KUNZMAN ASSOCIATES, INC.

DOLORES LAKE PARK

AIR QUALITY AND GLOBAL CLIMATE CHANGE IMPACT ANALYSIS

August 21, 2017

Traffic Engineering | Transportation Planning | Parking | Noise/Vibration | Expert Witness
Air Quality | Global Climate Change | Health Risk Assessment

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August 21, 2017

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I. INTRODUCTION AND SETTING

A. Purpose and Objectives

This preliminary analysis was performed to address the possibility of air quality impacts and global climate change impacts. The objectives of the study include:

- documentation of the atmospheric setting
- discussion of criteria pollutants and greenhouse gases
- discussion of the air quality and global climate change regulatory framework
- discussion of the air quality and greenhouse gas thresholds of significance
- analysis of the construction related air quality and greenhouse gas emissions
- analysis of the operations related air quality and greenhouse gas emissions
- recommendations for mitigation measures
- analysis of the conformity of the proposed project with the MDAQMD Attainment Plans

The County of San Bernardino is the lead agency responsible for preparation of this air quality analysis, in accordance with the California Environmental Quality Act authorizing legislation. Although this is a technical report, every effort has been made to write the report clearly and concisely. To assist the reader with terms unique to air quality and global climate change, a definition of terms has been provided in Appendix A.

B. Project Location

The proposed project is located at 72 Hacienda Road in the Newberry Springs area of the County of San Bernardino. The project site has the following APN: 0539-031-02. A vicinity map showing the project location is provided on Figure 1.

C. Project Description

The approximately 262.57 gross acre (245.89 net acre) project site is proposed to be developed with a recreational lake and pond covering approximately 8.7 acres, a RV park with 224 RV parking spaces and 67 standard parking spaces as well as 8,660 square feet of office and restrooms, a 13 acre waterpark with 54,554 square feet of existing waterpark facilities and a 14.1 acre parking lot (including 913 parking spaces), 13.6 acres of commercial retail uses with 45,727 square feet of commercial retail uses, 498 standard parking spaces, and 33 bus/trailer parking spaces, and 12.4 acres of office/administrative uses with 97,241 square feet of office use and 419 parking spaces. Figure 2 illustrates the project site plan.

D. Phasing and Timing

The project will be constructed in five phases.

Phase 1 is to include the recreational lake/pond portion of the proposed project. Phase 2 is the RV park portion of the proposed project. Phase 2 covers approximately 27.7 acres and

includes 8,660 square feet of office and restroom use structures. Construction of Phase 1 and Phase 2 is expected to begin May 2017 and be completed by June 2018.

Phase 3 includes the waterpark portion of the proposed project. This phase covers the approximately 13.0 acre waterpark as well as the approximately 14.10 acre waterpark parking area. A total of 54,554 square feet of existing water park facilities are included in this phase. Construction of Phase 3 is expected to begin April 2018 and be completed by May 2019.

Phase 4 is the retail/commercial portion of the proposed project. Phase 4 covers approximately 13.6 acres of the project site and includes 45,727 square feet of commercial/retail use structures. Construction of Phase 4 is expected to begin April 2019 and be completed by December 2020.

Phase 5 is the office/administrative portion of the proposed project, which covers approximately 12.7 acres with 97,241 square feet of office/administrative use structures. Construction of Phase 5 is expected to begin April 2020 and be completed by December 2021.

The project is anticipated to be built out by 2022.

E. <u>Sensitive Receptors in Project Vicinity</u>

For the purposes of a CEQA analysis, the MDAQMD considers a sensitive receptor to be a receptor such as a residence, school, daycare center, playgrounds, and medical facilities where children are present or that it is possible that an individual could remain at the location for 24 hours. Commercial and industrial facilities are not included in the definition of sensitive receptor because employees do not typically remain on-site for a full 24 hours, but are present for shorter periods of time, such as eight hours.

Currently, the area is mostly rural, the nearest sensitive receptors to the project site are a single-family detached residential dwelling unit located along the northern boundary of the project site (along Apache Avenue) and a single-family detached residential dwelling unit located along the eastern boundary of the project site (across Mountain View Road). Additional single-family detached residential dwelling units are located approximately 0.44 miles east of the project site. The majority of the area surrounding the project site is vacant land.

Figure 1
Project Location Map

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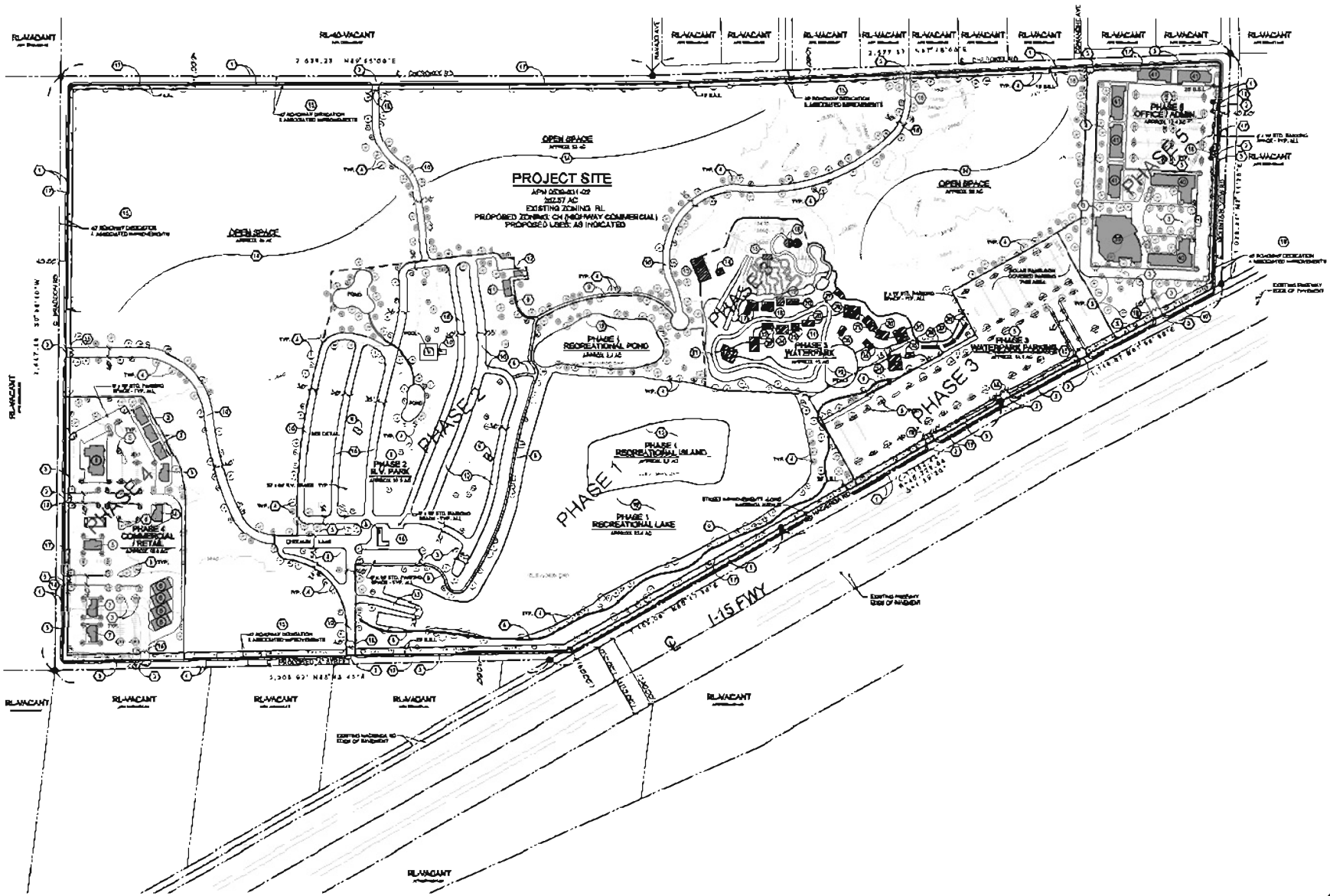
Figure 2
Site Plan



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II. ATMOSPHERIC SETTING

The project site is located within the western portion of San Bernardino County, which is part of the Mojave Desert Air Basin (MDAB). The MDAB is an assemblage of mountain ranges interspersed with long broad valleys that often contain dry lakes. Many of the lower mountains which dot the vast terrain rise from 1,000 to 4,000 feet above the valley floor. Prevailing winds in the MDAB are out of the west and southwest. These prevailing winds are due to the proximity of the MDAB to coastal and central regions and the blocking nature of the Sierra Nevada mountains to the north; air masses pushed onshore in southern California by differential heating are channeled through the MDAB. The MDAB is separated from the southern California coastal and central California valley regions by mountains (highest elevation approximately 10,000 feet), whose passes form the main channels for these air masses. The Antelope Valley is bordered in the northwest by the Tehachapi Mountains, separated from the Sierra Nevada's in the north by the Tehachapi Pass (3,800 foot elevation). The Antelope Valley is bordered in the south by the San Gabriel Mountains, bisected by Soledad Canyon (3,300 feet). The Mojave Desert is bordered in the southwest by the San Bernardino Mountains, separated from the San Gabriel's by the Cajon Pass (4,200 feet). A lesser channel lies between the San Bernardino Mountains and the Little San Bernardino Mountains (the Morongo Valley).

The Palo Verde Valley portion of the Mojave Desert lies in the low desert, at the eastern end of a series of valleys (notably the Coachella Valley) whose primary channel is the San Gorgonio Pass (2,300 feet) between the San Bernardino and San Jacinto Mountains.

During the summer the MDAB is generally influenced by a Pacific Subtropical High cell that sits off the coast, inhibiting cloud formation and encouraging daytime solar heating. The MDAB is rarely influenced by cold air masses moving south from Canada and Alaska, as these frontal systems are weak and diffuse by the time the reach the desert. Most desert moisture arrives from infrequent warm, moist and unstable air masses from the south. The MDAB averages between three and seven inches of precipitation per year (from 16 to 30 days with at least 0.01 inches of precipitation). The MDAB is classified as a dry-hot desert climate (BWh), with portions classified as dry-very hot desert (BWhh), to indicate at least three months have maximum average temperatures over 100.4° F.

The temperature and precipitation levels for Joshua Tree, closest monitoring site with available data, are shown below in Table 1. Table 1 shows that July is typically the warmest month and December is typically the coolest month. Rainfall in the project area varies considerably in both time and space. Almost all the annual rainfall comes from the fringes of mid-latitude storms from late November to early April, with summers being almost completely dry.

Table 1

Newberry Springs Monthly Climate Data[1]

Descriptor	Month of Year											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Avg. Max. Temperature	61.2	65.5	72.2	79.7	89.4	98.8	104.4	103.0	95.4	83.3	67.6	60.5
Avg. Min. Temperature	36.4	40.5	45.7	51.4	59.8	67.5	73.5	72.5	65.6	54.7	41.9	35.8
Avg. Total Precipitation (in.)	0.62	0.67	0.47	0.18	0.08	0.07	0.39	0.35	0.18	0.19	0.32	0.65

[1] Source: http://www.wrcc.dri.edu/cgi-bin/cliMAIN.pl?ca2257

Data taken from the Barstow Daggett Airport station.

III. POLLUTANTS

Pollutants are generally classified as either criteria pollutants or non-criteria pollutants. Federal ambient air quality standards have been established for criteria pollutants, whereas no ambient standards have been established for non-criteria pollutants. For some criteria pollutants, separate standards have been set for different periods. Most standards have been set to protect public health. For some pollutants, standards have been based on other values (such as protection of crops, protection of materials, or avoidance of nuisance conditions). A summary of federal and state ambient air quality standards is provided in the Regulatory Framework section.

A. Criteria Pollutants

The criteria pollutants consist of: ozone, nitrogen dioxide, carbon monoxide, sulfur dioxide, lead, and particulate matter. These pollutants can harm your health and the environment, and cause property damage. The Environmental Protection Agency (EPA) calls these pollutants "criteria" air pollutants because it regulates them by developing human health-based and/or environmentally-based criteria for setting permissible levels. The following provides descriptions of each of the criteria pollutants.

1. Nitrogen Dioxide (NO_2)

Nitrogen Oxides (NOx) is the generic term for a group of highly reactive gases which contain nitrogen and oxygen. While most NOx are colorless and odorless, concentrations of nitrogen dioxide (NO_2) can often be seen as a reddish-brown layer over many urban areas. NOx form when fuel is burned at high temperatures, as in a combustion process. The primary manmade sources of NOx are motor vehicles, electric utilities, and other industrial, commercial, and residential sources that burn fuel. NOx reacts with other pollutants to form, ground-level ozone, nitrate particles, acid aerosols, as well as NO_2, which cause respiratory problems. NOx and the pollutants formed from NOx can be transported over long distances, following the patterns of prevailing winds. Therefore controlling NOx is often most effective if done from a regional perspective, rather than focusing on the nearest sources.

2. Ozone (O_3)

Ozone is not usually emitted directly into the air but at ground-level is created by a chemical reaction between NOx and volatile organic compounds (VOC) in the presence of sunlight. Motor vehicle exhaust, industrial emissions, gasoline vapors, chemical solvents as well as natural sources emit NOx and VOC that help form ozone. Ground-level ozone is the primary constituent of smog. Sunlight and hot weather cause ground-level ozone to form with the greatest concentrations usually occurring downwind from urban areas. Ozone is subsequently considered a regional pollutant. Ground-level ozone is a respiratory irritant and an oxidant that increases susceptibility to respiratory infections and can cause substantial damage to vegetation and other materials. Because NOx and VOC are ozone precursors, the health effects associated with ozone are also indirect health effects associated with significant levels of NOx and VOC emissions.

3. Carbon Monoxide (CO)

Carbon monoxide (CO) is a colorless, odorless gas that is formed when carbon in fuel is not burned completely. It is a component of motor vehicle exhaust, which contributes about 56 percent of all CO emissions nationwide. In cities, 85 to 95 percent of all CO emissions may come from motor vehicle exhaust. Other sources of CO emissions include industrial processes (such as metals processing and chemical manufacturing), residential wood burning, and natural sources such as forest fires. Woodstoves, gas stoves, cigarette smoke, and unvented gas and kerosene space heaters are indoor sources of CO. The highest levels of CO in the outside air typically occur during the colder months of the year when inversion conditions are more frequent. The air pollution becomes trapped near the ground beneath a layer of warm air. CO is described as having only a local influence because it dissipates quickly. Since CO concentrations are strongly associated with motor vehicle emissions, high CO concentrations generally occur in the immediate vicinity of roadways with high traffic volumes and traffic congestion, active parking lots, and in automobile tunnels. Areas adjacent to heavily traveled and congested intersections are particularly susceptible to high CO concentrations.

CO is a public health concern because it combines readily with hemoglobin and thus reduces the amount of oxygen transported in the bloodstream. The health threat from lower levels of CO is most serious for those who suffer from heart disease such as angina, clogged arteries, or congestive heart failure. For a person with heart disease, a single exposure to CO at low levels may cause chest pain and reduce that person's ability to exercise; repeated exposures may contribute to other cardiovascular effects. High levels of CO can affect even healthy people. People who breathe high levels of CO can develop vision problems, reduced ability to work or learn, reduced manual dexterity, and difficulty performing complex tasks. At extremely high levels, CO is poisonous and can cause death.

4. Sulfur Dioxide (SO_2)

Sulfur Oxide (SOx) gases (including sulfur dioxide [SO_2]) are formed when fuel containing sulfur, such as coal and oil is burned, and from the refining of gasoline. SOx dissolves easily in water vapor to form acid and interacts with other gases and particles in the air to form sulfates and other products that can be harmful to people and the environment.

5. Lead

Lead is a metal found naturally in the environment as well as manufactured products. The major sources of lead emissions have historically been motor vehicles and industrial sources. Due to the phase out of leaded gasoline, metal processing is now the primary source of lead emissions to the air. High levels of lead in the air are typically only found near lead smelters, waste incinerators, utilities, and lead-acid battery manufacturers. Exposure of fetuses, infants and children to low levels of lead can adversely affect the development and function of the central nervous system,

leading to learning disorders, distractibility, inability to follow simple commands, and lower intelligence quotient. In adults, increased lead levels are associated with increased blood pressure.

6. Particulate Matter (PM)

Particulate matter (PM) is the term for a mixture of solid particles and liquid droplets found in the air. Particulate matter is made up of a number of components including acids (such as nitrates and sulfates), organic chemicals, metals, and soil or dust particles. The size of particles is directly linked to their potential for causing health problems. Particles that are less than 10 micrometers in diameter (PM10) are the particles that generally pass through the throat and nose and enter the lungs. Once inhaled, these particles can affect the heart and lungs and cause serious health effects. Particles that are less than 2.5 micrometers in diameter (PM2.5) have been designated as a subset of PM10 due to their increased negative health impacts and its ability to remain suspended in the air longer and travel further.

7. Volatile Organic Compounds (VOCs)

Although not a criteria pollutant, reactive organic gases (ROGs), or VOCs, 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. Although there are slight differences in the definition of ROGs and VOCs, the two terms are often used interchangeably. Indoor sources of VOCs include paints, solvents, aerosol sprays, cleansers, tobacco smoke, etc. Outdoor sources of VOCs are from combustion and fuel evaporation. A reduction in VOC emissions reduces certain chemical reactions that contribute to the formulation of ozone. VOCs are transformed into organic aerosols in the atmosphere, which contribute to higher PM10 and lower visibility.

B. Other Pollutants of Concern

1. Toxic Air Contaminants

In addition to the above-listed criteria pollutants, toxic air contaminants (TACs) are another group of pollutants of concern. Sources of toxic air contaminants include industrial processes such as petroleum refining and chrome plating operations, commercial operations such as gasoline stations and dry cleaners, and motor vehicle exhaust. Cars and trucks release at least forty different toxic air contaminants. The most important of these toxic air contaminants, in terms of health risk, are diesel particulates, benzene, formaldehyde, 1,3-butadiene, and acetaldehyde. Public exposure to toxic air contaminants can result from emissions from normal operations as well as accidental releases. Health effects of toxic air contaminants include cancer, birth defects, neurological damage, and death.

Toxic air contaminants are less pervasive in the urban atmosphere than criteria air pollutants, however they are linked to short-term (acute) or long-term (chronic or carcinogenic) adverse human health effects. There are hundreds of different types of

toxic air contaminants with varying degrees of toxicity. Sources of toxic air contaminants include industrial processes, commercial operations (e.g., gasoline stations and dry cleaners), and motor vehicle exhaust.

According to the 2013 California Almanac of Emissions and Air Quality, the majority of the estimated health risk from toxic air contaminants can be attributed to relatively few compounds, the most important of which is diesel particulate matter (DPM). Diesel particulate matter is a subset of PM2.5 because the size of diesel particles are typically 2.5 microns and smaller. The identification of diesel particulate matter as a toxic air contaminant in 1998 led the California Air Resources Board (CARB) to adopt the Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-fueled Engines and Vehicles in September 2000. The plan's goals are a 75-percent reduction in diesel particulate matter by 2010 and an 85-percent reduction by 2020 from the 2000 baseline. Diesel engines emit a complex mixture of air pollutants, composed of gaseous and solid material. The visible emissions in diesel exhaust are known as particulate matter or PM, which includes carbon particles or "soot." Diesel exhaust also contains a variety of harmful gases and over 40 other cancer-causing substances. California's identification of diesel particulate matter as a toxic air contaminant was based on its potential to cause cancer, premature deaths, and other health problems. Exposure to diesel particulate matter is a health hazard, particularly to children whose lungs are still developing and the elderly who may have other serious health problems. Overall, diesel engine emissions are responsible for the majority of California's potential airborne cancer risk from combustion sources.

2. Asbestos

Asbestos is listed as a TAC by ARB and as a Hazardous Air Pollutant by the EPA. Asbestos occurs naturally in mineral formations and crushing or breaking these rocks, through construction or other means, can release asbestoform fibers into the air. Asbestos emissions can result from the sale or use of asbestos-containing materials, road surfacing with such materials, grading activities, and surface mining. The risk of disease is dependent upon the intensity and duration of exposure. When inhaled, asbestos fibers may remain in the lungs and with time may be linked to such diseases as asbestosis, lung cancer, and mesothelioma. Naturally occurring asbestos is not present in San Bernardino County. The nearest likely locations of naturally occurring asbestos, as identified in the General Location Guide for Ultramafic Rocks in California prepared by the California Division of Mines and Geology, is located in Santa Barbara County. Due to the distance to the nearest natural occurrences of asbestos, the project site is not likely to contain asbestos.

C. Greenhouse Gases

Constituent gases of the Earth's atmosphere, called atmospheric greenhouse gases (GHG), play a critical role in the Earth's radiation amount by trapping infrared radiation emitted from the Earth's surface, which otherwise would have escaped to space. Prominent greenhouse gases contributing to this process include carbon dioxide (CO_2), methane (CH_4), ozone, water vapor, nitrous oxide (N_2O), and chlorofluorocarbons (CFCs). This phenomenon, known as the Greenhouse Effect, is responsible for maintaining a habitable

climate. Anthropogenic (caused or produced by humans) emissions of these greenhouse gases in excess of natural ambient concentrations are responsible for the enhancement of the Greenhouse Effect and have led to a trend of unnatural warming of the Earth's natural climate, known as global warming or climate change. Emissions of gases that induce global warming are attributable to human activities associated with industrial/manufacturing, agriculture, utilities, transportation, and residential land uses. Transportation is responsible for 41 percent of the State's greenhouse gas emissions, followed by electricity generation. Emissions of CO_2 and nitrous oxide (NOx) are byproducts of fossil fuel combustion. Methane, a potent greenhouse gas, results from off-gassing associated with agricultural practices and landfills. Sinks of CO_2, where CO_2 is stored outside of the atmosphere, include uptake by vegetation and dissolution into the ocean. The following provides a description of each of the greenhouse gases and their global warming potential.

1. Water Vapor

Water vapor is the most abundant, important, and variable GHG in the atmosphere. Water vapor is not considered a pollutant; in the atmosphere it maintains a climate necessary for life. Changes in its concentration are primarily considered a result of climate feedbacks related to the warming of the atmosphere rather than a direct result of industrialization. The feedback loop in which water is involved in is critically important to projecting future climate change. As the temperature of the atmosphere rises, more water is evaporated from ground storage (rivers, oceans, reservoirs, soil). Because the air is warmer, the relative humidity can be higher (in essence, the air is able to "hold" more water when it is warmer), leading to more water vapor in the atmosphere. As a GHG, the higher concentration of water vapor is then able to absorb more thermal indirect energy radiated from the Earth, thus further warming the atmosphere. The warmer atmosphere can then hold more water vapor and so on and so on. This is referred to as a "positive feedback loop." The extent to which this positive feedback loop will continue is unknown as there is also dynamics that put the positive feedback loop in check. As an example, when water vapor increases in the atmosphere, more of it will eventually also condense into clouds, which are more able to reflect incoming solar radiation (thus allowing less energy to reach the Earth's surface and heat it up).

2. Carbon Dioxide

The natural production and absorption of CO_2 is achieved through the terrestrial biosphere and the ocean. However, humankind has altered the natural carbon cycle by burning coal, oil, natural gas, and wood. Since the industrial revolution began in the mid 1700s. Each of these activities has increased in scale and distribution. CO_2 was the first GHG demonstrated to be increasing in atmospheric concentration with the first conclusive measurements being made in the last half of the 20th century. Prior to the industrial revolution, concentrations were fairly stable at 280 parts per million (ppm). The International Panel on Climate Change (IPCC Fifth Assessment Report, 2014) Emissions of CO_2 from fossil fuel combustion and industrial processes contributed about 78% of the total GHG emissions increase from 1970 to 2010, with a similar percentage contribution for the increase during the period 2000 to 2010. Globally, economic and population growth continued to be the most important

drivers of increases in CO_2 emissions from fossil fuel combustion. The contribution of population growth between 2000 and 2010 remained roughly identical to the previous three decades, while the contribution of economic growth has risen sharply.

3. Methane

CH_4 is an extremely effective absorber of radiation, although its atmospheric concentration is less than that of CO_2. Its lifetime in the atmosphere is brief (10 to 12 years), compared to some other GHGs (such as CO_2, N_2O, and Chlorofluorocarbons (CFCs). CH_4 has both natural and anthropogenic sources. It is released as part of the biological processes in low oxygen environments, such as in swamplands or in rice production (at the roots of the plants). Over the last 50 years, human activities such as growing rice, raising cattle, using natural gas, and mining coal have added to the atmospheric concentration of methane. Other anthropocentric sources include fossil-fuel combustion and biomass burning.

4. Nitrous Oxide

Concentrations of N_2O also began to rise at the beginning of the industrial revolution. In 1998, the global concentration was 314 parts per billion (ppb). N_2O is produced by microbial processes in soil and water, including those reactions which occur in fertilizer containing nitrogen. In addition to agricultural sources, some industrial processes (fossil fuel-fired power plants, nylon production, nitric acid production, and vehicle emissions) also contribute to its atmospheric load. It is also commonly used as an aerosol spray propellant, (i.e., in whipped cream bottles, in potato chip bags to keep chips fresh, and in rocket engines and in race cars).

5. Chlorofluorocarbons

CFCs are gases formed synthetically by replacing all hydrogen atoms in methane or ethane (C_2H_6) with chlorine and/or fluorine atoms. CFCs are nontoxic, nonflammable, insoluble, and chemically unreactive in the troposphere (the level of air at the Earth's surface). CFCs have no natural source, but were first synthesized in 1928. It was used for refrigerants, aerosol propellants, and cleaning solvents. Due to the discovery that they are able to destroy stratospheric ozone, a global effort to halt their production was undertaken and in 1989 the European Community agreed to ban CFCs by 2000 and subsequent treaties banned CFCs worldwide by 2010. This effort was extremely successful, and the levels of the major CFCs are now remaining level or declining. However, their long atmospheric lifetimes mean that some of the CFCs will remain in the atmosphere for over 100 years.

6. Hydrofluorocarbons

HFCs are synthetic man-made chemicals that are used as a substitute for CFCs. Out of all the GHGs, they are one of three groups with the highest global warming potential. The HFCs with the largest measured atmospheric abundances are (in order), HFC-23 (CHF_3), HFC-134a (CF_3CH_2F), and HFC-152a (CH_3CHF_2). Prior to 1990, the only significant emissions were HFC-23. HFC-134a use is increasing due to its use as a

refrigerant. Concentrations of HFC-23 HFC-134a are now about 10 parts per trillion (ppt) each. Concentrations of HFC-152a are about 1 ppt. HFCs are manmade for applications such as automobile air conditioners and refrigerants.

7. Perfluorocarbons

PFCs have stable molecular structures and do not break down through the chemical processes in the lower atmosphere. High-energy ultraviolet rays about 60 kilometers above Earth's surface are able to destroy the compounds. Because of this, PFCs have very long lifetimes, between 10,000 and 50,000 years. Two common PFCs are tetrafluoromethane (CF_4) and hexafluoroethane (C_2F_6). Concentrations of CF_4 in the atmosphere are over 70 ppt. The two main sources of PFCs are primary aluminum production and semiconductor manufacturing.

8. Sulfur Hexafluoride

SF_6 is an inorganic, odorless, colorless, nontoxic, nonflammable gas. SF_6 has the highest global warming potential of any gas evaluated; 23,900 times that of CO_2. Concentrations in the 1990s were about 4 ppt. Sulfur hexafluoride is used for insulation in electric power transmission and distribution equipment, in the magnesium industry, in semiconductor manufacturing, and as a tracer gas for leak detection.

9. Aerosols

Aerosols are particles emitted into the air through burning biomass (plant material) and fossil fuels. Aerosols can warm the atmosphere by absorbing and emitting heat and can cool the atmosphere by reflecting light. Cloud formation can also be affected by aerosols. Sulfate aerosols are emitted when fuel containing sulfur is burned. Black carbon (or soot) is emitted during biomass burning due to the incomplete combustion of fossil fuels. Particulate matter regulation has been lowering aerosol concentrations in the United States; however, global concentrations are likely increasing.

10. Global Warming Potential

The Global Warming Potential (GWP) was developed to allow comparisons of the global warming impacts of different gases. Specifically, it is a measure of how much energy the emissions of 1 ton of a gas will absorb over a given period of time, relative to the emissions of 1 ton of carbon dioxide (CO_2). The larger the GWP, the more that a given gas warms the Earth compared to CO_2 over that time period. The time period usually used for GWPs is 100 years. GWPs provide a common unit of measure, which allows analysts to add up emissions estimates of different gases (e.g., to compile a national GHG inventory), and allows policymakers to compare emissions reduction opportunities across sectors and gases. A summary of the atmospheric lifetime and the global warming potential of selected gases are summarized in Table 2. As shown in Table 2, the global warming potential of GHGs ranges from 1 to 22,800.

Table 2

Global Warming Potentials and Atmospheric Lifetimes[1]

Gas	Atmospheric Lifetime	Global Warming Potential[2] (100 Year Horizon)
Carbon Dioxide (CO_2)	—[3]	1
Methane (CH_4)	12	28-36
Nitrous Oxide (NO)	114	298
Hydrofluorocarbons (HFCs)	1-270	12-14,800
Perfluorocarbons (PFCs)	2,600-50,000	7,390-12,200
Nitrogen trifluoride (NF_3)	740	17,200
Sulfur Hexafluoride (SF_6)	3,200	22,800

[1] Source: http://www3.epa.gov/climatechange/ghgemissions/gases.html

[2] Compared to the same quantity of CO_2 emissions.

[3] Carbon dioxide's lifetime is poorly defined because the gas is not destroyed over time, but instead moves among different parts of the ocean–atmosphere–land system. Some of the excess carbon dioxide will be absorbed quickly (for example, by the ocean surface), but some will remain in the atmosphere for thousands of years, due in part to the very slow process by which carbon is transferred to ocean sediments.

IV. AIR QUALITY MANAGEMENT

A. Regulatory Setting

The proposed project is addressed through the efforts of various international, federal, state, regional, and local government agencies. These agencies work jointly, as well as individually, to improve air quality through legislation, regulations, planning, policy-making, education, and a variety of programs. The agencies responsible for improving the air quality are discussed below.

1. International

Montreal Protocol

In 1988, the United Nations established the Intergovernmental Panel on Climate Change (IPCC) to evaluate the impacts of global climate change and to develop strategies that nations could implement to curtail global climate change. In 1992, the United States joined other countries around the world in signing the United Nations' Framework Convention on Climate Change (UNFCCC) agreement with the goal of controlling GHG emissions. As a result, the Climate Change Action Plan was developed to address the reduction of GHGs in the United States. The plan consists of more than 50 voluntary programs.

Additionally, the Montreal Protocol was originally signed in 1987 and substantially amended in 1990 and 1992. The Montreal Protocol stipulates that the production and consumption of compounds that deplete ozone in the stratosphere—CFCs, halons, carbon tetrachloride, and methyl chloroform—were to be phased out, with the first three by the year 2000 and methyl chloroform by 2005.

The Paris Agreement

The Paris Agreement entered into force on 4 November 2016, thirty days after the date on which at least 55 Parties to the Convention accounting in total for at least an estimated 55 % of the total global greenhouse gas emissions have deposited their instruments of ratification, acceptance, approval or accession with the Depositary.

The Paris Agreement builds upon the Convention and – for the first time – brings all nations into a common cause to undertake take ambitious efforts to combat climate change and adapt to its effects, with enhanced support to assist developing countries to do so. As such, it charts a new course in the global climate effort.

The Paris Agreement's central aim is to strengthen the global response to the threat of climate change by keeping a global temperature rise this century well below 2 degrees Celsius above pre-industrial levels and to pursue efforts to limit the temperature increase even further to 1.5 degrees Celsius. Additionally, the agreement aims to strengthen the ability of countries to deal with the impacts of climate change. To reach these ambitious goals, appropriate financial flows, a new technology framework and an enhanced capacity building framework will be put in place, thus supporting action by developing countries and the most vulnerable

countries, in line with their own national objectives. The Agreement also provides for enhanced transparency of action and support through a more robust transparency framework.

2. Federal - United States Environmental Protection Agency

The United States Environmental Protection Agency (EPA) is responsible for setting and enforcing the National Ambient Air Quality Standards (NAAQS) for atmospheric pollutants. It regulates emission sources that are under the exclusive authority of the federal government, such as aircraft, ships, and certain locomotives. The National Ambient Air Quality Standards (NAAQS) pollutants were identified using medical evidence and are shown below in Table 3.

The EPA and the California Air Resource Board (CARB) 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 exceeds the threshold per year. In contrast, the Federal annual PM2.5 standard is met if the three-year average of the annual average PM2.5 concentration is less than or equal to the standard. Attainment status is shown in Table 4.

As part of its enforcement responsibilities, the EPA requires each state with federal nonattainment areas to prepare and submit a State Implementation Plan (SIP) that demonstrates the means to attain the national standards. The State Implementation Plan (SIP) must integrate federal, state, and local components and regulations to identify specific measures to reduce pollution, using a combination of performance standards and market-based programs within the timeframe identified in the State Implementation Plan (SIP).

As indicated below in Table 4, the MDAB has been designated by the EPA as a non-attainment area for ozone (O3) and suspended particulates (PM10). Currently, the Basin is in attainment with the ambient air quality standards for carbon monoxide (CO), lead, sulfur dioxide (SO2), nitrogen dioxide (NO2) and particulate matter (PM2.5).

On December 14, 2012, the EPA revised the primary annual PM2.5 NAAQS from 15 µg/m3 to 12 µg/m3 and retained the 24 hour PM2.5 standard at 35 µg/m3 in order to provide increased protection for children, older adults, persons with pre-existing heart and lung disease and other at risk populations.

In 2013, the MDAB exceeded federal standards for either ozone or PM2.5 at one or more locations on a total of 31 days, based on the current federal standards for 8-

hour ozone and 24-hour PM2.5. Despite substantial improvements in air quality over the past few decades, some air monitoring stations in the Basin still exceed the NAAQS for ozone more frequently than any other stations in the U.S.

In Massachusetts v. Environmental Protection Agency (Docket No. 05–1120), argued November 29, 2006 and decided April 2, 2007, the U.S. Supreme Court held that not only did the EPA have authority to regulate greenhouse gases, but the EPA's reasons for not regulating this area did not fit the statutory requirements. As such, the U.S. Supreme Court ruled that the EPA should be required to regulate CO_2 and other greenhouse gases as pollutants under the federal Clean Air Act (CAA).

In response to the FY2008 Consolidations Appropriations Act (H.R. 2764; Public Law 110-161), EPA proposed a rule on March 10, 2009 that requires mandatory reporting of GHG emissions from large sources in the United States. On September 22, 2009, the Final Mandatory Reporting of GHG Rule was signed and published in the Federal Register on October 30, 2009. The rule became effective on December 29, 2009. This rule requires 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 to submit annual reports to EPA.

On December 7, 2009, the EPA Administrator signed two distinct findings under section 202(a) of the Clean Air Act. One is an endangerment finding that finds concentrations of the six GHGs in the atmosphere threaten the public health and welfare of current and future generations. The other is a cause or contribute finding, that finds emissions from new motor vehicles and new motor vehicle engines contribute to the GHG pollution which threatens public health and welfare. These actions will not themselves impose any requirements on industry or other entities. However, it is a prerequisite to finalizing the EPA's proposed GHG emission standards for light-duty vehicles, which were jointly proposed by the EPA and Department of Transportation on September 15, 2009.

On March 19, 2015, the Whitehouse announced that President Obama will issue an Executive Order that will cut the Federal Government's greenhouse gas (GHG) emissions 40 percent over the next decade from 2008 levels -- saving taxpayers up to $18 billion in avoided energy costs -- and increase the share of electricity the Federal Government consumes from renewable sources to 30 percent. Complementing this effort, several major Federal suppliers are announcing commitments to cut their own GHG emissions. The Administration hosted a roundtable that brought some of these large Federal suppliers together to discuss the benefits of their GHG reduction targets or to make their first-ever corporate commitments to disclose emissions and set new reduction goals.

Together, the combined results of the Federal Government actions and new supplier commitments will reduce GHG emissions by 26 million metric tons by 2025 from 2008 levels, the equivalent of taking nearly 5.5 million cars off the road for a year. To encourage continued progress across the Federal supply chain, the Administration is releasing a new scorecard to publicly track self-reported emissions disclosure and progress for all major Federal suppliers, who together represent more than $187

billion in Federal spending and account for more than 40 percent of all Federal contract dollars.

Since the Federal Government is the single largest consumer of energy in the Nation, Federal emissions reductions and progress across the supply chain will have broad impacts. The new commitments announced today support the United States' international commitment to cut net GHG emissions 26-28 percent below 2005 levels by 2025, which President Obama first announced in November 2014 as part of an historic agreement with China. Additionally, the goals build on the strong progress made by Federal agencies during the first six years of the Administration under President Obama's 2009 Executive Order on Federal Leadership on Environmental, Energy and Economic Performance, including reducing Federal GHG emissions by 17 percent — which helped Federal agencies avoid $1.8 billion in cumulative energy costs — and increasing the share of renewable energy consumption to 9 percent.[1]

3. State – California Air Resources Board

The California Air Resources Board (CARB), which is a part of the California Environmental Protection Agency, is responsible for the coordination and administration of both federal and state air pollution control programs within California. In this capacity, the CARB conducts research, sets the California Ambient Air Quality Standards (CAAQS), compiles emission inventories, develops suggested control measures, provides oversight of local programs, and prepares the State Implementation Plan (SIP). The California Ambient Air Quality Standards (CAAQS) for criteria pollutants are shown in Table 3. In addition, the CARB establishes emission standards for motor vehicles sold in California, consumer products (e.g., hairspray, aerosol paints, and barbeque lighter fluid), and various types of commercial equipment. It also sets fuel specifications to further reduce vehicular emissions.

The MDAQMD-portion of the Mojave Desert Air Basin (MDAB) has been designated by the CARB as a nonattainment area for ozone, PM10 and PM2.5. Currently, the MDAB is in attainment with the ambient air quality standards for CO, lead, SO_2, NO_2, and sulfates and is unclassified for visibility reducing particles and Hydrogen Sulfide.

On June 20, 2002, the CARB revised the PM10 annual average standard to 20 µg/m3 and established an annual average standard for PM2.5 of 12 µg/m3. These standards were approved by the Office of Administrative Law in June 2003 and are now effective. On September 27, 2007 CARB approved the South Coast Air Basin and the Coachella Valley 2007 Air Quality Management Plan for Attaining the Federal 8-hour Ozone and PM2.5 Standards. The plan projects attainment for the 8-hour Ozone standard by 2024 and the PM2.5 standard by 2015.

On December 12, 2008 the CARB adopted Resolution 08-43, which limits NOx, PM10 and PM2.5 emissions from on-road diesel truck fleets that operate in California. On October 12, 2009 Executive Order R-09-010 was adopted that codified Resolution 08-

[1] Source: https://www.whitehouse.gov/the-press-office/2015/03/19/fact-sheet-reducing-greenhouse-gas-emissions-federal-government-and-acro.

43 into Section 2025, title 13 of the California Code of Regulations. This regulation requires that by the year 2023 all commercial diesel trucks that operate in California shall meet model year 2010 (Tier 4) or latter emission standards. In the interim period, this regulation provides annual interim targets for fleet owners to meet. This regulation also provides a few exemptions including a onetime per year 3-day pass for trucks registered outside of California.

The CARB is also responsible for regulations pertaining to toxic air contaminants. The Air Toxics "Hot Spots" Information and Assessment Act (AB 2588, 1987, Connelly) was enacted in 1987 as a means to establish a formal air toxics emission inventory risk quantification program. AB 2588, as amended, establishes a process that requires stationary sources to report the type and quantities of certain substances their facilities routinely release into the South Coast Air Basin. The data is ranked by high, intermediate, and low categories, which are determined by: the potency, toxicity, quantity, volume, and proximity of the facility to nearby receptors.

The State currently has no regulations that establish ambient air quality standards for GHGs. However, the State has passed laws directing CARB to develop actions to reduce GHG emissions, which are listed below.

Assembly Bill 1493

California Assembly Bill 1493 (also known as the Pavley Bill, in reference to its author Fran Pavley) was enacted on July 22, 2002 and required CARB to develop and adopt regulations that reduce GHGs emitted by passenger vehicles and light duty trucks. In 2004, CARB approved the "Pavley I" regulations limiting the amount of GHGs that may be released from new passenger automobiles that are being phased in between model years 2009 through 2016. This regulation will reduce GHG emissions by 30 percent from 2002 levels by 2016. The second set of regulations "Pavley II" is currently in development and will be phased in between model years 2017 through 2025 and will reduce emissions by 45 percent by the year 2020. The Pavley II standards are being developed by linking the GHG emissions and formerly separate toxic tailpipe emissions standards previously known as the "LEV III" (third stage of the Low Emission Vehicle standards) into a single regulatory framework.

In 2005, the CARB submitted a "waiver" request to the EPA in order to implement the GHG standards and in March of 2008, the U.S. EPA denied the request. However, in June 2009, the decision was reversed and the U.S. EPA granted California the authority to implement the GHG standards for passenger cars, pickup trucks and sport utility vehicles. In September 2009, the Pavley I regulations were adopted by CARB.

Executive Order S-3-05

The California Governor issued Executive Order S-3-05, GHG Emission, in June 2005, which established the following reduction targets:

- 2010: Reduce greenhouse gas emissions to 2000 levels
- 2020: Reduce greenhouse gas emissions to 1990 levels

- 2050: Reduce greenhouse gas emissions to 80 percent below 1990 levels.

The executive order directed the secretary of the California Environmental Protection Agency (CalEPA) to coordinate a multi-agency effort to reduce GHG emissions to the target levels. To comply with the Executive Order, the secretary of CalEPA created the California Climate Action Team (CAT), made up of members from various state agencies and commissions. The team released its first report in March 2006. The report proposed to achieve the targets by building on the voluntary actions of businesses, local governments, and communities and through State incentive and regulatory programs.

Assembly Bill 32

In 2006, the California State Legislature adopted Assembly Bill 32 (AB 32), the California Global Warming Solutions Act of 2006. AB 32 requires CARB, to adopt rules and regulations that would achieve GHG emissions equivalent to statewide levels in 1990 by 2020 through an enforceable statewide emission cap which will be phased in starting in 2012. Emission reductions shall include carbon sequestration projects that would remove carbon from the atmosphere and best management practices that are technologically feasible and cost effective.

On December 6, 2007 CARB released the calculated Year 1990 GHG emissions of 427 million metric tons of CO_2e ($MMTCO_2e$). The 2020 target of 427 $MMTCO_2e$ requires the reduction of 169 $MMTCO_2e$, or approximately 30 percent from the State's projected 2020 business as usual emissions of 596 $MMTCO_2e$ and the reduction of 42 $MMTCO_2e$, or almost 10 percent from the 2002-2004 average GHG emissions. Under AB 32, CARB was required to adopt regulations by January 1, 2011 to achieve reductions in GHGs to meet the 1990 cap by 2020. Early measures CARB took to lower GHG emissions included requiring operators of the largest industrial facilities that emit 25,000 metric tons of CO_2 in a calendar year to submit verification of GHG emissions by December 1, 2010. The CARB Board also approved nine discrete early action measures that include regulations affecting landfills, motor vehicle fuels, refrigerants in cars, port operations and other sources that became enforceable on or before January 1, 2010.

On December 11, 2008 the CARB Board approved a Scoping Plan, with final adoption May 11, 2009 that proposed a variety of measures including direct regulations, alternative compliance mechanisms, monetary and non-monetary incentives, voluntary actions, a market-based cap-and-trade system, and a fee regulation to fund the program. In current pending litigation, Association of Irritated Residents v. California Air Resources Board, a California State trial court found that the analysis of the alternatives identified in the AB 32 Scoping Plan Functional Equivalent Document (FED) was not sufficient for informed decision-making and public review under CEQA. In response, CARB has appealed the decision. In addition, CARB prepared the *Supplement to the AB 32 Scoping Plan Functional Equivalent Document,* June 13, 2011. On August 24, 2011 CARB recertified the complete AB 32 Scoping Plan Functional Equivalent

Environmental Document revised by the Final Supplement. In December, 2011 the Final Supplement was accepted as sufficient to fulfill the trial court's March order.

While local government operations were not accounted for in achieving the 2020 emissions reduction, local land use changes are estimated to result in a reduction of 5 metric tons of CO2e, which is approximately 3 percent of the 2020 GHG emissions reduction goal. In recognition of the critical role local governments will play in successful implementation of AB 32, CARB is recommending GHG reduction goals of 15 percent of 2010 levels by 2020 to ensure that municipal and community-wide emissions match the state's reduction target. According to the Measure Documentation Supplement to the Scoping Plan, local government actions and targets are anticipated to reduce vehicle miles by approximately 2 percent through land use planning, resulting in a potential GHG reduction of 2 metric tons of CO2e (or approximately 1.2 percent of the GHG reduction target).

In May 2014, CARB released its First Update to the Climate Change Scoping Plan (CARB 2014). This Update identifies the next steps for California's leadership on climate change. While California continues on its path to meet the near-term 2020 greenhouse gas limit, it must also set a clear path toward long-term, deep GHG emission reductions. This report highlights California's success to date in reducing its GHG emissions and lays the foundation for establishing a broad framework for continued emission reductions beyond 2020, on the path to 80 percent below 1990 levels by 2050.

On January 20, 2017, CARB announced its release of a proposed plan to reduce greenhouse gas emissions by 40 percent below 1990 levels by 2030 – the most ambitious target in North America. The plan builds on the state's successful efforts to reduce emissions and outlines the most effective ways to reach the 2030 goal, including continuing California's Cap-and-Trade Program. The Final 2017 Scoping Plan Update will be released in late March and be considered for approval by the Board in late April.

Senate Bill 32

(1) The California Global Warming Solutions Act of 2006 designates the State Air Resources Board as the state agency charged with monitoring and regulating sources of emissions of greenhouse gases. The state board is required to approve a statewide greenhouse gas emissions limit equivalent to the statewide greenhouse gas emissions level in 1990 to be achieved by 2020 and to adopt rules and regulations in an open public process to achieve the maximum, technologically feasible, and cost-effective greenhouse gas emissions reductions.

This bill would require the state board to ensure that statewide greenhouse gas emissions are reduced to 40% below the 1990 level by 2030.

(2) This bill would become operative only if AB 197 of the 2015–16 Regular Session is enacted and becomes effective on or before January 1, 2017. AB 197 requires that the California Air Resources Board, which directs implementation of emission-reduction programs, should target direct reductions at both stationary and mobile sources.

Senate Bill 1368

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

Executive Order S-1-07

Executive Order S-1-07 was issued in 2007 and proclaims that the transportation sector is the main source of GHG emissions in the State, since it generates more than 40 percent of the State's GHG emissions. It establishes a goal to reduce the carbon intensity of transportation fuels sold in the State by at least ten percent by 2020. This Order also directs CARB to determine whether this Low Carbon Fuel Standard (LCFS) could be adopted as a discrete early-action measure as part of the effort to meet the mandates in AB 32.

On April 23, 2009 CARB approved the proposed regulation to implement the low carbon fuel standard. The low carbon fuel standard is anticipated to reduce GHG emissions by about 16 MMT per year by 2020. The low carbon fuel standard is designed to provide a framework that uses market mechanisms to spur the steady introduction of lower carbon fuels. The framework establishes performance standards that fuel producers and importers must meet each year beginning in 2011. Separate standards are established for gasoline and diesel fuels and the alternative fuels that can replace each. The standards are "back-loaded", with more reductions required in the last five years, than the first five years. This schedule allows for the development of advanced fuels that are lower in carbon than today's fuels and the market penetration of plug-in hybrid electric vehicles, battery electric vehicles, fuel cell vehicles, and flexible fuel vehicles. It is anticipated that compliance with the low carbon fuel standard will be based on a combination of both lower carbon fuels and more efficient vehicles.

Reformulated gasoline mixed with corn-derived ethanol at ten percent by volume and low sulfur diesel fuel represent the baseline fuels. Lower carbon fuels may be ethanol, biodiesel, renewable diesel, or blends of these fuels with gasoline or diesel as appropriate. Compressed natural gas and liquefied natural gas also may be low carbon fuels. Hydrogen and electricity, when used in fuel

cells or electric vehicles are also considered as low carbon fuels for the low carbon fuel standard.

Senate Bill 97

Senate Bill 97 (SB 97) was adopted August 2007 and acknowledges that climate change is a prominent environmental issue that requires analysis under CEQA. SB 97 directed the Governor's Office of Planning and Research (OPR), which is part of the State Resource Agency, to prepare, develop, and transmit to CARB guidelines for the feasible mitigation of GHG emissions or the effects of GHG emissions, as required by CEQA, by July 1, 2009. The Resources Agency was required to certify and adopt those guidelines by January 1, 2010.

Pursuant to the requirements of SB 97 as stated above, on December 30, 2009 the Natural Resources Agency adopted amendments to the state CEQA guidelines that address GHG emissions. The CEQA Guidelines Amendments changed 14 sections of the CEQA Guidelines and incorporate GHG language throughout the Guidelines. However, no GHG emissions thresholds of significance are provided and no specific mitigation measures are identified. The GHG emission reduction amendments went into effect on March 18, 2010 and are summarized below:

- Climate action plans and other greenhouse gas reduction plans can be used to determine whether a project has significant impacts, based upon its compliance with the plan.
- Local governments are encouraged to quantify the greenhouse gas emissions of proposed projects, noting that they have the freedom to select the models and methodologies that best meet their needs and circumstances. The section also recommends consideration of several qualitative factors that may be used in the determination of significance, such as the extent to which the given project complies with state, regional, or local GHG reduction plans and policies. OPR does not set or dictate specific thresholds of significance. Consistent with existing CEQA Guidelines, OPR encourages local governments to develop and publish their own thresholds of significance for GHG impacts assessment.
- When creating their own thresholds of significance, local governments may consider the thresholds of significance adopted or recommended by other public agencies, or recommended by experts.
- New amendments include guidelines for determining methods to mitigate the effects of greenhouse gas emissions in Appendix F of the CEQA Guidelines.
- OPR is clear to state that "to qualify as mitigation, specific measures from an existing plan must be identified and incorporated into the project; general compliance with a plan, by itself, is not mitigation."
- OPR's emphasizes the advantages of analyzing GHG impacts on an institutional, programmatic level. OPR therefore approves tiering of environmental analyses and highlights some benefits of such an approach.

- Environmental impact reports (EIRs) must specifically consider a project's energy use and energy efficiency potential.

Senate Bills 1078, 107, and X1-2 and Executive Orders S-14-08 and S-21-09
Senate Bill 1078 (SB 1078) requires retail sellers of electricity, including investor-owned utilities and community choice aggregators, to provide at least 20 percent of their supply from renewable sources by 2017. Senate Bill 107 (SB 107) changed the target date to 2010. Executive Order S-14-08 was signed on November 2008 and expands the State's Renewable Energy Standard to 33 percent renewable energy by 2020. Executive Order S-21-09 directed CARB to adopt regulations by July 31, 2010 to enforce S-14-08. Senate Bill X1-2 codifies the 33 percent renewable energy requirement by 2020.

Senate Bill 375
Senate Bill 375 (SB 375) was adopted September 2008 and aligns regional transportation planning efforts, regional GHG emission reduction targets, and land use and housing allocation. SB 375 requires Metropolitan Planning Organizations (MPO) to adopt a sustainable communities strategy (SCS) or alternate planning strategy (APS) that will prescribe land use allocation in that MPOs Regional Transportation Plan (RTP). CARB, in consultation with each MPO, will provide each affected region with reduction targets for GHGs emitted by passenger cars and light trucks in the region for the years 2020 and 2035. These reduction targets will be updated every eight years but can be updated every four years if advancements in emissions technologies affect the reduction strategies to achieve the targets. CARB is also charged with reviewing each MPO's sustainable communities strategy or alternate planning strategy for consistency with its assigned targets.

The proposed project is located within the Southern California Association of Governments (SCAG), which has authority to develop the SCS or APS. For the SCAG region, the targets set by CARB are at eight percent below 2005 per capita GHG emissions levels by 2020 and 13 percent below 2005 per capita GHG emissions levels by 2035. On April 4, 2012, SCAG adopted the 2012-2035 Regional Transportation Plan / Sustainable Communities Strategy (RTP/SCS), which meets the CARB emission reduction requirements. The Housing Element Update was required by the State to be completed within 18 months after RTP/SCS adoption or by October 2013.

On April 7, 2016, SCAG's Regional Council adopted the 2016-2040 Regional Transportation Plan/ Sustainable Communities Strategy (2016 RTP/SCS or Plan). The Plan is a long-range visioning plan that balances future mobility and housing needs with economic, environmental and public health goals. The Plan charts a course for closely integrating land use and transportation – so that the region can grow smartly and sustainably. It outlines more than $556.5 billion in transportation system investments through 2040. The Plan was prepared through a collaborative, continuous, and comprehensive process with input from local governments, county transportation commissions, tribal governments, non-profit organizations, businesses and local stakeholders

within the counties of Imperial, Los Angeles, Orange, Riverside, San Bernardino and Ventura. In June 2016, SCAG received its conformity determination from the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA) indicating that all air quality conformity requirements for the 2016 RTP/SCS and associated 2015 FTIP Consistency Amendment through Amendment 15-12 have been met.

City and County land use policies, including General Plans, are not required to be consistent with the RTP and associated SCS or APS. However, new provisions of CEQA would incentivize, through streamlining and other provisions, qualified projects that are consistent with an approved SCS or APS and categorized as "transit priority projects."

Senate Bill X7-7

Senate Bill X7-7 (SB X7-7), enacted on November 9, 2009, mandates water conservation targets and efficiency improvements for urban and agricultural water suppliers. SB X7-7 requires the Department of Water Resources (DWR) to develop a task force and technical panel to develop alternative best management practices for the water sector. In addition SB X7-7 required the DWR to develop criteria for baseline uses for residential, commercial, and industrial uses for both indoor and landscaped area uses. The DWR was also required to develop targets and regulations that achieve a statewide 20 percent reduction in water usage.

Assembly Bills 939 and 1374

Assembly Bill 939 (AB 939) requires that each jurisdiction in California to divert at least 50 percent of its waste away from landfills, whether through waste reduction, recycling or other means. Senate Bill 1374 (SB 1374) requires the California Integrated Waste Management Board to adopt a model ordinance by March 1, 2004 suitable for adoption by any local agency to require 50 to 75 percent diversion of construction and demolition of waste materials from landfills.

California Code of Regulations (CCR) Title 24, Part 6

CCR Title 24, Part 6: California's Energy Efficiency Standards for Residential and Nonresidential Buildings (Title 24) were first established 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 efficiency technologies and methods. Although it was not originally intended to reduce GHG emissions, electricity production by fossil fuels results in GHG emissions and energy efficient buildings require less electricity. Therefore, increased energy efficiency results in decreased GHG emissions.

The Energy Commission adopted 2008 Standards on April 23, 2008 and Building Standards Commission approved them for publication on September 11, 2008. These updates became effective on August 1, 2009. 2013 Standards have been approved and became effective July 1, 2014.

California Code of Regulations (CCR) Title 24, Part 11

All buildings for which an application for a building permit is submitted on or after January 1, 2014 must follow the 2013 standards. The 2013 commercial standards are estimated to be 30 percent more efficient than the 2008 standards; residential standards are 25 percent more efficient. Energy efficient buildings require less electricity; therefore, increased energy efficiency reduces fossil fuel consumption and decreases greenhouse gas emissions.

California Green Building Standards

On January 12, 2010, the State Building Standards Commission unanimously adopted updates to the California Green Building Standards Code, which went into effect on January 1, 2011. The Code is a comprehensive and uniform regulatory code for all residential, commercial and school buildings. CCR Title 24, Part 11: California Green Building Standards (Title 24) became effective in 2001 in response to continued efforts to reduce GHG emissions associated with energy consumption. CCR Title 24, Part 11 now require that new buildings reduce water consumption, employ building commissioning to increase building system efficiencies, divert construction waste from landfills, and install low pollutant-emitting finish materials. One focus of CCR Title 24, Part 11 is water conservation measures, which reduce GHG emissions by reducing electrical consumption associated with pumping and treating water. CCR Title 24, Part 11 has approximately 52 nonresidential mandatory measures and an additional 130 provisions for optional use. Some key mandatory measures for commercial occupancies include specified parking for clean air vehicles, a 20 percent reduction of potable water use within buildings, a 50 percent construction waste diversion from landfills, use of building finish materials that emit low levels of volatile organic compounds, and commissioning for new, nonresidential buildings over 10,000 square feet.

The California Green Building Standards Code does not prevent a local jurisdiction from adopting a more stringent code as state law provides methods for local enhancements. The Code recognizes that many jurisdictions have developed existing construction and demolition ordinances, and defers to them as the ruling guidance provided they provide a minimum 50-percent diversion requirement. The code also provides exemptions for areas not served by construction and demolition recycling infrastructure. State building code provides the minimum standard that buildings need to meet in order to be certified for occupancy. Enforcement is generally through the local building official.

Executive Order B-30-15

Executive Order B-30-15, establishing a new interim statewide greenhouse gas emission reduction target to reduce greenhouse gas emissions to 40 percent below 1990 levels by 2030, was signed by Governor Brown in April 2015.

Executive Order B-29-15

Executive Order B-29-15, mandates a statewide 25% reduction in potable water usage. EO B-29-15 signed into law on April 1, 2015.

Executive Order B-37-16
Executive Order B-29-15, continuing the State's adopted water reductions, was signed into law on May 9, 2016. The water reductions build off the mandatory 25% percent reduction called for in EO B-29-15.

4. Regional

Regional Air Quality Planning Framework. The 1976 Lewis Air Quality Management Act established the MDAQMD and other air districts throughout the State. The federal CAA Amendments of 1977 required that each state adopt an implementation plan outlining pollution control measures to attain the federal standards in nonattainment areas of the state.

The ARB is responsible for incorporating air quality management plans for local air basins into a State Implementation Plan (SIP) for EPA approval. Significant authority for air quality control within them has been given to local air districts that regulate stationary source emissions and develop local nonattainment plans.

California is divided geographically into air basins for the purpose of managing the air resources of the State on a regional basis. An air basin generally has similar meteorological and geographic conditions throughout. The State is currently divided into 15 air basins. The proposed project site is located within the Mojave Desert Air Basin (MDAB). The MDAQMD includes the desert portion of the San Bernardino County. The MDAQMD is responsible for controlling emissions primarily from stationary sources within the MDAQMD and also maintains air quality monitoring stations to document historical and current levels of air quality within the District. The MDAQMD is also responsible for developing, updating, and implementing the Ozone Attainment Plan (MDAQMD 2004) which establishes a plan to implement, maintain, and enforce a program of emission control measures to attain and maintain the federal ozone air quality standards. Attainment plans prepared by the various air pollution control districts throughout the state are used to develop the SIP for the State of California. The proposed project is located within the MDAQMD and, thus, is subject to the rules and regulations of the MDAQMD.

Regional Air Quality Management Plan. The MDAQMD and SCAG are responsible for formulating and implementing the air quality attainment plan (AQAP) for the Basin. Regional AQAPs were adopted in 1991, 1994, and 1997. The following SIP and AQAP are the currently approved plans for the Basin region:

- 1997 SIP for O_3, PM10, and NO_2
- 1995 Mojave Desert Planning Area Federal PM10 Attainment Plan; no formal action by the EPA

The MDAQMD completed the MDAQMD 2004 Ozone Attainment Plan (State and federal) in April 2004, which has been approved by the EPA.

MDAQMD. The MDAQMD is downwind of the Los Angeles basin and the San Joaquin Valley. Prevailing winds transport ozone and ozone precursors from both regions into and through the MDAB during the summer ozone season. These transport couplings have been officially recognized by the CARB. Local MDAQMD emissions contribute to exceedances of both the NAAQS and CAAQS for ozone, but photochemical ozone modeling conducted by the MDAQMD and CARB indicates that the MDAB would be in attainment of both standards without the influence of this transported air pollution from upwind regions. Therefore, emissions reductions in the upwind area are critical to the attainment demonstration.

The following includes, but is not limited to, the MDAQMD rules that are applicable to the proposed project:

- Rule 201 (Permit to Construct) - requires written authorization to build, erect, install, alter, or replace any equipment, the use of which may cause the issuance of air contaminants or the use of which may eliminate, reduce, or control the issuance of air contaminants. With respect to the proposed project, this rule would apply to any stationary equipment that is not otherwise exempt from this rule as an insignificant source of air pollutants (see Rule 219).
- Rule 203 (Permit to Operate) - requires written authorization to operate any equipment, the use of which may cause the issuance of air pollutants, or the use of which may reduce or control the issuance of air contaminants. With respect to the proposed project, this rule would apply to any stationary equipment that is not otherwise exempt from this rule as an insignificant source of air pollutants (see Rule 219).
- Rule 219 (Equipment Not Requiring A Written Permit Pursuant to Regulation II) - specifies stationary sources that the MDAQMD considers to be insignificant sources of air pollutants that are exempt from Rules 201 and 202. With respect to the proposed project, the following sources would be exempt from permit requirements:
  - Comfort air conditioning or ventilating systems which are not designed or used to remove air contaminants generated by, or released from, specific equipment units;
  - Space heaters;
  - Equipment used exclusively for steam cleaning;
- Rule 402 (Nuisance) - This rule specifies that a person may 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.
- Rule 403.2 (Fugitive Dust Control for the Mojave Desert Planning Area) - This rule requires owners or operators of a construction or demolition fugitive dust source to implement the fugitive dust control measures listed in Rule 403.2. These measures include periodic watering for short-term stabilization of disturbed surface area to minimize visible dust emissions, stabilization of graded surfaces if no development is planned within 30 days, reducing non-essential earth moving activity under high wind conditions, and more. In

addition, for sites over 100 acres such as the proposed project, the control measures in Rule 403.2 must also be implemented. The additional control measures include preparing and submitting a dust control plan to the MDAQMD prior to commencing earth-moving activities. The dust control plan must describe all applicable dust control measures that will be implemented at the project site. Other additional control measures to minimize visible fugitive dust for sites over 100 acres include stabilizing access routes, maintaining natural topography to the extent possible, and constructing paved roads and parking lots first where feasible.

- Rule 1113 (Architectural Coatings) - This rule requires manufacturers, distributors, and end-users of architectural and industrial maintenance coatings to reduce VOC emissions from the use of these coatings, primarily by placing limits on the VOC content of various coating categories.
- Rule 1160 (Internal Combustion Engines) - This rule establishes limits for VOC, NOx, and CO emissions associated with stationary internal combustion engines. However, the provisions of the rule do not apply to the following engines:
  - All internal combustion engines rated at less than 500 brake horsepower;
  - All internal combustion engines operated less than 100 hours within any continuous four consecutive calendar quarter period; and
  - Emergency internal combustion engines.

Regulation XIII (New Source Review) - For new and modified stationary sources subject to permitting requirements (see Rule 201), this series of rules prescribes the use of Best Available Control Technology and the provision of emission offsets (i.e., mitigation) for equipment whose emissions exceed specified thresholds. The applicability of these requirements would be determined upon submittal of an application for permit to construct under Rule 201.

To assist in the establishment of a quantitative determination of what is considered "significant," the MDAQMD has published significance thresholds that apply to new projects constructed or operated within the MDAQMD.

Thresholds. The MDAQMD recommends that lead agencies apply these thresholds in determining whether a proposed project would result in a significant air quality impact. If the lead agency finds that a proposed project has the potential to exceed these air pollution thresholds, the project would be considered significant. The MDAQMD has defined thresholds for NOx, VOC, SOx, CO, and PM10, hereinafter referred to as "criteria" pollutants, and for health risk in terms of cancer and non-cancer risk (MDAQMD 2009). Any project is significant if it:

1. Generates total emissions (direct and indirect) in excess of the thresholds given in Table 6; and/or
2. Generates a violation of any ambient air quality standard when added to the local background*; and/or

3. Does not conform with the applicable attainment or maintenance plan(s)*[2]; and/or
4. Exposes sensitive receptors to substantial pollutant concentrations, including those resulting in a cancer risk greater than or equal to 10 in one million and/or a Hazard Index (HI) (non-cancerous) greater than or equal to one*.

* These significance thresholds are not applicable to all projects. In general, the emissions comparison (criteria number 1) is sufficient.

Southern California Association of Governments

The SCAG is the regional planning agency for Los Angeles, Orange, Ventura, Riverside, San Bernardino and Imperial Counties and addresses regional issues relating to transportation, the economy, community development and the environment. SCAG is the Federally designated MPO for the majority of the southern California region and is the largest MPO in the nation. With respect to air quality planning, SCAG has prepared the Regional Transportation Plan and Regional Transportation Improvement Plan (RTIP), which addresses regional development and growth forecasts. These plans form the basis for the land use and transportation components of the AQMP, which are utilized in the preparation of air quality forecasts and in the consistency analysis included in the AQMP. The Regional Transportation Plan, Regional Transportation Improvement Plan, and AQMP are based on projections originating within the City and County General Plans.

5. Local – County of San Bernardino

Local jurisdictions, such as the County of San Bernardino, have the authority and responsibility to reduce air pollution through its police power and decision-making authority. Specifically, the County is responsible for the assessment and mitigation of air emissions resulting from its land use decisions. The County is also responsible for the implementation of transportation control measures as outlined in the 2007 and 2012 AQMP and MDAQMD Attainment Plans. Examples of such measures include bus turnouts, energy-efficient streetlights, and synchronized traffic signals. In accordance with CEQA requirements and the CEQA review process, the County assesses the air quality impacts of new development projects, requires mitigation of potentially significant air quality impacts by conditioning discretionary permits, and monitors and enforces implementation of such mitigation.

In accordance with the CEQA requirements, the County does not, however, have the expertise to develop plans, programs, procedures, and methodologies to ensure that air quality within the County and region will meet federal and state standards. Instead, the County relies on the expertise of the SCAQMD and MDAQMD and utilizes the SCAQMD CEQA Handbook and MDAQMD California Environmental Quality Act (CEQA) And Federal Conformity Guidelines (depending on the location/jurisdiction of

[2] A project is deemed to not exceed this threshold, and hence not be significant, if it is consistent with the existing land use plan. Zoning changes, specific plans, general plan amendments and similar land use plan changes which do not increase dwelling unit density, do not increase vehicle trips, and do not increase vehicle miles traveled are also deemed to not exceed this threshold.

the project) as guidance documents for the environmental review of plans and development proposals within its jurisdiction.

The County of San Bernardino General Plan contains the following air quality-related goals and policies that are applicable to the proposed project:

Goal CO 4: The County will ensure good air quality for its residents, businesses, and visitors to reduce impacts on human health and the economy.

CO 4.1 Because developments can add to the wind hazard (due to increased dust, the removal of wind breaks, and other factors), the County will require either as mitigation measures in the appropriate environmental analysis required by the County for the development proposal or as conditions of approval if no environmental document is required, that developments in areas identified as susceptible to wind hazards to address site-specific analysis of:

a. Grading restrictions and/or controls on the basis of soil types, topography or season.
b. Landscaping methods, plant varieties, and scheduling to maximize successful revegetation.
c. Dust-control measures during grading, heavy truck travel, and other dust generating activities.

CO 4.2 Coordinate air quality improvement technologies with the South Coast Air Quality Management District (SCAQMD) and the Mojave Desert Air Quality Management District (MDAQMD) to improve air quality through reductions in pollutants from the region.

CO 4.4 Because congestion resulting from growth is expected to result in a significant increase in the air quality degradation, the County may manage growth by insuring the timely provision of infrastructure to serve new development.

Programs

1. Consistent with the land use designations in the Land Use Policy Map (see the Land Use Element) that will improve growth management at a subregional level in relation to major activity centers, review new development to encourage new intensified development around transit nodes and along transit corridors.
2. Locate and design new development in a manner that will minimize direct and indirect emission of air contaminants through such means as:
    a. Promoting mixed-use development to reduce the length and frequency of vehicle trips;
    b. Providing for increased intensity of development along existing and proposed transit corridors; and
    c. Providing for the location of ancillary employee services (including but not limited to child care, restaurants, banking

facilities, convenience markets) at major employment centers for the purpose of reducing midday vehicle trips.

d. The County shall comply, to the extent feasible, with the recommendations on siting new sensitive land uses, as recommended in California Air Resources Board's Air Quality and Land Use Handbook: A Community Health Perspective, which includes the following:

Notable siting recommendations include avoiding siting new sensitive land uses within:

- 500 feet of a freeway, urban roads with 100,000 vehicles/day, or rural roads with 50,000 vehicles/day;
- 1,000 feet of a distribution center (that accommodates more than 100 trucks per day, more than 40 trucks with operating transport refrigeration units per day, or where transport refrigeration units exceed 300 hours per week);
- 1,000 feet of a chrome plater;
- 300 feet of any dry cleaning operation; and 300 feet of a large gas station (defined as a facility with a through put of 3.6 million gallons per year or greater); a 50 foot separation is recommended for typical gas dispensing facilities.

3. Incorporate phasing policies and requirements in the General Plan and development plans to achieve timely provision of infrastructure (particularly transportation facilities) to serve development through:
   a. Tying growth to Level of Service (LOS) standards; and
   b. Using phasing areas to manage growth.

CO 4.5 Reduce emissions through reduced energy consumption.

Programs

1. Implement programs to phase in energy conservation improvements through the annual budget process.

CO 4.6 Provide incentives such as preferential parking for alternative-fuel vehicles (e.g., CNG or hydrogen).

CO 4.13 Reduce Greenhouse Gas (GHG) emissions within the County boundaries.

Programs

1. Emission Inventories. The County will prepare GHG emissions inventories including emissions produced by: (1) the County's operational activities, services and facilities, over which the County has direct responsibility and control, and (2) private industry and development, that is located within the area subject to the County's discretionary land use authority.
   a) Establish an inventory of existing GHG emissions.

b) Establish a projected inventory for year 2020.

2. GHG Emissions Reduction Plan. The County will adopt a GHG Emissions Reduction Plan that includes:
   a) Measures to reduce GHG emissions attributable to the County's operational activities, services and facilities, over which the County has direct responsibility and control; and,
   b) Measures to reduce GHG emissions produced by private industry and development that is located within the area subject to the County's discretionary land use authority and ministerial building permit authority; and,
   c) Implementation and monitoring procedures to provide periodic review of the plan's progress and allow for adjustments overtime to ensure fulfillment of the plan's objectives.

County of San Bernardino Development Code

83.01.040 - Air Quality.

(a) **Equipment permit and Inspection Requirements.** Required permits shall be obtained from either the Mojave Air Pollution Management District or the South Coast Air Quality Management District depending on the location of the subject property and equipment for equipment that may cause air pollution. Before the equipment may be constructed, plans and specifications shall be submitted to the appropriate District for approval.

(b) **Permits from Air Quality Management Districts.** Permits shall be obtained from either the Mojave Air Pollution Management District or the South Coast Air Quality Management District depending on the location of the subject property and equipment. If requested by the Director, uses, activities, or processes that require Air Quality Management District approval to operate shall file a copy of the permit with the Department within 30 days of its approval.

(c) **Diesel Exhaust Emissions Control Measures.** The following emissions control measures shall apply to all discretionary land use projects approved by the County on or after January 15, 2009:

1. **On-Road Diesel Vehicles.** On-road diesel vehicles are regulated by the State of California Air Resources Board.
2. **Off-Road Diesel Vehicle/Equipment Operations.** All business establishments and contractors that use off-road diesel vehicle/equipment as part of their normal business operations shall adhere to the following measures during

their operations in order to reduce diesel particulate matter emissions from diesel fueled engines:

a. Off-road vehicles/equipment shall not be left idling on site for periods in excess of five minutes. The idling limit does not apply to:
   i. Idling when queuing,
   ii. Idling to verify that the vehicle is in safe operating condition,
   iii. Idling for testing, servicing, repairing, or diagnostic purposes,
   iv. Idling necessary to accomplish work for which the vehicle was designed (such as operating a crane),
   v. Idling required to bring the machine system to operating temperature, and
   vi. Idling necessary to ensure safe operation of the vehicle

b. Use reformulated ultra-low sulfur diesel fuel in equipment and use equipment certified by the U.S. Environmental Protection Agency (EPA) or that pre-dates EPA regulations.
c. Maintain engines in good working order to reduce emissions.
d. Signs shall be posted requiring vehicle drivers to turn off engines when parked.
e. Any requirements or standards subsequently adopted by the South Coast Air Quality Management District, the Mojave Air Quality Management District, or the California Air Resources Board.
f. Provide temporary traffic control during all phases of construction.
g. On-site electrical power connections shall be provided for electric construction tools to eliminate the need for diesel-powered electric generators, where feasible.
h. Maintain construction equipment engines in good working order to reduce emissions. The developer shall have each contractor certify that all construction equipment is properly serviced and maintained in good operating condition.
i. Contractors shall use ultra-low sulfur diesel fuel for stationary construction equipment as required by Air Quality Management District (AQMD) Rules 431.1 and 431.2 to reduce the release of undesirable emissions.
j. Substitute electric and gasoline-powered equipment for diesel-powered equipment, where feasible.

3. **Project Design.** Distribution centers, warehouses, truck stops and other facilities with loading docks where diesel trucks may reside overnight or for periods in excess of three hours shall be designed to enable any vehicle using these facilities to utilize on-site electrical connections to power the heating and air conditioning of the cabs of such trucks, instead of operating the diesel engines and diesel refrigeration units of such trucks and trailers for these purposes. This requirement shall also apply to Recreational Vehicle Parks (as defined in Section 810.01.200(k) of this title) and other development projects where diesel engines may reasonably be expected to operate on other than an occasional basis.

B. Monitored Air Quality

The MDAQMD maintains an air-monitoring network that measures levels of several air pollutants throughout the air basin. Since not all air monitoring stations measure all of the tracked pollutants, the data from the following four monitoring stations, listed in the order of proximity to the project site have been used. The nearest air monitoring station to the project site is the Barstow monitoring station (Barstow Station) located approximately 18.98 miles southwest of the project site at 200 E Buena Vista, Barstow. The next nearest monitoring station to the project site is the Victorville -14306 Park Avenue monitoring station (Victorville Station) located approximately 46.55 miles southwest of the project site at 14306 Park Avenue, Victorville. Table 5 presents the monitored pollutant levels from the Barstow and Victorville Stations. However, it should be noted that due to the air monitoring station distance from the project site, recorded air pollution levels at the air monitoring station reflect with varying degrees of accuracy, local air quality conditions at the project site.

The monitoring data presented in Table 5 shows that ozone and particulate matter (PM10 and PM2.5) are the air pollutants of primary concern in the project area, which are detailed below.

Ozone

Ozone is a secondary pollutant as it is not directly emitted. Ozone is the result of chemical reactions between other pollutants, most importantly hydrocarbons and NO_2, which occur only in the presence of bright sunlight. Pollutants emitted from upwind cities react during transport downwind to produce the oxidant concentrations experienced in the area. Many areas of the SCAQMD and MDAQMD contribute to the ozone levels experienced at the monitoring station, with the more significant areas being those directly upwind.

During the 2013 to 2015 monitoring period, the State 1-hour concentration standard for ozone was exceeded for only one day in 2013 at the Barstow Station. The Federal 8-hour ozone standard was exceeded between 18 and 33 days each year over the past three years at the Barstow Station.

Carbon Monoxide
CO is another important pollutant that is due mainly to motor vehicles. The Barstow Station did not record an exceedance of the state or federal 1-hour or 8-hour CO standards for the last three years.

Nitrogen Dioxide
The Barstow Station did not record an exceedance of the State or Federal NO_2 standards for the last three years.

Particulate Matter
The State 24-hour concentration standards for PM10 was exceeded for only one day in 2013 over the past three years at the Barstow Station. Over the past three years the Federal 24-hour standard for PM10 was exceeded for only one day in 2014 at the Barstow Station.

Over the past three years the Federal standard for PM2.5 has been exceeded for only one day in 2015 at the Victorville Station. The annual average PM2.5 concentration has not exceeded either the State or Federal standard for the past three years. There does not appear to be a noticeable trend for PM10 or PM2.5 in either maximum particulate concentrations or days of exceedances in the area.

Particulate levels in the area are due to natural sources, grading operations, and motor vehicles. According to the EPA, some people are much more sensitive than others to breathing fine particles (PM10 and PM2.5). People with influenza, chronic respiratory and cardiovascular diseases, and the elderly may suffer worsening illness and premature death due to breathing these fine particles. People with bronchitis can expect aggravated symptoms from breathing in fine particles. Children may experience decline in lung function due to breathing in PM10 and PM2.5. Other groups considered sensitive are smokers and people who cannot breathe well through their noses. Exercising athletes are also considered sensitive, because many breathe through their mouths during exercise.

Table 3

State and Federal Criteria Pollutant Standards[1]

Air Pollutant	Concentration / Averaging Time		Most Relevant Effects
	California Standards	Federal Primary Standards	
Ozone (O_3)	0.09 ppm/1-hour 0.07 ppm/8-hour	0.070 ppm/8-hour	(a) Decline in pulmonary function and localized lung edema in humans and animals; (b) Risk to public health implied by alterations in pulmonary morphology and host defense in animals; (c) Increased mortality risk; (d) Risk to public health implied by altered connective tissue metabolism and altered pulmonary morphology in animals after long-term exposures and pulmonary function decrements in chronically exposed humans; (e) Vegetation damage; and (f) Property damage.
Carbon Monoxide (CO)	20.0 ppm/1-hour 9.0 ppm/8-hour	35.0 ppm/1-hour 9.0 ppm/8-hour	(a) Aggravation of angina pectoris and other aspects of coronary heart disease; (b) Decreased exercise tolerance in persons with peripheral vascular disease and lung disease; (c) Impairment of central nervous system functions; and (d) Possible increased risk to fetuses.
Nitrogen Dioxide (NO_2)	0.18 ppm/1-hour 0.03 ppm/annual	100 ppb/1-hour 0.053 ppm/annual	(a) Potential to aggravate chronic respiratory disease and respiratory symptoms in sensitive groups; (b) Risk to public health implied by pulmonary and extra-pulmonary biochemical and cellular changes and pulmonary structural changes; and (c) Contribution to atmospheric discoloration.
Sulfur Dioxide (SO_2)	0.25 ppm/1-hour 0.04 ppm/24-hour	75 ppb/1-hour 0.14 ppm/24-hour	(a) Bronchoconstriction accompanied by symptoms which may include wheezing, shortness of breath and chest tightness, during exercise or physical activity in persons with asthma.
Suspended Particulate Matter (PM_{10})	50 µg/m^3/24-hour 20 µg/m^3/annual	150 µg/m^3/24-hour	(a) Exacerbation of symptoms in sensitive patients with respiratory or cardiovascular disease; (b) Declines in pulmonary function growth in children; (c) Increased risk of premature death from heart or lung diseases in elderly.
Suspended Particulate Matter ($PM_{2.5}$)	12 µg/m^3 / annual	35 µg/m^3/24-hour 12 µg/m^3/annual	
Sulfates	25 µg/m^3/24-hour	No Federal Standards	(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.
Lead	1.5 µg/m^3/30-day	0.15 µg/m^3/3-month rolling	(a) Learning disabilities; (b) Impairment of blood formation and nerve conduction.
Visibility Reducing Particles	Extinction coefficient of 0.23 per kilometer-visibility of 10 miles or more due to particles when humidity is less than 70 percent.	No Federal Standards	Visibility impairment on days when relative humidity is less than 70 percent.

[1] Source: http://www.arb.ca.gov/research/aaqs/aaqs2.pdf .

Table 4

Attainment Status of MDAQMD[1]-Portion of Mojave Desert Air Basin[2]

Pollutant	Federal Designation	State Designation
1-Hour Ozone	Revoked June 2005	--
8-Hour Ozone	Nonattainment: Moderate	Nonattainment
CO	Attainment	Attainment
PM10	Nonattainment: Moderate	Nonattainment
PM2.5	Unclassified/ attainment	Nonattainment
Lead	Attainment	Attainment
SO_2	Attainment/ unclassified	Attainment/ unclassified
NO_2	Attainment/ unclassified	Attainment/ unclassified

[1] MDAQMD = Mojave Desert Air Quality Management District.

[2] Source: California Air Resources Board (2013) (http://www.arb.ca.gov/desig/desig.htm).

Table 5

Local Area Air Quality Monitoring Summary[1]

Pollutant (Standard)[2]	Year		
	2013	2014	2015
Ozone:			
Maximum 1-Hour Concentration (ppm)	0.099	0.094	0.090
Days > CAAQS (0.09 ppm)	**1**	0	0
Maximum 8-Hour Concentration (ppm)	0.092	0.087	0.082
Days > NAAQS (0.07 ppm)	**27**	**33**	**18**
Days > CAAQS (0.070 ppm)	**61**	**65**	**46**
Carbon Monoxide:			
Maximum 1-Hour Concentration (ppm)	*	*	*
Days > NAAQS (20 ppm)	0	0	0
Days > NAAQS (9 ppm)	0	0	0
Nitrogen Dioxide:			
Maximum 1-Hour Concentration (ppm)	0.0849	0.0693	0.0613
Days > NAAQS (0.25 ppm)	0	0	0
Inhalable Particulates (PM10):			
Maximum 24-Hour Concentration (ug/m^3)	87.1	305.8	145.5
Days > NAAQS (150 ug/m^3)	0	**1**	0
Days > CAAQS (50 ug/m^3)	**1**	*	*
Annual Arithmetic Mean (AAM) (ug/m^3)	24.8	27.7	23.6
Annual > NAAQS (50 ug/m^3)	No	No	No
Ultra-Fine Particulates (PM2.5):[3]			
Maximum 24-Hour Concentration (pg/m^3)	13.8	24.1	50.2
Days > NAAQS (35 ug/m^3)	0	0	**1**
Annual Arithmetic Mean (AAM) (ug/m^3)	*	*	6.6
Annual > NAAQS (15 ug/m3)	*	*	No
Annual > CAAQS (12 ug/m^3)	*	*	No

[1] Source: http://www.arb.ca.gov/adam/

Unless otherwise noted data obtained from the Barstow Station.

[2] CAAQS = California Ambient Air Quality Standard; NAAQS = National Ambient Air Quality Standard; ppm = parts per million.

[3] Data obtained from Victorville - 14306 Park Avenue Station.

* = Insufficient data available to determine value

V. AIR QUALITY STANDARDS

A. Regional Air Quality

According to the MDAQMD, a project is non-conforming if it conflicts with or delays implementation of any applicable attainment or maintenance plan. A project is conforming if it complies with all applicable MDAQMD rules and regulations, complies with all proposed control measures that are not yet adopted from the applicable plan(s), and it is consistent with the growth forecasts in the applicable plan(s) (or is directly included in the applicable plan).

Violation of Air Quality Standards or Substantial Contribution to Air Quality Violations. The MDAQMD currently recommends that projects with construction-related and/or operational emissions that exceed any of the following emissions thresholds should be considered significant:

- 25 tons per year or 137 pounds per day pounds per day of VOC
- 25 tons per year or 137 pounds per day of NOx
- 100 tons per year or 548 pounds per day of CO
- 25 tons per year or 137 pounds per day of SOx
- 15 tons per year or 82 pounds per day of PM10
- 15 tons per year or 82 pounds per day of PM2.5

For the purposes to this air quality impact analysis, a regional air quality impact would be considered significant if emissions exceed the MDAQMD significance thresholds identified above and in Table 6.

B. Toxic Air Contaminants

According to the MDAQMD CEQA Guidelines, any project that has the potential to expose the public to toxic air contaminants in excess of the following thresholds would be considered to have a significant air quality impact:

- If the Maximum Incremental Cancer Risk is 10 in one million or greater; or
- Toxic air contaminants from the proposed project would result in a Hazard Index increase of 1 or greater.

Residences, schools, daycare centers, playgrounds and medical facilities are considered sensitive receptor land uses. The following project types proposed for sites within the specified distance to an existing or planned (zoned) sensitive receptor land use must be evaluated using significance threshold criteria number 4 (refer to the significance threshold discussion in Section IV, A, 4 above).

C. Greenhouse Gases

The County of San Bernardino adopted its "Greenhouse Gas Emissions Reduction Plan" in December 2011. The purpose of the GHG Reduction Plan is to reduce the County's internal

and external GHG emissions by 15 percent below current (2011) levels by year 2020. The GHG Reduction Plan includes a two-tiered development review procedure to determine if a project could result in a significant impact related greenhouse gas emissions or otherwise comply with the Plan pursuant to Section 15183.5 of the state CEQA Guidelines.

The initial screening procedure is to determine if a project will emit 3,000 metric tons of carbon dioxide equivalents (MTCO2e) per year or more. Projects that do not exceed this threshold require no further climate change analysis. Projects exceeding this threshold must meet a minimum 31 percent emissions reduction in order to garner a less than significant determination. This can be met by either (1) achieving 100 points from a menu of mitigation options provided in the GHG Plan or (2) quantifying proposed reduction measures. Projects failing to meet the 31 percent reduction threshold would have a potentially significant impact related to climate change and greenhouse gas emissions.

As shown in Table 6, the MDAQMD has identified thresholds of 100,000 tons per year or 548,000 pounds per day of CO2e emissions for individual projects. The GHG Reduction Plan screening threshold of 3,000 MTCO2e per year and the MDAQMD thresholds of 100,000 MTCO2e per year and 548,000 pounds per day of CO2e are used as thresholds of significance in this analysis.

Table 6

MDAQMD Air Quality Significance Thresholds[1]

Pollutant	Annual Thresholds (tons/year)	Daily Thresholds (lbs/day)
NOx	25	137
VOC	25	137
PM10	15	82
PM2.5	15	82
SOx	25	137
CO	100	548
Lead	0.6	3
Greenhouse Gases (CO2e)	100,000	548,000

[1] Source: http://www.mdaqmd.ca.gov/Modules/ShowDocument.aspx?documentid=2910

VI. SHORT-TERM CONSTRUCTION IMPACTS

Construction activities associated with the proposed project would have the potential to generate air emissions, toxic air contaminant emissions, and odor impacts. Assumptions for the phasing, duration, and required equipment for the construction of the proposed project were obtained from the project applicant. Phase 1 and Phase 2 are anticipated to be constructed simultaneously. Phase 1 and Phase 2 construction activities are anticipated to include: grading of 89.45 acres, construction of 6,260 square feet of office structures, with 2,400 square feet of restrooms, and an approximately 33.14 acre City park (as there is not a recreational lake/pond use in CalEEMod the City park was used to incorporate the 25 acres of recreational lake/pond. The City park acreage also includes landscaping within the RV park, which is approximately 30 percent of the total acreage of the RV park), paving of 67 standard parking spaces and 224 RV camping spaces (modeled as mobile homes in CalEEMod; parking lot paving is approximately 70 percent of the total acreage of Phase 2) as well as paving of on-site roadways totaling 36.72 acres (on-site roadways are approximately 25 percent of the total net acreage of the entire project site without the areas allocated toward open space), and application of architectural coatings. Phase 3 construction activities are anticipated to include: grading of 14.1 acres, paving of 913 standard parking spaces (covering the entire 14.1 acre parking area), and application of architectural coatings. As all of the waterpark facilities are existing, no building construction is to be constructed in Phase 3. Phase 4 construction activities are anticipated to include: grading of 13.6 acres, construction of 45,727 square feet of commercial/retail buildings, paving of 498 standard parking spaces and 33 bus/trailer parking spaces, landscaping of approximately 2.35 acres, and application of architectural coatings. Phase 5 construction activities are anticipated to include: grading of 12.4 acres, construction of 97,241 square feet of office/administrative buildings, paving of 419 standard parking spaces and approximately 10 percent (1.24 acres) of Phase 5 as on-site roadways, landscaping of approximately 5.16 acres, and application of architectural coatings.

The proposed project is anticipated to start construction of Phase 1 and Phase 2 no earlier than May 2017 and be completed in June 2018. Phase 3 is anticipated to start construction April 2018 and be complete by May 2019. Phase 4 is anticipated to start construction April 2019 and be complete by December 2020. Phase 5 is anticipated to start construction April 2020 and be complete by December 2021. Phase 1 and Phase 2 of the project are to be operational in 2018, Phase 3 in 2019, Phase 4 in 2021, and Phase 5 in 2022.

A. Construction-Related Regional Impacts

The construction-related regional air quality impacts have been analyzed for both criteria pollutants and GHGs.

1. Construction-Related Criteria Pollutants Analysis

The following provides a discussion of the methodology used to calculate regional construction air emissions and an analysis of the proposed project's short-term construction emissions for the criteria pollutants.

Methodology

Typical emission rates from construction activities were obtained from CalEEMod Version 2016.3.1. CalEEMod is a computer model published by the SCAQMD for estimating air pollutant emissions. The CalEEMod program uses the EMFAC2014 computer program to calculate the emission rates specific for the Mojave Desert portion of San Bernardino County for construction-related employee vehicle trips and the OFFROAD2014 computer program to calculate emission rates for heavy truck operations. EMFAC2014 and OFFROAD2014 are computer programs generated by CARB that calculates composite emission rates for vehicles. Emission rates are reported by the program in grams per trip and grams per mile or grams per running hour. Using CalEEMod, the peak daily air pollutant emissions during each phase was calculated and presented below. These emissions represent the highest level of emissions for each of the construction phases in terms of air pollutant emissions. The details on construction assumptions and daily construction emissions printouts from CalEEMod are provided in Appendix B.

The phases of the construction activities which have been analyzed below are: 1) grading, 2) building construction, 3) paving, and 4) application of architectural coatings for Phases 1 through 5. See CalEEMod Output (see Appendix B) for details.

Per MDAQMD Rule 1113 as amended on April 23, 2012, the architectural coatings that would be applied after January 1, 2013 will be limited to an average of 150 grams per liter or less.

Project Impacts

The unmitigated construction-related criteria pollutant emissions for each phase are shown below in Tables 7, 9, 11, and 13, while the mitigated construction-related criteria pollutant emissions for each phase are shown in Tables 8, 10, 12, and 14. Tables 7, 9, 11, and 13 show that for each individual phase of construction none of the analyzed criteria pollutants would exceed the MDAQMD daily emissions thresholds. However, each of the construction phases potentially overlaps with that of the previous construction phase. The unmitigated overlapping construction emissions are shown in Table 15. Table 15 shows that the overlapping construction of Phases 1 and 2 plus Phase 3 would exceed the emissions thresholds of NOx. Therefore, mitigation is required during construction of Phases 1, 2 and 3.

Mitigated construction-related criteria pollutant emissions for the overlapping phases are shown in Table 16. Table 16 shows that with incorporation of mitigation measure 1 (MM1), which states the applicant would require the construction contractor to use construction equipment that have Tier 4 Final engines; none of the overlapping phases during construction of Phases 1, 2 and 3 would exceed regional emissions thresholds for any of the analyzed criteria pollutants.

Therefore, with incorporation of mitigation, a less than significant regional air quality impact would occur from construction of the proposed project.

B. Construction-Related Local Impacts

1. Construction-Related Toxic Air Contaminant Impacts

The greatest potential for toxic air contaminant emissions would be related to diesel particulate emissions associated with heavy equipment operations during construction of the proposed project. According to MDAQMD methodology, health effects from carcinogenic air toxics are usually described in terms of "individual cancer risk". "Individual Cancer Risk" is the likelihood that a person exposed to concentrations of toxic air contaminants over a 30-year lifetime will contract cancer, based on the use of standard risk-assessment methodology. Given the relatively limited number of heavy-duty construction equipment and the short-term construction schedule, the proposed project would not result in a long-term (i.e., 30 years) substantial source of toxic air contaminant emissions and corresponding individual cancer risk. Therefore, no significant short-term toxic air contaminant impacts would occur during construction of the proposed project.

2. Construction-Related Odor Impacts

Potential sources that may emit odors during construction activities include the application of materials such as asphalt pavement. The objectionable odors that may be produced during the construction process are of short-term in nature and the odor emissions are expected cease upon the drying or hardening of the odor producing materials. Due to the short-term nature and limited amounts of odor producing materials being utilized, no significant impact related to odors would occur during construction of the proposed project.

Table 7

Unmitigated Construction-Related Regional Pollutant Emissions for Phase 1 and Phase 2[1]

Activity	Pollutant Emissions (pounds/day)					
	VOC	NOx	CO	SO_2	PM10	PM2.5
Grading*						
On-Site[2]	5.75	67.94	38.78	0.06	6.90	4.28
Off-Site[3]	0.16	0.12	1.45	0.00	0.26	0.07
Subtotal	5.91	68.06	40.23	0.06	7.16	4.35
Building Construction						
On-Site[2]	3.11	26.55	18.18	0.03	1.79	1.68
Off-Site[3]	14.08	76.29	120.91	0.35	22.48	6.50
Subtotal	17.19	102.84	139.09	0.38	24.27	8.18
Paving						
On-Site[2]	7.08	17.52	14.80	0.02	0.96	0.88
Off-Site[3]	0.11	0.08	0.95	0.00	0.19	0.05
Subtotal	7.18	17.60	15.75	0.02	1.15	0.93
Architectural Coating						
On-Site[2]	74.26	2.01	1.85	0.00	0.15	0.15
Off-Site[3]	2.09	1.42	18.46	0.04	3.74	1.01
Subtotal	76.35	3.42	20.31	0.04	3.89	1.16
Total of Overlapping Construction Phases[4]	**100.73**	**123.86**	**175.15**	**0.44**	**29.31**	**10.27**
MDAQMD Thresholds	**137**	**137**	**548**	**137**	**82**	**82**
Exceeds Thresholds?	No	No	No	No	No	No

[1] Source: CalEEMod Version 2016.3.1 for Phase 1 (Recreational Lake/Pond) & Phase 2 (RV Park).

* includes fugitive dust control measures mandated by SCAQMD Rule 403 (used mitigated values for fugitive PM 10 and fugitive PM 2.5 and unmitigated values for off-road PM 10 and PM 2.5).

[2] On-site emissions from equipment operated on-site that is not operated on public roads.

[3] Off-site emissions from equipment operated on public roads.

[4] Construction phase, paving phase and painting phase may overlap.

Table 8

Mitigated Construction-Related Regional Pollutant Emissions for Phase 1 and Phase 2 [1]

Activity	Pollutant Emissions (pounds/day)					
	VOC	NOx	CO	SO_2	PM10	PM2.5
Grading						
On-Site[2]	0.76	3.30	33.00	0.06	3.93	1.55
Off-Site[3]	0.16	0.12	1.45	0.00	0.26	0.07
Subtotal	0.92	3.42	34.45	0.06	4.19	1.62
Building Construction						
On-Site[2]	0.33	2.23	17.46	0.03	0.04	0.04
Off-Site[3]	14.08	76.29	120.91	0.35	22.48	6.50
Subtotal	14.40	78.52	138.37	0.38	22.52	6.54
Paving						
On-Site[2]	5.71	1.22	17.30	0.02	0.04	0.04
Off-Site[3]	0.11	0.08	0.95	0.00	0.19	0.05
Subtotal	5.82	1.29	18.25	0.02	0.23	0.09
Architectural Coating						
On-Site[2]	74.00	0.13	1.83	0.00	0.00	0.00
Off-Site[3]	2.09	1.47	18.46	0.04	3.74	1.01
Subtotal	76.08	1.60	20.29	0.04	3.75	1.01
Total of Overlapping Construction Phases[4]	**96.31**	**81.42**	**176.91**	**0.44**	**26.50**	**7.65**
MDAQMD Thresholds	**137**	**137**	**548**	**137**	**82**	**82**
Exceeds Thresholds?	No	No	No	No	No	No

[1] Source: CalEEMod Version 2016.3.1 for Mitigated Phase 1 (Recreational Lake/Pond) & Phase 2 (RV Park).

[2] On-site emissions from equipment operated on-site that is not operated on public roads.

[3] Off-site emissions from equipment operated on public roads.

[4] Construction phase, paving phase and painting phase may overlap.

Table 9

Unmitigated Construction-Related Regional Pollutant Emissions for Phase 3 [1]

Activity	Pollutant Emissions (pounds/day)					
	VOC	NOx	CO	SO_2	PM10	PM2.5
Grading*						
On-Site[2]	5.09	59.52	35.09	0.06	5.09	3.73
Off-Site[3]	0.14	0.11	1.27	0.00	0.26	0.07
Subtotal	5.23	59.63	36.36	0.06	5.35	3.79
Paving						
On-Site[2]	1.82	17.52	14.80	0.02	0.96	0.88
Off-Site[3]	0.11	0.08	0.95	0.00	0.19	0.05
Subtotal	1.93	17.60	15.75	0.02	1.15	0.93
Architectural Coating						
On-Site[2]	9.76	1.84	1.84	0.00	0.13	0.13
Off-Site[3]	0.34	0.24	2.92	0.01	0.67	0.18
Subtotal	10.10	2.08	4.77	0.01	0.80	0.31
Total of Overlapping Construction Phases[4]	**12.03**	**19.68**	**20.51**	**0.03**	**1.95**	**1.24**
MDAQMD Thresholds	**137**	**137**	**548**	**137**	**82**	**82**
Exceeds Thresholds?	No	No	No	No	No	No

[1] Source: CalEEMod Version 2016.3.1 for Phase 3 (Waterpark)

* includes fugitive dust control measures mandated by SCAQMD Rule 403 (used mitigated values for fugitive PM 10 and fugitive PM 2.5 and unmitigated values for off-road PM 10 and PM 2.5).

[2] On-site emissions from equipment operated on-site that is not operated on public roads.

[3] Off-site emissions from equipment operated on public roads.

[4] Construction phase, paving phase and painting phase may overlap.

[5] Construction of Phase 3 is only that of the 14.1 acre waterpark parking lot as all waterpark facilities are existing and will not include building construction.

Table 10

Mitigated Construction-Related Regional Pollutant Emissions for Phase 3 [1]

Activity	Pollutant Emissions (pounds/day)					
	VOC	NOx	CO	SO_2	PM10	PM2.5
Grading						
On-Site[2]	0.76	3.30	33.00	0.06	2.56	1.40
Off-Site[3]	0.14	0.11	1.27	0.00	0.26	0.07
Subtotal	0.91	3.41	34.27	0.06	2.81	1.47
Paving						
On-Site[2]	0.46	1.22	17.30	0.02	0.04	0.04
Off-Site[3]	0.11	0.08	0.95	0.00	0.19	0.05
Subtotal	0.57	1.30	18.25	0.02	0.23	0.09
Architectural Coating						
On-Site[2]	9.52	0.13	1.83	0.00	0.00	0.00
Off-Site[3]	0.34	0.24	2.92	0.01	0.67	0.18
Subtotal	9.86	0.37	4.76	0.01	0.67	0.18
Total of Overlapping Construction Phases[4]	**10.43**	**1.67**	**23.00**	**0.03**	**0.90**	**0.27**
MDAQMD Thresholds	**137**	**137**	**548**	**137**	**82**	**82**
Exceeds Thresholds?	No	No	No	No	No	No

[1] Source: CalEEMod Version 2016.3.1 for Mitigated Phase 3 (Waterpark).

[2] On-site emissions from equipment operated on-site that is not operated on public roads.

[3] Off-site emissions from equipment operated on public roads.

[4] Construction phase, paving phase and painting phase may overlap.

[5] Construction of Phase 3 is only that of the 14.1 acre waterpark parking lot as all waterpark facilities are existing and will not include building construction.

Table 11

Unmitigated Construction-Related Regional Pollutant Emissions for Phase 4 [1]

Activity	Pollutant Emissions (pounds/day)					
	VOC	NOx	CO	SO_2	PM10	PM2.5
Grading*						
On-Site[2]	4.74	54.52	33.38	0.06	4.88	3.50
Off-Site[3]	0.13	0.09	1.12	0.00	0.26	0.07
Subtotal	4.87	54.61	34.50	0.07	5.14	3.57
Building Construction						
On-Site[2]	2.36	21.08	17.16	0.03	1.29	1.21
Off-Site[3]	1.18	7.34	9.62	0.04	2.29	0.65
Subtotal	3.54	28.42	26.79	0.06	3.58	1.87
Paving						
On-Site[2]	2.52	14.07	14.65	0.02	0.75	0.69
Off-Site[3]	0.09	0.06	0.76	0.00	0.19	0.05
Subtotal	2.61	14.13	15.41	0.02	0.95	0.74
Architectural Coating						
On-Site[2]	55.83	1.68	1.83	0.00	0.11	0.11
Off-Site[3]	0.18	0.12	1.47	0.00	0.37	0.10
Subtotal	56.01	1.80	3.30	0.01	0.48	0.21
Total of Overlapping Construction Phases[4]	**62.16**	**44.35**	**45.50**	**0.09**	**5.01**	**2.82**
MDAQMD Thresholds	**137**	**137**	**548**	**137**	**82**	**82**
Exceeds Thresholds?	No	No	No	No	No	No

[1] Source: CalEEMod Version 2016.3.1 for Phase 4 (Commercial/Retail).

* includes fugitive dust control measures mandated by SCAQMD Rule 403 (used mitigated values for fugitive PM 10 and fugitive PM 2.5 and unmitigated values for off-road PM 10 and PM 2.5).

[2] On-site emissions from equipment operated on-site that is not operated on public roads.

[3] Off-site emissions from equipment operated on public roads.

[4] Construction phase, paving phase and painting phase may overlap.

Table 12

Mitigated Construction-Related Regional Pollutant Emissions for Phase 4 [1]

Activity	Pollutant Emissions (pounds/day)					
	VOC	NOx	CO	SO_2	PM10	PM2.5
Grading						
On-Site[2]	0.76	3.30	33.00	0.06	2.60	1.41
Off-Site[3]	0.13	0.09	1.12	0.00	0.26	0.07
Subtotal	0.89	3.39	34.12	0.06	2.86	1.48
Building Construction						
On-Site[2]	0.39	2.92	17.46	0.03	0.14	0.14
Off-Site[3]	1.18	7.34	9.62	0.04	2.29	0.65
Subtotal	1.57	10.26	27.08	0.06	2.43	0.79
Paving						
On-Site[2]	1.44	1.22	17.30	0.02	0.04	0.04
Off-Site[3]	0.09	0.06	0.76	0.00	0.19	0.05
Subtotal	1.53	1.28	18.06	0.02	0.23	0.09
Architectural Coating						
On-Site[2]	55.62	0.13	1.83	0.00	0.00	0.00
Off-Site[3]	0.18	0.12	1.47	0.00	0.37	0.10
Subtotal	55.80	0.25	3.30	0.01	0.38	0.10
Total of Overlapping Construction Phases[4]	**58.90**	**11.79**	**48.44**	**0.09**	**3.04**	**0.99**
MDAQMD Thresholds	**137**	**137**	**548**	**137**	**82**	**82**
Exceeds Thresholds?	No	No	No	No	No	No

[1] Source: CalEEMod Version 2016.3.1 for Mitigated Phase 4 (Commercial/Retail).

[2] On-site emissions from equipment operated on-site that is not operated on public roads.

[3] Off-site emissions from equipment operated on public roads.

[4] Construction phase, paving phase and painting phase may overlap.

Table 13

Unmitigated Construction-Related Regional Pollutant Emissions for Phase 5 [1]

Activity	Pollutant Emissions (pounds/day)					
	VOC	NOx	CO	SO_2	PM10	PM2.5
Grading*						
On-Site[2]	4.45	50.20	31.96	0.06	4.66	3.31
Off-Site[3]	0.12	0.08	1.01	0.00	0.26	0.07
Subtotal	4.57	50.28	32.97	0.06	4.92	3.38
Building Construction						
On-Site[2]	2.12	19.19	16.85	0.03	1.12	1.05
Off-Site[3]	1.44	9.10	11.56	0.05	3.05	0.86
Subtotal	3.56	28.28	28.41	0.07	4.16	1.91
Paving						
On-Site[2]	1.78	12.92	14.65	0.02	0.68	0.62
Off-Site[3]	0.08	0.06	0.70	0.00	0.19	0.05
Subtotal	1.87	12.98	15.35	0.02	0.87	0.68
Architectural Coating						
On-Site[2]	101.27	1.53	1.82	0.00	0.09	0.09
Off-Site[3]	0.22	0.15	1.82	0.00	0.50	0.14
Subtotal	101.49	1.67	3.64	0.01	0.60	0.23
Total of Overlapping Construction Phases[4]	**106.92**	**42.93**	**47.40**	**0.11**	**5.63**	**2.81**
MDAQMD Thresholds	**137**	**137**	**548**	**137**	**82**	**82**
Exceeds Thresholds?	No	No	No	No	No	No

[1] Source: CalEEMod Version 2016.3.1 for Phase 5 (Office/Administrative).

* includes fugitive dust control measures mandated by SCAQMD Rule 403 (used mitigated values for fugitive PM 10 and fugitive PM 2.5 and unmitigated values for off-road PM 10 and PM 2.5).

[2] On-site emissions from equipment operated on-site that is not operated on public roads.

[3] Off-site emissions from equipment operated on public roads.

[4] Construction phase, paving phase and painting phase may overlap.

Table 14

Mitigated Construction-Related Regional Pollutant Emissions for Phase 5 [1]

Activity	Pollutant Emissions (pounds/day)					
	VOC	NOx	CO	SO_2	PM10	PM2.5
Grading						
On-Site[2]	0.76	3.30	33.00	0.06	2.59	1.41
Off-Site[3]	0.12	0.08	1.01	0.00	0.26	0.07
Subtotal	0.88	3.38	34.01	0.06	2.85	1.48
Building Construction						
On-Site[2]	0.33	2.23	17.46	0.03	0.04	0.04
Off-Site[3]	1.44	9.10	11.56	0.05	3.05	0.86
Subtotal	1.77	11.33	29.02	0.07	3.09	0.90
Paving						
On-Site[2]	0.81	1.22	17.30	0.02	0.04	0.04
Off-Site[3]	0.08	0.06	0.70	0.00	0.19	0.05
Subtotal	0.89	1.27	18.00	0.02	0.23	0.09
Architectural Coating						
On-Site[2]	101.08	0.13	1.83	0.00	0.00	0.00
Off-Site[3]	0.22	0.15	1.82	0.00	0.50	0.14
Subtotal	101.30	0.27	3.65	0.01	0.51	0.14
Total of Overlapping Construction Phases[4]	**103.96**	**12.88**	**50.67**	**0.11**	**3.82**	**1.13**
MDAQMD Thresholds	**137**	**137**	**548**	**137**	**82**	**82**
Exceeds Thresholds?	No	No	No	No	No	No

[1] Source: CalEEMod Version 2016.3.1 for Mitigated Phase 5 (Office/Administrative).

[2] On-site emissions from equipment operated on-site that is not operated on public roads.

[3] Off-site emissions from equipment operated on public roads.

[4] Construction phase, paving phase and painting phase may overlap.

Table 15

Unmitigated Construction-Related Regional Pollutant Emissions for Overlapping Phases [1]

Phases 1 & 2 Plus Phase 3 Activity	Pollutant Emissions (pounds/day)					
	VOC	NOx	CO	SO_2	PM10	PM2.5
Grading of Phase 3	5.23	59.63	36.36	0.06	5.35	3.79
Overlapping Building Construction, Paving, and Architectural Coating of Phases 1 & 2	100.73	123.86	175.15	0.44	29.31	10.27
Total	**105.96**	**183.49**	**211.51**	**0.51**	**34.66**	**14.07**
MDAQMD Thresholds	**137**	**137**	**548**	**137**	**82**	**82**
Exceeds Thresholds?	No	**Yes**	No	No	No	No

Phase 3 Plus Phase 4 Activity	Pollutant Emissions (pounds/day)					
	VOC	NOx	CO	SO_2	PM10	PM2.5
Grading of Phase 4	4.87	54.61	34.50	0.07	5.14	3.57
Architectural Coating of Phases 3	10.10	2.08	4.77	0.01	0.80	0.31
Total	**14.97**	**56.69**	**39.27**	**0.08**	**5.94**	**3.88**
MDAQMD Thresholds	**137**	**137**	**548**	**137**	**82**	**82**
Exceeds Thresholds?	No	No	No	No	No	No

Phase 4 Plus Phase 5 Activity	Pollutant Emissions (pounds/day)					
	VOC	NOx	CO	SO_2	PM10	PM2.5
Grading of Phase 5	4.57	50.28	32.97	0.06	4.92	3.38
Building Construction of Phase 4	3.54	28.42	26.79	0.06	3.58	1.87
Total	**8.12**	**78.70**	**59.76**	**0.13**	**8.50**	**5.24**
Building Construction of Phase 5	3.56	28.28	28.41	0.07	4.16	1.91
Overlapping Building Construction, Paving, and Architectural Coating of Phase 4	62.16	44.35	45.50	0.09	5.01	2.82
Total	**65.72**	**72.63**	**73.91**	**0.17**	**9.18**	**4.73**
MDAQMD Thresholds	**137**	**137**	**548**	**137**	**82**	**82**
Exceeds Thresholds?	No	No	No	No	No	No

[1] Source: CalEEMod Version 2016.3.1 for overlapping construction phases.

* includes fugitive dust control measures mandated by SCAQMD Rule 403 (used mitigated values for fugitive PM 10 and fugitive PM 2.5 and unmitigated values for off-road PM 10 and PM 2.5).

Table 16

Mitigated Construction-Related Regional Pollutant Emissions for Overlapping Phases [1]

Phases 1 & 2 Plus Phase 3 Activity	Pollutant Emissions (pounds/day)					
	VOC	NOx	CO	SO_2	PM10	PM2.5
Grading of Phase 3	0.91	3.41	34.27	0.06	2.81	1.47
Overlapping Building Construction, Paving, and Architectural Coating of Phases 1 & 2	96.31	81.42	176.91	0.44	26.50	7.65
Total	**97.21**	**84.82**	**211.18**	**0.51**	**29.31**	**9.12**
MDAQMD Thresholds	**137**	**137**	**548**	**137**	**82**	**82**
Exceeds Thresholds?	No	No	No	No	No	No

Phase 3 Plus Phase 4 Activity	Pollutant Emissions (pounds/day)					
	VOC	NOx	CO	SO_2	PM10	PM2.5
Grading of Phase 4	0.89	3.39	34.12	0.06	2.86	1.48
Architectural Coating of Phases 3	9.86	0.37	4.76	0.01	0.67	0.18
Total	**10.75**	**3.77**	**38.88**	**0.07**	**3.53**	**1.66**
MDAQMD Thresholds	**137**	**137**	**548**	**137**	**82**	**82**
Exceeds Thresholds?	No	No	No	No	No	No

Phase 4 Plus Phase 5 Activity	Pollutant Emissions (pounds/day)					
	VOC	NOx	CO	SO_2	PM10	PM2.5
Grading of Phase 5	0.88	3.38	34.01	0.06	2.85	1.48
Building Construction of Phase 4	1.57	10.26	27.08	0.06	2.43	0.79
Total	**2.46**	**13.64**	**61.10**	**0.13**	**5.28**	**2.27**
Building Construction of Phase 5	1.77	11.33	29.02	0.07	3.09	0.90
Overlapping Building Construction, Paving, and Architectural Coating of Phase 4	58.90	11.79	48.44	0.09	3.04	0.99
Total	**60.67**	**23.12**	**77.47**	**0.17**	**6.13**	**1.88**
MDAQMD Thresholds	**137**	**137**	**548**	**137**	**82**	**82**
Exceeds Thresholds?	No	No	No	No	No	No

[1] Source: CalEEMod Version 2016.3.1 for mitigated overlapping construction phases.

VII. LONG-TERM AIR QUALITY OPERATIONAL IMPACTS

The on-going operation of the proposed project would result in a long-term increase in air quality emissions. This increase would be due to emissions from the project-generated vehicle trips and through operational emissions from the on-going use of the proposed project. The following section provides an analysis of potential long-term air quality impacts due to: regional air quality impacts with the on-going operations of the proposed project.

A. Operations-Related Regional Air Quality Impacts

The potential operations-related air emissions have been analyzed below for the criteria pollutants and cumulative impacts.

1. Operations-Related Criteria Pollutant Analysis

The air quality impacts created by vehicle trips associated with the proposed project have been analyzed by using the trip generation provided in the project-specific traffic impact analysis (TIA) conducted by Fehr and Peers. Per the TIA, Park uses generate 4.56 trips/acres weekdays and 5.61 trips/acre weekends, general office building uses generate 11 trips/TSF weekdays and 2.46 trips/TSF on weekends, shopping center uses generate 42.71 trips/TSF weekdays and 49.99 trips/TSF on weekends; the waterslide park will generate 2,073 trips weekdays and 2,657 trips on weekends, which converts to 40 trips/TSF weekdays and 48.7 trips/TSF on weekends. The general office building uses and shopping center uses trip generation rates given in the TIA also match the CalEEMod default trip generation rates for these particular land uses. CalEEMod defaults were used for mobile home park (RV Park) trip generation park as daily trips were not provided for the RV park in TIA.

The daily operations emissions printouts from the CalEEMod model are provided in Appendix B, the annual emissions are provided in Appendix C.

The CalEEMod model has standardized emission rates for electrical usage, natural gas appliances, landscape maintenance equipment, and architectural coatings. The program then multiplies these rates by the number of square feet proposed for the project being analyzed.

Per MDAQMD Rule 1113 as amended on April 23, 2012, the architectural coatings that would be applied after January 1, 2014 will be limited to an average of 150 grams per liter or less. No changes were made to the default area source parameters.

The annual VOC, NOx, CO, SO_x, PM10, and PM2.5 emissions created from the proposed project's long-term operations have been calculated for all phases and are summarized below in Table 17. Table 17 also includes the total emissions for Phases 1 through 5 together. The data provided in Table 17 shows that for the on-going operations activities for each individual phase of the proposed project, none of the operational criteria pollutant emissions would exceed the MDAQMD annual thresholds of significance discussed above in Section V. Furthermore, when all of the

phases are totaled together, the project still does not exceed the MDAQMD annual thresholds of significance. Therefore, operation of the proposed project would not create a significant regional impact from operational emissions.

2. Cumulative Regional Air Quality Impacts

Cumulative projects include local development as well as general growth within the project area. However, as with most development, the greatest source of emissions is from mobile sources, which travel well out of the local area. Therefore, from an air quality standpoint, the cumulative analysis would extend beyond any local projects and when wind patterns are considered, would cover an even larger area. Accordingly, the cumulative analysis for the project's air quality must be generic by nature.

The project area is out of attainment for both ozone and particulate matter. Construction and operation of cumulative projects will further degrade the air quality of the Mojave Desert Air Basin. The greatest cumulative impact on the quality of regional air cell will be the incremental addition of pollutants mainly from increased traffic from residential, commercial, and industrial development and the use of heavy equipment and trucks associated with the construction of these projects. Air quality will be temporarily degraded during construction activities that occur separately or simultaneously. However, in accordance with the MDAQMD methodology, projects that do not exceed the MDAQMD criteria or can be mitigated to less than criteria levels are not significant and do not add to the overall cumulative impact. With respect to long-term emissions, this project would create a less than significant cumulative impact.

3. Operations-Related Odor Impacts

Potential sources that may emit odors during the on-going operations of the proposed project would include odor emissions from diesel truck emissions and trash storage areas. As the project is that of recreational uses (RV park, waterpark, and lake/pond), office/administrative uses, and commercial/retail uses, no significant impact related to odors would occur during the on-going operations of the proposed project.

4. Operations-Related Toxic Air Contaminant Impacts

MDAQMD recommends avoiding siting new sensitive land uses such as residences, schools, daycare centers, playgrounds, or medical facilities within 1,000 feet of a major transportation project (50,000 or more vehicles per day).

The proposed project involves the construction of a waterpark, RV park, recreational lake/pond, commercial/retail uses, and office/administrative uses in close proximity to the I-15 Freeway. According to the latest traffic volume data from the California Department of Transportation, the portion of the I-15 Freeway that runs southeast of

the project site has a current annual average daily trips (AADT) of 42,000 vehicles[3]. Therefore, as the I-15 Freeway volume is less than 50,000 vehicles per day, impacts to future visitors of the waterpark, RV park, and other recreational facilities are considered to be less than significant and a health risk assessment is not required.

Therefore, as the I-15 Freeway volume is less than 50,000 vehicles, a project-specific health risk assessment is not required or warranted. Impacts to future on-site sensitive receptors are considered to be less than significant.

[3] Source: http://www.traffic-counts.dot.ca.gov/ for I-15 Freeway north of Minneola Road.

Table 17

Operational Regional Pollutant Emissions[1]

Phase 1 and Phase 2	Pollutant Emissions (tons/year)					
Activity	VOC	NOx	CO	SOx	PM10	PM2.5
Area Sources[2]	1.74	0.02	1.68	0.00	0.01	0.01
Energy Usage[3]	0.04	0.30	0.13	0.00	0.02	0.02
Mobile Sources[4]	0.62	4.41	8.07	0.03	1.79	0.50
Total Emissions	**2.40**	**4.73**	**9.88**	**0.03**	**1.82**	**0.53**
MDAQMD Annual Thresholds	**25**	**25**	**100**	**25**	**15**	**15**
Exceeds Threshold?	No	No	No	No	No	No

Phase 3[5]	Pollutant Emissions (tons/year)					
Activity	VOC	NOx	CO	SOx	PM10	PM2.5
Area Sources[2]	0.34	0.00	0.01	0.00	0.00	0.00
Energy Usage[3]	0.00	0.00	0.00	0.00	0.00	0.00
Mobile Sources[4]	0.82	5.68	8.60	0.03	1.87	0.52
Total Emissions	**1.16**	**5.68**	**8.61**	**0.03**	**1.87**	**0.52**
MDAQMD Annual Thresholds	**25**	**25**	**100**	**25**	**15**	**15**
Exceeds Threshold?	No	No	No	No	No	No

Phase 4	Pollutant Emissions (tons/year)					
Activity	VOC	NOx	CO	SOx	PM10	PM2.5
Area Sources[2]	0.26	0.00	0.01	0.00	0.00	0.00
Energy Usage[3]	0.00	0.01	0.00	0.00	0.00	0.00
Mobile Sources[4]	0.54	3.92	5.29	0.02	1.32	0.36
Total Emissions	**0.80**	**3.93**	**5.30**	**0.02**	**1.32**	**0.36**
MDAQMD Annual Thresholds	**25**	**25**	**100**	**25**	**15**	**15**
Exceeds Threshold?	No	No	No	No	No	No

Phase 5	Pollutant Emissions (tons/year)					
Activity	VOC	NOx	CO	SOx	PM10	PM2.5
Area Sources[2]	0.53	0.00	0.00	0.00	0.00	0.00
Energy Usage[3]	0.00	0.02	0.01	0.00	0.00	0.00
Mobile Sources[4]	0.25	1.88	2.84	0.01	0.86	0.24
Total Emissions	**0.78**	**1.89**	**2.86**	**0.01**	**0.87**	**0.24**
MDAQMD Annual Thresholds	**25**	**25**	**100**	**25**	**15**	**15**
Exceeds Threshold?	No	No	No	No	No	No

Total for Phases 1 through 5	**5.14**	**16.24**	**26.65**	**0.09**	**5.87**	**1.65**
MDAQMD Annual Thresholds	**25**	**25**	**100**	**25**	**15**	**15**
Exceeds Threshold?	No	No	No	No	No	No

[1] Source: CalEEMod Version 2016.3.1. Unmitigated Annual Emissions (see Appendix C for annual emissions).

[2] Area sources consist of emissions from consumer products, architectural coatings, and landscaping equipment.

[3] Energy usage consists of emissions from generation of electricity and on-site natural gas usage.

[4] Mobile sources consist of emissions from vehicles and road dust.

[5] Phase 3 operational emissions include both the waterpark facilities and the waterpark parking lot.

VIII. GLOBAL CLIMATE CHANGE ANALYSIS

The proposed project is anticipated to generate GHG emissions from area sources, energy usage, mobile sources, waste, water, and construction equipment. The following provides the methodology used to calculate the project-related GHG emissions, the project impacts and a consistency analysis of the proposed project with any applicable GHG reduction plans, policies or regulations.

A. Methodology

The CalEEMod Version 2016.3.1 was used to calculate the GHG emissions from the proposed project. Each source of GHG emissions is described in greater detail below. Emissions were initially compared to the *County of San Bernardino Greenhouse Gas Emissions Reduction Plan*'s screening threshold of 3,000 MTCO2e per year. The project was also compared to the MDAQMD thresholds of 100,000 tons per year and 548,000 pounds per day of CO2e emissions for individual projects.

1. Area Sources

Area sources include emissions from consumer products, landscape equipment and architectural coatings. Area sources were analyzed in the manner described in Section VII above.

2. Energy Usage

Energy usage includes emissions from the generation of electricity and natural gas used on-site. High-efficiency lighting is to be installed on-site and Energy Star® appliances will be used wherever appliances are needed on-site. No other changes were made to the default energy usage parameters.

3. Mobile Sources

Mobile sources were analyzed in the manner described in Section VII above.

4. Waste

Waste includes the GHG emissions generated from the processing of waste from the proposed project as well as the GHG emissions from the waste once it is interred into a landfill. AB 939 requires that 50 percent (up to 75% by 2020 per AB 341) of waste be diverted from landfills. No other changes were made to the CalEEMod default values.

5. Water

Water includes the water used for the interior of the building as well as for landscaping and is based on the GHG emissions associated with the energy used to transport and filter the water. Low-flow fixtures are to be utilized that meet Green

Building Standards for a 20% reduction in indoor water use. It is anticipated that water-efficient irrigation and drought-tolerant landscaping will installed on-site. No other changes were made to the CalEEMod default values.

6. Construction

The annual construction-related GHG emissions were also included in the analysis and were based on a 30 year amortization rate as recommended in the SCAQMD GHG Working Group meeting on November 19, 2009. The construction-related GHG emissions were calculated by CalEEMod (see Appendix B for daily and Appendix C for annual details on emissions output).

B. Project Greenhouse Gas Emissions

The GHG emissions have been calculated based on the parameters described above. Unmitigated emissions for the project would result in annual emissions of: 3,547.30 MT CO2e per year for Phase 1 and 2; 2,895.73 MT CO2e per year for Phase 3; 2,096.86 MT CO2e per year for Phase 4; and 1,632.44 MT CO2e per year for Phase 5. Unmitigated emissions for the entire project (Phase 1 through Phase 5 together) would result in annual emissions of 10,172.34 MT CO2e per year (which includes the amortized construction emissions, which contributes approximately 139.41 MT CO2e per year for all 5 phases to the total; see Appendix C CalEEMod Annual Output for details). As shown in Table 18, this level of emissions exceeds the San Bernardino County GHG Reduction Plan screening threshold of 3,000 metric tons per year of CO2e, but does not exceed the MDAQMD annual threshold of 100,000 MTCO2e. Table 18 also shows that the project's total (Phase 1 through Phase 5 together) daily operational emissions of 113,765.25 lbs of CO2e does not exceed the MDAQMD's daily GHG threshold of 548,000 lbs of CO2e. During construction, 55,880.10 lbs of CO_2e will be emitted, which would not exceed the MDAQMD daily threshold either. However, as the San Bernardino County GHG Reduction Plan screening threshold of 3,000 metric tons per year of CO2e would be exceeded, mitigation is required.

As shown in Table 19, with mitigation the total project would result in annual emissions of 7,339.52 MT CO2e. This level of emissions would still exceed the San Bernardino County GHG Reduction Plan screening threshold and the project will be required to obtain at least 100 points from the CAP Screening Table for commercial projects (table provided in Appendix C). Mitigation Measure 2 has been included to ensure that the project complies with this CAP requirement.

On January 12, 2010, the State Building Standards Commission unanimously adopted updates to the California Green Building Standards Code, which went into effect on January 1, 2011. The Code is a comprehensive and uniform regulatory code for all residential, commercial and school buildings.

The California Green Building Standards Code does not prevent a local jurisdiction from adopting a more stringent code as state law provides methods for local enhancements. The Code recognizes that many jurisdictions have developed existing construction and demolition ordinances, and defers to them as the ruling guidance provided they provide a minimum 50-percent diversion requirement. The code also provides exemptions for areas

not served by construction and demolition recycling infrastructure. State building code provides the minimum standard that buildings need to meet in order to be certified for occupancy. Enforcement is generally through the local building official.

The California Green Building Standards Code (code section in parentheses) requires:

- Water Efficiency and Conservation [Indoor Water Use (4.303.1)]. Fixtures and fixture fittings reducing the overall use of potable water within the building by at least 20 percent shall be provided. The 20 percent reduction shall be demonstrated by one of the following methods:
  - Prescriptive Method: Showerheads (≤ 2.0 gpm @ 80 psi); Residential Lavatory Faucets (≤ 1.5 gpm @ 60 psi); Nonresidential Lavatory Faucets (≤ .4 gpm @ 60 psi); Kitchen Faucets (≤ 1.8 gpm @ 60 psi); Toilets (≤ 1.28 gal/flush); and urinals (≤ 0.5 gal/flush).
  - Performance Method: Provide a calculation demonstrating a 20% reduction of indoor potable water using the baseline values set forth in Table 4.303.1. The calculation will be limited to the total water usage of showerheads, lavatory faucets, water closets and urinals within the dwelling.
- Water Efficiency and Conservation [Outdoor Water Use (4.304.1)]. Irrigation Controllers. Automatic irrigation system controllers for landscaping provided by the builder and installed at the time of final inspection shall comply with the following:
  - Controllers shall be weather- or soil moisture-based controllers that automatically adjust irrigation in response to changes in plants' watering needs as weather or soil conditions change.
  - Weather-based controllers without integral rain sensors or communication systems that account for rainfall shall have a separate wired or wireless rain sensor which connects or communicates with the controller(s).
- Construction Waste Reduction of at least 50 percent (4.408.1). Recycle and/or salvage for reuse a minimum of 50 percent of the nonhazardous construction and demolition waste in accordance with either Section 4.408.2, 4.408.3 or 4.408.4; OR meet a more stringent local construction and demolition waste management ordinance. Documentation is required per Section 4.408.5. Exceptions:
  - Excavated soil and land-clearing debris.
  - Alternate waste reduction methods developed by working with local enforcing agencies if diversion or recycle facilities capable of compliance with this item do not exist or are not located reasonably close to the jobsite.
  - The enforcing agency may make exceptions to the requirements of this section when jobsites are located in areas beyond the haul boundaries of the diversion facility.
- Materials pollution control (4.504.1 – 4.504.6). Low-pollutant emitting interior finish materials such as paints, carpet, vinyl flooring and particleboard.
- Installer and Special Inspector Qualifications (702.1-702.2). Mandatory special installer inspector qualifications for installation and inspection of energy systems (e.g., heat furnace, air conditioner, mechanical equipment).

Compliance with County Performance Standards, 2016 Title 24 Standards, and 2016 Green Building Standards will further reduce project-related greenhouse emissions.

C. Greenhouse Gas Plan Consistency

The proposed project would have the potential to conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases.

According to the *County of San Bernardino Greenhouse Gas Emissions Reduction Plan*, "all development projects, including those otherwise determined to be exempt from CEQA will be subject to applicable Development Code provisions, including the GHG performance standards, and state requirements, such as the California Building Code requirements for energy efficiency. With the application of the GHG performance standards, projects that are exempt from CEQA and small projects that do not exceed 3,000 MTCO2e per year will be considered to be consistent with the Plan and determined to have a less than significant individual and cumulative impact for GHG emissions." The Reduction Plan also states that "a review standard of 3,000 MTCO2e per year will be used to identify projects that require the use of Screening Tables or a project-specific technical analysis to quantify and mitigate project emissions." Furthermore, "for projects exceeding 3,000 MTCO2e per year of GHG emissions, the County will use Screening Tables as a tool to assist with calculating GHG reduction measures and the determination of a significance finding. Projects that garner a 100 or greater points would not require quantification of project specific GHG emissions. The point system was devised to ensure to Project compliance with the reduction measures in the GHG Plan such that the GHG emissions from new development, when considered together with those existing development, will allow the County to meet its 2020 target and support reductions in GHG emissions beyond 2020. Consistent with the CEQA Guidelines, such projects are consistent with the Plan and therefore will be determined to have a less than significant individual and cumulative impact for GHG emissions.

As discussed previously, the project's operational GHG emissions exceed the County's screening threshold of 3,000 MTCO2e per year. Therefore, the project needs to accrue points using the screening tables in order to be consistent with the GHG Plan pursuant to Section 15183.5 of the State CEQA Guidelines. As shown in Operational Mitigation Measure 1 (see Section X), the project is expected to comply with the performance standards for commercial uses and obtain at least 100 points as detailed in the *County of San Bernardino Greenhouse Gas Emissions Reduction Plan* (see Appendix C for details on the screening table for commercial projects). With incorporation of the aforementioned mitigation measure, the proposed project will not result in substantial emissions of greenhouse gases and will not conflict with the County of San Bernardino CAP, or the goals of AB-32 or SB-32.

Table 18

Unmitigated Project-Related Greenhouse Gas Emissions[1]

Phase 1 and Phase 2	Greenhouse Gas Emissions (Metric Tons/Year)						(lbs/day)
Category	Bio-CO2	NonBio-CO_2	CO_2	CH_4	N_2O	CO_2e	CO_2e
Area Sources[2]	0.00	2.72	2.72	0.00	0.00	2.79	34.13
Energy Usage[3]	0.00	827.55	827.55	0.03	0.00	831.33	2,105.62
Mobile Sources[4]	0.00	2,302.32	2,302.32	0.13	0.00	2,305.65	14,311.97
Solid Waste[5]	23.13	0.00	23.13	1.37	0.00	57.30	0.00
Water[6]	5.12	242.62	247.74	0.54	0.01	265.45	0.00
Construction[7]	0.00	84.62	84.62	0.01	0.00	84.78	35,537.86
Total Emissions	28.25	3,459.83	3,488.07	2.07	0.02	**3,547.30**	**51,989.58**
					MDAQMD GHG Thresholds	**100,000**	**548,000**
					County of San Bernardino GHG Emissions Reduction Plan Screening Threshold	**3,000**	-
					Exceeds Any Threshold?	**Yes**	No

Phase 3[8]	Greenhouse Gas Emissions (Metric Tons/Year)						(lbs/day)
Category	Bio-CO2	NonBio-CO_2	CO_2	CH_4	N_2O	CO_2e	CO_2e
Area Sources[2]	0.00	0.02	0.02	0.00	0.00	0.02	0.01
Energy Usage[3]	0.00	172.21	172.21	0.01	0.00	172.83	0.00
Mobile Sources[4]	0.00	2,526.73	2,526.73	0.17	0.00	2,530.89	18,517.63
Solid Waste[5]	63.12	0.00	63.12	3.73	0.00	156.37	0.00
Water[6]	1.02	20.38	21.41	0.11	0.00	24.85	0.00
Construction[7]	0.00	10.70	10.70	0.00	0.00	10.78	6,568.57
Total Emissions	64.14	2,730.04	2,794.18	4.01	0.00	**2,895.73**	**25,086.21**
					MDAQMD GHG Thresholds	**100,000**	**548,000**
					County of San Bernardino GHG Emissions Reduction Plan Screening Threshold	**3,000**	-
					Exceeds Threshold?	No	No

Phase 4	Greenhouse Gas Emissions (Metric Tons/Year)						(lbs/day)
Category	Bio-CO2	NonBio-CO_2	CO_2	CH_4	N_2O	CO_2e	CO_2e
Area Sources[2]	0.00	0.01	0.01	0.00	0.00	0.01	0.14
Energy Usage[3]	0.00	254.55	254.55	0.01	0.00	255.47	33.06
Mobile Sources[4]	0.00	1,767.87	1,767.87	0.12	0.00	1,770.76	13,790.83
Solid Waste[5]	9.75	0.00	9.75	0.58	0.00	24.15	0.00
Water[6]	1.07	21.40	22.48	0.11	0.00	26.09	0.00
Construction[7]	0.00	20.31	20.31	0.00	0.00	20.38	6,454.74
Total Emissions	10.82	2,064.14	2,074.96	0.82	0.01	**2,096.86**	**20,278.77**
					MDAQMD GHG Thresholds	**100,000**	**548,000**
					County of San Bernardino GHG Emissions Reduction Plan Screening Threshold	**3,000**	-
					Exceeds Threshold?	No	No

Phase 5	Greenhouse Gas Emissions (Metric Tons/Year)						(lbs/day)
Category	Bio-CO2	NonBio-CO_2	CO_2	CH_4	N_2O	CO_2e	CO_2e
Area Sources[2]	0.00	0.01	0.01	0.00	0.00	0.01	0.12
Energy Usage[3]	0.00	367.49	367.49	0.01	0.00	368.85	110.04
Mobile Sources[4]	0.00	1,060.06	1,060.06	0.06	0.00	1,061.52	8,981.60
Solid Waste[5]	18.36	0.00	18.36	1.08	0.00	45.48	0.00
Water[6]	5.48	109.20	114.68	0.57	0.01	133.11	0.00
Construction[7]	0.00	23.39	23.39	0.00	0.00	23.47	7,318.94
Total Emissions	23.84	1,560.16	1,584.00	1.73	0.02	**1,632.44**	**16,410.69**
					MDAQMD GHG Thresholds	**100,000**	**548,000**
					County of San Bernardino GHG Emissions Reduction Plan Screening Threshold	**3,000**	-
					Exceeds Threshold?	No	No

Total for Phases 1 through 5	**10,172.34**	**113,765.25**
MDAQMD GHG Thresholds	**100,000**	**548,000**
County of San Bernardino GHG Emissions Reduction Plan Screening Threshold	**3,000**	-
Exceeds MDAQMD Threshold?	**No**	**No**
Exceeds County of San Bernardino Screening Threshold?	**Yes**	-

[1] Source: CalEEMod Version 2016.3.1.

[2] Area sources consist of GHG emissions from consumer products, architectural coatings, and landscape equipment.

[3] Energy usage consist of GHG emissions from electricity and natural gas usage.

[4] Mobile sources consist of GHG emissions from vehicles.

[5] Solid waste includes the CO_2 and CH_4 emissions created from the solid waste placed in landfills.

[6] Water includes GHG emissions from electricity used for transport of water and processing of wastewater.

[7] Annual construction GHG emissions CO2e based on a 30 year amortization rate.

[8] Phase 3 GHG emissions include both the waterpark facilities and the waterpark parking lot.

Table 19

Mitigated Project-Related Greenhouse Gas Emissions[1]

Phase 1 and Phase 2	Greenhouse Gas Emissions (Metric Tons/Year)						(lbs/day)
Category	Bio-CO2	NonBio-CO_2	CO_2	CH_4	N_2O	CO_2e	CO_2e
Area Sources[2]	0.00	2.72	2.72	0.00	0.00	2.79	34.13
Energy Usage[3]	0.00	818.35	818.35	0.03	0.01	822.10	2,105.62
Mobile Sources[4]	0.00	2,281.68	2,281.68	0.13	0.00	2,284.99	14,311.97
Solid Waste[5]	5.78	0.00	5.78	0.34	0.00	14.33	0.00
Water[6]	4.09	229.23	233.33	0.43	0.01	247.62	0.00
Construction[7]	0.00	84.62	84.62	0.01	0.00	84.78	35,537.86
Total Emissions	9.88	3,416.60	3,426.48	0.94	0.02	**3,456.61**	**51,989.58**
					MDAQMD GHG Thresholds	**100,000**	**548,000**
					County of San Bernardino GHG Emissions Reduction Plan Screening Threshold	**3,000**	-
					Exceeds Any Threshold?	**Yes**	No

Phase 3[8]	Greenhouse Gas Emissions (Metric Tons/Year)						(lbs/day)
Category	Bio-CO2	NonBio-CO_2	CO_2	CH_4	N_2O	CO_2e	CO_2e
Area Sources[2]	0.00	0.02	0.02	0.00	0.00	0.02	0.22
Energy Usage[3]	0.00	154.99	154.99	0.01	0.00	155.55	0.00
Mobile Sources[4]	0.00	113.09	113.09	0.01	0.00	113.27	2,373.01
Solid Waste[5]	0.11	0.00	0.11	0.01	0.00	0.28	0.00
Water[6]	0.00	54.83	54.83	0.00	0.00	55.03	0.00
Construction[7]	0.00	10.70	10.70	0.00	0.00	10.78	6,568.57
Total Emissions	0.11	333.62	333.74	0.03	0.00	**334.91**	**8,941.79**
					MDAQMD GHG Thresholds	**100,000**	**548,000**
					County of San Bernardino GHG Emissions Reduction Plan Screening Threshold	**3,000**	-
					Exceeds Threshold?	**No**	**No**

Phase 4	Greenhouse Gas Emissions (Metric Tons/Year)						(lbs/day)
Category	Bio-CO2	NonBio-CO_2	CO_2	CH_4	N_2O	CO_2e	CO_2e
Area Sources[2]	0.00	0.01	0.01	0.00	0.00	0.01	0.14
Energy Usage[3]	0.00	220.17	220.17	0.00	0.00	220.97	33.06
Mobile Sources[4]	0.00	1,753.67	1,753.67	0.12	0.00	1,756.55	13,679.93
Solid Waste[5]	2.44	0.00	2.44	0.14	0.00	6.04	0.00
Water[6]	0.86	18.59	19.45	0.09	0.00	22.35	0.00
Construction[7]	0.00	20.31	20.31	0.00	0.00	20.38	6,454.74
Total Emissions	3.30	2,012.75	2,016.05	0.35	0.00	**2,026.30**	**20,167.87**
					MDAQMD GHG Thresholds	**100,000**	**548,000**
					County of San Bernardino GHG Emissions Reduction Plan Screening Threshold	**3,000**	-
					Exceeds Threshold?	**No**	**No**

Phase 5	Greenhouse Gas Emissions (Metric Tons/Year)						(lbs/day)
Category	Bio-CO2	NonBio-CO_2	CO_2	CH_4	N_2O	CO_2e	CO_2e
Area Sources[2]	0.00	0.01	0.01	0.00	0.00	0.01	0.12
Energy Usage[3]	0.00	319.24	319.24	0.01	0.00	320.42	110.04
Mobile Sources[4]	0.00	1,050.97	1,050.97	0.06	0.00	1,052.42	8,904.52
Solid Waste[5]	4.59	0.00	4.59	0.27	0.00	11.37	0.00
Water[6]	4.39	94.86	99.25	0.45	0.01	114.02	0.00
Construction[7]	0.00	23.39	23.39	0.00	0.00	23.47	7,318.94
Total Emissions	8.98	1,488.48	1,497.46	0.80	0.01	**1,521.70**	**16,333.62**
					MDAQMD GHG Thresholds	**100,000**	**548,000**
					County of San Bernardino GHG Emissions Reduction Plan Screening Threshold	**3,000**	-
					Exceeds Threshold?	**No**	**No**

Total for Phases 1 through 5	**7,339.52**	**97,432.85**
MDAQMD GHG Thresholds	**100,000**	**548,000**
County of San Bernardino GHG Emissions Reduction Plan Screening Threshold	**3,000**	-
Exceeds MDAQMD Threshold?	**No**	**No**
Exceeds County of San Bernardino Screening Threshold?	**Yes**	-

[1] Source: CalEEMod Version 2016.3.1.

[2] Area sources consist of GHG emissions from consumer products, architectural coatings, and landscape equipment.

[3] Energy usage consist of GHG emissions from electricity and natural gas usage.

[4] Mobile sources consist of GHG emissions from vehicles.

[5] Solid waste includes the CO_2 and CH_4 emissions created from the solid waste placed in landfills.

[6] Water includes GHG emissions from electricity used for transport of water and processing of wastewater.

[7] Annual construction GHG emissions CO2e based on a 30 year amortization rate.

[8] Phase 3 GHG emissions include both the waterpark facilities and the waterpark parking lot.

IX. AIR QUALITY COMPLIANCE

The California Environmental Quality Act (CEQA) requires a discussion of any inconsistencies between a proposed project and applicable General Plans and Regional Plans (CEQA Guidelines Section 15125). According to the MDAQMD, a project is non-conforming if it conflicts with or delays implementation of any applicable attainment or maintenance plan.

A project is conforming if it complies with all applicable District rules and regulations, complies with all proposed control measures that are not yet adopted from the applicable plan(s), and is consistent with the growth forecasts in the applicable plan(s) (or is directly included in the applicable plan). Conformity with growth forecasts can be established by demonstrating that the project is consistent with the land use plan that was used to generate the growth forecast. An example of a non-conforming project would be one that increases the gross number of dwelling units, increases the number of trips, and/or increases the overall vehicle miles traveled in an affected area (relative to the applicable land use plan). The "one map approach" is employed by the County of San Bernardino, as it permits the use of a single map showing both General Plan land use designations and zoning classifications. The one-map approach assures that there will always be land use consistency between the County's General Plan and its Zoning Code.

The project site is located within unincorporated San Bernardino County. As shown by the results of this air analysis, the project's emissions do not exceed any MDAQMD thresholds during either short-term construction or long-term operation of the project. The proposed project includes an RV park, retail/commercial uses, office/administrative uses, and a waterpark and per the County's Land Use Zoning District map - Newberry Springs E103A, the current land use zoning district is Rural Living (RL). The proposed zoning is Highway Commercial (CH) and existing land uses on site are that of commercial uses (the existing portions of the waterpark that will be revitalized). Therefore, with the proposed zoning amendment from RL to CH the proposed project is not anticipated to exceed the Attainment Plan assumptions for the project site.

Based on the above, the proposed project would not conflict with implementation of the MDAQMD Attainment Plans, impacts are considered to be less than significant.

X. MITIGATION MEASURES

A. Construction Measures

Mitigation Measure 1. The project applicant shall ensure that all applicable MDAQMD Rules and Regulations (as detailed in Section IV above) are complied with during construction.

Mitigation Measure 2. The project applicant shall ensure that the construction contractor use construction equipment that have Tier 4 Final engines during construction of Phases 1, 2, and 3.

B. Operational Measures

Mitigation Measure 3. The project shall accrue at least 100 points in the *Screening Table for Implementation of GHG Reduction Measures for Commercial Development* as detailed in the *County of San Bernardino Greenhouse Gas Emissions Reduction Plan*.

Mitigation Measure 4. The project applicant shall require recycling programs that reduces waste to landfills by a minimum of 50 percent (up to 75% by 2020 per AB 341).

Mitigation Measure 5. The project applicant shall provide sidewalks within the project boundary.

Mitigation Measure 6. The project applicant shall require that high-efficiency lighting be installed that is at least 10% more efficient than standard lighting and install Energy Star® appliances on-site.

Mitigation Measure 7. The project applicant shall require that all faucets, toilets and showers installed in the proposed structures utilize low-flow fixtures that would reduce indoor water demand by 20% per CalGreen Standards.

Mitigation Measure 8. The project applicant shall require that all building structures meet or exceed 2016 Title 24, Part 6 Standards and meet Green Building Code Standards.

XI. REFERENCES

California Air Resources Board

2005 Air Quality and Land Use Handbook: A Community Health Perspective. April.

2008 Resolution 08-43

2008 Airborne Toxic Control Measure for in-use Diesel-Fueled Transport Refrigeration Units (TRU) and TRU Generator Sets, Section 2477 of Division 3, Chapter 9, Title 13, California Code of Regulations

2008 Recommended Approaches for Setting Interim Significance Thresholds for Greenhouse Gases under the California Environmental Quality Act

2011 Supplement to the AB 32 Scoping Plan Functional Equivalent Document

2013 Almanac of Emissions and Air Quality. Source: https://www.arb.ca.gov/aqd/almanac/almanac13/almanac13.htm

2014 First Update to the Climate Change Scoping Plan, Building on the Framework Pursuant to AB32, the California Global Warming Solutions Act of 2006. May.

2017 Historical Air Quality, Top 4 Summary

County of San Bernardino

2007 County of San Bernardino 2007 General Plan

2007 County of San Bernardino 2007 Development Code. March 13.

2011 County of San Bernardino Greenhouse Gas Emissions Reduction Plan. September.

2015 County of San Bernardino Greenhouse Gas Emissions Development Review Processes. Updated March

2017 County of San Bernardino Zoning and Overlay Map. Desert Region. Newberry Springs E103A.

Fehr and Peers

2017 Dolores Lake Park Traffic Impact Study. March.

Governor's Office of Planning and Research

2008 CEQA and Climate: Addressing Climate Change Through California Environmental Quality Act (CEQA) Review

2009 CEQA Guideline Sections to be Added or Amended

Intergovernmental Panel on Climate Change (IPCC).
2014 IPCC Fifth Assessment Report, Climate Change 2014: Synthesis Report

Mojave Desert Air Quality Management District (MDAQMD)
2011 California Environmental Quality Act (CEQA) And Federal Conformity Guidelines. February

Southern California Association of Governments
2012 2012-2035 Regional Transportation Plan/Sustainable Communities Strategy

U.S. Environmental Protection Agency (EPA)
2017 Understanding Global Warming Potentials
(Source: https://www.epa.gov/ghgemissions/understanding-global-warming-potentials)

U.S. Geological Survey
2011 Reported Historic Asbestos Mines, Historic Asbestos Prospects, and Other Natural Occurrences of Asbestos in California

APPENDICES

Appendix A – Glossary of Terms

Appendix B – CalEEMod Model Daily Emissions Printouts

Appendix C – CalEEMod Model Annual Emissions Printouts

APPENDIX A

Glossary of Terms

AQMP	Air Quality Management Plan
BACT	Best Available Control Technologies
CAAQS	California Ambient Air Quality Standards
CalEPA	California Environmental Protection Agency
CARB	California Air Resources Board
CCAA	California Clean Air Act
CCAR	California Climate Action Registry
CEQA	California Environmental Quality Act
CFCs	Chlorofluorocarbons
CH_4	Methane
CNG	Compressed natural gas
CO	Carbon monoxide
CO_2	Carbon dioxide
CO_2e	Carbon dioxide equivalent
DPM	Diesel particulate matter
EPA	U.S. Environmental Protection Agency
GHG	Greenhouse gas
GWP	Global warming potential
HIDPM	Hazard Index Diesel Particulate Matter
HFCs	Hydrofluorocarbons
IPCC	International Panel on Climate Change
LCFS	Low Carbon Fuel Standard
LST	Localized Significant Thresholds
MDAB	Mojave Desert Air Basin
MDAQMD	Mojave Desert Air Quality Management District
$MTCO_2e$	Metric tons of carbon dioxide equivalent
$MMTCO_2e$	Million metric tons of carbon dioxide equivalent
MPO	Metropolitan Planning Organization
NAAQS	National Ambient Air Quality Standards
NOx	Nitrogen Oxides
NO_2	Nitrogen dioxide
N_2O	Nitrous oxide
O_3	Ozone
OPR	Governor's Office of Planning and Research
PFCs	Perfluorocarbons
PM	Particle matter
PM10	Particles that are less than 10 micrometers in diameter
PM2.5	Particles that are less than 2.5 micrometers in diameter
PMI	Point of maximum impact
PPM	Parts per million
PPB	Parts per billion
RTIP	Regional Transportation Improvement Plan
RTP	Regional Transportation Plan
SCAB	South Coast Air Basin

SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SF	Square Feet
SF_6	Sulfur hexafluoride
SIP	State Implementation Plan
SOx	Sulfur Oxides
TAC	Toxic air contaminants
VOC	Volatile organic compounds (aka ROG)

APPENDIX B

CalEEMod Model Daily Emissions Printouts

6828 Dolores Lake- Phase 1 & Phase 2

San Bernardino-Mojave Desert County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	8.66	1000sqft	0.20	8,660.00	0
Other Asphalt Surfaces	36.72	Acre	36.72	1,599,523.20	0
Parking Lot	67.00	Space	0.60	26,800.00	0
City Park	33.14	Acre	33.14	1,443,578.40	0
Mobile Home Park	224.00	Dwelling Unit	18.79	268,800.00	641

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	32
Climate Zone	10			**Operational Year**	2018
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

6828 Dolores Lake- Phase 1 & Phase 2 - San Bernardino-Mojave Desert County, Summer

Project Characteristics - .

Land Use - P1(Lake) is 25 ac total & P2(RV Park) is 27.7 ac total. 33.14 ac lake and pond/lndscping, 8,660 sf offc/restrms, 67 standard & 224 RV [mobile hme] parking spaces (paving ~70% of phase 2), ~36.72 ac on-site rds.

Construction Phase - Construction of Phases 1 & 2 to start May 2017 and be completed June 2018. No demo or site prep.

Grading - Phase 1 and 2 is 89.45 acres. Site is to be balanced.

Energy Use -

Construction Off-road Equipment Mitigation - Tier 4 final equipment for construction

Mobile Land Use Mitigation - Sidewalks provided on-site.

Energy Mitigation - High efficiency lighting at least 10% more efficent than standard.

Water Mitigation - 20% reduction in indoor water use and water efficient irrigation to be used on-site per Per Green Building Standards

Waste Mitigation - AB 939 requires at least 50% of waste be diverted from landfills, 75% by 2020.

Vehicle Trips - per TIA, Park uses generate 4.56 trips/acres weekdays and 5.61 trips/acre weekends, other uses match CalEEMod default trip generation rates. Defaults used for mobile home park as daily trips not given for RV park in TIA.

Architectural Coating - No residential painting. residential uses are RV park only (modeled as mobile homes).

Woodstoves - 224 RV park spaces only...no mobile homes

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Residential_Exterior	181,440.00	0.00
tblArchitecturalCoating	ConstArea_Residential_Interior	544,320.00	0.00
tblArchitecturalCoating	EF_Residential_Exterior	250.00	0.00
tblArchitecturalCoating	EF_Residential_Interior	250.00	0.00
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	110.00	18.00
tblConstructionPhase	NumDays	1,550.00	244.00
tblConstructionPhase	NumDays	155.00	25.00
tblConstructionPhase	NumDays	110.00	18.00
tblFireplaces	NumberGas	123.20	0.00
tblFireplaces	NumberWood	78.40	0.00
tblGrading	AcresOfGrading	62.50	89.45

tblLandUse	LotAcreage	28.22	18.79
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblVehicleTrips	ST_TR	22.75	5.61
tblVehicleTrips	SU_TR	16.74	5.61
tblVehicleTrips	WD_TR	1.89	4.56
tblWoodstoves	NumberCatalytic	11.20	0.00
tblWoodstoves	NumberNoncatalytic	11.20	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					
2017	17.1901	102.8429	139.0894	0.3759	21.8009	3.0745	24.2698	5.8552	2.8286	8.1813	0.0000	38,161.8395	38,161.8395	2.5871	0.0000	38,226.5161
2018	76.3538	94.4775	123.4167	0.3697	21.8008	2.0591	23.8599	5.8552	1.9405	7.7956	0.0000	37,544.2978	37,544.2978	2.4207	0.0000	37,604.8164
Maximum	**76.3538**	**102.8429**	**139.0894**	**0.3759**	**21.8009**	**3.0745**	**24.2698**	**5.8552**	**2.8286**	**8.1813**	**0.0000**	**38,161.8395**	**38,161.8395**	**2.5871**	**0.0000**	**38,226.5161**

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					
2017	14.4030	78.5230	138.3672	0.3759	21.8009	0.7219	22.5227	5.8552	0.6878	6.5430	0.0000	38,161.8395	38,161.8395	2.5871	0.0000	38,226.5161
2018	76.0849	73.3222	123.2965	0.3697	21.8008	0.6000	22.4008	5.8552	0.5713	6.4265	0.0000	37,544.2978	37,544.2978	2.4207	0.0000	37,604.8164
Maximum	**76.0849**	**78.5230**	**138.3672**	**0.3759**	**21.8009**	**0.7219**	**22.5227**	**5.8552**	**0.6878**	**6.5430**	**0.0000**	**38,161.8395**	**38,161.8395**	**2.5871**	**0.0000**	**38,226.5161**

	ROG	NOx	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	**3.27**	**23.05**	**0.32**	**0.00**	**0.00**	**74.25**	**6.66**	**0.00**	**73.60**	**18.82**	**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	9.8320	0.2162	18.6260	9.8000e-004		0.1016	0.1016		0.1016	0.1016	0.0000	33.3076	33.3076	0.0331	0.0000	34.1342
Energy	0.1919	1.6402	0.7013	0.0105		0.1326	0.1326		0.1326	0.1326		2,093.1828	2,093.1828	0.0401	0.0384	2,105.6215
Mobile	4.1769	24.5708	51.1591	0.1527	10.2781	0.1584	10.4365	2.7510	0.1496	2.9006		15,513.9859	15,513.9859	0.8580		15,535.4359
Total	**14.2008**	**26.4271**	**70.4864**	**0.1642**	**10.2781**	**0.3926**	**10.6707**	**2.7510**	**0.3838**	**3.1348**	**0.0000**	**17,640.4763**	**17,640.4763**	**0.9312**	**0.0384**	**17,675.1915**

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	9.8320	0.2162	18.6260	9.8000e-004		0.1016	0.1016		0.1016	0.1016	0.0000	33.3076	33.3076	0.0331	0.0000	34.1342
Energy	0.1919	1.6402	0.7013	0.0105		0.1326	0.1326		0.1326	0.1326		2,093.1828	2,093.1828	0.0401	0.0384	2,105.6215
Mobile	4.1610	24.4381	50.7270	0.1513	10.1753	0.1570	10.3323	2.7235	0.1483	2.8717		15,374.8035	15,374.8035	0.8524		15,396.1132
Total	**14.1849**	**26.2944**	**70.0544**	**0.1628**	**10.1753**	**0.3912**	**10.5665**	**2.7235**	**0.3825**	**3.1059**	**0.0000**	**17,501.2939**	**17,501.2939**	**0.9256**	**0.0384**	**17,535.8688**

	ROG	NOx	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	**0.11**	**0.50**	**0.61**	**0.83**	**1.00**	**0.37**	**0.98**	**1.00**	**0.36**	**0.92**	**0.00**	**0.79**	**0.79**	**0.60**	**0.00**	**0.79**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	5/1/2017	6/2/2017	5	25	
2	Building Construction	Building Construction	6/3/2017	5/10/2018	5	244	
3	Paving	Paving	5/11/2018	6/5/2018	5	18	
4	Architectural Coating	Architectural Coating	6/6/2018	6/30/2018	5	18	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 89.45

Acres of Paving: 37.32

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 12,990; Non-Residential Outdoor: 4,330; Striped Parking Area: 97,579 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	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
Grading	8	20.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	1,453.00	529.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	291.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Grading - 2017

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					9.8166	0.0000	9.8166	3.7199	0.0000	3.7199			0.0000			0.0000
Off-Road	5.7483	67.9396	38.7826	0.0620		3.0727	3.0727		2.8269	2.8269		6,344.8863	6,344.8863	1.9441		6,393.4879
Total	**5.7483**	**67.9396**	**38.7826**	**0.0620**	**9.8166**	**3.0727**	**12.8893**	**3.7199**	**2.8269**	**6.5468**		**6,344.8863**	**6,344.8863**	**1.9441**		**6,393.4879**

3.2 Grading - 2017

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	0.1609	0.1163	1.4493	2.8500e-003	0.2555	1.8200e-003	0.2573	0.0678	1.6800e-003	0.0694		283.1428	283.1428	0.0115		283.4297
Total	**0.1609**	**0.1163**	**1.4493**	**2.8500e-003**	**0.2555**	**1.8200e-003**	**0.2573**	**0.0678**	**1.6800e-003**	**0.0694**		**283.1428**	**283.1428**	**0.0115**		**283.4297**

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					3.8285	0.0000	3.8285	1.4508	0.0000	1.4508			0.0000			0.0000
Off-Road	0.7616	3.3000	32.9991	0.0620		0.1015	0.1015		0.1015	0.1015	0.0000	6,344.8863	6,344.8863	1.9441		6,393.4878
Total	**0.7616**	**3.3000**	**32.9991**	**0.0620**	**3.8285**	**0.1015**	**3.9300**	**1.4508**	**0.1015**	**1.5523**	**0.0000**	**6,344.8863**	**6,344.8863**	**1.9441**		**6,393.4878**

3.2 Grading - 2017

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	0.1609	0.1163	1.4493	2.8500e-003	0.2555	1.8200e-003	0.2573	0.0678	1.6800e-003	0.0694		283.1428	283.1428	0.0115		283.4297
Total	**0.1609**	**0.1163**	**1.4493**	**2.8500e-003**	**0.2555**	**1.8200e-003**	**0.2573**	**0.0678**	**1.6800e-003**	**0.0694**		**283.1428**	**283.1428**	**0.0115**		**283.4297**

3.3 Building Construction - 2017

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	3.1149	26.5546	18.1825	0.0269		1.7879	1.7879		1.6791	1.6791		2,650.9797	2,650.9797	0.6531		2,667.3078
Total	**3.1149**	**26.5546**	**18.1825**	**0.0269**		**1.7879**	**1.7879**		**1.6791**	**1.6791**		**2,650.9797**	**2,650.9797**	**0.6531**		**2,667.3078**

3.3 Building Construction - 2017

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	2.3892	67.8425	15.6176	0.1419	3.2416	0.5488	3.7904	0.9335	0.5250	1.4584		14,940.5380	14,940.5380	1.1002		14,968.0428
Worker	11.6860	8.4458	105.2894	0.2071	18.5592	0.1323	18.6915	4.9217	0.1221	5.0438		20,570.3218	20,570.3218	0.8338		20,591.1655
Total	**14.0751**	**76.2883**	**120.9069**	**0.3490**	**21.8009**	**0.6811**	**22.4819**	**5.8552**	**0.6470**	**6.5022**		**35,510.8598**	**35,510.8598**	**1.9339**		**35,559.2083**

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	0.3278	2.2347	17.4603	0.0269		0.0408	0.0408		0.0408	0.0408	0.0000	2,650.9797	2,650.9797	0.6531		2,667.3078
Total	**0.3278**	**2.2347**	**17.4603**	**0.0269**		**0.0408**	**0.0408**		**0.0408**	**0.0408**	**0.0000**	**2,650.9797**	**2,650.9797**	**0.6531**		**2,667.3078**

3.3 Building Construction - 2017

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	2.3892	67.8425	15.6176	0.1419	3.2416	0.5488	3.7904	0.9335	0.5250	1.4584		14,940.5380	14,940.5380	1.1002		14,968.0428
Worker	11.6860	8.4458	105.2894	0.2071	18.5592	0.1323	18.6915	4.9217	0.1221	5.0438		20,570.3218	20,570.3218	0.8338		20,591.1655
Total	**14.0751**	**76.2883**	**120.9069**	**0.3490**	**21.8009**	**0.6811**	**22.4819**	**5.8552**	**0.6470**	**6.5022**		**35,510.8598**	**35,510.8598**	**1.9339**		**35,559.2083**

3.3 Building Construction - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.6795	23.3900	17.5804	0.0269		1.4999	1.4999		1.4099	1.4099		2,620.9351	2,620.9351	0.6421		2,636.9883
Total	**2.6795**	**23.3900**	**17.5804**	**0.0269**		**1.4999**	**1.4999**		**1.4099**	**1.4099**		**2,620.9351**	**2,620.9351**	**0.6421**		**2,636.9883**

3.3 Building Construction - 2018

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	2.0837	63.7357	13.6652	0.1417	3.2416	0.4318	3.6733	0.9334	0.4131	1.3465		14,923.8188	14,923.8188	1.0466		14,949.9848
Worker	10.4305	7.3518	92.1711	0.2011	18.5592	0.1275	18.6867	4.9217	0.1175	5.0392		19,999.5439	19,999.5439	0.7320		20,017.8433
Total	**12.5142**	**71.0875**	**105.8363**	**0.3428**	**21.8008**	**0.5592**	**22.3600**	**5.8552**	**0.5305**	**6.3857**		**34,923.3627**	**34,923.3627**	**1.7786**		**34,967.8281**

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	0.3278	2.2347	17.4603	0.0269		0.0408	0.0408		0.0408	0.0408	0.0000	2,620.9351	2,620.9351	0.6421		2,636.9883
Total	**0.3278**	**2.2347**	**17.4603**	**0.0269**		**0.0408**	**0.0408**		**0.0408**	**0.0408**	**0.0000**	**2,620.9351**	**2,620.9351**	**0.6421**		**2,636.9883**

3.3 Building Construction - 2018

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	2.0837	63.7357	13.6652	0.1417	3.2416	0.4318	3.6733	0.9334	0.4131	1.3465		14,923.8188	14,923.8188	1.0466		14,949.9848
Worker	10.4305	7.3518	92.1711	0.2011	18.5592	0.1275	18.6867	4.9217	0.1175	5.0392		19,999.5439	19,999.5439	0.7320		20,017.8433
Total	**12.5142**	**71.0875**	**105.8363**	**0.3428**	**21.8008**	**0.5592**	**22.3600**	**5.8552**	**0.5305**	**6.3857**		**34,923.3627**	**34,923.3627**	**1.7786**		**34,967.8281**

3.4 Paving - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.6437	17.5209	14.7964	0.0228		0.9561	0.9561		0.8797	0.8797		2,294.0887	2,294.0887	0.7142		2,311.9432
Paving	5.4321					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**7.0758**	**17.5209**	**14.7964**	**0.0228**		**0.9561**	**0.9561**		**0.8797**	**0.8797**		**2,294.0887**	**2,294.0887**	**0.7142**		**2,311.9432**

3.4 Paving - 2018

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	0.1077	0.0759	0.9515	2.0800e-003	0.1916	1.3200e-003	0.1929	0.0508	1.2100e-003	0.0520		206.4647	206.4647	7.5600e-003		206.6536
Total	**0.1077**	**0.0759**	**0.9515**	**2.0800e-003**	**0.1916**	**1.3200e-003**	**0.1929**	**0.0508**	**1.2100e-003**	**0.0520**		**206.4647**	**206.4647**	**7.5600e-003**		**206.6536**

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	0.2805	1.2154	17.2957	0.0228		0.0374	0.0374		0.0374	0.0374	0.0000	2,294.0887	2,294.0887	0.7142		2,311.9432
Paving	5.4321					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**5.7126**	**1.2154**	**17.2957**	**0.0228**		**0.0374**	**0.0374**		**0.0374**	**0.0374**	**0.0000**	**2,294.0887**	**2,294.0887**	**0.7142**		**2,311.9432**

3.4 Paving - 2018

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	0.1077	0.0759	0.9515	2.0800e-003	0.1916	1.3200e-003	0.1929	0.0508	1.2100e-003	0.0520		206.4647	206.4647	7.5600e-003		206.6536
Total	**0.1077**	**0.0759**	**0.9515**	**2.0800e-003**	**0.1916**	**1.3200e-003**	**0.1929**	**0.0508**	**1.2100e-003**	**0.0520**		**206.4647**	**206.4647**	**7.5600e-003**		**206.6536**

3.5 Architectural Coating - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	73.9662					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2986	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506		281.4485	281.4485	0.0267		282.1171
Total	**74.2649**	**2.0058**	**1.8542**	**2.9700e-003**		**0.1506**	**0.1506**		**0.1506**	**0.1506**		**281.4485**	**281.4485**	**0.0267**		**282.1171**

3.5 Architectural Coating - 2018

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	2.0890	1.4724	18.4596	0.0403	3.7170	0.0255	3.7425	0.9857	0.0235	1.0092		4,005.4145	4,005.4145	0.1466		4,009.0794
Total	**2.0890**	**1.4724**	**18.4596**	**0.0403**	**3.7170**	**0.0255**	**3.7425**	**0.9857**	**0.0235**	**1.0092**		**4,005.4145**	**4,005.4145**	**0.1466**		**4,009.0794**

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	73.9662					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0297	0.1288	1.8324	2.9700e-003		3.9600e-003	3.9600e-003		3.9600e-003	3.9600e-003	0.0000	281.4485	281.4485	0.0267		282.1171
Total	**73.9959**	**0.1288**	**1.8324**	**2.9700e-003**		**3.9600e-003**	**3.9600e-003**		**3.9600e-003**	**3.9600e-003**	**0.0000**	**281.4485**	**281.4485**	**0.0267**		**282.1171**

3.5 Architectural Coating - 2018

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	2.0890	1.4724	18.4596	0.0403	3.7170	0.0255	3.7425	0.9857	0.0235	1.0092		4,005.4145	4,005.4145	0.1466		4,009.0794
Total	**2.0890**	**1.4724**	**18.4596**	**0.0403**	**3.7170**	**0.0255**	**3.7425**	**0.9857**	**0.0235**	**1.0092**		**4,005.4145**	**4,005.4145**	**0.1466**		**4,009.0794**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	4.1610	24.4381	50.7270	0.1513	10.1753	0.1570	10.3323	2.7235	0.1483	2.8717		15,374.8035	15,374.8035	0.8524		15,396.1132
Unmitigated	4.1769	24.5708	51.1591	0.1527	10.2781	0.1584	10.4365	2.7510	0.1496	2.9006		15,513.9859	15,513.9859	0.8580		15,535.4359

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	151.12	185.92	185.92	397,208	393,236
General Office Building	95.52	21.30	9.09	200,355	198,352
Other Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Mobile Home Park	1,117.76	1,120.00	976.64	4,017,701	3,977,524
Total	1,364.40	1,327.22	1,171.65	4,615,264	4,569,111

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
City Park	14.70	6.60	6.60	33.00	48.00	19.00	66	28	6
General Office Building	14.70	6.60	6.60	33.00	48.00	19.00	77	19	4
Other Asphalt Surfaces	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0
Parking Lot	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0
Mobile Home Park	16.80	7.10	7.90	40.20	19.20	40.60	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Office Building	0.536558	0.040171	0.178324	0.131133	0.021173	0.005906	0.016602	0.058581	0.001315	0.001778	0.006379	0.000829	0.001251
Other Asphalt Surfaces	0.536558	0.040171	0.178324	0.131133	0.021173	0.005906	0.016602	0.058581	0.001315	0.001778	0.006379	0.000829	0.001251
Parking Lot	0.536558	0.040171	0.178324	0.131133	0.021173	0.005906	0.016602	0.058581	0.001315	0.001778	0.006379	0.000829	0.001251
City Park	0.536558	0.040171	0.178324	0.131133	0.021173	0.005906	0.016602	0.058581	0.001315	0.001778	0.006379	0.000829	0.001251
Mobile Home Park	0.536558	0.040171	0.178324	0.131133	0.021173	0.005906	0.016602	0.058581	0.001315	0.001778	0.006379	0.000829	0.001251

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Install High Efficiency Lighting

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.1919	1.6402	0.7013	0.0105		0.1326	0.1326		0.1326	0.1326		2,093.1828	2,093.1828	0.0401	0.0384	2,105.6215
NaturalGas Unmitigated	0.1919	1.6402	0.7013	0.0105		0.1326	0.1326		0.1326	0.1326		2,093.1828	2,093.1828	0.0401	0.0384	2,105.6215

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					
City Park	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
General Office Building	82.8038	8.9000e-004	8.1200e-003	6.8200e-003	5.0000e-005		6.2000e-004	6.2000e-004		6.2000e-004	6.2000e-004		9.7416	9.7416	1.9000e-004	1.8000e-004	9.7995
Mobile Home Park	17709.2	0.1910	1.6320	0.6945	0.0104		0.1320	0.1320		0.1320	0.1320		2,083.4412	2,083.4412	0.0399	0.0382	2,095.8220
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
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		**0.1919**	**1.6402**	**0.7013**	**0.0105**		**0.1326**	**0.1326**		**0.1326**	**0.1326**		**2,093.1828**	**2,093.1828**	**0.0401**	**0.0384**	**2,105.6215**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
City Park	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
General Office Building	0.0828038	8.9000e-004	8.1200e-003	6.8200e-003	5.0000e-005		6.2000e-004	6.2000e-004		6.2000e-004	6.2000e-004		9.7416	9.7416	1.9000e-004	1.8000e-004	9.7995
Mobile Home Park	17.7092	0.1910	1.6320	0.6945	0.0104		0.1320	0.1320		0.1320	0.1320		2,083.4412	2,083.4412	0.0399	0.0382	2,095.8220
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
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		**0.1919**	**1.6402**	**0.7013**	**0.0105**		**0.1326**	**0.1326**		**0.1326**	**0.1326**		**2,093.1828**	**2,093.1828**	**0.0401**	**0.0384**	**2,105.6215**

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	9.8320	0.2162	18.6260	9.8000e-004		0.1016	0.1016		0.1016	0.1016	0.0000	33.3076	33.3076	0.0331	0.0000	34.1342
Unmitigated	9.8320	0.2162	18.6260	9.8000e-004		0.1016	0.1016		0.1016	0.1016	0.0000	33.3076	33.3076	0.0331	0.0000	34.1342

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	2.6688					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	6.5881					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	0.5751	0.2162	18.6260	9.8000e-004		0.1016	0.1016		0.1016	0.1016		33.3076	33.3076	0.0331		34.1342
Total	**9.8320**	**0.2162**	**18.6260**	**9.8000e-004**		**0.1016**	**0.1016**		**0.1016**	**0.1016**	**0.0000**	**33.3076**	**33.3076**	**0.0331**	**0.0000**	**34.1342**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	2.6688					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	6.5881					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	0.5751	0.2162	18.6260	9.8000e-004		0.1016	0.1016		0.1016	0.1016		33.3076	33.3076	0.0331		34.1342
Total	**9.8320**	**0.2162**	**18.6260**	**9.8000e-004**		**0.1016**	**0.1016**		**0.1016**	**0.1016**	**0.0000**	**33.3076**	**33.3076**	**0.0331**	**0.0000**	**34.1342**

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

Use Water Efficient Irrigation System

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

6828 Dolores Lake- Phase 1 & Phase 2

San Bernardino-Mojave Desert County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	8.66	1000sqft	0.20	8,660.00	0
Other Asphalt Surfaces	36.72	Acre	36.72	1,599,523.20	0
Parking Lot	67.00	Space	0.60	26,800.00	0
City Park	33.14	Acre	33.14	1,443,578.40	0
Mobile Home Park	224.00	Dwelling Unit	18.79	268,800.00	641

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	32
Climate Zone	10			**Operational Year**	2018
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

6828 Dolores Lake- Phase 1 & Phase 2 - San Bernardino-Mojave Desert County, Winter

Project Characteristics - .

Land Use - P1(Lake) is 25 ac total & P2(RV Park) is 27.7 ac total. 33.14 ac lake and pond/lndscping, 8,660 sf offc/restrms, 67 standard & 224 RV [mobile hme] parking spaces (paving ~70% of phase 2), ~36.72 ac on-site rds.

Construction Phase - Construction of Phases 1 & 2 to start May 2017 and be completed June 2018. No demo or site prep.

Grading - Phase 1 and 2 is 89.45 acres. Site is to be balanced.

Energy Use -

Construction Off-road Equipment Mitigation - Tier 4 final equipment for construction

Mobile Land Use Mitigation - Sidewalks provided on-site.

Energy Mitigation - High efficiency lighting at least 10% more efficent than standard.

Water Mitigation - 20% reduction in indoor water use and water efficient irrigation to be used on-site per Per Green Building Standards

Waste Mitigation - AB 939 requires at least 50% of waste be diverted from landfills, 75% by 2020.

Vehicle Trips - per TIA, Park uses generate 4.56 trips/acres weekdays and 5.61 trips/acre weekends, other uses match CalEEMod default trip generation rates. Defaults used for mobile home park as daily trips not given for RV park in TIA.

Architectural Coating - No residential painting. residential uses are RV park only (modeled as mobile homes).

Woodstoves - 224 RV park spaces only...no mobile homes

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Residential_Exterior	181,440.00	0.00
tblArchitecturalCoating	ConstArea_Residential_Interior	544,320.00	0.00
tblArchitecturalCoating	EF_Residential_Exterior	250.00	0.00
tblArchitecturalCoating	EF_Residential_Interior	250.00	0.00
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	110.00	18.00
tblConstructionPhase	NumDays	1,550.00	244.00
tblConstructionPhase	NumDays	155.00	25.00
tblConstructionPhase	NumDays	110.00	18.00
tblFireplaces	NumberGas	123.20	0.00
tblFireplaces	NumberWood	78.40	0.00
tblGrading	AcresOfGrading	62.50	89.45

tblLandUse	LotAcreage	28.22	18.79
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblVehicleTrips	ST_TR	22.75	5.61
tblVehicleTrips	SU_TR	16.74	5.61
tblVehicleTrips	WD_TR	1.89	4.56
tblWoodstoves	NumberCatalytic	11.20	0.00
tblWoodstoves	NumberNoncatalytic	11.20	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					
2017	17.3563	103.0787	122.4904	0.3491	21.8009	3.0745	24.2769	5.8552	2.8286	8.1881	0.0000	35,473.0773	35,473.0773	2.5913	0.0000	35,537.8594
2018	76.3656	94.5419	108.8164	0.3433	21.8008	2.0649	23.8656	5.8552	1.9460	7.8011	0.0000	34,896.6047	34,896.6047	2.4363	0.0000	34,957.5121
Maximum	**76.3656**	**103.0787**	**122.4904**	**0.3491**	**21.8009**	**3.0745**	**24.2769**	**5.8552**	**2.8286**	**8.1881**	**0.0000**	**35,473.0773**	**35,473.0773**	**2.5913**	**0.0000**	**35,537.8594**

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					
2017	14.5692	78.7588	121.7682	0.3491	21.8009	0.7290	22.5298	5.8552	0.6946	6.5498	0.0000	35,473.0773	35,473.0773	2.5913	0.0000	35,537.8594
2018	76.0966	73.3866	108.6963	0.3433	21.8008	0.6058	22.4066	5.8552	0.5768	6.4320	0.0000	34,896.6047	34,896.6047	2.4363	0.0000	34,957.5121
Maximum	**76.0966**	**78.7588**	**121.7682**	**0.3491**	**21.8009**	**0.7290**	**22.5298**	**5.8552**	**0.6946**	**6.5498**	**0.0000**	**35,473.0773**	**35,473.0773**	**2.5913**	**0.0000**	**35,537.8594**

	ROG	NOx	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	**3.26**	**23.01**	**0.36**	**0.00**	**0.00**	**74.03**	**6.66**	**0.00**	**73.37**	**18.81**	**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	9.8320	0.2162	18.6260	9.8000e-004		0.1016	0.1016		0.1016	0.1016	0.0000	33.3076	33.3076	0.0331	0.0000	34.1342
Energy	0.1919	1.6402	0.7013	0.0105		0.1326	0.1326		0.1326	0.1326		2,093.1828	2,093.1828	0.0401	0.0384	2,105.6215
Mobile	3.6743	24.8077	44.8043	0.1405	10.2781	0.1600	10.4380	2.7510	0.1511	2.9021		14,290.5621	14,290.5621	0.8562		14,311.9682
Total	**13.6982**	**26.6640**	**64.1317**	**0.1519**	**10.2781**	**0.3942**	**10.6722**	**2.7510**	**0.3853**	**3.1363**	**0.0000**	**16,417.0524**	**16,417.0524**	**0.9294**	**0.0384**	**16,451.7238**

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	9.8320	0.2162	18.6260	9.8000e-004		0.1016	0.1016		0.1016	0.1016	0.0000	33.3076	33.3076	0.0331	0.0000	34.1342
Energy	0.1919	1.6402	0.7013	0.0105		0.1326	0.1326		0.1326	0.1326		2,093.1828	2,093.1828	0.0401	0.0384	2,105.6215
Mobile	3.6593	24.6684	44.4525	0.1392	10.1753	0.1585	10.3338	2.7235	0.1497	2.8732		14,161.8160	14,161.8160	0.8510		14,183.0920
Total	**13.6832**	**26.5247**	**63.7799**	**0.1507**	**10.1753**	**0.3927**	**10.5680**	**2.7235**	**0.3839**	**3.1074**	**0.0000**	**16,288.3063**	**16,288.3063**	**0.9242**	**0.0384**	**16,322.8476**

	ROG	NOx	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	**0.11**	**0.52**	**0.55**	**0.84**	**1.00**	**0.37**	**0.98**	**1.00**	**0.36**	**0.92**	**0.00**	**0.78**	**0.78**	**0.56**	**0.00**	**0.78**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	5/1/2017	6/2/2017	5	25	
2	Building Construction	Building Construction	6/3/2017	5/10/2018	5	244	
3	Paving	Paving	5/11/2018	6/5/2018	5	18	
4	Architectural Coating	Architectural Coating	6/6/2018	6/30/2018	5	18	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 89.45

Acres of Paving: 37.32

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 12,990; Non-Residential Outdoor: 4,330; Striped Parking Area: 97,579 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	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
Grading	8	20.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	1,453.00	529.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	291.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Grading - 2017

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					9.8166	0.0000	9.8166	3.7199	0.0000	3.7199			0.0000			0.0000
Off-Road	5.7483	67.9396	38.7826	0.0620		3.0727	3.0727		2.8269	2.8269		6,344.8863	6,344.8863	1.9441		6,393.4879
Total	**5.7483**	**67.9396**	**38.7826**	**0.0620**	**9.8166**	**3.0727**	**12.8893**	**3.7199**	**2.8269**	**6.5468**		**6,344.8863**	**6,344.8863**	**1.9441**		**6,393.4879**

3.2 Grading - 2017

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	0.1617	0.1226	1.1935	2.5600e-003	0.2555	1.8200e-003	0.2573	0.0678	1.6800e-003	0.0694		254.0276	254.0276	0.0101		254.2800
Total	**0.1617**	**0.1226**	**1.1935**	**2.5600e-003**	**0.2555**	**1.8200e-003**	**0.2573**	**0.0678**	**1.6800e-003**	**0.0694**		**254.0276**	**254.0276**	**0.0101**		**254.2800**

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					3.8285	0.0000	3.8285	1.4508	0.0000	1.4508			0.0000			0.0000
Off-Road	0.7616	3.3000	32.9991	0.0620		0.1015	0.1015		0.1015	0.1015	0.0000	6,344.8863	6,344.8863	1.9441		6,393.4878
Total	**0.7616**	**3.3000**	**32.9991**	**0.0620**	**3.8285**	**0.1015**	**3.9300**	**1.4508**	**0.1015**	**1.5523**	**0.0000**	**6,344.8863**	**6,344.8863**	**1.9441**		**6,393.4878**

3.2 Grading - 2017

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	0.1617	0.1226	1.1935	2.5600e-003	0.2555	1.8200e-003	0.2573	0.0678	1.6800e-003	0.0694		254.0276	254.0276	0.0101		254.2800
Total	**0.1617**	**0.1226**	**1.1935**	**2.5600e-003**	**0.2555**	**1.8200e-003**	**0.2573**	**0.0678**	**1.6800e-003**	**0.0694**		**254.0276**	**254.0276**	**0.0101**		**254.2800**

3.3 Building Construction - 2017

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	3.1149	26.5546	18.1825	0.0269		1.7879	1.7879		1.6791	1.6791		2,650.9797	2,650.9797	0.6531		2,667.3078
Total	**3.1149**	**26.5546**	**18.1825**	**0.0269**		**1.7879**	**1.7879**		**1.6791**	**1.6791**		**2,650.9797**	**2,650.9797**	**0.6531**		**2,667.3078**

3.3 Building Construction - 2017

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	2.4947	67.6145	17.6026	0.1365	3.2416	0.5559	3.7975	0.9335	0.5318	1.4653		14,366.9957	14,366.9957	1.2046		14,397.1096
Worker	11.7467	8.9095	86.7053	0.1857	18.5592	0.1323	18.6915	4.9217	0.1221	5.0438		18,455.1019	18,455.1019	0.7336		18,473.4420
Total	**14.2414**	**76.5241**	**104.3079**	**0.3221**	**21.8009**	**0.6882**	**22.4890**	**5.8552**	**0.6539**	**6.5091**		**32,822.0976**	**32,822.0976**	**1.9382**		**32,870.5516**

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	0.3278	2.2347	17.4603	0.0269		0.0408	0.0408		0.0408	0.0408	0.0000	2,650.9797	2,650.9797	0.6531		2,667.3078
Total	**0.3278**	**2.2347**	**17.4603**	**0.0269**		**0.0408**	**0.0408**		**0.0408**	**0.0408**	**0.0000**	**2,650.9797**	**2,650.9797**	**0.6531**		**2,667.3078**

3.3 Building Construction - 2017

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	2.4947	67.6145	17.6026	0.1365	3.2416	0.5559	3.7975	0.9335	0.5318	1.4653		14,366.9957	14,366.9957	1.2046		14,397.1096
Worker	11.7467	8.9095	86.7053	0.1857	18.5592	0.1323	18.6915	4.9217	0.1221	5.0438		18,455.1019	18,455.1019	0.7336		18,473.4420
Total	**14.2414**	**76.5241**	**104.3079**	**0.3221**	**21.8009**	**0.6882**	**22.4890**	**5.8552**	**0.6539**	**6.5091**		**32,822.0976**	**32,822.0976**	**1.9382**		**32,870.5516**

3.3 Building Construction - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.6795	23.3900	17.5804	0.0269		1.4999	1.4999		1.4099	1.4099		2,620.9351	2,620.9351	0.6421		2,636.9883
Total	**2.6795**	**23.3900**	**17.5804**	**0.0269**		**1.4999**	**1.4999**		**1.4099**	**1.4099**		**2,620.9351**	**2,620.9351**	**0.6421**		**2,636.9883**

3.3 Building Construction - 2018

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	2.1836	63.4064	15.5934	0.1361	3.2416	0.4375	3.6791	0.9334	0.4186	1.3520		14,336.7926	14,336.7926	1.1523		14,365.6011
Worker	10.4891	7.7455	75.6426	0.1803	18.5592	0.1275	18.6867	4.9217	0.1175	5.0392		17,938.8770	17,938.8770	0.6418		17,954.9227
Total	**12.6727**	**71.1519**	**91.2360**	**0.3164**	**21.8008**	**0.5650**	**22.3658**	**5.8552**	**0.5360**	**6.3912**		**32,275.6696**	**32,275.6696**	**1.7942**		**32,320.5238**

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	0.3278	2.2347	17.4603	0.0269		0.0408	0.0408		0.0408	0.0408	0.0000	2,620.9351	2,620.9351	0.6421		2,636.9883
Total	**0.3278**	**2.2347**	**17.4603**	**0.0269**		**0.0408**	**0.0408**		**0.0408**	**0.0408**	**0.0000**	**2,620.9351**	**2,620.9351**	**0.6421**		**2,636.9883**

3.3 Building Construction - 2018

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	2.1836	63.4064	15.5934	0.1361	3.2416	0.4375	3.6791	0.9334	0.4186	1.3520		14,336.7926	14,336.7926	1.1523		14,365.6011
Worker	10.4891	7.7455	75.6426	0.1803	18.5592	0.1275	18.6867	4.9217	0.1175	5.0392		17,938.8770	17,938.8770	0.6418		17,954.9227
Total	**12.6727**	**71.1519**	**91.2360**	**0.3164**	**21.8008**	**0.5650**	**22.3658**	**5.8552**	**0.5360**	**6.3912**		**32,275.6696**	**32,275.6696**	**1.7942**		**32,320.5238**

3.4 Paving - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.6437	17.5209	14.7964	0.0228		0.9561	0.9561		0.8797	0.8797		2,294.0887	2,294.0887	0.7142		2,311.9432
Paving	5.4321					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**7.0758**	**17.5209**	**14.7964**	**0.0228**		**0.9561**	**0.9561**		**0.8797**	**0.8797**		**2,294.0887**	**2,294.0887**	**0.7142**		**2,311.9432**

3.4 Paving - 2018

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	0.1083	0.0800	0.7809	1.8600e-003	0.1916	1.3200e-003	0.1929	0.0508	1.2100e-003	0.0520		185.1914	185.1914	6.6300e-003		185.3571
Total	**0.1083**	**0.0800**	**0.7809**	**1.8600e-003**	**0.1916**	**1.3200e-003**	**0.1929**	**0.0508**	**1.2100e-003**	**0.0520**		**185.1914**	**185.1914**	**6.6300e-003**		**185.3571**

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	0.2805	1.2154	17.2957	0.0228		0.0374	0.0374		0.0374	0.0374	0.0000	2,294.0887	2,294.0887	0.7142		2,311.9432
Paving	5.4321					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**5.7126**	**1.2154**	**17.2957**	**0.0228**		**0.0374**	**0.0374**		**0.0374**	**0.0374**	**0.0000**	**2,294.0887**	**2,294.0887**	**0.7142**		**2,311.9432**

3.4 Paving - 2018

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	0.1083	0.0800	0.7809	1.8600e-003	0.1916	1.3200e-003	0.1929	0.0508	1.2100e-003	0.0520		185.1914	185.1914	6.6300e-003		185.3571
Total	**0.1083**	**0.0800**	**0.7809**	**1.8600e-003**	**0.1916**	**1.3200e-003**	**0.1929**	**0.0508**	**1.2100e-003**	**0.0520**		**185.1914**	**185.1914**	**6.6300e-003**		**185.3571**

3.5 Architectural Coating - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	73.9662					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2986	2.0058	1.8542	2.9700e-003		0.1506	0.1506		0.1506	0.1506		281.4485	281.4485	0.0267		282.1171
Total	**74.2649**	**2.0058**	**1.8542**	**2.9700e-003**		**0.1506**	**0.1506**		**0.1506**	**0.1506**		**281.4485**	**281.4485**	**0.0267**		**282.1171**

3.5 Architectural Coating - 2018

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	2.1007	1.5512	15.1494	0.0361	3.7170	0.0255	3.7425	0.9857	0.0235	1.0092		3,592.7138	3,592.7138	0.1285		3,595.9274
Total	**2.1007**	**1.5512**	**15.1494**	**0.0361**	**3.7170**	**0.0255**	**3.7425**	**0.9857**	**0.0235**	**1.0092**		**3,592.7138**	**3,592.7138**	**0.1285**		**3,595.9274**

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	73.9662					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0297	0.1288	1.8324	2.9700e-003		3.9600e-003	3.9600e-003		3.9600e-003	3.9600e-003	0.0000	281.4485	281.4485	0.0267		282.1171
Total	**73.9959**	**0.1288**	**1.8324**	**2.9700e-003**		**3.9600e-003**	**3.9600e-003**		**3.9600e-003**	**3.9600e-003**	**0.0000**	**281.4485**	**281.4485**	**0.0267**		**282.1171**

3.5 Architectural Coating - 2018

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	2.1007	1.5512	15.1494	0.0361	3.7170	0.0255	3.7425	0.9857	0.0235	1.0092		3,592.7138	3,592.7138	0.1285		3,595.9274
Total	**2.1007**	**1.5512**	**15.1494**	**0.0361**	**3.7170**	**0.0255**	**3.7425**	**0.9857**	**0.0235**	**1.0092**		**3,592.7138**	**3,592.7138**	**0.1285**		**3,595.9274**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	3.6593	24.6684	44.4525	0.1392	10.1753	0.1585	10.3338	2.7235	0.1497	2.8732		14,161.8160	14,161.8160	0.8510		14,183.0920
Unmitigated	3.6743	24.8077	44.8043	0.1405	10.2781	0.1600	10.4380	2.7510	0.1511	2.9021		14,290.5621	14,290.5621	0.8562		14,311.9682

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	151.12	185.92	185.92	397,208	393,236
General Office Building	95.52	21.30	9.09	200,355	198,352
Other Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Mobile Home Park	1,117.76	1,120.00	976.64	4,017,701	3,977,524
Total	1,364.40	1,327.22	1,171.65	4,615,264	4,569,111

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
City Park	14.70	6.60	6.60	33.00	48.00	19.00	66	28	6
General Office Building	14.70	6.60	6.60	33.00	48.00	19.00	77	19	4
Other Asphalt Surfaces	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0
Parking Lot	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0
Mobile Home Park	16.80	7.10	7.90	40.20	19.20	40.60	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Office Building	0.536558	0.040171	0.178324	0.131133	0.021173	0.005906	0.016602	0.058581	0.001315	0.001778	0.006379	0.000829	0.001251
Other Asphalt Surfaces	0.536558	0.040171	0.178324	0.131133	0.021173	0.005906	0.016602	0.058581	0.001315	0.001778	0.006379	0.000829	0.001251
Parking Lot	0.536558	0.040171	0.178324	0.131133	0.021173	0.005906	0.016602	0.058581	0.001315	0.001778	0.006379	0.000829	0.001251
City Park	0.536558	0.040171	0.178324	0.131133	0.021173	0.005906	0.016602	0.058581	0.001315	0.001778	0.006379	0.000829	0.001251
Mobile Home Park	0.536558	0.040171	0.178324	0.131133	0.021173	0.005906	0.016602	0.058581	0.001315	0.001778	0.006379	0.000829	0.001251

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Install High Efficiency Lighting

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.1919	1.6402	0.7013	0.0105		0.1326	0.1326		0.1326	0.1326		2,093.1828	2,093.1828	0.0401	0.0384	2,105.6215
NaturalGas Unmitigated	0.1919	1.6402	0.7013	0.0105		0.1326	0.1326		0.1326	0.1326		2,093.1828	2,093.1828	0.0401	0.0384	2,105.6215

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					
City Park	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
General Office Building	82.8038	8.9000e-004	8.1200e-003	6.8200e-003	5.0000e-005		6.2000e-004	6.2000e-004		6.2000e-004	6.2000e-004		9.7416	9.7416	1.9000e-004	1.8000e-004	9.7995
Mobile Home Park	17709.2	0.1910	1.6320	0.6945	0.0104		0.1320	0.1320		0.1320	0.1320		2,083.4412	2,083.4412	0.0399	0.0382	2,095.8220
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
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		**0.1919**	**1.6402**	**0.7013**	**0.0105**		**0.1326**	**0.1326**		**0.1326**	**0.1326**		**2,093.1828**	**2,093.1828**	**0.0401**	**0.0384**	**2,105.6215**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
City Park	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
General Office Building	0.0828038	8.9000e-004	8.1200e-003	6.8200e-003	5.0000e-005		6.2000e-004	6.2000e-004		6.2000e-004	6.2000e-004		9.7416	9.7416	1.9000e-004	1.8000e-004	9.7995
Mobile Home Park	17.7092	0.1910	1.6320	0.6945	0.0104		0.1320	0.1320		0.1320	0.1320		2,083.4412	2,083.4412	0.0399	0.0382	2,095.8220
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
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		**0.1919**	**1.6402**	**0.7013**	**0.0105**		**0.1326**	**0.1326**		**0.1326**	**0.1326**		**2,093.1828**	**2,093.1828**	**0.0401**	**0.0384**	**2,105.6215**

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	9.8320	0.2162	18.6260	9.8000e-004		0.1016	0.1016		0.1016	0.1016	0.0000	33.3076	33.3076	0.0331	0.0000	34.1342
Unmitigated	9.8320	0.2162	18.6260	9.8000e-004		0.1016	0.1016		0.1016	0.1016	0.0000	33.3076	33.3076	0.0331	0.0000	34.1342

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	2.6688					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	6.5881					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	0.5751	0.2162	18.6260	9.8000e-004		0.1016	0.1016		0.1016	0.1016		33.3076	33.3076	0.0331		34.1342
Total	**9.8320**	**0.2162**	**18.6260**	**9.8000e-004**		**0.1016**	**0.1016**		**0.1016**	**0.1016**	**0.0000**	**33.3076**	**33.3076**	**0.0331**	**0.0000**	**34.1342**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	2.6688					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	6.5881					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	0.5751	0.2162	18.6260	9.8000e-004		0.1016	0.1016		0.1016	0.1016		33.3076	33.3076	0.0331		34.1342
Total	**9.8320**	**0.2162**	**18.6260**	**9.8000e-004**		**0.1016**	**0.1016**		**0.1016**	**0.1016**	**0.0000**	**33.3076**	**33.3076**	**0.0331**	**0.0000**	**34.1342**

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

Use Water Efficient Irrigation System

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Phase 3- Waterpark Parking Lot

San Bernardino-Mojave Desert County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	913.00	Space	14.10	614,196.00	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	32
Climate Zone	10			**Operational Year**	2019
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Phase 3- Waterpark Parking Lot - San Bernardino-Mojave Desert County, Summer

Project Characteristics - Parking lot portion of Phase 3 only.

Land Use - Parking lot portion of Phase 3 (waterpark) covers 14.1 acres with 913 parking spaces.

Construction Phase - Construction Phase 3 to start April 2018 and be completed May 2019. Parking lot only, no buildings being constructed.

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Grading - Phase 3 parking area is 14.1 acres. Site is to be balanced.

Energy Use -

Construction Off-road Equipment Mitigation - Tier 4 final equipment for construction

Mobile Land Use Mitigation -

Energy Mitigation - High efficiency lighting at least 10% more efficent than standard.

Water Mitigation - Per Green Building Standards.

Waste Mitigation - AB 939 requires at least 50% of waste be diverted from landfills, 75% by 2020.

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final

tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	20.00	45.00
tblConstructionPhase	NumDays	30.00	55.00
tblConstructionPhase	NumDays	20.00	205.00
tblGrading	AcresOfGrading	137.50	14.10
tblLandUse	BuildingSpaceSquareFeet	365,200.00	614,196.00
tblLandUse	LandUseSquareFeet	365,200.00	614,196.00
tblLandUse	LotAcreage	8.22	14.10
tblProjectCharacteristics	OperationalYear	2018	2019
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	5.2337	59.6230	36.3581	0.0648	6.5494	2.6355	9.1849	3.4073	2.4247	5.8320	0.0000	6,519.7146	6,519.7146	1.9541	0.0000	6,568.5659
2019	10.0951	15.3108	15.5084	0.0248	0.6642	0.8259	1.0175	0.1761	0.7598	0.8106	0.0000	2,456.4512	2,456.4512	0.7207	0.0000	2,474.4696
Maximum	**10.0951**	**59.6230**	**36.3581**	**0.0648**	**6.5494**	**2.6355**	**9.1849**	**3.4073**	**2.4247**	**5.8320**	**0.0000**	**6,519.7146**	**6,519.7146**	**1.9541**	**0.0000**	**6,568.5659**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	0.9051	3.4012	34.2678	0.0648	2.7101	0.1033	2.8134	1.3702	0.1032	1.4733	0.0000	6,519.7146	6,519.7146	1.9541	0.0000	6,568.5659
2019	9.8583	1.2821	18.1392	0.0248	0.6642	0.0387	0.6726	0.1761	0.0386	0.1842	0.0000	2,456.4512	2,456.4512	0.7207	0.0000	2,474.4696
Maximum	**9.8583**	**3.4012**	**34.2678**	**0.0648**	**2.7101**	**0.1033**	**2.8134**	**1.3702**	**0.1032**	**1.4733**	**0.0000**	**6,519.7146**	**6,519.7146**	**1.9541**	**0.0000**	**6,568.5659**

	ROG	NOx	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	**29.78**	**93.75**	**-1.04**	**0.00**	**53.22**	**95.90**	**65.83**	**56.85**	**95.55**	**75.05**	**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	0.3435	8.7000e-004	0.0941	1.0000e-005		3.4000e-004	3.4000e-004		3.4000e-004	3.4000e-004		0.1998	0.1998	5.4000e-004		0.2134
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	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	**0.3435**	**8.7000e-004**	**0.0941**	**1.0000e-005**	**0.0000**	**3.4000e-004**	**3.4000e-004**	**0.0000**	**3.4000e-004**	**3.4000e-004**		**0.1998**	**0.1998**	**5.4000e-004**	**0.0000**	**0.2134**

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	0.3435	8.7000e-004	0.0941	1.0000e-005		3.4000e-004	3.4000e-004		3.4000e-004	3.4000e-004		0.1998	0.1998	5.4000e-004		0.2134
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	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	**0.3435**	**8.7000e-004**	**0.0941**	**1.0000e-005**	**0.0000**	**3.4000e-004**	**3.4000e-004**	**0.0000**	**3.4000e-004**	**3.4000e-004**		**0.1998**	**0.1998**	**5.4000e-004**	**0.0000**	**0.2134**

	ROG	NOx	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	Grading	Grading	4/1/2018	6/17/2018	5	55	
2	Paving	Paving	6/18/2018	3/31/2019	5	205	
3	Architectural Coating	Architectural Coating	4/1/2019	5/31/2019	5	45	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 14.1

Acres of Paving: 14.1

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 36,852 (Architectural Coating – sqft)

OffRoad Equipment

Phase 3- Waterpark Parking Lot - San Bernardino-Mojave Desert County, Summer

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
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
Grading	8	20.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	52.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Grading - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.2940	0.0000	6.2940	3.3396	0.0000	3.3396			0.0000			0.0000
Off-Road	5.0901	59.5218	35.0894	0.0620		2.6337	2.6337		2.4230	2.4230		6,244.4284	6,244.4284	1.9440		6,293.0278
Total	**5.0901**	**59.5218**	**35.0894**	**0.0620**	**6.2940**	**2.6337**	**8.9277**	**3.3396**	**2.4230**	**5.7626**		**6,244.4284**	**6,244.4284**	**1.9440**		**6,293.0278**

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	0.1436	0.1012	1.2687	2.7700e-003	0.2555	1.7500e-003	0.2572	0.0678	1.6200e-003	0.0694		275.2862	275.2862	0.0101		275.5381
Total	**0.1436**	**0.1012**	**1.2687**	**2.7700e-003**	**0.2555**	**1.7500e-003**	**0.2572**	**0.0678**	**1.6200e-003**	**0.0694**		**275.2862**	**275.2862**	**0.0101**		**275.5381**

3.2 Grading - 2018

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					2.4546	0.0000	2.4546	1.3024	0.0000	1.3024			0.0000			0.0000
Off-Road	0.7616	3.3000	32.9991	0.0620		0.1015	0.1015		0.1015	0.1015	0.0000	6,244.4284	6,244.4284	1.9440		6,293.0278
Total	**0.7616**	**3.3000**	**32.9991**	**0.0620**	**2.4546**	**0.1015**	**2.5562**	**1.3024**	**0.1015**	**1.4040**	**0.0000**	**6,244.4284**	**6,244.4284**	**1.9440**		**6,293.0278**

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	0.1436	0.1012	1.2687	2.7700e-003	0.2555	1.7500e-003	0.2572	0.0678	1.6200e-003	0.0694		275.2862	275.2862	0.0101		275.5381
Total	**0.1436**	**0.1012**	**1.2687**	**2.7700e-003**	**0.2555**	**1.7500e-003**	**0.2572**	**0.0678**	**1.6200e-003**	**0.0694**		**275.2862**	**275.2862**	**0.0101**		**275.5381**

3.3 Paving - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.6437	17.5209	14.7964	0.0228		0.9561	0.9561		0.8797	0.8797		2,294.0887	2,294.0887	0.7142		2,311.9432
Paving	0.1802					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.8239**	**17.5209**	**14.7964**	**0.0228**		**0.9561**	**0.9561**		**0.8797**	**0.8797**		**2,294.0887**	**2,294.0887**	**0.7142**		**2,311.9432**

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	0.1077	0.0759	0.9515	2.0800e-003	0.1916	1.3200e-003	0.1929	0.0508	1.2100e-003	0.0520		206.4647	206.4647	7.5600e-003		206.6536
Total	**0.1077**	**0.0759**	**0.9515**	**2.0800e-003**	**0.1916**	**1.3200e-003**	**0.1929**	**0.0508**	**1.2100e-003**	**0.0520**		**206.4647**	**206.4647**	**7.5600e-003**		**206.6536**

3.3 Paving - 2018

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	0.2805	1.2154	17.2957	0.0228		0.0374	0.0374		0.0374	0.0374	0.0000	2,294.0887	2,294.0887	0.7142		2,311.9432
Paving	0.1802					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.4607**	**1.2154**	**17.2957**	**0.0228**		**0.0374**	**0.0374**		**0.0374**	**0.0374**	**0.0000**	**2,294.0887**	**2,294.0887**	**0.7142**		**2,311.9432**

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	0.1077	0.0759	0.9515	2.0800e-003	0.1916	1.3200e-003	0.1929	0.0508	1.2100e-003	0.0520		206.4647	206.4647	7.5600e-003		206.6536
Total	**0.1077**	**0.0759**	**0.9515**	**2.0800e-003**	**0.1916**	**1.3200e-003**	**0.1929**	**0.0508**	**1.2100e-003**	**0.0520**		**206.4647**	**206.4647**	**7.5600e-003**		**206.6536**

3.3 Paving - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4544	15.2441	14.6648	0.0228		0.8246	0.8246		0.7586	0.7586		2,257.0025	2,257.0025	0.7141		2,274.8548
Paving	0.1802					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.6346**	**15.2441**	**14.6648**	**0.0228**		**0.8246**	**0.8246**		**0.7586**	**0.7586**		**2,257.0025**	**2,257.0025**	**0.7141**		**2,274.8548**

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	0.0979	0.0667	0.8435	2.0000e-003	0.1916	1.2700e-003	0.1929	0.0508	1.1700e-003	0.0520		199.4487	199.4487	6.6400e-003		199.6148
Total	**0.0979**	**0.0667**	**0.8435**	**2.0000e-003**	**0.1916**	**1.2700e-003**	**0.1929**	**0.0508**	**1.1700e-003**	**0.0520**		**199.4487**	**199.4487**	**6.6400e-003**		**199.6148**

3.3 Paving - 2019

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	0.2805	1.2154	17.2957	0.0228		0.0374	0.0374		0.0374	0.0374	0.0000	2,257.0025	2,257.0025	0.7141		2,274.8548
Paving	0.1802					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.4607**	**1.2154**	**17.2957**	**0.0228**		**0.0374**	**0.0374**		**0.0374**	**0.0374**	**0.0000**	**2,257.0025**	**2,257.0025**	**0.7141**		**2,274.8548**

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	0.0979	0.0667	0.8435	2.0000e-003	0.1916	1.2700e-003	0.1929	0.0508	1.1700e-003	0.0520		199.4487	199.4487	6.6400e-003		199.6148
Total	**0.0979**	**0.0667**	**0.8435**	**2.0000e-003**	**0.1916**	**1.2700e-003**	**0.1929**	**0.0508**	**1.1700e-003**	**0.0520**		**199.4487**	**199.4487**	**6.6400e-003**		**199.6148**

3.4 Architectural Coating - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	9.4894					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288		281.4481	281.4481	0.0238		282.0423
Total	**9.7558**	**1.8354**	**1.8413**	**2.9700e-003**		**0.1288**	**0.1288**		**0.1288**	**0.1288**		**281.4481**	**281.4481**	**0.0238**		**282.0423**

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	0.3392	0.2313	2.9242	6.9500e-003	0.6642	4.4200e-003	0.6686	0.1761	4.0700e-003	0.1802		691.4222	691.4222	0.0230		691.9980
Total	**0.3392**	**0.2313**	**2.9242**	**6.9500e-003**	**0.6642**	**4.4200e-003**	**0.6686**	**0.1761**	**4.0700e-003**	**0.1802**		**691.4222**	**691.4222**	**0.0230**		**691.9980**

3.4 Architectural Coating - 2019

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	9.4894					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0297	0.1288	1.8324	2.9700e-003		3.9600e-003	3.9600e-003		3.9600e-003	3.9600e-003	0.0000	281.4481	281.4481	0.0238		282.0423
Total	**9.5191**	**0.1288**	**1.8324**	**2.9700e-003**		**3.9600e-003**	**3.9600e-003**		**3.9600e-003**	**3.9600e-003**	**0.0000**	**281.4481**	**281.4481**	**0.0238**		**282.0423**

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	0.3392	0.2313	2.9242	6.9500e-003	0.6642	4.4200e-003	0.6686	0.1761	4.0700e-003	0.1802		691.4222	691.4222	0.0230		691.9980
Total	**0.3392**	**0.2313**	**2.9242**	**6.9500e-003**	**0.6642**	**4.4200e-003**	**0.6686**	**0.1761**	**4.0700e-003**	**0.1802**		**691.4222**	**691.4222**	**0.0230**		**691.9980**

4.0 Operational Detail - Mobile

Phase 3- Waterpark Parking Lot - San Bernardino-Mojave Desert County, Summer

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Parking Lot	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Parking Lot	14.70	6.60	6.60	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
Parking Lot	0.541740	0.038987	0.178620	0.126833	0.019742	0.005671	0.017070	0.060066	0.001326	0.001715	0.006244	0.000823	0.001163

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Install High Efficiency Lighting

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

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					
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		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
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		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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	0.3435	8.7000e-004	0.0941	1.0000e-005		3.4000e-004	3.4000e-004		3.4000e-004	3.4000e-004		0.1998	0.1998	5.4000e-004		0.2134
Unmitigated	0.3435	8.7000e-004	0.0941	1.0000e-005		3.4000e-004	3.4000e-004		3.4000e-004	3.4000e-004		0.1998	0.1998	5.4000e-004		0.2134

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	0.1170					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.2176					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	8.9200e-003	8.7000e-004	0.0941	1.0000e-005		3.4000e-004	3.4000e-004		3.4000e-004	3.4000e-004		0.1998	0.1998	5.4000e-004		0.2134
Total	**0.3435**	**8.7000e-004**	**0.0941**	**1.0000e-005**		**3.4000e-004**	**3.4000e-004**		**3.4000e-004**	**3.4000e-004**		**0.1998**	**0.1998**	**5.4000e-004**		**0.2134**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1170					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.2176					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	8.9200e-003	8.7000e-004	0.0941	1.0000e-005		3.4000e-004	3.4000e-004		3.4000e-004	3.4000e-004		0.1998	0.1998	5.4000e-004		0.2134
Total	**0.3435**	**8.7000e-004**	**0.0941**	**1.0000e-005**		**3.4000e-004**	**3.4000e-004**		**3.4000e-004**	**3.4000e-004**		**0.1998**	**0.1998**	**5.4000e-004**		**0.2134**

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

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

Phase 3- Waterpark Parking Lot

San Bernardino-Mojave Desert County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	913.00	Space	14.10	614,196.00	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	32
Climate Zone	10			**Operational Year**	2019
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Phase 3- Waterpark Parking Lot - San Bernardino-Mojave Desert County, Winter

Project Characteristics - Parking lot portion of Phase 3 only.

Land Use - Parking lot portion of Phase 3 (waterpark) covers 14.1 acres with 913 parking spaces.

Construction Phase - Construction Phase 3 to start April 2018 and be completed May 2019. Parking lot only, no buildings being constructed.

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Grading - Phase 3 parking area is 14.1 acres. Site is to be balanced.

Energy Use -

Construction Off-road Equipment Mitigation - Tier 4 final equipment for construction

Mobile Land Use Mitigation -

Energy Mitigation - High efficiency lighting at least 10% more efficent than standard.

Water Mitigation - Per Green Building Standards.

Waste Mitigation - AB 939 requires at least 50% of waste be diverted from landfills, 75% by 2020.

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final

tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	20.00	45.00
tblConstructionPhase	NumDays	30.00	55.00
tblConstructionPhase	NumDays	20.00	205.00
tblGrading	AcresOfGrading	137.50	14.10
tblLandUse	BuildingSpaceSquareFeet	365,200.00	614,196.00
tblLandUse	LandUseSquareFeet	365,200.00	614,196.00
tblLandUse	LotAcreage	8.22	14.10
tblProjectCharacteristics	OperationalYear	2018	2019
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	5.2345	59.6284	36.1306	0.0645	6.5494	2.6355	9.1849	3.4073	2.4247	5.8320	0.0000	6,491.3503	6,491.3503	1.9528	0.0000	6,540.1706
2019	10.0975	15.3143	15.3556	0.0246	0.6642	0.8259	1.0175	0.1761	0.7598	0.8106	0.0000	2,435.8911	2,435.8911	0.7199	0.0000	2,453.8887
Maximum	**10.0975**	**59.6284**	**36.1306**	**0.0645**	**6.5494**	**2.6355**	**9.1849**	**3.4073**	**2.4247**	**5.8320**	**0.0000**	**6,491.3503**	**6,491.3503**	**1.9528**	**0.0000**	**6,540.1706**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2018	0.9059	3.4067	34.0403	0.0645	2.7101	0.1033	2.8134	1.3702	0.1032	1.4733	0.0000	6,491.3503	6,491.3503	1.9528	0.0000	6,540.1706
2019	9.8608	1.2856	17.9865	0.0246	0.6642	0.0387	0.6726	0.1761	0.0386	0.1842	0.0000	2,435.8911	2,435.8911	0.7199	0.0000	2,453.8887
Maximum	**9.8608**	**3.4067**	**34.0403**	**0.0645**	**2.7101**	**0.1033**	**2.8134**	**1.3702**	**0.1032**	**1.4733**	**0.0000**	**6,491.3503**	**6,491.3503**	**1.9528**	**0.0000**	**6,540.1706**

	ROG	NOx	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	**29.78**	**93.74**	**-1.05**	**0.00**	**53.22**	**95.90**	**65.83**	**56.85**	**95.55**	**75.05**	**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	0.3435	8.7000e-004	0.0941	1.0000e-005		3.4000e-004	3.4000e-004		3.4000e-004	3.4000e-004		0.1998	0.1998	5.4000e-004		0.2134
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	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	**0.3435**	**8.7000e-004**	**0.0941**	**1.0000e-005**	**0.0000**	**3.4000e-004**	**3.4000e-004**	**0.0000**	**3.4000e-004**	**3.4000e-004**		**0.1998**	**0.1998**	**5.4000e-004**	**0.0000**	**0.2134**

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	0.3435	8.7000e-004	0.0941	1.0000e-005		3.4000e-004	3.4000e-004		3.4000e-004	3.4000e-004		0.1998	0.1998	5.4000e-004		0.2134
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	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	**0.3435**	**8.7000e-004**	**0.0941**	**1.0000e-005**	**0.0000**	**3.4000e-004**	**3.4000e-004**	**0.0000**	**3.4000e-004**	**3.4000e-004**		**0.1998**	**0.1998**	**5.4000e-004**	**0.0000**	**0.2134**

	ROG	NOx	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	Grading	Grading	4/1/2018	6/17/2018	5	55	
2	Paving	Paving	6/18/2018	3/31/2019	5	205	
3	Architectural Coating	Architectural Coating	4/1/2019	5/31/2019	5	45	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 14.1

Acres of Paving: 14.1

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 36,852 (Architectural Coating – sqft)

OffRoad Equipment

Phase 3- Waterpark Parking Lot - San Bernardino-Mojave Desert County, Winter

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
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
Grading	8	20.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	52.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Grading - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.2940	0.0000	6.2940	3.3396	0.0000	3.3396			0.0000			0.0000
Off-Road	5.0901	59.5218	35.0894	0.0620		2.6337	2.6337		2.4230	2.4230		6,244.4284	6,244.4284	1.9440		6,293.0278
Total	**5.0901**	**59.5218**	**35.0894**	**0.0620**	**6.2940**	**2.6337**	**8.9277**	**3.3396**	**2.4230**	**5.7626**		**6,244.4284**	**6,244.4284**	**1.9440**		**6,293.0278**

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	0.1444	0.1066	1.0412	2.4800e-003	0.2555	1.7500e-003	0.2572	0.0678	1.6200e-003	0.0694		246.9219	246.9219	8.8300e-003		247.1428
Total	**0.1444**	**0.1066**	**1.0412**	**2.4800e-003**	**0.2555**	**1.7500e-003**	**0.2572**	**0.0678**	**1.6200e-003**	**0.0694**		**246.9219**	**246.9219**	**8.8300e-003**		**247.1428**

3.2 Grading - 2018

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					2.4546	0.0000	2.4546	1.3024	0.0000	1.3024			0.0000			0.0000
Off-Road	0.7616	3.3000	32.9991	0.0620		0.1015	0.1015		0.1015	0.1015	0.0000	6,244.4284	6,244.4284	1.9440		6,293.0278
Total	**0.7616**	**3.3000**	**32.9991**	**0.0620**	**2.4546**	**0.1015**	**2.5562**	**1.3024**	**0.1015**	**1.4040**	**0.0000**	**6,244.4284**	**6,244.4284**	**1.9440**		**6,293.0278**

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	0.1444	0.1066	1.0412	2.4800e-003	0.2555	1.7500e-003	0.2572	0.0678	1.6200e-003	0.0694		246.9219	246.9219	8.8300e-003		247.1428
Total	**0.1444**	**0.1066**	**1.0412**	**2.4800e-003**	**0.2555**	**1.7500e-003**	**0.2572**	**0.0678**	**1.6200e-003**	**0.0694**		**246.9219**	**246.9219**	**8.8300e-003**		**247.1428**

3.3 Paving - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.6437	17.5209	14.7964	0.0228		0.9561	0.9561		0.8797	0.8797		2,294.0887	2,294.0887	0.7142		2,311.9432
Paving	0.1802					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.8239**	**17.5209**	**14.7964**	**0.0228**		**0.9561**	**0.9561**		**0.8797**	**0.8797**		**2,294.0887**	**2,294.0887**	**0.7142**		**2,311.9432**

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	0.1083	0.0800	0.7809	1.8600e-003	0.1916	1.3200e-003	0.1929	0.0508	1.2100e-003	0.0520		185.1914	185.1914	6.6300e-003		185.3571
Total	**0.1083**	**0.0800**	**0.7809**	**1.8600e-003**	**0.1916**	**1.3200e-003**	**0.1929**	**0.0508**	**1.2100e-003**	**0.0520**		**185.1914**	**185.1914**	**6.6300e-003**		**185.3571**

3.3 Paving - 2018

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	0.2805	1.2154	17.2957	0.0228		0.0374	0.0374		0.0374	0.0374	0.0000	2,294.0887	2,294.0887	0.7142		2,311.9432
Paving	0.1802					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.4607**	**1.2154**	**17.2957**	**0.0228**		**0.0374**	**0.0374**		**0.0374**	**0.0374**	**0.0000**	**2,294.0887**	**2,294.0887**	**0.7142**		**2,311.9432**

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	0.1083	0.0800	0.7809	1.8600e-003	0.1916	1.3200e-003	0.1929	0.0508	1.2100e-003	0.0520		185.1914	185.1914	6.6300e-003		185.3571
Total	**0.1083**	**0.0800**	**0.7809**	**1.8600e-003**	**0.1916**	**1.3200e-003**	**0.1929**	**0.0508**	**1.2100e-003**	**0.0520**		**185.1914**	**185.1914**	**6.6300e-003**		**185.3571**

3.3 Paving - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4544	15.2441	14.6648	0.0228		0.8246	0.8246		0.7586	0.7586		2,257.0025	2,257.0025	0.7141		2,274.8548
Paving	0.1802					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.6346**	**15.2441**	**14.6648**	**0.0228**		**0.8246**	**0.8246**		**0.7586**	**0.7586**		**2,257.0025**	**2,257.0025**	**0.7141**		**2,274.8548**

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	0.0986	0.0703	0.6908	1.8000e-003	0.1916	1.2700e-003	0.1929	0.0508	1.1700e-003	0.0520		178.8886	178.8886	5.8100e-003		179.0339
Total	**0.0986**	**0.0703**	**0.6908**	**1.8000e-003**	**0.1916**	**1.2700e-003**	**0.1929**	**0.0508**	**1.1700e-003**	**0.0520**		**178.8886**	**178.8886**	**5.8100e-003**		**179.0339**

3.3 Paving - 2019

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	0.2805	1.2154	17.2957	0.0228		0.0374	0.0374		0.0374	0.0374	0.0000	2,257.0025	2,257.0025	0.7141		2,274.8548
Paving	0.1802					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.4607**	**1.2154**	**17.2957**	**0.0228**		**0.0374**	**0.0374**		**0.0374**	**0.0374**	**0.0000**	**2,257.0025**	**2,257.0025**	**0.7141**		**2,274.8548**

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	0.0986	0.0703	0.6908	1.8000e-003	0.1916	1.2700e-003	0.1929	0.0508	1.1700e-003	0.0520		178.8886	178.8886	5.8100e-003		179.0339
Total	**0.0986**	**0.0703**	**0.6908**	**1.8000e-003**	**0.1916**	**1.2700e-003**	**0.1929**	**0.0508**	**1.1700e-003**	**0.0520**		**178.8886**	**178.8886**	**5.8100e-003**		**179.0339**

3.4 Architectural Coating - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	9.4894					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2664	1.8354	1.8413	2.9700e-003		0.1288	0.1288		0.1288	0.1288		281.4481	281.4481	0.0238		282.0423
Total	**9.7558**	**1.8354**	**1.8413**	**2.9700e-003**		**0.1288**	**0.1288**		**0.1288**	**0.1288**		**281.4481**	**281.4481**	**0.0238**		**282.0423**

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	0.3417	0.2435	2.3947	6.2300e-003	0.6642	4.4200e-003	0.6686	0.1761	4.0700e-003	0.1802		620.1471	620.1471	0.0202		620.6510
Total	**0.3417**	**0.2435**	**2.3947**	**6.2300e-003**	**0.6642**	**4.4200e-003**	**0.6686**	**0.1761**	**4.0700e-003**	**0.1802**		**620.1471**	**620.1471**	**0.0202**		**620.6510**

3.4 Architectural Coating - 2019

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	9.4894					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0297	0.1288	1.8324	2.9700e-003		3.9600e-003	3.9600e-003		3.9600e-003	3.9600e-003	0.0000	281.4481	281.4481	0.0238		282.0423
Total	**9.5191**	**0.1288**	**1.8324**	**2.9700e-003**		**3.9600e-003**	**3.9600e-003**		**3.9600e-003**	**3.9600e-003**	**0.0000**	**281.4481**	**281.4481**	**0.0238**		**282.0423**

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	0.3417	0.2435	2.3947	6.2300e-003	0.6642	4.4200e-003	0.6686	0.1761	4.0700e-003	0.1802		620.1471	620.1471	0.0202		620.6510
Total	**0.3417**	**0.2435**	**2.3947**	**6.2300e-003**	**0.6642**	**4.4200e-003**	**0.6686**	**0.1761**	**4.0700e-003**	**0.1802**		**620.1471**	**620.1471**	**0.0202**		**620.6510**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Parking Lot	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Parking Lot	14.70	6.60	6.60	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
Parking Lot	0.541740	0.038987	0.178620	0.126833	0.019742	0.005671	0.017070	0.060066	0.001326	0.001715	0.006244	0.000823	0.001163

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Install High Efficiency Lighting

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

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					
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		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
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		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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	0.3435	8.7000e-004	0.0941	1.0000e-005		3.4000e-004	3.4000e-004		3.4000e-004	3.4000e-004		0.1998	0.1998	5.4000e-004		0.2134
Unmitigated	0.3435	8.7000e-004	0.0941	1.0000e-005		3.4000e-004	3.4000e-004		3.4000e-004	3.4000e-004		0.1998	0.1998	5.4000e-004		0.2134

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	0.1170					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.2176					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	8.9200e-003	8.7000e-004	0.0941	1.0000e-005		3.4000e-004	3.4000e-004		3.4000e-004	3.4000e-004		0.1998	0.1998	5.4000e-004		0.2134
Total	**0.3435**	**8.7000e-004**	**0.0941**	**1.0000e-005**		**3.4000e-004**	**3.4000e-004**		**3.4000e-004**	**3.4000e-004**		**0.1998**	**0.1998**	**5.4000e-004**		**0.2134**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1170					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.2176					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	8.9200e-003	8.7000e-004	0.0941	1.0000e-005		3.4000e-004	3.4000e-004		3.4000e-004	3.4000e-004		0.1998	0.1998	5.4000e-004		0.2134
Total	**0.3435**	**8.7000e-004**	**0.0941**	**1.0000e-005**		**3.4000e-004**	**3.4000e-004**		**3.4000e-004**	**3.4000e-004**		**0.1998**	**0.1998**	**5.4000e-004**		**0.2134**

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

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

6828 Lake Dolores- Phase 3 Waterpark Facilities OPERATIONAL ONLY

San Bernardino-Mojave Desert County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Recreational Swimming Pool	54.55	1000sqft	13.00	54,554.00	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	32
Climate Zone	10			**Operational Year**	2019
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Waterpark faciltiies are all existing, no new buildings to be constructed OPERATIONAL ANALYSIS ONLY.

Land Use - Phase 3 covers 13 acres with a waterpark with 54,554 square feet of existing water park facilities (parking area modeled separately).

Construction Phase - no construction, OPS only

Grading -

Energy Use -

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation - Sidewalks provided on-site.

Energy Mitigation - High efficiency lighting at least 10% more efficent than standard.

Water Mitigation - Per Green Building Standards.

Waste Mitigation - AB 939 requires at least 50% of waste be diverted from landfills, 75% by 2020.

Architectural Coating -

Vehicle Trips - Per TIA, waterpark will generate 2,073 trips/day weekday and 2,657 trips/day weekends = 40 trips/TSF wkday and 48.7 trips/TSF weekends

Woodstoves -

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	15
tblLandUse	BuildingSpaceSquareFeet	0.00	54,554.00
tblLandUse	LotAcreage	1.25	13.00
tblLandUse	RecSwimmingAreaSquareFeet	54,554.00	0.00
tblProjectCharacteristics	OperationalYear	2018	2019
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblVehicleTrips	ST_TR	9.10	48.70
tblVehicleTrips	SU_TR	13.60	48.70
tblVehicleTrips	WD_TR	33.82	40.00

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.5144	5.0000e-005	5.6200e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0119	0.0119	3.0000e-005		0.0128
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	6.1132	35.0519	58.0721	0.1830	11.8250	0.1771	12.0020	3.1648	0.1670	3.3318		18,644.8085	18,644.8085	1.1493		18,673.5420
Total	**7.6276**	**35.0519**	**58.0778**	**0.1830**	**11.8250**	**0.1771**	**12.0020**	**3.1648**	**0.1670**	**3.3318**		**18,644.8204**	**18,644.8204**	**1.1494**	**0.0000**	**18,673.5547**

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	1.5144	5.0000e-005	5.6200e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0119	0.0119	3.0000e-005		0.0128
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	6.0969	34.9131	57.6266	0.1815	11.7067	0.1755	11.8822	3.1331	0.1655	3.2986		18,489.0478	18,489.0478	1.1434		18,517.6336
Total	**7.6113**	**34.9132**	**57.6323**	**0.1815**	**11.7067**	**0.1755**	**11.8822**	**3.1331**	**0.1655**	**3.2987**		**18,489.0598**	**18,489.0598**	**1.1435**	**0.0000**	**18,517.6464**

	ROG	NOx	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	**0.21**	**0.40**	**0.77**	**0.84**	**1.00**	**0.88**	**1.00**	**1.00**	**0.87**	**0.99**	**0.00**	**0.84**	**0.84**	**0.51**	**0.00**	**0.83**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	6.0969	34.9131	57.6266	0.1815	11.7067	0.1755	11.8822	3.1331	0.1655	3.2986		18,489.0478	18,489.0478	1.1434		18,517.6336

Unmitigated	6.1132	35.0519	58.0721	0.1830	11.8250	0.1771	12.0020	3.1648	0.1670	3.3318		18,644.8085	18,644.8085	1.1493		18,673.5420

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Recreational Swimming Pool	2,182.16	2,656.78	2656.78	4,838,494	4,790,109
Total	2,182.16	2,656.78	2,656.78	4,838,494	4,790,109

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
Recreational Swimming Pool	14.70	6.60	6.60	33.00	48.00	19.00	52	39	9

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Recreational Swimming Pool	0.541740	0.038987	0.178620	0.126833	0.019742	0.005671	0.017070	0.060066	0.001326	0.001715	0.006244	0.000823	0.001163

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Install High Efficiency Lighting

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

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					
Recreational Swimming Pool	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		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Recreational Swimming Pool	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		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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	1.5144	5.0000e-005	5.6200e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0119	0.0119	3.0000e-005		0.0128
Unmitigated	1.5144	5.0000e-005	5.6200e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0119	0.0119	3.0000e-005		0.0128

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	0.3464					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.1675					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	5.3000e-004	5.0000e-005	5.6200e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0119	0.0119	3.0000e-005		0.0128
Total	**1.5144**	**5.0000e-005**	**5.6200e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**		**0.0119**	**0.0119**	**3.0000e-005**		**0.0128**

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	0.3464					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.1675					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	5.3000e-004	5.0000e-005	5.6200e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0119	0.0119	3.0000e-005		0.0128
Total	**1.5144**	**5.0000e-005**	**5.6200e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**		**0.0119**	**0.0119**	**3.0000e-005**		**0.0128**

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

6828 Lake Dolores- Phase 3 Waterpark Facilities OPERATIONAL ONLY

San Bernardino-Mojave Desert County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Recreational Swimming Pool	54.55	1000sqft	13.00	54,554.00	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	32
Climate Zone	10			**Operational Year**	2019
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Waterpark faciltiies are all existing, no new buildings to be constructed OPERATIONAL ANALYSIS ONLY.

Land Use - Phase 3 covers 13 acres with a waterpark with 54,554 square feet of existing water park facilities (parking area modeled separately).

Construction Phase - no construction, OPS only

Grading -

Energy Use -

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation - Sidewalks provided on-site.

Energy Mitigation - High efficiency lighting at least 10% more efficent than standard.

Water Mitigation - Per Green Building Standards.

Waste Mitigation - AB 939 requires at least 50% of waste be diverted from landfills, 75% by 2020.

Architectural Coating -

Vehicle Trips - Per TIA, waterpark will generate 2,073 trips/day weekday and 2,657 trips/day weekends = 40 trips/TSF wkday and 48.7 trips/TSF weekends

Woodstoves -

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	15
tblLandUse	BuildingSpaceSquareFeet	0.00	54,554.00
tblLandUse	LotAcreage	1.25	13.00
tblLandUse	RecSwimmingAreaSquareFeet	54,554.00	0.00
tblProjectCharacteristics	OperationalYear	2018	2019
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblVehicleTrips	ST_TR	9.10	48.70
tblVehicleTrips	SU_TR	13.60	48.70
tblVehicleTrips	WD_TR	33.82	40.00

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.5144	5.0000e-005	5.6200e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0119	0.0119	3.0000e-005		0.0128
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	5.3018	34.9538	52.7146	0.1681	11.8250	0.1797	12.0046	3.1648	0.1695	3.3343		17,139.7502	17,139.7502	1.1821		17,169.3020
Total	**6.8162**	**34.9538**	**52.7203**	**0.1681**	**11.8250**	**0.1797**	**12.0047**	**3.1648**	**0.1695**	**3.3343**		**17,139.7622**	**17,139.7622**	**1.1821**	**0.0000**	**17,169.3147**

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	1.5144	5.0000e-005	5.6200e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0119	0.0119	3.0000e-005		0.0128
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	5.2865	34.8082	52.3520	0.1667	11.7067	0.1781	11.8848	3.1331	0.1680	3.3012		16,995.5456	16,995.5456	1.1766		17,024.9601
Total	**6.8009**	**34.8083**	**52.3577**	**0.1667**	**11.7067**	**0.1782**	**11.8849**	**3.1331**	**0.1680**	**3.3012**		**16,995.5576**	**16,995.5576**	**1.1766**	**0.0000**	**17,024.9729**

	ROG	NOx	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	**0.22**	**0.42**	**0.69**	**0.84**	**1.00**	**0.86**	**1.00**	**1.00**	**0.86**	**0.99**	**0.00**	**0.84**	**0.84**	**0.46**	**0.00**	**0.84**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	5.2865	34.8082	52.3520	0.1667	11.7067	0.1781	11.8848	3.1331	0.1680	3.3012		16,995.5456	16,995.5456	1.1766		17,024.9601
Unmitigated	5.3018	34.9538	52.7146	0.1681	11.8250	0.1797	12.0046	3.1648	0.1695	3.3343		17,139.7502	17,139.7502	1.1821		17,169.3020

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Recreational Swimming Pool	2,182.16	2,656.78	2656.78	4,838,494	4,790,109
Total	2,182.16	2,656.78	2,656.78	4,838,494	4,790,109

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
Recreational Swimming Pool	14.70	6.60	6.60	33.00	48.00	19.00	52	39	9

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Recreational Swimming Pool	0.541740	0.038987	0.178620	0.126833	0.019742	0.005671	0.017070	0.060066	0.001326	0.001715	0.006244	0.000823	0.001163

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Install High Efficiency Lighting

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000

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					
Recreational Swimming Pool	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		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Recreational Swimming Pool	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		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

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	1.5144	5.0000e-005	5.6200e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0119	0.0119	3.0000e-005		0.0128
Unmitigated	1.5144	5.0000e-005	5.6200e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0119	0.0119	3.0000e-005		0.0128

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	0.3464					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.1675					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	5.3000e-004	5.0000e-005	5.6200e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0119	0.0119	3.0000e-005		0.0128
Total	**1.5144**	**5.0000e-005**	**5.6200e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**		**0.0119**	**0.0119**	**3.0000e-005**		**0.0128**

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	0.3464					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.1675					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	5.3000e-004	5.0000e-005	5.6200e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0119	0.0119	3.0000e-005		0.0128
Total	**1.5144**	**5.0000e-005**	**5.6200e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**		**0.0119**	**0.0119**	**3.0000e-005**		**0.0128**

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

6828 Dolores Lake- Phase 4

San Bernardino-Mojave Desert County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Non-Asphalt Surfaces	2.35	Acre	2.35	102,366.00	0
Parking Lot	531.00	Space	10.20	212,400.00	0
Regional Shopping Center	45.73	1000sqft	1.05	45,727.00	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	32
Climate Zone	10			**Operational Year**	2021
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Phase 4 (Commercial/Retail)- 13.6 acres- 45,727 sf retail buildings, 498 standard parking spaces & 33 bus/trailer parking spaces, & remainder landscaping.

Construction Phase - Phase 4 construction to start April 2019 and end December 2020. Phase 4 portion of the proposed project is vacant, no demo or site prep needed.

Off-road Equipment -

Grading - Phase 4 is 13.6 acres. Site to be balanced.

Vehicle Trips - CalEEMod defaults match the trip gen in the TIA.

Construction Off-road Equipment Mitigation - Tier 4 final equipment for construction

Mobile Land Use Mitigation - Sidewalks provided on-site. Retail = 1 employee per 500 sf, project is 45,727 sf retail/ 500 sf = 91.5 employees/13.6 ac= 6.7 emp/acre.

Energy Mitigation - High efficiency lighting at least 10% more efficent than standard. 2016 Title 24 standards are at least 25% more efficient than 2013 Title standards (CalEEMod default). Energy star appliances to be used on-site where needed.

Water Mitigation - Per Green Building Standards.

Waste Mitigation - AB 939 requires at least 50% of waste be diverted from landfills, 75% by 2020.

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	15
tblConstructionPhase	NumDays	20.00	23.00
tblConstructionPhase	NumDays	300.00	376.00
tblConstructionPhase	NumDays	30.00	37.00
tblConstructionPhase	NumDays	20.00	23.00
tblGrading	AcresOfGrading	92.50	13.60
tblLandUse	BuildingSpaceSquareFeet	45,730.00	45,727.00
tblLandUse	LandUseSquareFeet	45,730.00	45,727.00
tblLandUse	LotAcreage	4.78	10.20
tblProjectCharacteristics	OperationalYear	2018	2021
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	4.8694	54.6092	34.5015	0.0647	6.6674	2.3844	9.0517	3.4201	2.1936	5.6137	0.0000	6,405.9511	6,405.9511	1.9515	0.0000	6,454.7385
2020	56.0067	25.9034	25.5001	0.0615	2.2392	1.1567	3.3959	0.6020	1.0878	1.6899	0.0000	6,083.8396	6,083.8396	0.7891	0.0000	6,103.5671
Maximum	**56.0067**	**54.6092**	**34.5015**	**0.0647**	**6.6674**	**2.3844**	**9.0517**	**3.4201**	**2.1936**	**5.6137**	**0.0000**	**6,405.9511**	**6,405.9511**	**1.9515**	**0.0000**	**6,454.7385**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	4.8694	54.6092	34.5015	0.0647	2.7561	2.3844	5.1405	1.3752	2.1936	3.5688	0.0000	6,405.9511	6,405.9511	1.9515	0.0000	6,454.7385
2020	56.0067	25.9034	25.5001	0.0615	2.2392	1.1567	3.3959	0.6020	1.0878	1.6899	0.0000	6,083.8396	6,083.8396	0.7891	0.0000	6,103.5671
Maximum	**56.0067**	**54.6092**	**34.5015**	**0.0647**	**2.7561**	**2.3844**	**5.1405**	**1.3752**	**2.1936**	**3.5688**	**0.0000**	**6,405.9511**	**6,405.9511**	**1.9515**	**0.0000**	**6,454.7385**

	ROG	NOx	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**	**43.91**	**0.00**	**31.42**	**50.84**	**0.00**	**28.00**	**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	1.4459	5.4000e-004	0.0594	0.0000		2.1000e-004	2.1000e-004		2.1000e-004	2.1000e-004		0.1267	0.1267	3.4000e-004		0.1352
Energy	3.0100e-003	0.0274	0.0230	1.6000e-004		2.0800e-003	2.0800e-003		2.0800e-003	2.0800e-003		32.8674	32.8674	6.3000e-004	6.0000e-004	33.0628
Mobile	4.2963	25.7531	37.4758	0.1348	8.8335	0.0927	8.9262	2.3639	0.0868	2.4507		13,769.8847	13,769.8847	0.8380		13,790.8334
Total	**5.7452**	**25.7810**	**37.5581**	**0.1350**	**8.8335**	**0.0950**	**8.9285**	**2.3639**	**0.0891**	**2.4530**		**13,802.8789**	**13,802.8789**	**0.8389**	**6.0000e-004**	**13,824.0313**

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	1.4459	5.4000e-004	0.0594	0.0000		2.1000e-004	2.1000e-004		2.1000e-004	2.1000e-004		0.1267	0.1267	3.4000e-004		0.1352
Energy	2.3600e-003	0.0215	0.0180	1.3000e-004		1.6300e-003	1.6300e-003		1.6300e-003	1.6300e-003		25.7560	25.7560	4.9000e-004	4.7000e-004	25.9090
Mobile	4.2862	25.6715	37.1959	0.1337	8.7452	0.0919	8.8371	2.3402	0.0861	2.4263		13,659.0770	13,659.0770	0.8342		13,679.9306
Total	**5.7344**	**25.6935**	**37.2732**	**0.1338**	**8.7452**	**0.0937**	**8.8389**	**2.3402**	**0.0879**	**2.4282**		**13,684.9597**	**13,684.9597**	**0.8350**	**4.7000e-004**	**13,705.9748**

	ROG	NOx	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	**0.19**	**0.34**	**0.76**	**0.83**	**1.00**	**1.28**	**1.00**	**1.00**	**1.32**	**1.01**	**0.00**	**0.85**	**0.85**	**0.47**	**21.67**	**0.85**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	4/1/2019	5/21/2019	5	37	
2	Building Construction	Building Construction	5/22/2019	10/28/2020	5	376	
3	Paving	Paving	10/29/2020	11/30/2020	5	23	
4	Architectural Coating	Architectural Coating	12/1/2020	12/31/2020	5	23	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 13.6

Acres of Paving: 12.55

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 68,591; Non-Residential Outdoor: 22,864; Striped Parking Area: 18,886 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	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
Grading	8	20.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	147.00	59.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	29.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Grading - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.4119	0.0000	6.4119	3.3523	0.0000	3.3523			0.0000			0.0000
Off-Road	4.7389	54.5202	33.3768	0.0620		2.3827	2.3827		2.1920	2.1920		6,140.0195	6,140.0195	1.9426		6,188.5854
Total	**4.7389**	**54.5202**	**33.3768**	**0.0620**	**6.4119**	**2.3827**	**8.7945**	**3.3523**	**2.1920**	**5.5444**		**6,140.0195**	**6,140.0195**	**1.9426**		**6,188.5854**

3.2 Grading - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	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	0.1305	0.0890	1.1247	2.6700e-003	0.2555	1.7000e-003	0.2572	0.0678	1.5600e-003	0.0693		265.9316	265.9316	8.8600e-003		266.1531
Total	**0.1305**	**0.0890**	**1.1247**	**2.6700e-003**	**0.2555**	**1.7000e-003**	**0.2572**	**0.0678**	**1.5600e-003**	**0.0693**		**265.9316**	**265.9316**	**8.8600e-003**		**266.1531**

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					2.5006	0.0000	2.5006	1.3074	0.0000	1.3074			0.0000			0.0000
Off-Road	4.7389	54.5202	33.3768	0.0620		2.3827	2.3827		2.1920	2.1920	0.0000	6,140.0195	6,140.0195	1.9426		6,188.5854
Total	**4.7389**	**54.5202**	**33.3768**	**0.0620**	**2.5006**	**2.3827**	**4.8833**	**1.3074**	**2.1920**	**3.4994**	**0.0000**	**6,140.0195**	**6,140.0195**	**1.9426**		**6,188.5854**

3.2 Grading - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	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	0.1305	0.0890	1.1247	2.6700e-003	0.2555	1.7000e-003	0.2572	0.0678	1.5600e-003	0.0693		265.9316	265.9316	8.8600e-003		266.1531
Total	**0.1305**	**0.0890**	**1.1247**	**2.6700e-003**	**0.2555**	**1.7000e-003**	**0.2572**	**0.0678**	**1.5600e-003**	**0.0693**		**265.9316**	**265.9316**	**8.8600e-003**		**266.1531**

3.3 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.3612	21.0788	17.1638	0.0269		1.2899	1.2899		1.2127	1.2127		2,591.5802	2,591.5802	0.6313		2,607.3635
Total	**2.3612**	**21.0788**	**17.1638**	**0.0269**		**1.2899**	**1.2899**		**1.2127**	**1.2127**		**2,591.5802**	**2,591.5802**	**0.6313**		**2,607.3635**

3.3 Building Construction - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2070	6.6850	1.3567	0.0156	0.3615	0.0408	0.4023	0.1041	0.0390	0.1431		1,648.1367	1,648.1367	0.1140		1,650.9873
Worker	0.9590	0.6539	8.2665	0.0196	1.8776	0.0125	1.8901	0.4979	0.0115	0.5094		1,954.5973	1,954.5973	0.0651		1,956.2250
Total	**1.1660**	**7.3389**	**9.6231**	**0.0353**	**2.2392**	**0.0532**	**2.2924**	**0.6020**	**0.0505**	**0.6525**		**3,602.7340**	**3,602.7340**	**0.1791**		**3,607.2123**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.3612	21.0788	17.1638	0.0269		1.2899	1.2899		1.2127	1.2127	0.0000	2,591.5802	2,591.5802	0.6313		2,607.3635
Total	**2.3612**	**21.0788**	**17.1638**	**0.0269**		**1.2899**	**1.2899**		**1.2127**	**1.2127**	**0.0000**	**2,591.5802**	**2,591.5802**	**0.6313**		**2,607.3635**

3.3 Building Construction - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2070	6.6850	1.3567	0.0156	0.3615	0.0408	0.4023	0.1041	0.0390	0.1431		1,648.1367	1,648.1367	0.1140		1,650.9873
Worker	0.9590	0.6539	8.2665	0.0196	1.8776	0.0125	1.8901	0.4979	0.0115	0.5094		1,954.5973	1,954.5973	0.0651		1,956.2250
Total	**1.1660**	**7.3389**	**9.6231**	**0.0353**	**2.2392**	**0.0532**	**2.2924**	**0.6020**	**0.0505**	**0.6525**		**3,602.7340**	**3,602.7340**	**0.1791**		**3,607.2123**

3.3 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503		2,553.0631	2,553.0631	0.6229		2,568.6345
Total	**2.1198**	**19.1860**	**16.8485**	**0.0269**		**1.1171**	**1.1171**		**1.0503**	**1.0503**		**2,553.0631**	**2,553.0631**	**0.6229**		**2,568.6345**

3.3 Building Construction - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1754	6.1364	1.1924	0.0155	0.3615	0.0275	0.3890	0.1041	0.0263	0.1304		1,637.0763	1,637.0763	0.1088		1,639.7965
Worker	0.8830	0.5809	7.4591	0.0190	1.8776	0.0122	1.8898	0.4979	0.0112	0.5091		1,893.7003	1,893.7003	0.0574		1,895.1362
Total	**1.0584**	**6.7173**	**8.6516**	**0.0345**	**2.2392**	**0.0396**	**2.2788**	**0.6020**	**0.0375**	**0.6395**		**3,530.7766**	**3,530.7766**	**0.1663**		**3,534.9326**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503	0.0000	2,553.0631	2,553.0631	0.6229		2,568.6345
Total	**2.1198**	**19.1860**	**16.8485**	**0.0269**		**1.1171**	**1.1171**		**1.0503**	**1.0503**	**0.0000**	**2,553.0631**	**2,553.0631**	**0.6229**		**2,568.6345**

3.3 Building Construction - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1754	6.1364	1.1924	0.0155	0.3615	0.0275	0.3890	0.1041	0.0263	0.1304		1,637.0763	1,637.0763	0.1088		1,639.7965
Worker	0.8830	0.5809	7.4591	0.0190	1.8776	0.0122	1.8898	0.4979	0.0112	0.5091		1,893.7003	1,893.7003	0.0574		1,895.1362
Total	**1.0584**	**6.7173**	**8.6516**	**0.0345**	**2.2392**	**0.0396**	**2.2788**	**0.6020**	**0.0375**	**0.6395**		**3,530.7766**	**3,530.7766**	**0.1663**		**3,534.9326**

3.4 Paving - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3566	14.0656	14.6521	0.0228		0.7528	0.7528		0.6926	0.6926		2,207.7334	2,207.7334	0.7140		2,225.5841
Paving	1.1619					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.5185**	**14.0656**	**14.6521**	**0.0228**		**0.7528**	**0.7528**		**0.6926**	**0.6926**		**2,207.7334**	**2,207.7334**	**0.7140**		**2,225.5841**

3.4 Paving - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	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	0.0901	0.0593	0.7611	1.9400e-003	0.1916	1.2400e-003	0.1928	0.0508	1.1400e-003	0.0520		193.2347	193.2347	5.8600e-003		193.3812
Total	**0.0901**	**0.0593**	**0.7611**	**1.9400e-003**	**0.1916**	**1.2400e-003**	**0.1928**	**0.0508**	**1.1400e-003**	**0.0520**		**193.2347**	**193.2347**	**5.8600e-003**		**193.3812**

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	1.3566	14.0656	14.6521	0.0228		0.7528	0.7528		0.6926	0.6926	0.0000	2,207.7334	2,207.7334	0.7140		2,225.5841
Paving	1.1619					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.5185**	**14.0656**	**14.6521**	**0.0228**		**0.7528**	**0.7528**		**0.6926**	**0.6926**	**0.0000**	**2,207.7334**	**2,207.7334**	**0.7140**		**2,225.5841**

3.4 Paving - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	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	0.0901	0.0593	0.7611	1.9400e-003	0.1916	1.2400e-003	0.1928	0.0508	1.1400e-003	0.0520		193.2347	193.2347	5.8600e-003		193.3812
Total	**0.0901**	**0.0593**	**0.7611**	**1.9400e-003**	**0.1916**	**1.2400e-003**	**0.1928**	**0.0508**	**1.1400e-003**	**0.0520**		**193.2347**	**193.2347**	**5.8600e-003**		**193.3812**

3.5 Architectural Coating - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	55.5903					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109		281.4481	281.4481	0.0218		281.9928
Total	**55.8325**	**1.6838**	**1.8314**	**2.9700e-003**		**0.1109**	**0.1109**		**0.1109**	**0.1109**		**281.4481**	**281.4481**	**0.0218**		**281.9928**

3.5 Architectural Coating - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	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	0.1742	0.1146	1.4715	3.7500e-003	0.3704	2.4000e-003	0.3728	0.0982	2.2100e-003	0.1004		373.5871	373.5871	0.0113		373.8704
Total	**0.1742**	**0.1146**	**1.4715**	**3.7500e-003**	**0.3704**	**2.4000e-003**	**0.3728**	**0.0982**	**2.2100e-003**	**0.1004**		**373.5871**	**373.5871**	**0.0113**		**373.8704**

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	55.5903					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109	0.0000	281.4481	281.4481	0.0218		281.9928
Total	**55.8325**	**1.6838**	**1.8314**	**2.9700e-003**		**0.1109**	**0.1109**		**0.1109**	**0.1109**	**0.0000**	**281.4481**	**281.4481**	**0.0218**		**281.9928**

3.5 Architectural Coating - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	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	0.1742	0.1146	1.4715	3.7500e-003	0.3704	2.4000e-003	0.3728	0.0982	2.2100e-003	0.1004		373.5871	373.5871	0.0113		373.8704
Total	**0.1742**	**0.1146**	**1.4715**	**3.7500e-003**	**0.3704**	**2.4000e-003**	**0.3728**	**0.0982**	**2.2100e-003**	**0.1004**		**373.5871**	**373.5871**	**0.0113**		**373.8704**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	4.2862	25.6715	37.1959	0.1337	8.7452	0.0919	8.8371	2.3402	0.0861	2.4263		13,659.0770	13,659.0770	0.8342		13,679.9306
Unmitigated	4.2963	25.7531	37.4758	0.1348	8.8335	0.0927	8.9262	2.3639	0.0868	2.4507		13,769.8847	13,769.8847	0.8380		13,790.8334

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Regional Shopping Center	1,952.67	2,285.13	1154.23	3,419,652	3,385,455
Total	1,952.67	2,285.13	1,154.23	3,419,652	3,385,455

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
Other Non-Asphalt Surfaces	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0
Parking Lot	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0
Regional Shopping Center	14.70	6.60	6.60	16.30	64.70	19.00	54	35	11

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Non-Asphalt Surfaces	0.549952	0.037123	0.179649	0.119457	0.017229	0.005267	0.017877	0.062669	0.001348	0.001607	0.006000	0.000812	0.001010
Parking Lot	0.549952	0.037123	0.179649	0.119457	0.017229	0.005267	0.017877	0.062669	0.001348	0.001607	0.006000	0.000812	0.001010
Regional Shopping Center	0.549952	0.037123	0.179649	0.119457	0.017229	0.005267	0.017877	0.062669	0.001348	0.001607	0.006000	0.000812	0.001010

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Install High Efficiency Lighting

Install Energy Efficient Appliances

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	2.3600e-003	0.0215	0.0180	1.3000e-004		1.6300e-003	1.6300e-003		1.6300e-003	1.6300e-003		25.7560	25.7560	4.9000e-004	4.7000e-004	25.9090
NaturalGas Unmitigated	3.0100e-003	0.0274	0.0230	1.6000e-004		2.0800e-003	2.0800e-003		2.0800e-003	2.0800e-003		32.8674	32.8674	6.3000e-004	6.0000e-004	33.0628

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					
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
Regional Shopping Center	279.373	3.0100e-003	0.0274	0.0230	1.6000e-004		2.0800e-003	2.0800e-003		2.0800e-003	2.0800e-003		32.8674	32.8674	6.3000e-004	6.0000e-004	33.0628
Total		**3.0100e-003**	**0.0274**	**0.0230**	**1.6000e-004**		**2.0800e-003**	**2.0800e-003**		**2.0800e-003**	**2.0800e-003**		**32.8674**	**32.8674**	**6.3000e-004**	**6.0000e-004**	**33.0628**

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					
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
Regional Shopping Center	0.218926	2.3600e-003	0.0215	0.0180	1.3000e-004		1.6300e-003	1.6300e-003		1.6300e-003	1.6300e-003		25.7560	25.7560	4.9000e-004	4.7000e-004	25.9090
Total		**2.3600e-003**	**0.0215**	**0.0180**	**1.3000e-004**		**1.6300e-003**	**1.6300e-003**		**1.6300e-003**	**1.6300e-003**		**25.7560**	**25.7560**	**4.9000e-004**	**4.7000e-004**	**25.9090**

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	1.4459	5.4000e-004	0.0594	0.0000		2.1000e-004	2.1000e-004		2.1000e-004	2.1000e-004		0.1267	0.1267	3.4000e-004		0.1352
Unmitigated	1.4459	5.4000e-004	0.0594	0.0000		2.1000e-004	2.1000e-004		2.1000e-004	2.1000e-004		0.1267	0.1267	3.4000e-004		0.1352

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	0.3503					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.0901					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	5.5400e-003	5.4000e-004	0.0594	0.0000		2.1000e-004	2.1000e-004		2.1000e-004	2.1000e-004		0.1267	0.1267	3.4000e-004		0.1352
Total	**1.4459**	**5.4000e-004**	**0.0594**	**0.0000**		**2.1000e-004**	**2.1000e-004**		**2.1000e-004**	**2.1000e-004**		**0.1267**	**0.1267**	**3.4000e-004**		**0.1352**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.3503					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.0901					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	5.5400e-003	5.4000e-004	0.0594	0.0000		2.1000e-004	2.1000e-004		2.1000e-004	2.1000e-004		0.1267	0.1267	3.4000e-004		0.1352
Total	**1.4459**	**5.4000e-004**	**0.0594**	**0.0000**		**2.1000e-004**	**2.1000e-004**		**2.1000e-004**	**2.1000e-004**		**0.1267**	**0.1267**	**3.4000e-004**		**0.1352**

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

Use Water Efficient Irrigation System

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

6828 Dolores Lake- Phase 4

San Bernardino-Mojave Desert County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Non-Asphalt Surfaces	2.35	Acre	2.35	102,366.00	0
Parking Lot	531.00	Space	10.20	212,400.00	0
Regional Shopping Center	45.73	1000sqft	1.05	45,727.00	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	32
Climate Zone	10			**Operational Year**	2021
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Phase 4 (Commercial/Retail)- 13.6 acres- 45,727 sf retail buildings, 498 standard parking spaces & 33 bus/trailer parking spaces, & remainder landscaping.

Construction Phase - Phase 4 construction to start April 2019 and end December 2020. Phase 4 portion of the proposed project is vacant, no demo or site prep needed.

Off-road Equipment -

Grading - Phase 4 is 13.6 acres. Site to be balanced.

Vehicle Trips - CalEEMod defaults match the trip gen in the TIA.

Construction Off-road Equipment Mitigation - Tier 4 final equipment for construction

Mobile Land Use Mitigation - Sidewalks provided on-site. Retail = 1 employee per 500 sf, project is 45,727 sf retail/ 500 sf = 91.5 employees/13.6 ac= 6.7 emp/acre.

Energy Mitigation - High efficiency lighting at least 10% more efficent than standard. 2016 Title 24 standards are at least 25% more efficient than 2013 Title standards (CalEEMod default). Energy star appliances to be used on-site where needed.

Water Mitigation - Per Green Building Standards.

Waste Mitigation - AB 939 requires at least 50% of waste be diverted from landfills, 75% by 2020.

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	15
tblConstructionPhase	NumDays	20.00	23.00
tblConstructionPhase	NumDays	300.00	376.00
tblConstructionPhase	NumDays	30.00	37.00
tblConstructionPhase	NumDays	20.00	23.00
tblGrading	AcresOfGrading	92.50	13.60
tblLandUse	BuildingSpaceSquareFeet	45,730.00	45,727.00
tblLandUse	LandUseSquareFeet	45,730.00	45,727.00
tblLandUse	LotAcreage	4.78	10.20
tblProjectCharacteristics	OperationalYear	2018	2021
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	4.8703	54.6139	34.2978	0.0644	6.6674	2.3844	9.0517	3.4201	2.1936	5.6137	0.0000	6,378.5376	6,378.5376	1.9504	0.0000	6,427.2973
2020	56.0083	25.8790	24.3313	0.0589	2.2392	1.1571	3.3962	0.6020	1.0882	1.6902	0.0000	5,823.0655	5,823.0655	0.7935	0.0000	5,842.9026
Maximum	**56.0083**	**54.6139**	**34.2978**	**0.0644**	**6.6674**	**2.3844**	**9.0517**	**3.4201**	**2.1936**	**5.6137**	**0.0000**	**6,378.5376**	**6,378.5376**	**1.9504**	**0.0000**	**6,427.2973**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	4.8703	54.6139	34.2978	0.0644	2.7561	2.3844	5.1405	1.3752	2.1936	3.5688	0.0000	6,378.5376	6,378.5376	1.9504	0.0000	6,427.2973
2020	56.0083	25.8790	24.3313	0.0589	2.2392	1.1571	3.3962	0.6020	1.0882	1.6902	0.0000	5,823.0655	5,823.0655	0.7935	0.0000	5,842.9026
Maximum	**56.0083**	**54.6139**	**34.2978**	**0.0644**	**2.7561**	**2.3844**	**5.1405**	**1.3752**	**2.1936**	**3.5688**	**0.0000**	**6,378.5376**	**6,378.5376**	**1.9504**	**0.0000**	**6,427.2973**

	ROG	NOx	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**	**43.91**	**0.00**	**31.42**	**50.84**	**0.00**	**28.00**	**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	1.4459	5.4000e-004	0.0594	0.0000		2.1000e-004	2.1000e-004		2.1000e-004	2.1000e-004		0.1267	0.1267	3.4000e-004		0.1352
Energy	3.0100e-003	0.0274	0.0230	1.6000e-004		2.0800e-003	2.0800e-003		2.0800e-003	2.0800e-003		32.8674	32.8674	6.3000e-004	6.0000e-004	33.0628
Mobile	3.6983	25.5167	34.3768	0.1238	8.8335	0.0940	8.9275	2.3639	0.0881	2.4520		12,653.6790	12,653.6790	0.8755		12,675.5662
Total	**5.1472**	**25.5447**	**34.4591**	**0.1239**	**8.8335**	**0.0963**	**8.9298**	**2.3639**	**0.0904**	**2.4542**		**12,686.6731**	**12,686.6731**	**0.8765**	**6.0000e-004**	**12,708.7641**

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	1.4459	5.4000e-004	0.0594	0.0000		2.1000e-004	2.1000e-004		2.1000e-004	2.1000e-004		0.1267	0.1267	3.4000e-004		0.1352
Energy	2.3600e-003	0.0215	0.0180	1.3000e-004		1.6300e-003	1.6300e-003		1.6300e-003	1.6300e-003		25.7560	25.7560	4.9000e-004	4.7000e-004	25.9090
Mobile	3.6888	25.4312	34.1492	0.1228	8.7452	0.0932	8.8384	2.3402	0.0874	2.4276		12,550.9098	12,550.9098	0.8719		12,572.7082
Total	**5.1370**	**25.4532**	**34.2266**	**0.1229**	**8.7452**	**0.0950**	**8.8402**	**2.3402**	**0.0892**	**2.4294**		**12,576.7925**	**12,576.7925**	**0.8728**	**4.7000e-004**	**12,598.7524**

	ROG	NOx	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	**0.20**	**0.36**	**0.67**	**0.84**	**1.00**	**1.28**	**1.00**	**1.00**	**1.31**	**1.01**	**0.00**	**0.87**	**0.87**	**0.42**	**21.67**	**0.87**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	4/1/2019	5/21/2019	5	37	
2	Building Construction	Building Construction	5/22/2019	10/28/2020	5	376	
3	Paving	Paving	10/29/2020	11/30/2020	5	23	
4	Architectural Coating	Architectural Coating	12/1/2020	12/31/2020	5	23	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 13.6

Acres of Paving: 12.55

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 68,591; Non-Residential Outdoor: 22,864; Striped Parking Area: 18,886 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	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
Grading	8	20.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	147.00	59.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	29.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Grading - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.4119	0.0000	6.4119	3.3523	0.0000	3.3523			0.0000			0.0000
Off-Road	4.7389	54.5202	33.3768	0.0620		2.3827	2.3827		2.1920	2.1920		6,140.0195	6,140.0195	1.9426		6,188.5854
Total	**4.7389**	**54.5202**	**33.3768**	**0.0620**	**6.4119**	**2.3827**	**8.7945**	**3.3523**	**2.1920**	**5.5444**		**6,140.0195**	**6,140.0195**	**1.9426**		**6,188.5854**

3.2 Grading - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	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	0.1314	0.0937	0.9210	2.4000e-003	0.2555	1.7000e-003	0.2572	0.0678	1.5600e-003	0.0693		238.5181	238.5181	7.7500e-003		238.7119
Total	**0.1314**	**0.0937**	**0.9210**	**2.4000e-003**	**0.2555**	**1.7000e-003**	**0.2572**	**0.0678**	**1.5600e-003**	**0.0693**		**238.5181**	**238.5181**	**7.7500e-003**		**238.7119**

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					2.5006	0.0000	2.5006	1.3074	0.0000	1.3074			0.0000			0.0000
Off-Road	4.7389	54.5202	33.3768	0.0620		2.3827	2.3827		2.1920	2.1920	0.0000	6,140.0195	6,140.0195	1.9426		6,188.5854
Total	**4.7389**	**54.5202**	**33.3768**	**0.0620**	**2.5006**	**2.3827**	**4.8833**	**1.3074**	**2.1920**	**3.4994**	**0.0000**	**6,140.0195**	**6,140.0195**	**1.9426**		**6,188.5854**

3.2 Grading - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	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	0.1314	0.0937	0.9210	2.4000e-003	0.2555	1.7000e-003	0.2572	0.0678	1.5600e-003	0.0693		238.5181	238.5181	7.7500e-003		238.7119
Total	**0.1314**	**0.0937**	**0.9210**	**2.4000e-003**	**0.2555**	**1.7000e-003**	**0.2572**	**0.0678**	**1.5600e-003**	**0.0693**		**238.5181**	**238.5181**	**7.7500e-003**		**238.7119**

3.3 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.3612	21.0788	17.1638	0.0269		1.2899	1.2899		1.2127	1.2127		2,591.5802	2,591.5802	0.6313		2,607.3635
Total	**2.3612**	**21.0788**	**17.1638**	**0.0269**		**1.2899**	**1.2899**		**1.2127**	**1.2127**		**2,591.5802**	**2,591.5802**	**0.6313**		**2,607.3635**

3.3 Building Construction - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2175	6.6409	1.5639	0.0150	0.3615	0.0413	0.4028	0.1041	0.0395	0.1436		1,582.6546	1,582.6546	0.1259		1,585.8015
Worker	0.9659	0.6885	6.7697	0.0176	1.8776	0.0125	1.8901	0.4979	0.0115	0.5094		1,753.1082	1,753.1082	0.0570		1,754.5326
Total	**1.1835**	**7.3294**	**8.3336**	**0.0326**	**2.2392**	**0.0538**	**2.2930**	**0.6020**	**0.0510**	**0.6531**		**3,335.7627**	**3,335.7627**	**0.1829**		**3,340.3341**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.3612	21.0788	17.1638	0.0269		1.2899	1.2899		1.2127	1.2127	0.0000	2,591.5802	2,591.5802	0.6313		2,607.3635
Total	**2.3612**	**21.0788**	**17.1638**	**0.0269**		**1.2899**	**1.2899**		**1.2127**	**1.2127**	**0.0000**	**2,591.5802**	**2,591.5802**	**0.6313**		**2,607.3635**

3.3 Building Construction - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2175	6.6409	1.5639	0.0150	0.3615	0.0413	0.4028	0.1041	0.0395	0.1436		1,582.6546	1,582.6546	0.1259		1,585.8015
Worker	0.9659	0.6885	6.7697	0.0176	1.8776	0.0125	1.8901	0.4979	0.0115	0.5094		1,753.1082	1,753.1082	0.0570		1,754.5326
Total	**1.1835**	**7.3294**	**8.3336**	**0.0326**	**2.2392**	**0.0538**	**2.2930**	**0.6020**	**0.0510**	**0.6531**		**3,335.7627**	**3,335.7627**	**0.1829**		**3,340.3341**

3.3 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503		2,553.0631	2,553.0631	0.6229		2,568.6345
Total	**2.1198**	**19.1860**	**16.8485**	**0.0269**		**1.1171**	**1.1171**		**1.0503**	**1.0503**		**2,553.0631**	**2,553.0631**	**0.6229**		**2,568.6345**

3.3 Building Construction - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1852	6.0817	1.3856	0.0149	0.3615	0.0278	0.3894	0.1041	0.0266	0.1307		1,571.5788	1,571.5788	0.1204		1,574.5885
Worker	0.8915	0.6112	6.0972	0.0171	1.8776	0.0122	1.8898	0.4979	0.0112	0.5091		1,698.4236	1,698.4236	0.0502		1,699.6796
Total	**1.0767**	**6.6930**	**7.4828**	**0.0320**	**2.2392**	**0.0400**	**2.2792**	**0.6020**	**0.0378**	**0.6399**		**3,270.0024**	**3,270.0024**	**0.1706**		**3,274.2681**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503	0.0000	2,553.0631	2,553.0631	0.6229		2,568.6345
Total	**2.1198**	**19.1860**	**16.8485**	**0.0269**		**1.1171**	**1.1171**		**1.0503**	**1.0503**	**0.0000**	**2,553.0631**	**2,553.0631**	**0.6229**		**2,568.6345**

3.3 Building Construction - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.1852	6.0817	1.3856	0.0149	0.3615	0.0278	0.3894	0.1041	0.0266	0.1307		1,571.5788	1,571.5788	0.1204		1,574.5885
Worker	0.8915	0.6112	6.0972	0.0171	1.8776	0.0122	1.8898	0.4979	0.0112	0.5091		1,698.4236	1,698.4236	0.0502		1,699.6796
Total	**1.0767**	**6.6930**	**7.4828**	**0.0320**	**2.2392**	**0.0400**	**2.2792**	**0.6020**	**0.0378**	**0.6399**		**3,270.0024**	**3,270.0024**	**0.1706**		**3,274.2681**

3.4 Paving - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3566	14.0656	14.6521	0.0228		0.7528	0.7528		0.6926	0.6926		2,207.7334	2,207.7334	0.7140		2,225.5841
Paving	1.1619					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.5185**	**14.0656**	**14.6521**	**0.0228**		**0.7528**	**0.7528**		**0.6926**	**0.6926**		**2,207.7334**	**2,207.7334**	**0.7140**		**2,225.5841**

3.4 Paving - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	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	0.0910	0.0624	0.6222	1.7400e-003	0.1916	1.2400e-003	0.1928	0.0508	1.1400e-003	0.0520		173.3085	173.3085	5.1300e-003		173.4367
Total	**0.0910**	**0.0624**	**0.6222**	**1.7400e-003**	**0.1916**	**1.2400e-003**	**0.1928**	**0.0508**	**1.1400e-003**	**0.0520**		**173.3085**	**173.3085**	**5.1300e-003**		**173.4367**

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	1.3566	14.0656	14.6521	0.0228		0.7528	0.7528		0.6926	0.6926	0.0000	2,207.7334	2,207.7334	0.7140		2,225.5841
Paving	1.1619					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**2.5185**	**14.0656**	**14.6521**	**0.0228**		**0.7528**	**0.7528**		**0.6926**	**0.6926**	**0.0000**	**2,207.7334**	**2,207.7334**	**0.7140**		**2,225.5841**

3.4 Paving - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	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	0.0910	0.0624	0.6222	1.7400e-003	0.1916	1.2400e-003	0.1928	0.0508	1.1400e-003	0.0520		173.3085	173.3085	5.1300e-003		173.4367
Total	**0.0910**	**0.0624**	**0.6222**	**1.7400e-003**	**0.1916**	**1.2400e-003**	**0.1928**	**0.0508**	**1.1400e-003**	**0.0520**		**173.3085**	**173.3085**	**5.1300e-003**		**173.4367**

3.5 Architectural Coating - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	55.5903					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109		281.4481	281.4481	0.0218		281.9928
Total	**55.8325**	**1.6838**	**1.8314**	**2.9700e-003**		**0.1109**	**0.1109**		**0.1109**	**0.1109**		**281.4481**	**281.4481**	**0.0218**		**281.9928**

3.5 Architectural Coating - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	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	0.1759	0.1206	1.2029	3.3600e-003	0.3704	2.4000e-003	0.3728	0.0982	2.2100e-003	0.1004		335.0632	335.0632	9.9100e-003		335.3109
Total	**0.1759**	**0.1206**	**1.2029**	**3.3600e-003**	**0.3704**	**2.4000e-003**	**0.3728**	**0.0982**	**2.2100e-003**	**0.1004**		**335.0632**	**335.0632**	**9.9100e-003**		**335.3109**

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	55.5903					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109	0.0000	281.4481	281.4481	0.0218		281.9928
Total	**55.8325**	**1.6838**	**1.8314**	**2.9700e-003**		**0.1109**	**0.1109**		**0.1109**	**0.1109**	**0.0000**	**281.4481**	**281.4481**	**0.0218**		**281.9928**

3.5 Architectural Coating - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	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	0.1759	0.1206	1.2029	3.3600e-003	0.3704	2.4000e-003	0.3728	0.0982	2.2100e-003	0.1004		335.0632	335.0632	9.9100e-003		335.3109
Total	**0.1759**	**0.1206**	**1.2029**	**3.3600e-003**	**0.3704**	**2.4000e-003**	**0.3728**	**0.0982**	**2.2100e-003**	**0.1004**		**335.0632**	**335.0632**	**9.9100e-003**		**335.3109**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	3.6888	25.4312	34.1492	0.1228	8.7452	0.0932	8.8384	2.3402	0.0874	2.4276		12,550.9098	12,550.9098	0.8719		12,572.7082
Unmitigated	3.6983	25.5167	34.3768	0.1238	8.8335	0.0940	8.9275	2.3639	0.0881	2.4520		12,653.6790	12,653.6790	0.8755		12,675.5662

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Regional Shopping Center	1,952.67	2,285.13	1154.23	3,419,652	3,385,455
Total	1,952.67	2,285.13	1,154.23	3,419,652	3,385,455

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
Other Non-Asphalt Surfaces	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0
Parking Lot	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0
Regional Shopping Center	14.70	6.60	6.60	16.30	64.70	19.00	54	35	11

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Non-Asphalt Surfaces	0.549952	0.037123	0.179649	0.119457	0.017229	0.005267	0.017877	0.062669	0.001348	0.001607	0.006000	0.000812	0.001010
Parking Lot	0.549952	0.037123	0.179649	0.119457	0.017229	0.005267	0.017877	0.062669	0.001348	0.001607	0.006000	0.000812	0.001010
Regional Shopping Center	0.549952	0.037123	0.179649	0.119457	0.017229	0.005267	0.017877	0.062669	0.001348	0.001607	0.006000	0.000812	0.001010

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Install High Efficiency Lighting

Install Energy Efficient Appliances

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	2.3600e-003	0.0215	0.0180	1.3000e-004		1.6300e-003	1.6300e-003		1.6300e-003	1.6300e-003		25.7560	25.7560	4.9000e-004	4.7000e-004	25.9090
NaturalGas Unmitigated	3.0100e-003	0.0274	0.0230	1.6000e-004		2.0800e-003	2.0800e-003		2.0800e-003	2.0800e-003		32.8674	32.8674	6.3000e-004	6.0000e-004	33.0628

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					
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
Regional Shopping Center	279.373	3.0100e-003	0.0274	0.0230	1.6000e-004		2.0800e-003	2.0800e-003		2.0800e-003	2.0800e-003		32.8674	32.8674	6.3000e-004	6.0000e-004	33.0628
Total		**3.0100e-003**	**0.0274**	**0.0230**	**1.6000e-004**		**2.0800e-003**	**2.0800e-003**		**2.0800e-003**	**2.0800e-003**		**32.8674**	**32.8674**	**6.3000e-004**	**6.0000e-004**	**33.0628**

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					
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
Regional Shopping Center	0.218926	2.3600e-003	0.0215	0.0180	1.3000e-004		1.6300e-003	1.6300e-003		1.6300e-003	1.6300e-003		25.7560	25.7560	4.9000e-004	4.7000e-004	25.9090
Total		**2.3600e-003**	**0.0215**	**0.0180**	**1.3000e-004**		**1.6300e-003**	**1.6300e-003**		**1.6300e-003**	**1.6300e-003**		**25.7560**	**25.7560**	**4.9000e-004**	**4.7000e-004**	**25.9090**

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	1.4459	5.4000e-004	0.0594	0.0000		2.1000e-004	2.1000e-004		2.1000e-004	2.1000e-004		0.1267	0.1267	3.4000e-004		0.1352
Unmitigated	1.4459	5.4000e-004	0.0594	0.0000		2.1000e-004	2.1000e-004		2.1000e-004	2.1000e-004		0.1267	0.1267	3.4000e-004		0.1352

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	0.3503					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.0901					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	5.5400e-003	5.4000e-004	0.0594	0.0000		2.1000e-004	2.1000e-004		2.1000e-004	2.1000e-004		0.1267	0.1267	3.4000e-004		0.1352
Total	**1.4459**	**5.4000e-004**	**0.0594**	**0.0000**		**2.1000e-004**	**2.1000e-004**		**2.1000e-004**	**2.1000e-004**		**0.1267**	**0.1267**	**3.4000e-004**		**0.1352**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.3503					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.0901					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	5.5400e-003	5.4000e-004	0.0594	0.0000		2.1000e-004	2.1000e-004		2.1000e-004	2.1000e-004		0.1267	0.1267	3.4000e-004		0.1352
Total	**1.4459**	**5.4000e-004**	**0.0594**	**0.0000**		**2.1000e-004**	**2.1000e-004**		**2.1000e-004**	**2.1000e-004**		**0.1267**	**0.1267**	**3.4000e-004**		**0.1352**

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

Use Water Efficient Irrigation System

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

6828 Dolores Lake- Phase 5

San Bernardino-Mojave Desert County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	97.24	1000sqft	2.23	97,240.00	0
Other Non-Asphalt Surfaces	5.16	Acre	5.16	224,769.60	0
Parking Lot	419.00	Space	5.01	167,600.00	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	32
Climate Zone	10			**Operational Year**	2022
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

6828 Dolores Lake- Phase 5 - San Bernardino-Mojave Desert County, Summer

Project Characteristics - .

Land Use - Phase 5 covers 12.4 acres with 97,241 sf office/administrative uses, 419 parking spaces, ~10% (1.24 acres) of site is onsite roadways, & remainder is landscaping/open space (5.16 acres).

Construction Phase - Construction of Phase 5 to start April 2020 and be completed Decemeber 2021. Vacant site, no demo or site prep.

Grading - Phase 5 covers approximately 12.4 acres and is to be balanced.

Architectural Coating -

Area Coating -

Energy Use -

Construction Off-road Equipment Mitigation - Tier 4 final equipment for construction

Mobile Land Use Mitigation - Sidewalks provided on-site.

Energy Mitigation - High efficiency lighting at least 10% more efficent than standard. 2016 Title standards are at least 25% more efficient than 2013 Title 24 standards (CalEEmod defaults). Energy star appliances to be used on site where applicable.

Water Mitigation - Per Green Building Standards.

Waste Mitigation - AB 939 requires at least 50% of waste be diverted from landfills, 75% by 2020.

Vehicle Trips - TIA trip generation matches CalEEMod defaults for Gen office blg use

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	20.00	25.00
tblConstructionPhase	NumDays	300.00	371.00
tblConstructionPhase	NumDays	30.00	37.00
tblConstructionPhase	NumDays	20.00	25.00
tblGrading	AcresOfGrading	92.50	12.40
tblLandUse	LotAcreage	3.77	5.01
tblProjectCharacteristics	OperationalYear	2018	2022
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	4.5702	50.2766	32.9731	0.0733	6.6330	2.1756	8.8085	3.4164	2.0015	5.4179	0.0000	7,297.7612	7,297.7612	1.9502	0.0000	7,318.9355
2021	101.4903	25.7435	27.1608	0.0724	2.9937	0.9872	3.9809	0.8051	0.9280	1.7331	0.0000	7,205.7842	7,205.7842	0.8280	0.0000	7,226.4833
Maximum	**101.4903**	**50.2766**	**32.9731**	**0.0733**	**6.6330**	**2.1756**	**8.8085**	**3.4164**	**2.0015**	**5.4179**	**0.0000**	**7,297.7612**	**7,297.7612**	**1.9502**	**0.0000**	**7,318.9355**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	1.7430	11.3298	34.0140	0.0733	2.9937	0.1032	3.0880	1.3737	0.1031	1.4768	0.0000	7,297.7612	7,297.7612	1.9502	0.0000	7,318.9355
2021	101.3011	10.5462	28.0459	0.0724	2.9937	0.0693	3.0630	0.8051	0.0675	0.8726	0.0000	7,205.7842	7,205.7842	0.8280	0.0000	7,226.4832
Maximum	**101.3011**	**11.3298**	**34.0140**	**0.0733**	**2.9937**	**0.1032**	**3.0880**	**1.3737**	**0.1031**	**1.4768**	**0.0000**	**7,297.7612**	**7,297.7612**	**1.9502**	**0.0000**	**7,318.9355**

	ROG	NOx	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	**2.84**	**71.22**	**-3.20**	**0.00**	**37.80**	**94.55**	**51.91**	**48.39**	**94.18**	**67.15**	**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	2.9170	4.9000e-004	0.0533	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004		0.1141	0.1141	3.0000e-004		0.1216
Energy	0.0100	0.0912	0.0766	5.5000e-004		6.9300e-003	6.9300e-003		6.9300e-003	6.9300e-003		109.3852	109.3852	2.1000e-003	2.0100e-003	110.0352
Mobile	2.1009	13.3132	22.4608	0.0879	6.3135	0.0579	6.3714	1.6894	0.0542	1.7436		8,970.0340	8,970.0340	0.4625		8,981.5964
Total	**5.0280**	**13.4048**	**22.5907**	**0.0884**	**6.3135**	**0.0650**	**6.3785**	**1.6894**	**0.0613**	**1.7507**		**9,079.5333**	**9,079.5333**	**0.4649**	**2.0100e-003**	**9,091.7533**

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	2.9170	4.9000e-004	0.0533	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004		0.1141	0.1141	3.0000e-004		0.1216
Energy	7.5200e-003	0.0684	0.0574	4.1000e-004		5.2000e-003	5.2000e-003		5.2000e-003	5.2000e-003		82.0389	82.0389	1.5700e-003	1.5000e-003	82.5264
Mobile	2.0943	13.2613	22.2767	0.0871	6.2504	0.0574	6.3078	1.6725	0.0537	1.7262		8,893.0237	8,893.0237	0.4600		8,904.5227
Total	**5.0188**	**13.3301**	**22.3874**	**0.0875**	**6.2504**	**0.0627**	**6.3131**	**1.6725**	**0.0591**	**1.7316**		**8,975.1767**	**8,975.1767**	**0.4618**	**1.5000e-003**	**8,987.1708**

	ROG	NOx	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	**0.18**	**0.56**	**0.90**	**1.02**	**1.00**	**3.46**	**1.03**	**1.00**	**3.61**	**1.09**	**0.00**	**1.15**	**1.15**	**0.66**	**25.37**	**1.15**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	4/1/2020	5/21/2020	5	37	
2	Building Construction	Building Construction	5/22/2020	10/24/2021	5	371	
3	Paving	Paving	10/25/2021	11/26/2021	5	25	
4	Architectural Coating	Architectural Coating	11/27/2021	12/31/2021	5	25	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 12.4

Acres of Paving: 10.17

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 145,860; Non-Residential Outdoor: 48,620; Striped Parking Area: 23,542 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	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
Grading	8	20.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	196.00	80.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	39.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.3775	0.0000	6.3775	3.3486	0.0000	3.3486			0.0000			0.0000
Off-Road	4.4501	50.1975	31.9583	0.0620		2.1739	2.1739		2.0000	2.0000		6,005.8653	6,005.8653	1.9424		6,054.4257
Total	**4.4501**	**50.1975**	**31.9583**	**0.0620**	**6.3775**	**2.1739**	**8.5514**	**3.3486**	**2.0000**	**5.3486**		**6,005.8653**	**6,005.8653**	**1.9424**		**6,054.4257**

3.2 Grading - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	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	0.1201	0.0790	1.0148	2.5900e-003	0.2555	1.6600e-003	0.2571	0.0678	1.5200e-003	0.0693		257.6463	257.6463	7.8100e-003		257.8417
Total	**0.1201**	**0.0790**	**1.0148**	**2.5900e-003**	**0.2555**	**1.6600e-003**	**0.2571**	**0.0678**	**1.5200e-003**	**0.0693**		**257.6463**	**257.6463**	**7.8100e-003**		**257.8417**

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					2.4872	0.0000	2.4872	1.3060	0.0000	1.3060			0.0000			0.0000
Off-Road	0.7616	3.3000	32.9991	0.0620		0.1015	0.1015		0.1015	0.1015	0.0000	6,005.8653	6,005.8653	1.9424		6,054.4257
Total	**0.7616**	**3.3000**	**32.9991**	**0.0620**	**2.4872**	**0.1015**	**2.5888**	**1.3060**	**0.1015**	**1.4075**	**0.0000**	**6,005.8653**	**6,005.8653**	**1.9424**		**6,054.4257**

3.2 Grading - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	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	0.1201	0.0790	1.0148	2.5900e-003	0.2555	1.6600e-003	0.2571	0.0678	1.5200e-003	0.0693		257.6463	257.6463	7.8100e-003		257.8417
Total	**0.1201**	**0.0790**	**1.0148**	**2.5900e-003**	**0.2555**	**1.6600e-003**	**0.2571**	**0.0678**	**1.5200e-003**	**0.0693**		**257.6463**	**257.6463**	**7.8100e-003**		**257.8417**

3.3 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503		2,553.0631	2,553.0631	0.6229		2,568.6345
Total	**2.1198**	**19.1860**	**16.8485**	**0.0269**		**1.1171**	**1.1171**		**1.0503**	**1.0503**		**2,553.0631**	**2,553.0631**	**0.6229**		**2,568.6345**

3.3 Building Construction - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2379	8.3205	1.6169	0.0211	0.4902	0.0373	0.5275	0.1412	0.0356	0.1768		2,219.7645	2,219.7645	0.1475		2,223.4528
Worker	1.1774	0.7746	9.9455	0.0254	2.5035	0.0162	2.5197	0.6639	0.0149	0.6789		2,524.9337	2,524.9337	0.0766		2,526.8482
Total	**1.4152**	**9.0951**	**11.5624**	**0.0464**	**2.9937**	**0.0535**	**3.0472**	**0.8051**	**0.0506**	**0.8556**		**4,744.6982**	**4,744.6982**	**0.2241**		**4,750.3011**

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	0.3278	2.2347	17.4603	0.0269		0.0408	0.0408		0.0408	0.0408	0.0000	2,553.0631	2,553.0631	0.6229		2,568.6345
Total	**0.3278**	**2.2347**	**17.4603**	**0.0269**		**0.0408**	**0.0408**		**0.0408**	**0.0408**	**0.0000**	**2,553.0631**	**2,553.0631**	**0.6229**		**2,568.6345**

3.3 Building Construction - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2379	8.3205	1.6169	0.0211	0.4902	0.0373	0.5275	0.1412	0.0356	0.1768		2,219.7645	2,219.7645	0.1475		2,223.4528
Worker	1.1774	0.7746	9.9455	0.0254	2.5035	0.0162	2.5197	0.6639	0.0149	0.6789		2,524.9337	2,524.9337	0.0766		2,526.8482
Total	**1.4152**	**9.0951**	**11.5624**	**0.0464**	**2.9937**	**0.0535**	**3.0472**	**0.8051**	**0.0506**	**0.8556**		**4,744.6982**	**4,744.6982**	**0.2241**		**4,750.3011**

3.3 Building Construction - 2021

Unmitigated Construction On-Site

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

3.3 Building Construction - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2032	7.6168	1.4279	0.0209	0.4902	0.0127	0.5029	0.1412	0.0122	0.1533		2,207.9391	2,207.9391	0.1428		2,211.5094
Worker	1.0965	0.6946	9.1577	0.0246	2.5035	0.0158	2.5194	0.6639	0.0146	0.6785		2,444.4812	2,444.4812	0.0691		2,446.2096
Total	**1.2997**	**8.3114**	**10.5856**	**0.0455**	**2.9937**	**0.0285**	**3.0223**	**0.8051**	**0.0267**	**0.8318**		**4,652.4203**	**4,652.4203**	**0.2120**		**4,657.7190**

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	0.3278	2.2347	17.4603	0.0269		0.0408	0.0408		0.0408	0.0408	0.0000	2,553.3639	2,553.3639	0.6160		2,568.7643
Total	**0.3278**	**2.2347**	**17.4603**	**0.0269**		**0.0408**	**0.0408**		**0.0408**	**0.0408**	**0.0000**	**2,553.3639**	**2,553.3639**	**0.6160**		**2,568.7643**

3.3 Building Construction - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2032	7.6168	1.4279	0.0209	0.4902	0.0127	0.5029	0.1412	0.0122	0.1533		2,207.9391	2,207.9391	0.1428		2,211.5094
Worker	1.0965	0.6946	9.1577	0.0246	2.5035	0.0158	2.5194	0.6639	0.0146	0.6785		2,444.4812	2,444.4812	0.0691		2,446.2096
Total	**1.2997**	**8.3114**	**10.5856**	**0.0455**	**2.9937**	**0.0285**	**3.0223**	**0.8051**	**0.0267**	**0.8318**		**4,652.4203**	**4,652.4203**	**0.2120**		**4,657.7190**

3.4 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2556	12.9191	14.6532	0.0228		0.6777	0.6777		0.6235	0.6235		2,207.2109	2,207.2109	0.7139		2,225.0573
Paving	0.5251					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.7806**	**12.9191**	**14.6532**	**0.0228**		**0.6777**	**0.6777**		**0.6235**	**0.6235**		**2,207.2109**	**2,207.2109**	**0.7139**		**2,225.0573**

3.4 Paving - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	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	0.0839	0.0532	0.7009	1.8800e-003	0.1916	1.2100e-003	0.1928	0.0508	1.1200e-003	0.0519		187.0776	187.0776	5.2900e-003		187.2099
Total	**0.0839**	**0.0532**	**0.7009**	**1.8800e-003**	**0.1916**	**1.2100e-003**	**0.1928**	**0.0508**	**1.1200e-003**	**0.0519**		**187.0776**	**187.0776**	**5.2900e-003**		**187.2099**

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	0.2805	1.2154	17.2957	0.0228		0.0374	0.0374		0.0374	0.0374	0.0000	2,207.2109	2,207.2109	0.7139		2,225.0573
Paving	0.5251					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.8055**	**1.2154**	**17.2957**	**0.0228**		**0.0374**	**0.0374**		**0.0374**	**0.0374**	**0.0000**	**2,207.2109**	**2,207.2109**	**0.7139**		**2,225.0573**

3.4 Paving - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	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	0.0839	0.0532	0.7009	1.8800e-003	0.1916	1.2100e-003	0.1928	0.0508	1.1200e-003	0.0519		187.0776	187.0776	5.2900e-003		187.2099
Total	**0.0839**	**0.0532**	**0.7009**	**1.8800e-003**	**0.1916**	**1.2100e-003**	**0.1928**	**0.0508**	**1.1200e-003**	**0.0519**		**187.0776**	**187.0776**	**5.2900e-003**		**187.2099**

3.5 Architectural Coating - 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					
Archit. Coating	101.0532					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.9309
Total	**101.2721**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**		**281.4481**	**281.4481**	**0.0193**		**281.9309**

3.5 Architectural Coating - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	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	0.2182	0.1382	1.8222	4.8800e-003	0.4982	3.1500e-003	0.5013	0.1321	2.9000e-003	0.1350		486.4019	486.4019	0.0138		486.7458
Total	**0.2182**	**0.1382**	**1.8222**	**4.8800e-003**	**0.4982**	**3.1500e-003**	**0.5013**	**0.1321**	**2.9000e-003**	**0.1350**		**486.4019**	**486.4019**	**0.0138**		**486.7458**

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	101.0532					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0297	0.1288	1.8324	2.9700e-003		3.9600e-003	3.9600e-003		3.9600e-003	3.9600e-003	0.0000	281.4481	281.4481	0.0193		281.9309
Total	**101.0829**	**0.1288**	**1.8324**	**2.9700e-003**		**3.9600e-003**	**3.9600e-003**		**3.9600e-003**	**3.9600e-003**	**0.0000**	**281.4481**	**281.4481**	**0.0193**		**281.9309**

3.5 Architectural Coating - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	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	0.2182	0.1382	1.8222	4.8800e-003	0.4982	3.1500e-003	0.5013	0.1321	2.9000e-003	0.1350		486.4019	486.4019	0.0138		486.7458
Total	**0.2182**	**0.1382**	**1.8222**	**4.8800e-003**	**0.4982**	**3.1500e-003**	**0.5013**	**0.1321**	**2.9000e-003**	**0.1350**		**486.4019**	**486.4019**	**0.0138**		**486.7458**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2.0943	13.2613	22.2767	0.0871	6.2504	0.0574	6.3078	1.6725	0.0537	1.7262		8,893.0237	8,893.0237	0.4600		8,904.5227
Unmitigated	2.1009	13.3132	22.4608	0.0879	6.3135	0.0579	6.3714	1.6894	0.0542	1.7436		8,970.0340	8,970.0340	0.4625		8,981.5964

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Office Building	1,072.56	239.21	102.10	2,249,715	2,227,218
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Total	1,072.56	239.21	102.10	2,249,715	2,227,218

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Office Building	14.70	6.60	6.60	33.00	48.00	19.00	77	19	4
Other Non-Asphalt Surfaces	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0
Parking Lot	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Office Building	0.553113	0.036408	0.180286	0.116335	0.016165	0.005101	0.018218	0.063797	0.001357	0.001565	0.005903	0.000808	0.000944
Other Non-Asphalt Surfaces	0.553113	0.036408	0.180286	0.116335	0.016165	0.005101	0.018218	0.063797	0.001357	0.001565	0.005903	0.000808	0.000944
Parking Lot	0.553113	0.036408	0.180286	0.116335	0.016165	0.005101	0.018218	0.063797	0.001357	0.001565	0.005903	0.000808	0.000944

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Install High Efficiency Lighting

Install Energy Efficient Appliances

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	7.5200e-003	0.0684	0.0574	4.1000e-004		5.2000e-003	5.2000e-003		5.2000e-003	5.2000e-003		82.0389	82.0389	1.5700e-003	1.5000e-003	82.5264
NaturalGas Unmitigated	0.0100	0.0912	0.0766	5.5000e-004		6.9300e-003	6.9300e-003		6.9300e-003	6.9300e-003		109.3852	109.3852	2.1000e-003	2.0100e-003	110.0352

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	929.774	0.0100	0.0912	0.0766	5.5000e-004		6.9300e-003	6.9300e-003		6.9300e-003	6.9300e-003		109.3852	109.3852	2.1000e-003	2.0100e-003	110.0352
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		**0.0100**	**0.0912**	**0.0766**	**5.5000e-004**		**6.9300e-003**	**6.9300e-003**		**6.9300e-003**	**6.9300e-003**		**109.3852**	**109.3852**	**2.1000e-003**	**2.0100e-003**	**110.0352**

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	0.697331	7.5200e-003	0.0684	0.0574	4.1000e-004		5.2000e-003	5.2000e-003		5.2000e-003	5.2000e-003		82.0389	82.0389	1.5700e-003	1.5000e-003	82.5264
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		**7.5200e-003**	**0.0684**	**0.0574**	**4.1000e-004**		**5.2000e-003**	**5.2000e-003**		**5.2000e-003**	**5.2000e-003**		**82.0389**	**82.0389**	**1.5700e-003**	**1.5000e-003**	**82.5264**

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	2.9170	4.9000e-004	0.0533	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004		0.1141	0.1141	3.0000e-004		0.1216
Unmitigated	2.9170	4.9000e-004	0.0533	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004		0.1141	0.1141	3.0000e-004		0.1216

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	0.6922					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.2199					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.9600e-003	4.9000e-004	0.0533	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004		0.1141	0.1141	3.0000e-004		0.1216
Total	**2.9170**	**4.9000e-004**	**0.0533**	**0.0000**		**1.9000e-004**	**1.9000e-004**		**1.9000e-004**	**1.9000e-004**		**0.1141**	**0.1141**	**3.0000e-004**		**0.1216**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.6922					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.2199					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.9600e-003	4.9000e-004	0.0533	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004		0.1141	0.1141	3.0000e-004		0.1216
Total	**2.9170**	**4.9000e-004**	**0.0533**	**0.0000**		**1.9000e-004**	**1.9000e-004**		**1.9000e-004**	**1.9000e-004**		**0.1141**	**0.1141**	**3.0000e-004**		**0.1216**

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

6828 Dolores Lake- Phase 5

San Bernardino-Mojave Desert County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	97.24	1000sqft	2.23	97,240.00	0
Other Non-Asphalt Surfaces	5.16	Acre	5.16	224,769.60	0
Parking Lot	419.00	Space	5.01	167,600.00	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	32
Climate Zone	10			**Operational Year**	2022
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

6828 Dolores Lake- Phase 5 - San Bernardino-Mojave Desert County, Winter

Project Characteristics - .

Land Use - Phase 5 covers 12.4 acres with 97,241 sf office/administrative uses, 419 parking spaces, ~10% (1.24 acres) of site is onsite roadways, & remainder is landscaping/open space (5.16 acres).

Construction Phase - Construction of Phase 5 to start April 2020 and be completed Decemeber 2021. Vacant site, no demo or site prep.

Grading - Phase 5 covers approximately 12.4 acres and is to be balanced.

Architectural Coating -

Area Coating -

Energy Use -

Construction Off-road Equipment Mitigation - Tier 4 final equipment for construction

Mobile Land Use Mitigation - Sidewalks provided on-site.

Energy Mitigation - High efficiency lighting at least 10% more efficent than standard. 2016 Title standards are at least 25% more efficient than 2013 Title 24 standards (CalEEmod defaults). Energy star appliances to be used on site where applicable.

Water Mitigation - Per Green Building Standards.

Waste Mitigation - AB 939 requires at least 50% of waste be diverted from landfills, 75% by 2020.

Vehicle Trips - TIA trip generation matches CalEEMod defaults for Gen office blg use

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
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tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	20.00	25.00
tblConstructionPhase	NumDays	300.00	371.00
tblConstructionPhase	NumDays	30.00	37.00
tblConstructionPhase	NumDays	20.00	25.00
tblGrading	AcresOfGrading	92.50	12.40
tblLandUse	LotAcreage	3.77	5.01
tblProjectCharacteristics	OperationalYear	2018	2022
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	4.5714	50.2807	32.7878	0.0699	6.6330	2.1756	8.8085	3.4164	2.0015	5.4179	0.0000	6,948.5822	6,948.5822	1.9493	0.0000	6,969.9092
2021	101.4928	25.6928	25.7210	0.0690	2.9937	0.9875	3.9812	0.8051	0.9284	1.7334	0.0000	6,865.3782	6,865.3782	0.8349	0.0000	6,886.2509
Maximum	**101.4928**	**50.2807**	**32.7878**	**0.0699**	**6.6330**	**2.1756**	**8.8085**	**3.4164**	**2.0015**	**5.4179**	**0.0000**	**6,948.5822**	**6,948.5822**	**1.9493**	**0.0000**	**6,969.9092**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	1.7676	11.2961	33.8287	0.0699	2.9937	0.1032	3.0885	1.3737	0.1031	1.4768	0.0000	6,948.5822	6,948.5822	1.9493	0.0000	6,969.9092
2021	101.3036	10.4954	26.6060	0.0690	2.9937	0.0697	3.0634	0.8051	0.0679	0.8729	0.0000	6,865.3782	6,865.3782	0.8349	0.0000	6,886.2509
Maximum	**101.3036**	**11.2961**	**33.8287**	**0.0699**	**2.9937**	**0.1032**	**3.0885**	**1.3737**	**0.1031**	**1.4768**	**0.0000**	**6,948.5822**	**6,948.5822**	**1.9493**	**0.0000**	**6,969.9092**

	ROG	NOx	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	**2.82**	**71.32**	**-3.29**	**0.00**	**37.80**	**94.53**	**51.90**	**48.39**	**94.17**	**67.14**	**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	2.9170	4.9000e-004	0.0533	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004		0.1141	0.1141	3.0000e-004		0.1216
Energy	0.0100	0.0912	0.0766	5.5000e-004		6.9300e-003	6.9300e-003		6.9300e-003	6.9300e-003		109.3852	109.3852	2.1000e-003	2.0100e-003	110.0352
Mobile	1.8248	13.2761	19.9451	0.0809	6.3135	0.0584	6.3720	1.6894	0.0547	1.7441		8,269.1159	8,269.1159	0.4753		8,280.9991
Total	**4.7518**	**13.3677**	**20.0750**	**0.0814**	**6.3135**	**0.0655**	**6.3791**	**1.6894**	**0.0618**	**1.7513**		**8,378.6152**	**8,378.6152**	**0.4777**	**2.0100e-003**	**8,391.1559**

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	2.9170	4.9000e-004	0.0533	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004		0.1141	0.1141	3.0000e-004		0.1216
Energy	7.5200e-003	0.0684	0.0574	4.1000e-004		5.2000e-003	5.2000e-003		5.2000e-003	5.2000e-003		82.0389	82.0389	1.5700e-003	1.5000e-003	82.5264
Mobile	1.8185	13.2216	19.7955	0.0802	6.2504	0.0579	6.3083	1.6725	0.0542	1.7268		8,197.6231	8,197.6231	0.4730		8,209.4469
Total	**4.7430**	**13.2905**	**19.9062**	**0.0806**	**6.2504**	**0.0633**	**6.3137**	**1.6725**	**0.0596**	**1.7321**		**8,279.7761**	**8,279.7761**	**0.4748**	**1.5000e-003**	**8,292.0950**

	ROG	NOx	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	**0.18**	**0.58**	**0.84**	**1.03**	**1.00**	**3.42**	**1.02**	**1.00**	**3.58**	**1.09**	**0.00**	**1.18**	**1.18**	**0.61**	**25.37**	**1.18**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	4/1/2020	5/21/2020	5	37	
2	Building Construction	Building Construction	5/22/2020	10/24/2021	5	371	
3	Paving	Paving	10/25/2021	11/26/2021	5	25	
4	Architectural Coating	Architectural Coating	11/27/2021	12/31/2021	5	25	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 12.4

Acres of Paving: 10.17

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 145,860; Non-Residential Outdoor: 48,620; Striped Parking Area: 23,542 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	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
Grading	8	20.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	196.00	80.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	39.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.3775	0.0000	6.3775	3.3486	0.0000	3.3486			0.0000			0.0000
Off-Road	4.4501	50.1975	31.9583	0.0620		2.1739	2.1739		2.0000	2.0000		6,005.8653	6,005.8653	1.9424		6,054.4257
Total	**4.4501**	**50.1975**	**31.9583**	**0.0620**	**6.3775**	**2.1739**	**8.5514**	**3.3486**	**2.0000**	**5.3486**		**6,005.8653**	**6,005.8653**	**1.9424**		**6,054.4257**

3.2 Grading - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	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	0.1213	0.0832	0.8296	2.3200e-003	0.2555	1.6600e-003	0.2571	0.0678	1.5200e-003	0.0693		231.0781	231.0781	6.8300e-003		231.2489
Total	**0.1213**	**0.0832**	**0.8296**	**2.3200e-003**	**0.2555**	**1.6600e-003**	**0.2571**	**0.0678**	**1.5200e-003**	**0.0693**		**231.0781**	**231.0781**	**6.8300e-003**		**231.2489**

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					2.4872	0.0000	2.4872	1.3060	0.0000	1.3060			0.0000			0.0000
Off-Road	0.7616	3.3000	32.9991	0.0620		0.1015	0.1015		0.1015	0.1015	0.0000	6,005.8653	6,005.8653	1.9424		6,054.4257
Total	**0.7616**	**3.3000**	**32.9991**	**0.0620**	**2.4872**	**0.1015**	**2.5888**	**1.3060**	**0.1015**	**1.4075**	**0.0000**	**6,005.8653**	**6,005.8653**	**1.9424**		**6,054.4257**

3.2 Grading - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	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	0.1213	0.0832	0.8296	2.3200e-003	0.2555	1.6600e-003	0.2571	0.0678	1.5200e-003	0.0693		231.0781	231.0781	6.8300e-003		231.2489
Total	**0.1213**	**0.0832**	**0.8296**	**2.3200e-003**	**0.2555**	**1.6600e-003**	**0.2571**	**0.0678**	**1.5200e-003**	**0.0693**		**231.0781**	**231.0781**	**6.8300e-003**		**231.2489**

3.3 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.1198	19.1860	16.8485	0.0269		1.1171	1.1171		1.0503	1.0503		2,553.0631	2,553.0631	0.6229		2,568.6345
Total	**2.1198**	**19.1860**	**16.8485**	**0.0269**		**1.1171**	**1.1171**		**1.0503**	**1.0503**		**2,553.0631**	**2,553.0631**	**0.6229**		**2,568.6345**

3.3 Building Construction - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2511	8.2464	1.8787	0.0202	0.4902	0.0377	0.5279	0.1412	0.0361	0.1773		2,130.9543	2,130.9543	0.1632		2,135.0353
Worker	1.1886	0.8150	8.1296	0.0227	2.5035	0.0162	2.5197	0.6639	0.0149	0.6789		2,264.5649	2,264.5649	0.0670		2,266.2394
Total	**1.4397**	**9.0614**	**10.0084**	**0.0430**	**2.9937**	**0.0540**	**3.0477**	**0.8051**	**0.0511**	**0.8561**		**4,395.5192**	**4,395.5192**	**0.2302**		**4,401.2747**

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	0.3278	2.2347	17.4603	0.0269		0.0408	0.0408		0.0408	0.0408	0.0000	2,553.0631	2,553.0631	0.6229		2,568.6345
Total	**0.3278**	**2.2347**	**17.4603**	**0.0269**		**0.0408**	**0.0408**		**0.0408**	**0.0408**	**0.0000**	**2,553.0631**	**2,553.0631**	**0.6229**		**2,568.6345**

3.3 Building Construction - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2511	8.2464	1.8787	0.0202	0.4902	0.0377	0.5279	0.1412	0.0361	0.1773		2,130.9543	2,130.9543	0.1632		2,135.0353
Worker	1.1886	0.8150	8.1296	0.0227	2.5035	0.0162	2.5197	0.6639	0.0149	0.6789		2,264.5649	2,264.5649	0.0670		2,266.2394
Total	**1.4397**	**9.0614**	**10.0084**	**0.0430**	**2.9937**	**0.0540**	**3.0477**	**0.8051**	**0.0511**	**0.8561**		**4,395.5192**	**4,395.5192**	**0.2302**		**4,401.2747**

3.3 Building Construction - 2021

Unmitigated Construction On-Site

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

3.3 Building Construction - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2157	7.5301	1.6745	0.0201	0.4902	0.0131	0.5033	0.1412	0.0125	0.1537		2,119.5057	2,119.5057	0.1584		2,123.4659
Worker	1.1090	0.7306	7.4713	0.0220	2.5035	0.0158	2.5194	0.6639	0.0146	0.6785		2,192.5086	2,192.5086	0.0605		2,194.0207
Total	**1.3247**	**8.2607**	**9.1458**	**0.0421**	**2.9937**	**0.0289**	**3.0226**	**0.8051**	**0.0271**	**0.8322**		**4,312.0143**	**4,312.0143**	**0.2189**		**4,317.4866**

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	0.3278	2.2347	17.4603	0.0269		0.0408	0.0408		0.0408	0.0408	0.0000	2,553.3639	2,553.3639	0.6160		2,568.7643
Total	**0.3278**	**2.2347**	**17.4603**	**0.0269**		**0.0408**	**0.0408**		**0.0408**	**0.0408**	**0.0000**	**2,553.3639**	**2,553.3639**	**0.6160**		**2,568.7643**

3.3 Building Construction - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2157	7.5301	1.6745	0.0201	0.4902	0.0131	0.5033	0.1412	0.0125	0.1537		2,119.5057	2,119.5057	0.1584		2,123.4659
Worker	1.1090	0.7306	7.4713	0.0220	2.5035	0.0158	2.5194	0.6639	0.0146	0.6785		2,192.5086	2,192.5086	0.0605		2,194.0207
Total	**1.3247**	**8.2607**	**9.1458**	**0.0421**	**2.9937**	**0.0289**	**3.0226**	**0.8051**	**0.0271**	**0.8322**		**4,312.0143**	**4,312.0143**	**0.2189**		**4,317.4866**

3.4 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2556	12.9191	14.6532	0.0228		0.6777	0.6777		0.6235	0.6235		2,207.2109	2,207.2109	0.7139		2,225.0573
Paving	0.5251					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.7806**	**12.9191**	**14.6532**	**0.0228**		**0.6777**	**0.6777**		**0.6235**	**0.6235**		**2,207.2109**	**2,207.2109**	**0.7139**		**2,225.0573**

3.4 Paving - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	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	0.0849	0.0559	0.5718	1.6800e-003	0.1916	1.2100e-003	0.1928	0.0508	1.1200e-003	0.0519		167.7940	167.7940	4.6300e-003		167.9098
Total	**0.0849**	**0.0559**	**0.5718**	**1.6800e-003**	**0.1916**	**1.2100e-003**	**0.1928**	**0.0508**	**1.1200e-003**	**0.0519**		**167.7940**	**167.7940**	**4.6300e-003**		**167.9098**

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	0.2805	1.2154	17.2957	0.0228		0.0374	0.0374		0.0374	0.0374	0.0000	2,207.2109	2,207.2109	0.7139		2,225.0573
Paving	0.5251					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.8055**	**1.2154**	**17.2957**	**0.0228**		**0.0374**	**0.0374**		**0.0374**	**0.0374**	**0.0000**	**2,207.2109**	**2,207.2109**	**0.7139**		**2,225.0573**

3.4 Paving - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	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	0.0849	0.0559	0.5718	1.6800e-003	0.1916	1.2100e-003	0.1928	0.0508	1.1200e-003	0.0519		167.7940	167.7940	4.6300e-003		167.9098
Total	**0.0849**	**0.0559**	**0.5718**	**1.6800e-003**	**0.1916**	**1.2100e-003**	**0.1928**	**0.0508**	**1.1200e-003**	**0.0519**		**167.7940**	**167.7940**	**4.6300e-003**		**167.9098**

3.5 Architectural Coating - 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					
Archit. Coating	101.0532					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.9309
Total	**101.2721**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**		**281.4481**	**281.4481**	**0.0193**		**281.9309**

3.5 Architectural Coating - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	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	0.2207	0.1454	1.4866	4.3800e-003	0.4982	3.1500e-003	0.5013	0.1321	2.9000e-003	0.1350		436.2645	436.2645	0.0120		436.5654
Total	**0.2207**	**0.1454**	**1.4866**	**4.3800e-003**	**0.4982**	**3.1500e-003**	**0.5013**	**0.1321**	**2.9000e-003**	**0.1350**		**436.2645**	**436.2645**	**0.0120**		**436.5654**

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	101.0532					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0297	0.1288	1.8324	2.9700e-003		3.9600e-003	3.9600e-003		3.9600e-003	3.9600e-003	0.0000	281.4481	281.4481	0.0193		281.9309
Total	**101.0829**	**0.1288**	**1.8324**	**2.9700e-003**		**3.9600e-003**	**3.9600e-003**		**3.9600e-003**	**3.9600e-003**	**0.0000**	**281.4481**	**281.4481**	**0.0193**		**281.9309**

3.5 Architectural Coating - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	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	0.2207	0.1454	1.4866	4.3800e-003	0.4982	3.1500e-003	0.5013	0.1321	2.9000e-003	0.1350		436.2645	436.2645	0.0120		436.5654
Total	**0.2207**	**0.1454**	**1.4866**	**4.3800e-003**	**0.4982**	**3.1500e-003**	**0.5013**	**0.1321**	**2.9000e-003**	**0.1350**		**436.2645**	**436.2645**	**0.0120**		**436.5654**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	1.8185	13.2216	19.7955	0.0802	6.2504	0.0579	6.3083	1.6725	0.0542	1.7268		8,197.6231	8,197.6231	0.4730		8,209.4469
Unmitigated	1.8248	13.2761	19.9451	0.0809	6.3135	0.0584	6.3720	1.6894	0.0547	1.7441		8,269.1159	8,269.1159	0.4753		8,280.9991

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Office Building	1,072.56	239.21	102.10	2,249,715	2,227,218
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Total	1,072.56	239.21	102.10	2,249,715	2,227,218

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Office Building	14.70	6.60	6.60	33.00	48.00	19.00	77	19	4
Other Non-Asphalt Surfaces	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0
Parking Lot	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Office Building	0.553113	0.036408	0.180286	0.116335	0.016165	0.005101	0.018218	0.063797	0.001357	0.001565	0.005903	0.000808	0.000944
Other Non-Asphalt Surfaces	0.553113	0.036408	0.180286	0.116335	0.016165	0.005101	0.018218	0.063797	0.001357	0.001565	0.005903	0.000808	0.000944
Parking Lot	0.553113	0.036408	0.180286	0.116335	0.016165	0.005101	0.018218	0.063797	0.001357	0.001565	0.005903	0.000808	0.000944

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Install High Efficiency Lighting

Install Energy Efficient Appliances

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	7.5200e-003	0.0684	0.0574	4.1000e-004		5.2000e-003	5.2000e-003		5.2000e-003	5.2000e-003		82.0389	82.0389	1.5700e-003	1.5000e-003	82.5264
NaturalGas Unmitigated	0.0100	0.0912	0.0766	5.5000e-004		6.9300e-003	6.9300e-003		6.9300e-003	6.9300e-003		109.3852	109.3852	2.1000e-003	2.0100e-003	110.0352

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	929.774	0.0100	0.0912	0.0766	5.5000e-004		6.9300e-003	6.9300e-003		6.9300e-003	6.9300e-003		109.3852	109.3852	2.1000e-003	2.0100e-003	110.0352
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		**0.0100**	**0.0912**	**0.0766**	**5.5000e-004**		**6.9300e-003**	**6.9300e-003**		**6.9300e-003**	**6.9300e-003**		**109.3852**	**109.3852**	**2.1000e-003**	**2.0100e-003**	**110.0352**

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	0.697331	7.5200e-003	0.0684	0.0574	4.1000e-004		5.2000e-003	5.2000e-003		5.2000e-003	5.2000e-003		82.0389	82.0389	1.5700e-003	1.5000e-003	82.5264
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		**7.5200e-003**	**0.0684**	**0.0574**	**4.1000e-004**		**5.2000e-003**	**5.2000e-003**		**5.2000e-003**	**5.2000e-003**		**82.0389**	**82.0389**	**1.5700e-003**	**1.5000e-003**	**82.5264**

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	2.9170	4.9000e-004	0.0533	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004		0.1141	0.1141	3.0000e-004		0.1216
Unmitigated	2.9170	4.9000e-004	0.0533	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004		0.1141	0.1141	3.0000e-004		0.1216

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	0.6922					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.2199					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.9600e-003	4.9000e-004	0.0533	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004		0.1141	0.1141	3.0000e-004		0.1216
Total	**2.9170**	**4.9000e-004**	**0.0533**	**0.0000**		**1.9000e-004**	**1.9000e-004**		**1.9000e-004**	**1.9000e-004**		**0.1141**	**0.1141**	**3.0000e-004**		**0.1216**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.6922					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.2199					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	4.9600e-003	4.9000e-004	0.0533	0.0000		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004		0.1141	0.1141	3.0000e-004		0.1216
Total	**2.9170**	**4.9000e-004**	**0.0533**	**0.0000**		**1.9000e-004**	**1.9000e-004**		**1.9000e-004**	**1.9000e-004**		**0.1141**	**0.1141**	**3.0000e-004**		**0.1216**

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

APPENDIX C

CalEEMod Model Annual Emissions Printouts

6828 Dolores Lake- Phase 1 & Phase 2

San Bernardino-Mojave Desert County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	8.66	1000sqft	0.20	8,660.00	0
Other Asphalt Surfaces	36.72	Acre	36.72	1,599,523.20	0
Parking Lot	67.00	Space	0.60	26,800.00	0
City Park	33.14	Acre	33.14	1,443,578.40	0
Mobile Home Park	224.00	Dwelling Unit	18.79	268,800.00	641

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	32
Climate Zone	10			**Operational Year**	2018
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

6828 Dolores Lake- Phase 1 & Phase 2 - San Bernardino-Mojave Desert County, Annual

Project Characteristics - .

Land Use - P1(Lake) is 25 ac total & P2(RV Park) is 27.7 ac total. 33.14 ac lake and pond/lndscping, 8,660 sf offc/restrms, 67 standard & 224 RV [mobile hme] parking spaces (paving ~70% of phase 2), ~36.72 ac on-site rds.

Construction Phase - Construction of Phases 1 & 2 to start May 2017 and be completed June 2018. No demo or site prep.

Grading - Phase 1 and 2 is 89.45 acres. Site is to be balanced.

Energy Use -

Construction Off-road Equipment Mitigation - Tier 4 final equipment for construction

Mobile Land Use Mitigation - Sidewalks provided on-site.

Energy Mitigation - High efficiency lighting at least 10% more efficent than standard.

Water Mitigation - 20% reduction in indoor water use and water efficient irrigation to be used on-site per Per Green Building Standards

Waste Mitigation - AB 939 requires at least 50% of waste be diverted from landfills, 75% by 2020.

Vehicle Trips - per TIA, Park uses generate 4.56 trips/acres weekdays and 5.61 trips/acre weekends, other uses match CalEEMod default trip generation rates. Defaults used for mobile home park as daily trips not given for RV park in TIA.

Architectural Coating - No residential painting. residential uses are RV park only (modeled as mobile homes).

Woodstoves - 224 RV park spaces only...no mobile homes

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Residential_Exterior	181,440.00	0.00
tblArchitecturalCoating	ConstArea_Residential_Interior	544,320.00	0.00
tblArchitecturalCoating	EF_Residential_Exterior	250.00	0.00
tblArchitecturalCoating	EF_Residential_Interior	250.00	0.00
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	110.00	18.00
tblConstructionPhase	NumDays	1,550.00	244.00
tblConstructionPhase	NumDays	155.00	25.00
tblConstructionPhase	NumDays	110.00	18.00
tblFireplaces	NumberGas	123.20	0.00
tblFireplaces	NumberWood	78.40	0.00
tblGrading	AcresOfGrading	62.50	89.45

tblLandUse	LotAcreage	28.22	18.79
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblVehicleTrips	ST_TR	22.75	5.61
tblVehicleTrips	SU_TR	16.74	5.61
tblVehicleTrips	WD_TR	1.89	4.56
tblWoodstoves	NumberCatalytic	11.20	0.00
tblWoodstoves	NumberNoncatalytic	11.20	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					
2017	1.2905	8.7208	9.9537	0.0275	1.7306	0.2238	1.9544	0.4790	0.2100	0.6891	0.0000	2,538.5844	2,538.5844	0.1962	0.0000	2,543.4880
2018	1.4228	4.7148	5.5530	0.0171	1.0401	0.1071	1.1472	0.2797	0.1008	0.3805	0.0000	1,571.7720	1,571.7720	0.1094	0.0000	1,574.5078
Maximum	**1.4228**	**8.7208**	**9.9537**	**0.0275**	**1.7306**	**0.2238**	**1.9544**	**0.4790**	**0.2100**	**0.6891**	**0.0000**	**2,538.5844**	**2,538.5844**	**0.1962**	**0.0000**	**2,543.4880**

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					
2017	1.0192	6.0888	9.8272	0.0275	1.6557	0.0557	1.7114	0.4507	0.0531	0.5038	0.0000	2,538.5841	2,538.5841	0.1962	0.0000	2,543.4877
2018	1.2976	3.5569	5.5697	0.0171	1.0401	0.0289	1.0691	0.2797	0.0276	0.3073	0.0000	1,571.7719	1,571.7719	0.1094	0.0000	1,574.5076
Maximum	**1.2976**	**6.0888**	**9.8272**	**0.0275**	**1.6557**	**0.0557**	**1.7114**	**0.4507**	**0.0531**	**0.5038**	**0.0000**	**2,538.5841**	**2,538.5841**	**0.1962**	**0.0000**	**2,543.4877**

	ROG	NOx	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	**14.62**	**28.21**	**0.71**	**0.00**	**2.70**	**74.44**	**10.36**	**3.74**	**74.05**	**24.17**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

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Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	5-1-2017	7-31-2017	3.4010	2.0092
2	8-1-2017	10-31-2017	3.9484	3.0577
3	11-1-2017	1-31-2018	3.8404	2.9896
4	2-1-2018	4-30-2018	3.4907	2.7435
5	5-1-2018	7-31-2018	1.3346	1.0674
		Highest	3.9484	3.0577

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	1.7411	0.0195	1.6763	9.0000e-005		9.1500e-003	9.1500e-003		9.1500e-003	9.1500e-003	0.0000	2.7195	2.7195	2.7000e-003	0.0000	2.7869
Energy	0.0350	0.2993	0.1280	1.9100e-003		0.0242	0.0242		0.0242	0.0242	0.0000	827.5528	827.5528	0.0265	0.0105	831.3330
Mobile	0.6233	4.4127	8.0727	0.0250	1.7575	0.0277	1.7851	0.4711	0.0261	0.4973	0.0000	2,302.3167	2,302.3167	0.1334	0.0000	2,305.6527
Waste						0.0000	0.0000		0.0000	0.0000	23.1288	0.0000	23.1288	1.3669	0.0000	57.3006
Water						0.0000	0.0000		0.0000	0.0000	5.1185	242.6191	247.7376	0.5357	0.0145	265.4476
Total	**2.3995**	**4.7315**	**9.8771**	**0.0270**	**1.7575**	**0.0610**	**1.8185**	**0.4711**	**0.0595**	**0.5306**	**28.2473**	**3,375.2081**	**3,403.4554**	**2.0652**	**0.0250**	**3,462.5209**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.7411	0.0195	1.6763	9.0000e-005		9.1500e-003	9.1500e-003		9.1500e-003	9.1500e-003	0.0000	2.7195	2.7195	2.7000e-003	0.0000	2.7869
Energy	0.0350	0.2993	0.1280	1.9100e-003		0.0242	0.0242		0.0242	0.0242	0.0000	818.3540	818.3540	0.0261	0.0104	822.1013
Mobile	0.6207	4.3879	8.0084	0.0247	1.7399	0.0274	1.7673	0.4664	0.0259	0.4923	0.0000	2,281.6755	2,281.6755	0.1326	0.0000	2,284.9907
Waste						0.0000	0.0000		0.0000	0.0000	5.7822	0.0000	5.7822	0.3417	0.0000	14.3252
Water						0.0000	0.0000		0.0000	0.0000	4.0948	229.2322	233.3269	0.4300	0.0119	247.6207
Total	**2.3968**	**4.7067**	**9.8127**	**0.0267**	**1.7399**	**0.0608**	**1.8006**	**0.4664**	**0.0592**	**0.5257**	**9.8770**	**3,331.9812**	**3,341.8582**	**0.9332**	**0.0223**	**3,371.8248**

	ROG	NOx	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	**0.11**	**0.53**	**0.65**	**0.82**	**1.00**	**0.43**	**0.98**	**1.00**	**0.40**	**0.93**	**65.03**	**1.28**	**1.81**	**54.81**	**10.74**	**2.62**

3.0 Construction Detail

Construction Phase

6828 Dolores Lake- Phase 1 & Phase 2 - San Bernardino-Mojave Desert County, Annual

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	5/1/2017	6/2/2017	5	25	
2	Building Construction	Building Construction	6/3/2017	5/10/2018	5	244	
3	Paving	Paving	5/11/2018	6/5/2018	5	18	
4	Architectural Coating	Architectural Coating	6/6/2018	6/30/2018	5	18	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 89.45

Acres of Paving: 37.32

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 12,990; Non-Residential Outdoor: 4,330; Striped Parking Area: 97,579 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	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
Grading	8	20.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	1,453.00	529.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	291.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Grading - 2017

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					0.1227	0.0000	0.1227	0.0465	0.0000	0.0465	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0719	0.8493	0.4848	7.8000e-004		0.0384	0.0384		0.0353	0.0353	0.0000	71.9498	71.9498	0.0221	0.0000	72.5009
Total	**0.0719**	**0.8493**	**0.4848**	**7.8000e-004**	**0.1227**	**0.0384**	**0.1611**	**0.0465**	**0.0353**	**0.0818**	**0.0000**	**71.9498**	**71.9498**	**0.0221**	**0.0000**	**72.5009**

3.2 Grading - 2017

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	1.8400e-003	1.6100e-003	0.0157	3.0000e-005	3.1300e-003	2.0000e-005	3.1600e-003	8.3000e-004	2.0000e-005	8.5000e-004	0.0000	2.9437	2.9437	1.2000e-004	0.0000	2.9467
Total	**1.8400e-003**	**1.6100e-003**	**0.0157**	**3.0000e-005**	**3.1300e-003**	**2.0000e-005**	**3.1600e-003**	**8.3000e-004**	**2.0000e-005**	**8.5000e-004**	**0.0000**	**2.9437**	**2.9437**	**1.2000e-004**	**0.0000**	**2.9467**

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					0.0479	0.0000	0.0479	0.0181	0.0000	0.0181	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.5200e-003	0.0413	0.4125	7.8000e-004		1.2700e-003	1.2700e-003		1.2700e-003	1.2700e-003	0.0000	71.9497	71.9497	0.0221	0.0000	72.5009
Total	**9.5200e-003**	**0.0413**	**0.4125**	**7.8000e-004**	**0.0479**	**1.2700e-003**	**0.0491**	**0.0181**	**1.2700e-003**	**0.0194**	**0.0000**	**71.9497**	**71.9497**	**0.0221**	**0.0000**	**72.5009**

3.2 Grading - 2017

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	1.8400e-003	1.6100e-003	0.0157	3.0000e-005	3.1300e-003	2.0000e-005	3.1600e-003	8.3000e-004	2.0000e-005	8.5000e-004	0.0000	2.9437	2.9437	1.2000e-004	0.0000	2.9467
Total	**1.8400e-003**	**1.6100e-003**	**0.0157**	**3.0000e-005**	**3.1300e-003**	**2.0000e-005**	**3.1600e-003**	**8.3000e-004**	**2.0000e-005**	**8.5000e-004**	**0.0000**	**2.9437**	**2.9437**	**1.2000e-004**	**0.0000**	**2.9467**

3.3 Building Construction - 2017

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	0.2336	1.9916	1.3637	2.0200e-003		0.1341	0.1341		0.1259	0.1259	0.0000	180.3696	180.3696	0.0444	0.0000	181.4806
Total	**0.2336**	**1.9916**	**1.3637**	**2.0200e-003**		**0.1341**	**0.1341**		**0.1259**	**0.1259**	**0.0000**	**180.3696**	**180.3696**	**0.0444**	**0.0000**	**181.4806**

3.3 Building Construction - 2017

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	0.1822	5.1747	1.2530	0.0105	0.2393	0.0414	0.2807	0.0691	0.0396	0.1087	0.0000	1,000.1476	1,000.1476	0.0782	0.0000	1,002.1023
Worker	0.8010	0.7037	6.8365	0.0142	1.3654	9.9200e-003	1.3753	0.3626	9.1600e-003	0.3718	0.0000	1,283.1736	1,283.1736	0.0514	0.0000	1,284.4576
Total	**0.9832**	**5.8784**	**8.0895**	**0.0247**	**1.6048**	**0.0513**	**1.6561**	**0.4317**	**0.0488**	**0.4804**	**0.0000**	**2,283.3212**	**2,283.3212**	**0.1296**	**0.0000**	**2,286.5598**

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	0.0246	0.1676	1.3095	2.0200e-003		3.0600e-003	3.0600e-003		3.0600e-003	3.0600e-003	0.0000	180.3694	180.3694	0.0444	0.0000	181.4804
Total	**0.0246**	**0.1676**	**1.3095**	**2.0200e-003**		**3.0600e-003**	**3.0600e-003**		**3.0600e-003**	**3.0600e-003**	**0.0000**	**180.3694**	**180.3694**	**0.0444**	**0.0000**	**181.4804**

3.3 Building Construction - 2017

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	0.1822	5.1747	1.2530	0.0105	0.2393	0.0414	0.2807	0.0691	0.0396	0.1087	0.0000	1,000.1476	1,000.1476	0.0782	0.0000	1,002.1023
Worker	0.8010	0.7037	6.8365	0.0142	1.3654	9.9200e-003	1.3753	0.3626	9.1600e-003	0.3718	0.0000	1,283.1736	1,283.1736	0.0514	0.0000	1,284.4576
Total	**0.9832**	**5.8784**	**8.0895**	**0.0247**	**1.6048**	**0.0513**	**1.6561**	**0.4317**	**0.0488**	**0.4804**	**0.0000**	**2,283.3212**	**2,283.3212**	**0.1296**	**0.0000**	**2,286.5598**

3.3 Building Construction - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1259	1.0993	0.8263	1.2600e-003		0.0705	0.0705		0.0663	0.0663	0.0000	111.7506	111.7506	0.0274	0.0000	112.4351
Total	**0.1259**	**1.0993**	**0.8263**	**1.2600e-003**		**0.0705**	**0.0705**		**0.0663**	**0.0663**	**0.0000**	**111.7506**	**111.7506**	**0.0274**	**0.0000**	**112.4351**

3.3 Building Construction - 2018

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	0.0998	3.0408	0.6915	6.5500e-003	0.1500	0.0204	0.1704	0.0433	0.0195	0.0628	0.0000	625.8048	625.8048	0.0467	0.0000	626.9726
Worker	0.4470	0.3835	3.7347	8.6600e-003	0.8557	5.9900e-003	0.8617	0.2272	5.5200e-003	0.2328	0.0000	781.6656	781.6656	0.0282	0.0000	782.3696
Total	**0.5467**	**3.4243**	**4.4263**	**0.0152**	**1.0056**	**0.0264**	**1.0320**	**0.2705**	**0.0250**	**0.2956**	**0.0000**	**1,407.4705**	**1,407.4705**	**0.0749**	**0.0000**	**1,409.3422**

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	0.0154	0.1050	0.8206	1.2600e-003		1.9200e-003	1.9200e-003		1.9200e-003	1.9200e-003	0.0000	111.7505	111.7505	0.0274	0.0000	112.4349
Total	**0.0154**	**0.1050**	**0.8206**	**1.2600e-003**		**1.9200e-003**	**1.9200e-003**		**1.9200e-003**	**1.9200e-003**	**0.0000**	**111.7505**	**111.7505**	**0.0274**	**0.0000**	**112.4349**

3.3 Building Construction - 2018

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	0.0998	3.0408	0.6915	6.5500e-003	0.1500	0.0204	0.1704	0.0433	0.0195	0.0628	0.0000	625.8048	625.8048	0.0467	0.0000	626.9726
Worker	0.4470	0.3835	3.7347	8.6600e-003	0.8557	5.9900e-003	0.8617	0.2272	5.5200e-003	0.2328	0.0000	781.6656	781.6656	0.0282	0.0000	782.3696
Total	**0.5467**	**3.4243**	**4.4263**	**0.0152**	**1.0056**	**0.0264**	**1.0320**	**0.2705**	**0.0250**	**0.2956**	**0.0000**	**1,407.4705**	**1,407.4705**	**0.0749**	**0.0000**	**1,409.3422**

3.4 Paving - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0148	0.1577	0.1332	2.1000e-004		8.6100e-003	8.6100e-003		7.9200e-003	7.9200e-003	0.0000	18.7305	18.7305	5.8300e-003	0.0000	18.8762
Paving	0.0489					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0637**	**0.1577**	**0.1332**	**2.1000e-004**		**8.6100e-003**	**8.6100e-003**		**7.9200e-003**	**7.9200e-003**	**0.0000**	**18.7305**	**18.7305**	**5.8300e-003**	**0.0000**	**18.8762**

3.4 Paving - 2018

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.8000e-004	7.6000e-004	7.3800e-003	2.0000e-005	1.6900e-003	1.0000e-005	1.7000e-003	4.5000e-004	1.0000e-005	4.6000e-004	0.0000	1.5452	1.5452	6.0000e-005	0.0000	1.5466
Total	**8.8000e-004**	**7.6000e-004**	**7.3800e-003**	**2.0000e-005**	**1.6900e-003**	**1.0000e-005**	**1.7000e-003**	**4.5000e-004**	**1.0000e-005**	**4.6000e-004**	**0.0000**	**1.5452**	**1.5452**	**6.0000e-005**	**0.0000**	**1.5466**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.5200e-003	0.0109	0.1557	2.1000e-004		3.4000e-004	3.4000e-004		3.4000e-004	3.4000e-004	0.0000	18.7304	18.7304	5.8300e-003	0.0000	18.8762
Paving	0.0489					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0514**	**0.0109**	**0.1557**	**2.1000e-004**		**3.4000e-004**	**3.4000e-004**		**3.4000e-004**	**3.4000e-004**	**0.0000**	**18.7304**	**18.7304**	**5.8300e-003**	**0.0000**	**18.8762**

3.4 Paving - 2018

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.8000e-004	7.6000e-004	7.3800e-003	2.0000e-005	1.6900e-003	1.0000e-005	1.7000e-003	4.5000e-004	1.0000e-005	4.6000e-004	0.0000	1.5452	1.5452	6.0000e-005	0.0000	1.5466
Total	**8.8000e-004**	**7.6000e-004**	**7.3800e-003**	**2.0000e-005**	**1.6900e-003**	**1.0000e-005**	**1.7000e-003**	**4.5000e-004**	**1.0000e-005**	**4.6000e-004**	**0.0000**	**1.5452**	**1.5452**	**6.0000e-005**	**0.0000**	**1.5466**

3.5 Architectural Coating - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.6657					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.6900e-003	0.0181	0.0167	3.0000e-005		1.3500e-003	1.3500e-003		1.3500e-003	1.3500e-003	0.0000	2.2979	2.2979	2.2000e-004	0.0000	2.3034
Total	**0.6684**	**0.0181**	**0.0167**	**3.0000e-005**		**1.3500e-003**	**1.3500e-003**		**1.3500e-003**	**1.3500e-003**	**0.0000**	**2.2979**	**2.2979**	**2.2000e-004**	**0.0000**	**2.3034**

3.5 Architectural Coating - 2018

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0171	0.0147	0.1432	3.3000e-004	0.0328	2.3000e-004	0.0330	8.7100e-003	2.1000e-004	8.9300e-003	0.0000	29.9773	29.9773	1.0800e-003	0.0000	30.0043
Total	**0.0171**	**0.0147**	**0.1432**	**3.3000e-004**	**0.0328**	**2.3000e-004**	**0.0330**	**8.7100e-003**	**2.1000e-004**	**8.9300e-003**	**0.0000**	**29.9773**	**29.9773**	**1.0800e-003**	**0.0000**	**30.0043**

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	0.6657					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.7000e-004	1.1600e-003	0.0165	3.0000e-005		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	2.2979	2.2979	2.2000e-004	0.0000	2.3034
Total	**0.6660**	**1.1600e-003**	**0.0165**	**3.0000e-005**		**4.0000e-005**	**4.0000e-005**		**4.0000e-005**	**4.0000e-005**	**0.0000**	**2.2979**	**2.2979**	**2.2000e-004**	**0.0000**	**2.3034**

3.5 Architectural Coating - 2018

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0171	0.0147	0.1432	3.3000e-004	0.0328	2.3000e-004	0.0330	8.7100e-003	2.1000e-004	8.9300e-003	0.0000	29.9773	29.9773	1.0800e-003	0.0000	30.0043
Total	**0.0171**	**0.0147**	**0.1432**	**3.3000e-004**	**0.0328**	**2.3000e-004**	**0.0330**	**8.7100e-003**	**2.1000e-004**	**8.9300e-003**	**0.0000**	**29.9773**	**29.9773**	**1.0800e-003**	**0.0000**	**30.0043**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.6207	4.3879	8.0084	0.0247	1.7399	0.0274	1.7673	0.4664	0.0259	0.4923	0.0000	2,281.6755	2,281.6755	0.1326	0.0000	2,284.9907
Unmitigated	0.6233	4.4127	8.0727	0.0250	1.7575	0.0277	1.7851	0.4711	0.0261	0.4973	0.0000	2,302.3167	2,302.3167	0.1334	0.0000	2,305.6527

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	151.12	185.92	185.92	397,208	393,236
General Office Building	95.52	21.30	9.09	200,355	198,352
Other Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Mobile Home Park	1,117.76	1,120.00	976.64	4,017,701	3,977,524
Total	1,364.40	1,327.22	1,171.65	4,615,264	4,569,111

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
City Park	14.70	6.60	6.60	33.00	48.00	19.00	66	28	6
General Office Building	14.70	6.60	6.60	33.00	48.00	19.00	77	19	4
Other Asphalt Surfaces	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0
Parking Lot	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0
Mobile Home Park	16.80	7.10	7.90	40.20	19.20	40.60	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Office Building	0.536558	0.040171	0.178324	0.131133	0.021173	0.005906	0.016602	0.058581	0.001315	0.001778	0.006379	0.000829	0.001251
Other Asphalt Surfaces	0.536558	0.040171	0.178324	0.131133	0.021173	0.005906	0.016602	0.058581	0.001315	0.001778	0.006379	0.000829	0.001251
Parking Lot	0.536558	0.040171	0.178324	0.131133	0.021173	0.005906	0.016602	0.058581	0.001315	0.001778	0.006379	0.000829	0.001251
City Park	0.536558	0.040171	0.178324	0.131133	0.021173	0.005906	0.016602	0.058581	0.001315	0.001778	0.006379	0.000829	0.001251
Mobile Home Park	0.536558	0.040171	0.178324	0.131133	0.021173	0.005906	0.016602	0.058581	0.001315	0.001778	0.006379	0.000829	0.001251

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Install High Efficiency Lighting

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	471.8042	471.8042	0.0195	4.0300e-003	473.4921
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	481.0029	481.0029	0.0199	4.1100e-003	482.7237
NaturalGas Mitigated	0.0350	0.2993	0.1280	1.9100e-003		0.0242	0.0242		0.0242	0.0242	0.0000	346.5499	346.5499	6.6400e-003	6.3500e-003	348.6093
NaturalGas Unmitigated	0.0350	0.2993	0.1280	1.9100e-003		0.0242	0.0242		0.0242	0.0242	0.0000	346.5499	346.5499	6.6400e-003	6.3500e-003	348.6093

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					
City Park	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
General Office Building	30223.4	1.6000e-004	1.4800e-003	1.2400e-003	1.0000e-005		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004	0.0000	1.6128	1.6128	3.0000e-005	3.0000e-005	1.6224
Mobile Home Park	6.46388e+006	0.0349	0.2979	0.1267	1.9000e-003		0.0241	0.0241		0.0241	0.0241	0.0000	344.9371	344.9371	6.6100e-003	6.3200e-003	346.9868
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
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0350**	**0.2993**	**0.1280**	**1.9100e-003**		**0.0242**	**0.0242**		**0.0242**	**0.0242**	**0.0000**	**346.5499**	**346.5499**	**6.6400e-003**	**6.3500e-003**	**348.6093**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
City Park	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
General Office Building	30223.4	1.6000e-004	1.4800e-003	1.2400e-003	1.0000e-005		1.1000e-004	1.1000e-004		1.1000e-004	1.1000e-004	0.0000	1.6128	1.6128	3.0000e-005	3.0000e-005	1.6224
Mobile Home Park	6.46388e+006	0.0349	0.2979	0.1267	1.9000e-003		0.0241	0.0241		0.0241	0.0241	0.0000	344.9371	344.9371	6.6100e-003	6.3200e-003	346.9868
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
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0350**	**0.2993**	**0.1280**	**1.9100e-003**		**0.0242**	**0.0242**		**0.0242**	**0.0242**	**0.0000**	**346.5499**	**346.5499**	**6.6400e-003**	**6.3500e-003**	**348.6093**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
City Park	0	0.0000	0.0000	0.0000	0.0000
General Office Building	84521.6	26.9304	1.1100e-003	2.3000e-004	27.0267
Mobile Home Park	1.40153e+006	446.5582	0.0184	3.8100e-003	448.1558
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	23584	7.5144	3.1000e-004	6.0000e-005	7.5413
Total		**481.0029**	**0.0199**	**4.1000e-003**	**482.7237**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
City Park	0	0.0000	0.0000	0.0000	0.0000
General Office Building	81274.1	25.8957	1.0700e-003	2.2000e-004	25.9883
Mobile Home Park	1.37827e+006	439.1456	0.0181	3.7500e-003	440.7166
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	21225.6	6.7629	2.8000e-004	6.0000e-005	6.7871
Total		**471.8042**	**0.0195**	**4.0300e-003**	**473.4921**

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	1.7411	0.0195	1.6763	9.0000e-005		9.1500e-003	9.1500e-003		9.1500e-003	9.1500e-003	0.0000	2.7195	2.7195	2.7000e-003	0.0000	2.7869
Unmitigated	1.7411	0.0195	1.6763	9.0000e-005		9.1500e-003	9.1500e-003		9.1500e-003	9.1500e-003	0.0000	2.7195	2.7195	2.7000e-003	0.0000	2.7869

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	0.4871					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.2023					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	0.0518	0.0195	1.6763	9.0000e-005		9.1500e-003	9.1500e-003		9.1500e-003	9.1500e-003	0.0000	2.7195	2.7195	2.7000e-003	0.0000	2.7869
Total	**1.7411**	**0.0195**	**1.6763**	**9.0000e-005**		**9.1500e-003**	**9.1500e-003**		**9.1500e-003**	**9.1500e-003**	**0.0000**	**2.7195**	**2.7195**	**2.7000e-003**	**0.0000**	**2.7869**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.4871					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.2023					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	0.0518	0.0195	1.6763	9.0000e-005		9.1500e-003	9.1500e-003		9.1500e-003	9.1500e-003	0.0000	2.7195	2.7195	2.7000e-003	0.0000	2.7869
Total	**1.7411**	**0.0195**	**1.6763**	**9.0000e-005**		**9.1500e-003**	**9.1500e-003**		**9.1500e-003**	**9.1500e-003**	**0.0000**	**2.7195**	**2.7195**	**2.7000e-003**	**0.0000**	**2.7869**

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

Use Water Efficient Irrigation System

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	233.3269	0.4300	0.0119	247.6207
Unmitigated	247.7376	0.5357	0.0145	265.4476

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
City Park	0 / 39.4857	139.7748	5.7700e-003	1.1900e-003	140.2748
General Office Building	1.53917 / 0.943365	10.2134	0.0506	1.2700e-003	11.8549
Mobile Home Park	14.5945 / 9.20088	97.7494	0.4794	0.0120	113.3179
Other 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		**247.7376**	**0.5357**	**0.0145**	**265.4477**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
City Park	0 / 39.4857	139.7748	5.7700e-003	1.1900e-003	140.2748
General Office Building	1.23134 / 0.943365	8.8386	0.0405	1.0200e-003	10.1542
Mobile Home Park	11.6756 / 9.20088	84.7136	0.3838	9.6800e-003	97.1916
Other 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		**233.3269**	**0.4300**	**0.0119**	**247.6207**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	5.7822	0.3417	0.0000	14.3252
Unmitigated	23.1288	1.3669	0.0000	57.3006

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
City Park	2.85	0.5785	0.0342	0.0000	1.4333
General Office Building	8.05	1.6341	0.0966	0.0000	4.0484
Mobile Home Park	103.04	20.9162	1.2361	0.0000	51.8190
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**23.1288**	**1.3669**	**0.0000**	**57.3006**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
City Park	0.7125	0.1446	8.5500e-003	0.0000	0.3583
General Office Building	2.0125	0.4085	0.0241	0.0000	1.0121
Mobile Home Park	25.76	5.2291	0.3090	0.0000	12.9547
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**5.7822**	**0.3417**	**0.0000**	**14.3252**

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

Phase 3- Waterpark Parking Lot

San Bernardino-Mojave Desert County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	913.00	Space	14.10	614,196.00	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	32
Climate Zone	10			**Operational Year**	2019
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Phase 3- Waterpark Parking Lot - San Bernardino-Mojave Desert County, Annual

Project Characteristics - Parking lot portion of Phase 3 only.

Land Use - Parking lot portion of Phase 3 (waterpark) covers 14.1 acres with 913 parking spaces.

Construction Phase - Construction Phase 3 to start April 2018 and be completed May 2019. Parking lot only, no buildings being constructed.

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Grading - Phase 3 parking area is 14.1 acres. Site is to be balanced.

Energy Use -

Construction Off-road Equipment Mitigation - Tier 4 final equipment for construction

Mobile Land Use Mitigation -

Energy Mitigation - High efficiency lighting at least 10% more efficent than standard.

Water Mitigation - Per Green Building Standards.

Waste Mitigation - AB 939 requires at least 50% of waste be diverted from landfills, 75% by 2020.

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final

tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	20.00	45.00
tblConstructionPhase	NumDays	30.00	55.00
tblConstructionPhase	NumDays	20.00	205.00
tblGrading	AcresOfGrading	137.50	14.10
tblLandUse	BuildingSpaceSquareFeet	365,200.00	614,196.00
tblLandUse	LandUseSquareFeet	365,200.00	614,196.00
tblLandUse	LotAcreage	8.22	14.10
tblProjectCharacteristics	OperationalYear	2018	2019
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2018	0.2791	2.8811	2.0960	3.5200e-003	0.1932	0.1400	0.3332	0.0972	0.1288	0.2260	0.0000	320.9049	320.9049	0.0948	0.0000	323.2759
2019	0.2816	0.5373	0.5905	1.0000e-003	0.0207	0.0294	0.0501	5.4900e-003	0.0273	0.0328	0.0000	89.5087	89.5087	0.0218	0.0000	90.0540
Maximum	**0.2816**	**2.8811**	**2.0960**	**3.5200e-003**	**0.1932**	**0.1400**	**0.3332**	**0.0972**	**0.1288**	**0.2260**	**0.0000**	**320.9049**	**320.9049**	**0.0948**	**0.0000**	**323.2759**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2018	0.0639	0.1855	2.2147	3.5200e-003	0.0876	5.5700e-003	0.0932	0.0412	5.5600e-003	0.0467	0.0000	320.9046	320.9046	0.0948	0.0000	323.2755
2019	0.2387	0.0499	0.6745	1.0000e-003	0.0207	1.4300e-003	0.0221	5.4900e-003	1.4100e-003	6.9100e-003	0.0000	89.5087	89.5087	0.0218	0.0000	90.0540
Maximum	**0.2387**	**0.1855**	**2.2147**	**3.5200e-003**	**0.0876**	**5.5700e-003**	**0.0932**	**0.0412**	**5.5600e-003**	**0.0467**	**0.0000**	**320.9046**	**320.9046**	**0.0948**	**0.0000**	**323.2755**

	ROG	NOx	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	**46.02**	**93.11**	**-7.55**	**0.00**	**49.36**	**95.87**	**69.92**	**54.56**	**95.53**	**79.27**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Phase 3- Waterpark Parking Lot - San Bernardino-Mojave Desert County, Annual

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	4-1-2018	6-30-2018	1.8974	0.1286
2	7-1-2018	9-30-2018	0.6416	0.0611
3	10-1-2018	12-31-2018	0.6418	0.0613
4	1-1-2019	3-31-2019	0.5480	0.0593
5	4-1-2019	6-30-2019	0.2650	0.2226
		Highest	1.8974	0.2226

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0619	8.0000e-005	8.4700e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0163	0.0163	4.0000e-005	0.0000	0.0174
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	172.2125	172.2125	7.1100e-003	1.4700e-003	172.8286
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0619**	**8.0000e-005**	**8.4700e-003**	**0.0000**	**0.0000**	**3.0000e-005**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**3.0000e-005**	**0.0000**	**172.2288**	**172.2288**	**7.1500e-003**	**1.4700e-003**	**172.8460**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0619	8.0000e-005	8.4700e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0163	0.0163	4.0000e-005	0.0000	0.0174
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	154.9912	154.9912	6.4000e-003	1.3200e-003	155.5457
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0619**	**8.0000e-005**	**8.4700e-003**	**0.0000**	**0.0000**	**3.0000e-005**	**3.0000e-005**	**0.0000**	**3.0000e-005**	**3.0000e-005**	**0.0000**	**155.0076**	**155.0076**	**6.4400e-003**	**1.3200e-003**	**155.5631**

	ROG	NOx	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**	**10.00**	**10.00**	**9.93**	**10.20**	**10.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	4/1/2018	6/17/2018	5	55	
2	Paving	Paving	6/18/2018	3/31/2019	5	205	
3	Architectural Coating	Architectural Coating	4/1/2019	5/31/2019	5	45	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 14.1

Acres of Paving: 14.1

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 36,852 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
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
Grading	8	20.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	52.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Grading - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1731	0.0000	0.1731	0.0918	0.0000	0.0918	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1400	1.6369	0.9650	1.7100e-003		0.0724	0.0724		0.0666	0.0666	0.0000	155.7834	155.7834	0.0485	0.0000	156.9958
Total	**0.1400**	**1.6369**	**0.9650**	**1.7100e-003**	**0.1731**	**0.0724**	**0.2455**	**0.0918**	**0.0666**	**0.1585**	**0.0000**	**155.7834**	**155.7834**	**0.0485**	**0.0000**	**156.9958**

3.2 Grading - 2018

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	3.6000e-003	3.0900e-003	0.0301	7.0000e-005	6.8900e-003	5.0000e-005	6.9400e-003	1.8300e-003	4.0000e-005	1.8700e-003	0.0000	6.2954	6.2954	2.3000e-004	0.0000	6.3010
Total	**3.6000e-003**	**3.0900e-003**	**0.0301**	**7.0000e-005**	**6.8900e-003**	**5.0000e-005**	**6.9400e-003**	**1.8300e-003**	**4.0000e-005**	**1.8700e-003**	**0.0000**	**6.2954**	**6.2954**	**2.3000e-004**	**0.0000**	**6.3010**

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					0.0675	0.0000	0.0675	0.0358	0.0000	0.0358	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0209	0.0908	0.9075	1.7100e-003		2.7900e-003	2.7900e-003		2.7900e-003	2.7900e-003	0.0000	155.7832	155.7832	0.0485	0.0000	156.9956
Total	**0.0209**	**0.0908**	**0.9075**	**1.7100e-003**	**0.0675**	**2.7900e-003**	**0.0703**	**0.0358**	**2.7900e-003**	**0.0386**	**0.0000**	**155.7832**	**155.7832**	**0.0485**	**0.0000**	**156.9956**

3.2 Grading - 2018

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	3.6000e-003	3.0900e-003	0.0301	7.0000e-005	6.8900e-003	5.0000e-005	6.9400e-003	1.8300e-003	4.0000e-005	1.8700e-003	0.0000	6.2954	6.2954	2.3000e-004	0.0000	6.3010
Total	**3.6000e-003**	**3.0900e-003**	**0.0301**	**7.0000e-005**	**6.8900e-003**	**5.0000e-005**	**6.9400e-003**	**1.8300e-003**	**4.0000e-005**	**1.8700e-003**	**0.0000**	**6.2954**	**6.2954**	**2.3000e-004**	**0.0000**	**6.3010**

3.3 Paving - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1159	1.2352	1.0432	1.6100e-003		0.0674	0.0674		0.0620	0.0620	0.0000	146.7219	146.7219	0.0457	0.0000	147.8639
Paving	0.0127					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.1286**	**1.2352**	**1.0432**	**1.6100e-003**		**0.0674**	**0.0674**		**0.0620**	**0.0620**	**0.0000**	**146.7219**	**146.7219**	**0.0457**	**0.0000**	**147.8639**

3.3 Paving - 2018

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	6.9200e-003	5.9400e-003	0.0578	1.3000e-004	0.0133	9.0000e-005	0.0133	3.5200e-003	9.0000e-005	3.6000e-003	0.0000	12.1043	12.1043	4.4000e-004	0.0000	12.1152
Total	**6.9200e-003**	**5.9400e-003**	**0.0578**	**1.3000e-004**	**0.0133**	**9.0000e-005**	**0.0133**	**3.5200e-003**	**9.0000e-005**	**3.6000e-003**	**0.0000**	**12.1043**	**12.1043**	**4.4000e-004**	**0.0000**	**12.1152**

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	0.0198	0.0857	1.2193	1.6100e-003		2.6400e-003	2.6400e-003		2.6400e-003	2.6400e-003	0.0000	146.7218	146.7218	0.0457	0.0000	147.8637
Paving	0.0127					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0325**	**0.0857**	**1.2193**	**1.6100e-003**		**2.6400e-003**	**2.6400e-003**		**2.6400e-003**	**2.6400e-003**	**0.0000**	**146.7218**	**146.7218**	**0.0457**	**0.0000**	**147.8637**

3.3 Paving - 2018

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	6.9200e-003	5.9400e-003	0.0578	1.3000e-004	0.0133	9.0000e-005	0.0133	3.5200e-003	9.0000e-005	3.6000e-003	0.0000	12.1043	12.1043	4.4000e-004	0.0000	12.1152
Total	**6.9200e-003**	**5.9400e-003**	**0.0578**	**1.3000e-004**	**0.0133**	**9.0000e-005**	**0.0133**	**3.5200e-003**	**9.0000e-005**	**3.6000e-003**	**0.0000**	**12.1043**	**12.1043**	**4.4000e-004**	**0.0000**	**12.1152**

3.3 Paving - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0465	0.4878	0.4693	7.3000e-004		0.0264	0.0264		0.0243	0.0243	0.0000	65.5206	65.5206	0.0207	0.0000	66.0388
Paving	5.7700e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0523**	**0.4878**	**0.4693**	**7.3000e-004**		**0.0264**	**0.0264**		**0.0243**	**0.0243**	**0.0000**	**65.5206**	**65.5206**	**0.0207**	**0.0000**	**66.0388**

3.3 Paving - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	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	2.8500e-003	2.3700e-003	0.0232	6.0000e-005	6.0100e-003	4.0000e-005	6.0500e-003	1.6000e-003	4.0000e-005	1.6300e-003	0.0000	5.3072	5.3072	1.7000e-004	0.0000	5.3115
Total	**2.8500e-003**	**2.3700e-003**	**0.0232**	**6.0000e-005**	**6.0100e-003**	**4.0000e-005**	**6.0500e-003**	**1.6000e-003**	**4.0000e-005**	**1.6300e-003**	**0.0000**	**5.3072**	**5.3072**	**1.7000e-004**	**0.0000**	**5.3115**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	8.9800e-003	0.0389	0.5535	7.3000e-004		1.2000e-003	1.2000e-003		1.2000e-003	1.2000e-003	0.0000	65.5205	65.5205	0.0207	0.0000	66.0388
Paving	5.7700e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0148**	**0.0389**	**0.5535**	**7.3000e-004**		**1.2000e-003**	**1.2000e-003**		**1.2000e-003**	**1.2000e-003**	**0.0000**	**65.5205**	**65.5205**	**0.0207**	**0.0000**	**66.0388**

3.3 Paving - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	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	2.8500e-003	2.3700e-003	0.0232	6.0000e-005	6.0100e-003	4.0000e-005	6.0500e-003	1.6000e-003	4.0000e-005	1.6300e-003	0.0000	5.3072	5.3072	1.7000e-004	0.0000	5.3115
Total	**2.8500e-003**	**2.3700e-003**	**0.0232**	**6.0000e-005**	**6.0100e-003**	**4.0000e-005**	**6.0500e-003**	**1.6000e-003**	**4.0000e-005**	**1.6300e-003**	**0.0000**	**5.3072**	**5.3072**	**1.7000e-004**	**0.0000**	**5.3115**

3.4 Architectural Coating - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.2135					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.9900e-003	0.0413	0.0414	7.0000e-005		2.9000e-003	2.9000e-003		2.9000e-003	2.9000e-003	0.0000	5.7448	5.7448	4.9000e-004	0.0000	5.7570
Total	**0.2195**	**0.0413**	**0.0414**	**7.0000e-005**		**2.9000e-003**	**2.9000e-003**		**2.9000e-003**	**2.9000e-003**	**0.0000**	**5.7448**	**5.7448**	**4.9000e-004**	**0.0000**	**5.7570**

3.4 Architectural Coating - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	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	6.9600e-003	5.7700e-003	0.0566	1.4000e-004	0.0147	1.0000e-004	0.0148	3.8900e-003	9.0000e-005	3.9800e-003	0.0000	12.9362	12.9362	4.2000e-004	0.0000	12.9468
Total	**6.9600e-003**	**5.7700e-003**	**0.0566**	**1.4000e-004**	**0.0147**	**1.0000e-004**	**0.0148**	**3.8900e-003**	**9.0000e-005**	**3.9800e-003**	**0.0000**	**12.9362**	**12.9362**	**4.2000e-004**	**0.0000**	**12.9468**

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	0.2135					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.7000e-004	2.9000e-003	0.0412	7.0000e-005		9.0000e-005	9.0000e-005		9.0000e-005	9.0000e-005	0.0000	5.7448	5.7448	4.9000e-004	0.0000	5.7569
Total	**0.2142**	**2.9000e-003**	**0.0412**	**7.0000e-005**		**9.0000e-005**	**9.0000e-005**		**9.0000e-005**	**9.0000e-005**	**0.0000**	**5.7448**	**5.7448**	**4.9000e-004**	**0.0000**	**5.7569**

3.4 Architectural Coating - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	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	6.9600e-003	5.7700e-003	0.0566	1.4000e-004	0.0147	1.0000e-004	0.0148	3.8900e-003	9.0000e-005	3.9800e-003	0.0000	12.9362	12.9362	4.2000e-004	0.0000	12.9468
Total	**6.9600e-003**	**5.7700e-003**	**0.0566**	**1.4000e-004**	**0.0147**	**1.0000e-004**	**0.0148**	**3.8900e-003**	**9.0000e-005**	**3.9800e-003**	**0.0000**	**12.9362**	**12.9362**	**4.2000e-004**	**0.0000**	**12.9468**

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	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Parking Lot	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Parking Lot	14.70	6.60	6.60	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
Parking Lot	0.541740	0.038987	0.178620	0.126833	0.019742	0.005671	0.017070	0.060066	0.001326	0.001715	0.006244	0.000823	0.001163

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Install High Efficiency Lighting

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	154.9912	154.9912	6.4000e-003	1.3200e-003	155.5457
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	172.2125	172.2125	7.1100e-003	1.4700e-003	172.8286
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Parking Lot	540492	172.2125	7.1100e-003	1.4700e-003	172.8286
Total		**172.2125**	**7.1100e-003**	**1.4700e-003**	**172.8286**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Parking Lot	486443	154.9912	6.4000e-003	1.3200e-003	155.5457
Total		**154.9912**	**6.4000e-003**	**1.3200e-003**	**155.5457**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0619	8.0000e-005	8.4700e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0163	0.0163	4.0000e-005	0.0000	0.0174
Unmitigated	0.0619	8.0000e-005	8.4700e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0163	0.0163	4.0000e-005	0.0000	0.0174

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	0.0214					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0397					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	8.0000e-004	8.0000e-005	8.4700e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0163	0.0163	4.0000e-005	0.0000	0.0174
Total	**0.0619**	**8.0000e-005**	**8.4700e-003**	**0.0000**		**3.0000e-005**	**3.0000e-005**		**3.0000e-005**	**3.0000e-005**	**0.0000**	**0.0163**	**0.0163**	**4.0000e-005**	**0.0000**	**0.0174**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0214					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0397					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	8.0000e-004	8.0000e-005	8.4700e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0163	0.0163	4.0000e-005	0.0000	0.0174
Total	**0.0619**	**8.0000e-005**	**8.4700e-003**	**0.0000**		**3.0000e-005**	**3.0000e-005**		**3.0000e-005**	**3.0000e-005**	**0.0000**	**0.0163**	**0.0163**	**4.0000e-005**	**0.0000**	**0.0174**

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

8.2 Waste by Land Use

Unmitigated

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

Mitigated

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

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

6828 Lake Dolores- Phase 3 Waterpark Facilities OPERATIONAL ONLY

San Bernardino-Mojave Desert County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Recreational Swimming Pool	54.55	1000sqft	13.00	54,554.00	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	32
Climate Zone	10			**Operational Year**	2019
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Waterpark faciltiies are all existing, no new buildings to be constructed OPERATIONAL ANALYSIS ONLY.

Land Use - Phase 3 covers 13 acres with a waterpark with 54,554 square feet of existing water park facilities (parking area modeled separately).

Construction Phase - no construction, OPS only

Grading -

Energy Use -

Construction Off-road Equipment Mitigation -

Mobile Land Use Mitigation - Sidewalks provided on-site.

Energy Mitigation - High efficiency lighting at least 10% more efficent than standard.

Water Mitigation - Per Green Building Standards.

Waste Mitigation - AB 939 requires at least 50% of waste be diverted from landfills, 75% by 2020.

Architectural Coating -

Vehicle Trips - Per TIA, waterpark will generate 2,073 trips/day weekday and 2,657 trips/day weekends = 40 trips/TSF wkday and 48.7 trips/TSF weekends

Woodstoves -

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	15
tblLandUse	BuildingSpaceSquareFeet	0.00	54,554.00
tblLandUse	LotAcreage	1.25	13.00
tblLandUse	RecSwimmingAreaSquareFeet	54,554.00	0.00
tblProjectCharacteristics	OperationalYear	2018	2019
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural
tblVehicleTrips	ST_TR	9.10	48.70
tblVehicleTrips	SU_TR	13.60	48.70
tblVehicleTrips	WD_TR	33.82	40.00

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.2763	0.0000	5.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	9.7000e-004	9.7000e-004	0.0000	0.0000	1.0400e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.8168	5.6824	8.6046	0.0273	1.8425	0.0283	1.8707	0.4939	0.0267	0.5205	0.0000	2,526.7289	2,526.7289	0.1664	0.0000	2,530.8899
Waste						0.0000	0.0000		0.0000	0.0000	63.1180	0.0000	63.1180	3.7302	0.0000	156.3722
Water						0.0000	0.0000		0.0000	0.0000	1.0235	20.3847	21.4083	0.1060	2.6600e-003	24.8491

Total	**1.0931**	**5.6824**	**8.6051**	**0.0273**	**1.8425**	**0.0283**	**1.8707**	**0.4939**	**0.0267**	**0.5205**	**64.1416**	**2,547.1145**	**2,611.2561**	**4.0026**	**2.6600e-003**	**2,712.1122**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.2763	0.0000	5.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	9.7000e-004	9.7000e-004	0.0000	0.0000	1.0400e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.8143	5.6587	8.5442	0.0271	1.8240	0.0280	1.8521	0.4890	0.0264	0.5154	0.0000	2,505.6654	2,505.6654	0.1656	0.0000	2,509.8063
Waste						0.0000	0.0000		0.0000	0.0000	31.5590	0.0000	31.5590	1.8651	0.0000	78.1861
Water						0.0000	0.0000		0.0000	0.0000	0.8188	17.7077	18.5266	0.0848	2.1400e-003	21.2842
Total	**1.0906**	**5.6587**	**8.5447**	**0.0271**	**1.8240**	**0.0280**	**1.8521**	**0.4890**	**0.0264**	**0.5154**	**32.3778**	**2,523.3740**	**2,555.7519**	**2.1156**	**2.1400e-003**	**2,609.2777**

	ROG	NOx	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	**0.23**	**0.42**	**0.70**	**0.84**	**1.00**	**0.85**	**1.00**	**1.00**	**0.90**	**0.99**	**49.52**	**0.93**	**2.13**	**47.15**	**19.55**	**3.79**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.8143	5.6587	8.5442	0.0271	1.8240	0.0280	1.8521	0.4890	0.0264	0.5154	0.0000	2,505.6654	2,505.6654	0.1656	0.0000	2,509.8063
Unmitigated	0.8168	5.6824	8.6046	0.0273	1.8425	0.0283	1.8707	0.4939	0.0267	0.5205	0.0000	2,526.7289	2,526.7289	0.1664	0.0000	2,530.8899

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Recreational Swimming Pool	2,182.16	2,656.78	2656.78	4,838,494	4,790,109
Total	2,182.16	2,656.78	2,656.78	4,838,494	4,790,109

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
Recreational Swimming Pool	14.70	6.60	6.60	33.00	48.00	19.00	52	39	9

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Recreational Swimming Pool	0.541740	0.038987	0.178620	0.126833	0.019742	0.005671	0.017070	0.060066	0.001326	0.001715	0.006244	0.000823	0.001163

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Install High Efficiency Lighting

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Recreational Swimming Pool	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Recreational Swimming Pool	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Recreational Swimming Pool	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Recreational Swimming Pool	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.2763	0.0000	5.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	9.7000e-004	9.7000e-004	0.0000	0.0000	1.0400e-003
Unmitigated	0.2763	0.0000	5.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	9.7000e-004	9.7000e-004	0.0000	0.0000	1.0400e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0632					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.2131					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	5.0000e-005	0.0000	5.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	9.7000e-004	9.7000e-004	0.0000	0.0000	1.0400e-003
Total	**0.2763**	**0.0000**	**5.1000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**9.7000e-004**	**9.7000e-004**	**0.0000**	**0.0000**	**1.0400e-003**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0632					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.2131					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	5.0000e-005	0.0000	5.1000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	9.7000e-004	9.7000e-004	0.0000	0.0000	1.0400e-003
Total	**0.2763**	**0.0000**	**5.1000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**9.7000e-004**	**9.7000e-004**	**0.0000**	**0.0000**	**1.0400e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	18.5266	0.0848	2.1400e-003	21.2842
Unmitigated	21.4083	0.1060	2.6600e-003	24.8491

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Recreational Swimming Pool	3.22626 / 1.97738	21.4083	0.1060	2.6600e-003	24.8491
Total		**21.4083**	**0.1060**	**2.6600e-003**	**24.8491**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Recreational Swimming Pool	2.58101 / 1.97738	18.5266	0.0848	2.1400e-003	21.2842
Total		**18.5266**	**0.0848**	**2.1400e-003**	**21.2842**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	31.5590	1.8651	0.0000	78.1861
Unmitigated	63.1180	3.7302	0.0000	156.3722

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Recreational Swimming Pool	310.94	63.1180	3.7302	0.0000	156.3722
Total		**63.1180**	**3.7302**	**0.0000**	**156.3722**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Recreational Swimming Pool	155.47	31.5590	1.8651	0.0000	78.1861
Total		**31.5590**	**1.8651**	**0.0000**	**78.1861**

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

6828 Dolores Lake- Phase 4

San Bernardino-Mojave Desert County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Non-Asphalt Surfaces	2.35	Acre	2.35	102,366.00	0
Parking Lot	531.00	Space	10.20	212,400.00	0
Regional Shopping Center	45.73	1000sqft	1.05	45,727.00	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	32
Climate Zone	10			**Operational Year**	2021
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Phase 4 (Commercial/Retail)- 13.6 acres- 45,727 sf retail buildings, 498 standard parking spaces & 33 bus/trailer parking spaces, & remainder landscaping.

Construction Phase - Phase 4 construction to start April 2019 and end December 2020. Phase 4 portion of the proposed project is vacant, no demo or site prep needed.

Off-road Equipment -

Grading - Phase 4 is 13.6 acres. Site to be balanced.

Vehicle Trips - CalEEMod defaults match the trip gen in the TIA.

Construction Off-road Equipment Mitigation - Tier 4 final equipment for construction

Mobile Land Use Mitigation - Sidewalks provided on-site. Retail = 1 employee per 500 sf, project is 45,727 sf retail/ 500 sf = 91.5 employees/13.6 ac= 6.7 emp/acre.

Energy Mitigation - High efficiency lighting at least 10% more efficent than standard. 2016 Title 24 standards are at least 25% more efficient than 2013 Title standards (CalEEMod default). Energy star appliances to be used on-site where needed.

Water Mitigation - Per Green Building Standards.

Waste Mitigation - AB 939 requires at least 50% of waste be diverted from landfills, 75% by 2020.

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	15
tblConstructionPhase	NumDays	20.00	23.00
tblConstructionPhase	NumDays	300.00	376.00
tblConstructionPhase	NumDays	30.00	37.00
tblConstructionPhase	NumDays	20.00	23.00
tblGrading	AcresOfGrading	92.50	13.60
tblLandUse	BuildingSpaceSquareFeet	45,730.00	45,727.00
tblLandUse	LandUseSquareFeet	45,730.00	45,727.00
tblLandUse	LotAcreage	4.78	10.20
tblProjectCharacteristics	OperationalYear	2018	2021
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019	0.3656	3.2968	2.6946	6.0200e-003	0.2991	0.1516	0.4507	0.1106	0.1417	0.2523	0.0000	542.8642	542.8642	0.0915	0.0000	545.1511
2020	1.0091	2.9949	2.8626	6.7900e-003	0.2437	0.1349	0.3786	0.0656	0.1268	0.1924	0.0000	609.2863	609.2863	0.0851	0.0000	611.4138
Maximum	**1.0091**	**3.2968**	**2.8626**	**6.7900e-003**	**0.2991**	**0.1516**	**0.4507**	**0.1106**	**0.1417**	**0.2523**	**0.0000**	**609.2863**	**609.2863**	**0.0915**	**0.0000**	**611.4138**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019	0.3656	3.2968	2.6946	6.0200e-003	0.2267	0.1516	0.3783	0.0728	0.1417	0.2144	0.0000	542.8638	542.8638	0.0915	0.0000	545.1508
2020	1.0091	2.9949	2.8626	6.7900e-003	0.2437	0.1349	0.3786	0.0656	0.1268	0.1924	0.0000	609.2860	609.2860	0.0851	0.0000	611.4134
Maximum	**1.0091**	**3.2968**	**2.8626**	**6.7900e-003**	**0.2437**	**0.1516**	**0.3786**	**0.0728**	**0.1417**	**0.2144**	**0.0000**	**609.2860**	**609.2860**	**0.0915**	**0.0000**	**611.4134**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**13.33**	**0.00**	**8.73**	**21.47**	**0.00**	**8.51**	**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	4-1-2019	6-30-2019	1.5397	1.5397
2	7-1-2019	9-30-2019	1.0496	1.0496
3	10-1-2019	12-31-2019	1.0499	1.0499
4	1-1-2020	3-31-2020	0.9450	0.9450
5	4-1-2020	6-30-2020	0.9452	0.9452
6	7-1-2020	9-30-2020	0.9555	0.9555
		Highest	1.5397	1.5397

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.2634	5.0000e-005	5.3400e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0104	0.0104	3.0000e-005	0.0000	0.0110
Energy	5.5000e-004	5.0000e-003	4.2000e-003	3.0000e-005		3.8000e-004	3.8000e-004		3.8000e-004	3.8000e-004	0.0000	254.5463	254.5463	0.0104	2.2300e-003	255.4698
Mobile	0.5382	3.9223	5.2899	0.0191	1.3022	0.0140	1.3162	0.3490	0.0131	0.3621	0.0000	1,767.8685	1,767.8685	0.1158	0.0000	1,770.7632
Waste						0.0000	0.0000		0.0000	0.0000	9.7476	0.0000	9.7476	0.5761	0.0000	24.1493
Water						0.0000	0.0000		0.0000	0.0000	1.0747	21.4025	22.4771	0.1113	2.7900e-003	26.0897
Total	**0.8021**	**3.9273**	**5.2994**	**0.0191**	**1.3022**	**0.0144**	**1.3166**	**0.3490**	**0.0135**	**0.3625**	**10.8223**	**2,043.8276**	**2,054.6499**	**0.8135**	**5.0200e-003**	**2,076.4831**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.2634	5.0000e-005	5.3400e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0104	0.0104	3.0000e-005	0.0000	0.0110
Energy	4.3000e-004	3.9200e-003	3.2900e-003	2.0000e-005		3.0000e-004	3.0000e-004		3.0000e-004	3.0000e-004	0.0000	220.1683	220.1683	9.0000e-003	1.9200e-003	220.9661
Mobile	0.5368	3.9091	5.2540	0.0189	1.2892	0.0139	1.3030	0.3455	0.0130	0.3585	0.0000	1,753.6716	1,753.6716	0.1153	0.0000	1,756.5540
Waste						0.0000	0.0000		0.0000	0.0000	2.4369	0.0000	2.4369	0.1440	0.0000	6.0373
Water						0.0000	0.0000		0.0000	0.0000	0.8597	18.5918	19.4515	0.0891	2.2400e-003	22.3469
Total	**0.8006**	**3.9131**	**5.2627**	**0.0189**	**1.2892**	**0.0142**	**1.3034**	**0.3455**	**0.0133**	**0.3589**	**3.2966**	**1,992.4420**	**1,995.7387**	**0.3574**	**4.1600e-003**	**2,005.9153**

	ROG	NOx	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	**0.20**	**0.36**	**0.69**	**0.89**	**1.00**	**1.39**	**1.00**	**1.00**	**1.41**	**1.01**	**69.54**	**2.51**	**2.87**	**56.07**	**17.13**	**3.40**

3.0 Construction Detail

Construction Phase

6828 Dolores Lake- Phase 4 - San Bernardino-Mojave Desert County, Annual

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	4/1/2019	5/21/2019	5	37	
2	Building Construction	Building Construction	5/22/2019	10/28/2020	5	376	
3	Paving	Paving	10/29/2020	11/30/2020	5	23	
4	Architectural Coating	Architectural Coating	12/1/2020	12/31/2020	5	23	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 13.6

Acres of Paving: 12.55

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 68,591; Non-Residential Outdoor: 22,864; Striped Parking Area: 18,886 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	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
Grading	8	20.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	147.00	59.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	29.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Grading - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1186	0.0000	0.1186	0.0620	0.0000	0.0620	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0877	1.0086	0.6175	1.1500e-003		0.0441	0.0441		0.0406	0.0406	0.0000	103.0474	103.0474	0.0326	0.0000	103.8625
Total	**0.0877**	**1.0086**	**0.6175**	**1.1500e-003**	**0.1186**	**0.0441**	**0.1627**	**0.0620**	**0.0406**	**0.1026**	**0.0000**	**103.0474**	**103.0474**	**0.0326**	**0.0000**	**103.8625**

3.2 Grading - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.2000e-003	1.8300e-003	0.0179	5.0000e-005	4.6400e-003	3.0000e-005	4.6700e-003	1.2300e-003	3.0000e-005	1.2600e-003	0.0000	4.0909	4.0909	1.3000e-004	0.0000	4.0943
Total	**2.2000e-003**	**1.8300e-003**	**0.0179**	**5.0000e-005**	**4.6400e-003**	**3.0000e-005**	**4.6700e-003**	**1.2300e-003**	**3.0000e-005**	**1.2600e-003**	**0.0000**	**4.0909**	**4.0909**	**1.3000e-004**	**0.0000**	**4.0943**

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					0.0463	0.0000	0.0463	0.0242	0.0000	0.0242	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0877	1.0086	0.6175	1.1500e-003		0.0441	0.0441		0.0406	0.0406	0.0000	103.0473	103.0473	0.0326	0.0000	103.8624
Total	**0.0877**	**1.0086**	**0.6175**	**1.1500e-003**	**0.0463**	**0.0441**	**0.0903**	**0.0242**	**0.0406**	**0.0647**	**0.0000**	**103.0473**	**103.0473**	**0.0326**	**0.0000**	**103.8624**

3.2 Grading - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.2000e-003	1.8300e-003	0.0179	5.0000e-005	4.6400e-003	3.0000e-005	4.6700e-003	1.2300e-003	3.0000e-005	1.2600e-003	0.0000	4.0909	4.0909	1.3000e-004	0.0000	4.0943
Total	**2.2000e-003**	**1.8300e-003**	**0.0179**	**5.0000e-005**	**4.6400e-003**	**3.0000e-005**	**4.6700e-003**	**1.2300e-003**	**3.0000e-005**	**1.2600e-003**	**0.0000**	**4.0909**	**4.0909**	**1.3000e-004**	**0.0000**	**4.0943**

3.3 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1889	1.6863	1.3731	2.1500e-003		0.1032	0.1032		0.0970	0.0970	0.0000	188.0834	188.0834	0.0458	0.0000	189.2288
Total	**0.1889**	**1.6863**	**1.3731**	**2.1500e-003**		**0.1032**	**0.1032**		**0.0970**	**0.0970**	**0.0000**	**188.0834**	**188.0834**	**0.0458**	**0.0000**	**189.2288**

3.3 Building Construction - 2019

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0169	0.5420	0.1175	1.2300e-003	0.0285	3.2800e-003	0.0318	8.2200e-003	3.1400e-003	0.0114	0.0000	117.6172	117.6172	8.6700e-003	0.0000	117.8339
Worker	0.0699	0.0580	0.5687	1.4400e-003	0.1474	1.0000e-003	0.1484	0.0391	9.2000e-004	0.0401	0.0000	130.0252	130.0252	4.2500e-003	0.0000	130.1316
Total	**0.0868**	**0.6000**	**0.6862**	**2.6700e-003**	**0.1758**	**4.2800e-003**	**0.1801**	**0.0474**	**4.0600e-003**	**0.0514**	**0.0000**	**247.6424**	**247.6424**	**0.0129**	**0.0000**	**247.9655**

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	0.1889	1.6863	1.3731	2.1500e-003		0.1032	0.1032		0.0970	0.0970	0.0000	188.0831	188.0831	0.0458	0.0000	189.2286
Total	**0.1889**	**1.6863**	**1.3731**	**2.1500e-003**		**0.1032**	**0.1032**		**0.0970**	**0.0970**	**0.0000**	**188.0831**	**188.0831**	**0.0458**	**0.0000**	**189.2286**

3.3 Building Construction - 2019

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0169	0.5420	0.1175	1.2300e-003	0.0285	3.2800e-003	0.0318	8.2200e-003	3.1400e-003	0.0114	0.0000	117.6172	117.6172	8.6700e-003	0.0000	117.8339
Worker	0.0699	0.0580	0.5687	1.4400e-003	0.1474	1.0000e-003	0.1484	0.0391	9.2000e-004	0.0401	0.0000	130.0252	130.0252	4.2500e-003	0.0000	130.1316
Total	**0.0868**	**0.6000**	**0.6862**	**2.6700e-003**	**0.1758**	**4.2800e-003**	**0.1801**	**0.0474**	**4.0600e-003**	**0.0514**	**0.0000**	**247.6424**	**247.6424**	**0.0129**	**0.0000**	**247.9655**

3.3 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2289	2.0721	1.8196	2.9100e-003		0.1206	0.1206		0.1134	0.1134	0.0000	250.1388	250.1388	0.0610	0.0000	251.6644
Total	**0.2289**	**2.0721**	**1.8196**	**2.9100e-003**		**0.1206**	**0.1206**		**0.1134**	**0.1134**	**0.0000**	**250.1388**	**250.1388**	**0.0610**	**0.0000**	**251.6644**

3.3 Building Construction - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0194	0.6699	0.1400	1.6500e-003	0.0384	2.9800e-003	0.0414	0.0111	2.8500e-003	0.0140	0.0000	157.6989	157.6989	0.0112	0.0000	157.9783
Worker	0.0870	0.0696	0.6913	1.8800e-003	0.1989	1.3100e-003	0.2002	0.0528	1.2100e-003	0.0540	0.0000	170.0597	170.0597	5.0600e-003	0.0000	170.1863
Total	**0.1063**	**0.7395**	**0.8314**	**3.5300e-003**	**0.2374**	**4.2900e-003**	**0.2417**	**0.0639**	**4.0600e-003**	**0.0680**	**0.0000**	**327.7587**	**327.7587**	**0.0162**	**0.0000**	**328.1646**

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	0.2289	2.0721	1.8196	2.9100e-003		0.1206	0.1206		0.1134	0.1134	0.0000	250.1385	250.1385	0.0610	0.0000	251.6641
Total	**0.2289**	**2.0721**	**1.8196**	**2.9100e-003**		**0.1206**	**0.1206**		**0.1134**	**0.1134**	**0.0000**	**250.1385**	**250.1385**	**0.0610**	**0.0000**	**251.6641**

3.3 Building Construction - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0194	0.6699	0.1400	1.6500e-003	0.0384	2.9800e-003	0.0414	0.0111	2.8500e-003	0.0140	0.0000	157.6989	157.6989	0.0112	0.0000	157.9783
Worker	0.0870	0.0696	0.6913	1.8800e-003	0.1989	1.3100e-003	0.2002	0.0528	1.2100e-003	0.0540	0.0000	170.0597	170.0597	5.0600e-003	0.0000	170.1863
Total	**0.1063**	**0.7395**	**0.8314**	**3.5300e-003**	**0.2374**	**4.2900e-003**	**0.2417**	**0.0639**	**4.0600e-003**	**0.0680**	**0.0000**	**327.7587**	**327.7587**	**0.0162**	**0.0000**	**328.1646**

3.4 Paving - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0156	0.1618	0.1685	2.6000e-004		8.6600e-003	8.6600e-003		7.9600e-003	7.9600e-003	0.0000	23.0325	23.0325	7.4500e-003	0.0000	23.2187
Paving	0.0134					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0290**	**0.1618**	**0.1685**	**2.6000e-004**		**8.6600e-003**	**8.6600e-003**		**7.9600e-003**	**7.9600e-003**	**0.0000**	**23.0325**	**23.0325**	**7.4500e-003**	**0.0000**	**23.2187**

3.4 Paving - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	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	9.4000e-004	7.6000e-004	7.5100e-003	2.0000e-005	2.1600e-003	1.0000e-005	2.1800e-003	5.7000e-004	1.0000e-005	5.9000e-004	0.0000	1.8478	1.8478	5.0000e-005	0.0000	1.8492
Total	**9.4000e-004**	**7.6000e-004**	**7.5100e-003**	**2.0000e-005**	**2.1600e-003**	**1.0000e-005**	**2.1800e-003**	**5.7000e-004**	**1.0000e-005**	**5.9000e-004**	**0.0000**	**1.8478**	**1.8478**	**5.0000e-005**	**0.0000**	**1.8492**

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	0.0156	0.1618	0.1685	2.6000e-004		8.6600e-003	8.6600e-003		7.9600e-003	7.9600e-003	0.0000	23.0324	23.0324	7.4500e-003	0.0000	23.2187
Paving	0.0134					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0290**	**0.1618**	**0.1685**	**2.6000e-004**		**8.6600e-003**	**8.6600e-003**		**7.9600e-003**	**7.9600e-003**	**0.0000**	**23.0324**	**23.0324**	**7.4500e-003**	**0.0000**	**23.2187**

3.4 Paving - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	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	9.4000e-004	7.6000e-004	7.5100e-003	2.0000e-005	2.1600e-003	1.0000e-005	2.1800e-003	5.7000e-004	1.0000e-005	5.9000e-004	0.0000	1.8478	1.8478	5.0000e-005	0.0000	1.8492
Total	**9.4000e-004**	**7.6000e-004**	**7.5100e-003**	**2.0000e-005**	**2.1600e-003**	**1.0000e-005**	**2.1800e-003**	**5.7000e-004**	**1.0000e-005**	**5.9000e-004**	**0.0000**	**1.8478**	**1.8478**	**5.0000e-005**	**0.0000**	**1.8492**

3.5 Architectural Coating - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.6393					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.7900e-003	0.0194	0.0211	3.0000e-005		1.2800e-003	1.2800e-003		1.2800e-003	1.2800e-003	0.0000	2.9362	2.9362	2.3000e-004	0.0000	2.9419
Total	**0.6421**	**0.0194**	**0.0211**	**3.0000e-005**		**1.2800e-003**	**1.2800e-003**		**1.2800e-003**	**1.2800e-003**	**0.0000**	**2.9362**	**2.9362**	**2.3000e-004**	**0.0000**	**2.9419**

3.5 Architectural Coating - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	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	1.8300e-003	1.4600e-003	0.0145	4.0000e-005	4.1800e-003	3.0000e-005	4.2100e-003	1.1100e-003	3.0000e-005	1.1400e-003	0.0000	3.5724	3.5724	1.1000e-004	0.0000	3.5750
Total	**1.8300e-003**	**1.4600e-003**	**0.0145**	**4.0000e-005**	**4.1800e-003**	**3.0000e-005**	**4.2100e-003**	**1.1100e-003**	**3.0000e-005**	**1.1400e-003**	**0.0000**	**3.5724**	**3.5724**	**1.1000e-004**	**0.0000**	**3.5750**

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	0.6393					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.7900e-003	0.0194	0.0211	3.0000e-005		1.2800e-003	1.2800e-003		1.2800e-003	1.2800e-003	0.0000	2.9362	2.9362	2.3000e-004	0.0000	2.9419
Total	**0.6421**	**0.0194**	**0.0211**	**3.0000e-005**		**1.2800e-003**	**1.2800e-003**		**1.2800e-003**	**1.2800e-003**	**0.0000**	**2.9362**	**2.9362**	**2.3000e-004**	**0.0000**	**2.9419**

3.5 Architectural Coating - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	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	1.8300e-003	1.4600e-003	0.0145	4.0000e-005	4.1800e-003	3.0000e-005	4.2100e-003	1.1100e-003	3.0000e-005	1.1400e-003	0.0000	3.5724	3.5724	1.1000e-004	0.0000	3.5750
Total	**1.8300e-003**	**1.4600e-003**	**0.0145**	**4.0000e-005**	**4.1800e-003**	**3.0000e-005**	**4.2100e-003**	**1.1100e-003**	**3.0000e-005**	**1.1400e-003**	**0.0000**	**3.5724**	**3.5724**	**1.1000e-004**	**0.0000**	**3.5750**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.5368	3.9091	5.2540	0.0189	1.2892	0.0139	1.3030	0.3455	0.0130	0.3585	0.0000	1,753.6716	1,753.6716	0.1153	0.0000	1,756.5540
Unmitigated	0.5382	3.9223	5.2899	0.0191	1.3022	0.0140	1.3162	0.3490	0.0131	0.3621	0.0000	1,767.8685	1,767.8685	0.1158	0.0000	1,770.7632

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Regional Shopping Center	1,952.67	2,285.13	1154.23	3,419,652	3,385,455
Total	1,952.67	2,285.13	1,154.23	3,419,652	3,385,455

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
Other Non-Asphalt Surfaces	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0
Parking Lot	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0
Regional Shopping Center	14.70	6.60	6.60	16.30	64.70	19.00	54	35	11

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Non-Asphalt Surfaces	0.549952	0.037123	0.179649	0.119457	0.017229	0.005267	0.017877	0.062669	0.001348	0.001607	0.006000	0.000812	0.001010
Parking Lot	0.549952	0.037123	0.179649	0.119457	0.017229	0.005267	0.017877	0.062669	0.001348	0.001607	0.006000	0.000812	0.001010
Regional Shopping Center	0.549952	0.037123	0.179649	0.119457	0.017229	0.005267	0.017877	0.062669	0.001348	0.001607	0.006000	0.000812	0.001010

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Install High Efficiency Lighting

Install Energy Efficient Appliances

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	215.9041	215.9041	8.9100e-003	1.8400e-003	216.6765
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	249.1047	249.1047	0.0103	2.1300e-003	249.9959
NaturalGas Mitigated	4.3000e-004	3.9200e-003	3.2900e-003	2.0000e-005		3.0000e-004	3.0000e-004		3.0000e-004	3.0000e-004	0.0000	4.2642	4.2642	8.0000e-005	8.0000e-005	4.2895
NaturalGas Unmitigated	5.5000e-004	5.0000e-003	4.2000e-003	3.0000e-005		3.8000e-004	3.8000e-004		3.8000e-004	3.8000e-004	0.0000	5.4416	5.4416	1.0000e-004	1.0000e-004	5.4739

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					
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
Regional Shopping Center	101971	5.5000e-004	5.0000e-003	4.2000e-003	3.0000e-005		3.8000e-004	3.8000e-004		3.8000e-004	3.8000e-004	0.0000	5.4416	5.4416	1.0000e-004	1.0000e-004	5.4739
Total		**5.5000e-004**	**5.0000e-003**	**4.2000e-003**	**3.0000e-005**		**3.8000e-004**	**3.8000e-004**		**3.8000e-004**	**3.8000e-004**	**0.0000**	**5.4416**	**5.4416**	**1.0000e-004**	**1.0000e-004**	**5.4739**

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					
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
Regional Shopping Center	79907.9	4.3000e-004	3.9200e-003	3.2900e-003	2.0000e-005		3.0000e-004	3.0000e-004		3.0000e-004	3.0000e-004	0.0000	4.2642	4.2642	8.0000e-005	8.0000e-005	4.2895
Total		**4.3000e-004**	**3.9200e-003**	**3.2900e-003**	**2.0000e-005**		**3.0000e-004**	**3.0000e-004**		**3.0000e-004**	**3.0000e-004**	**0.0000**	**4.2642**	**4.2642**	**8.0000e-005**	**8.0000e-005**	**4.2895**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	186912	59.5542	2.4600e-003	5.1000e-004	59.7672
Regional Shopping Center	594908	189.5505	7.8300e-003	1.6200e-003	190.2286
Total		**249.1047**	**0.0103**	**2.1300e-003**	**249.9959**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	168221	53.5988	2.2100e-003	4.6000e-004	53.7905
Regional Shopping Center	509399	162.3054	6.7000e-003	1.3900e-003	162.8860
Total		**215.9041**	**8.9100e-003**	**1.8500e-003**	**216.6765**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.2634	5.0000e-005	5.3400e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0104	0.0104	3.0000e-005	0.0000	0.0110
Unmitigated	0.2634	5.0000e-005	5.3400e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0104	0.0104	3.0000e-005	0.0000	0.0110

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	0.0639					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1989					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	5.0000e-004	5.0000e-005	5.3400e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0104	0.0104	3.0000e-005	0.0000	0.0110
Total	**0.2634**	**5.0000e-005**	**5.3400e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0104**	**0.0104**	**3.0000e-005**	**0.0000**	**0.0110**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0639					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1989					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	5.0000e-004	5.0000e-005	5.3400e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	0.0104	0.0104	3.0000e-005	0.0000	0.0110
Total	**0.2634**	**5.0000e-005**	**5.3400e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**	**0.0000**	**0.0104**	**0.0104**	**3.0000e-005**	**0.0000**	**0.0110**

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

Use Water Efficient Irrigation System

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	19.4515	0.0891	2.2400e-003	22.3469
Unmitigated	22.4771	0.1113	2.7900e-003	26.0897

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
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
Regional Shopping Center	3.38734 / 2.07611	22.4771	0.1113	2.7900e-003	26.0897
Total		**22.4771**	**0.1113**	**2.7900e-003**	**26.0897**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
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
Regional Shopping Center	2.70987 / 2.07611	19.4515	0.0891	2.2400e-003	22.3469
Total		**19.4515**	**0.0891**	**2.2400e-003**	**22.3469**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	2.4369	0.1440	0.0000	6.0373
Unmitigated	9.7476	0.5761	0.0000	24.1493

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	48.02	9.7476	0.5761	0.0000	24.1493
Total		**9.7476**	**0.5761**	**0.0000**	**24.1493**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Regional Shopping Center	12.005	2.4369	0.1440	0.0000	6.0373
Total		**2.4369**	**0.1440**	**0.0000**	**6.0373**

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

6828 Dolores Lake- Phase 5

San Bernardino-Mojave Desert County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	97.24	1000sqft	2.23	97,240.00	0
Other Non-Asphalt Surfaces	5.16	Acre	5.16	224,769.60	0
Parking Lot	419.00	Space	5.01	167,600.00	0

1.2 Other Project Characteristics

Urbanization	Rural	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	32
Climate Zone	10			**Operational Year**	2022
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

6828 Dolores Lake- Phase 5 - San Bernardino-Mojave Desert County, Annual

Project Characteristics - .

Land Use - Phase 5 covers 12.4 acres with 97,241 sf office/administrative uses, 419 parking spaces, ~10% (1.24 acres) of site is onsite roadways, & remainder is landscaping/open space (5.16 acres).

Construction Phase - Construction of Phase 5 to start April 2020 and be completed Decemeber 2021. Vacant site, no demo or site prep.

Grading - Phase 5 covers approximately 12.4 acres and is to be balanced.

Architectural Coating -

Area Coating -

Energy Use -

Construction Off-road Equipment Mitigation - Tier 4 final equipment for construction

Mobile Land Use Mitigation - Sidewalks provided on-site.

Energy Mitigation - High efficiency lighting at least 10% more efficent than standard. 2016 Title standards are at least 25% more efficient than 2013 Title 24 standards (CalEEmod defaults). Energy star appliances to be used on site where applicable.

Water Mitigation - Per Green Building Standards.

Waste Mitigation - AB 939 requires at least 50% of waste be diverted from landfills, 75% by 2020.

Vehicle Trips - TIA trip generation matches CalEEMod defaults for Gen office blg use

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00

tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	5.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	20.00	25.00
tblConstructionPhase	NumDays	300.00	371.00
tblConstructionPhase	NumDays	30.00	37.00
tblConstructionPhase	NumDays	20.00	25.00
tblGrading	AcresOfGrading	92.50	12.40
tblLandUse	LotAcreage	3.77	5.01
tblProjectCharacteristics	OperationalYear	2018	2022
tblProjectCharacteristics	UrbanizationLevel	Urban	Rural

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.3593	3.2067	2.7787	6.8600e-003	0.3577	0.1339	0.4916	0.1265	0.1251	0.2516	0.0000	616.3994	616.3994	0.0941	0.0000	618.7530
2021	1.6197	2.9136	2.9737	7.7800e-003	0.3185	0.1139	0.4323	0.0858	0.1069	0.1927	0.0000	701.8063	701.8063	0.0878	0.0000	704.0001
Maximum	**1.6197**	**3.2067**	**2.9737**	**7.7800e-003**	**0.3577**	**0.1339**	**0.4916**	**0.1265**	**0.1251**	**0.2516**	**0.0000**	**701.8063**	**701.8063**	**0.0941**	**0.0000**	**704.0001**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.1477	0.9830	2.8468	6.8600e-003	0.2857	9.4700e-003	0.2952	0.0887	9.2300e-003	0.0979	0.0000	616.3991	616.3991	0.0941	0.0000	618.7527
2021	1.4392	1.1465	3.1003	7.7800e-003	0.3185	7.9000e-003	0.3264	0.0858	7.7100e-003	0.0935	0.0000	701.8059	701.8059	0.0878	0.0000	703.9998
Maximum	**1.4392**	**1.1465**	**3.1003**	**7.7800e-003**	**0.3185**	**9.4700e-003**	**0.3264**	**0.0887**	**9.2300e-003**	**0.0979**	**0.0000**	**701.8059**	**701.8059**	**0.0941**	**0.0000**	**703.9998**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**19.81**	**65.21**	**-3.39**	**0.00**	**10.64**	**92.99**	**32.73**	**17.80**	**92.70**	**56.92**	**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	4-1-2020	6-30-2020	1.4535	0.2644
2	7-1-2020	9-30-2020	1.0454	0.4295
3	10-1-2020	12-31-2020	1.0451	0.4292
4	1-1-2021	3-31-2021	0.9295	0.3905
5	4-1-2021	6-30-2021	0.9407	0.3956
6	7-1-2021	9-30-2021	0.9510	0.4000
		Highest	1.4535	0.4295

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.5319	4.0000e-005	4.8000e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	9.3200e-003	9.3200e-003	2.0000e-005	0.0000	9.9300e-003
Energy	1.8300e-003	0.0166	0.0140	1.0000e-004		1.2600e-003	1.2600e-003		1.2600e-003	1.2600e-003	0.0000	367.4944	367.4944	0.0148	3.3200e-003	368.8520
Mobile	0.2459	1.8782	2.8393	0.0114	0.8567	8.0200e-003	0.8647	0.2296	7.5100e-003	0.2371	0.0000	1,060.0622	1,060.0622	0.0582	0.0000	1,061.5172
Waste						0.0000	0.0000		0.0000	0.0000	18.3565	0.0000	18.3565	1.0848	0.0000	45.4774
Water						0.0000	0.0000		0.0000	0.0000	5.4830	109.1994	114.6825	0.5677	0.0142	133.1148
Total	**0.7796**	**1.8949**	**2.8581**	**0.0115**	**0.8567**	**9.3000e-003**	**0.8660**	**0.2296**	**8.7900e-003**	**0.2384**	**23.8395**	**1,536.7654**	**1,560.6049**	**1.7255**	**0.0176**	**1,608.9713**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.5319	4.0000e-005	4.8000e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	9.3200e-003	9.3200e-003	2.0000e-005	0.0000	9.9300e-003
Energy	1.3700e-003	0.0125	0.0105	7.0000e-005		9.5000e-004	9.5000e-004		9.5000e-004	9.5000e-004	0.0000	319.2449	319.2449	0.0129	2.8600e-003	320.4191
Mobile	0.2450	1.8705	2.8176	0.0113	0.8481	7.9500e-003	0.8561	0.2273	7.4400e-003	0.2348	0.0000	1,050.9731	1,050.9731	0.0579	0.0000	1,052.4205
Waste						0.0000	0.0000		0.0000	0.0000	4.5891	0.0000	4.5891	0.2712	0.0000	11.3694
Water						0.0000	0.0000		0.0000	0.0000	4.3864	94.8589	99.2454	0.4545	0.0115	114.0181
Total	**0.7782**	**1.8830**	**2.8329**	**0.0114**	**0.8481**	**8.9200e-003**	**0.8571**	**0.2273**	**8.4100e-003**	**0.2357**	**8.9756**	**1,465.0862**	**1,474.0617**	**0.7965**	**0.0143**	**1,498.2369**

	ROG	NOx	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	**0.17**	**0.63**	**0.88**	**1.13**	**1.00**	**4.09**	**1.03**	**1.00**	**4.32**	**1.12**	**62.35**	**4.66**	**5.55**	**53.84**	**18.46**	**6.88**

3.0 Construction Detail

Construction Phase

6828 Dolores Lake- Phase 5 - San Bernardino-Mojave Desert County, Annual

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Grading	Grading	4/1/2020	5/21/2020	5	37	
2	Building Construction	Building Construction	5/22/2020	10/24/2021	5	371	
3	Paving	Paving	10/25/2021	11/26/2021	5	25	
4	Architectural Coating	Architectural Coating	11/27/2021	12/31/2021	5	25	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 12.4

Acres of Paving: 10.17

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 145,860; Non-Residential Outdoor: 48,620; Striped Parking Area: 23,542 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	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
Grading	8	20.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	196.00	80.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	39.00	0.00	0.00	16.80	6.60	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1180	0.0000	0.1180	0.0620	0.0000	0.0620	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0823	0.9287	0.5912	1.1500e-003		0.0402	0.0402		0.0370	0.0370	0.0000	100.7959	100.7959	0.0326	0.0000	101.6109
Total	**0.0823**	**0.9287**	**0.5912**	**1.1500e-003**	**0.1180**	**0.0402**	**0.1582**	**0.0620**	**0.0370**	**0.0990**	**0.0000**	**100.7959**	**100.7959**	**0.0326**	**0.0000**	**101.6109**

3.2 Grading - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	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	2.0300e-003	1.6200e-003	0.0161	4.0000e-005	4.6400e-003	3.0000e-005	4.6700e-003	1.2300e-003	3.0000e-005	1.2600e-003	0.0000	3.9634	3.9634	1.2000e-004	0.0000	3.9663
Total	**2.0300e-003**	**1.6200e-003**	**0.0161**	**4.0000e-005**	**4.6400e-003**	**3.0000e-005**	**4.6700e-003**	**1.2300e-003**	**3.0000e-005**	**1.2600e-003**	**0.0000**	**3.9634**	**3.9634**	**1.2000e-004**	**0.0000**	**3.9663**

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					0.0460	0.0000	0.0460	0.0242	0.0000	0.0242	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0141	0.0611	0.6105	1.1500e-003		1.8800e-003	1.8800e-003		1.8800e-003	1.8800e-003	0.0000	100.7958	100.7958	0.0326	0.0000	101.6108
Total	**0.0141**	**0.0611**	**0.6105**	**1.1500e-003**	**0.0460**	**1.8800e-003**	**0.0479**	**0.0242**	**1.8800e-003**	**0.0260**	**0.0000**	**100.7958**	**100.7958**	**0.0326**	**0.0000**	**101.6108**

3.2 Grading - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	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	2.0300e-003	1.6200e-003	0.0161	4.0000e-005	4.6400e-003	3.0000e-005	4.6700e-003	1.2300e-003	3.0000e-005	1.2600e-003	0.0000	3.9634	3.9634	1.2000e-004	0.0000	3.9663
Total	**2.0300e-003**	**1.6200e-003**	**0.0161**	**4.0000e-005**	**4.6400e-003**	**3.0000e-005**	**4.6700e-003**	**1.2300e-003**	**3.0000e-005**	**1.2600e-003**	**0.0000**	**3.9634**	**3.9634**	**1.2000e-004**	**0.0000**	**3.9663**

3.3 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1696	1.5349	1.3479	2.1500e-003		0.0894	0.0894		0.0840	0.0840	0.0000	185.2880	185.2880	0.0452	0.0000	186.4181
Total	**0.1696**	**1.5349**	**1.3479**	**2.1500e-003**		**0.0894**	**0.0894**		**0.0840**	**0.0840**	**0.0000**	**185.2880**	**185.2880**	**0.0452**	**0.0000**	**186.4181**

3.3 Building Construction - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0195	0.6729	0.1406	1.6600e-003	0.0386	3.0000e-003	0.0416	0.0111	2.8700e-003	0.0140	0.0000	158.3919	158.3919	0.0112	0.0000	158.6725
Worker	0.0859	0.0687	0.6828	1.8600e-003	0.1965	1.3000e-003	0.1978	0.0522	1.2000e-003	0.0534	0.0000	167.9602	167.9602	5.0000e-003	0.0000	168.0852
Total	**0.1054**	**0.7416**	**0.8234**	**3.5200e-003**	**0.2351**	**4.3000e-003**	**0.2394**	**0.0633**	**4.0700e-003**	**0.0674**	**0.0000**	**326.3521**	**326.3521**	**0.0162**	**0.0000**	**326.7577**

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	0.0262	0.1788	1.3968	2.1500e-003		3.2600e-003	3.2600e-003		3.2600e-003	3.2600e-003	0.0000	185.2878	185.2878	0.0452	0.0000	186.4179
Total	**0.0262**	**0.1788**	**1.3968**	**2.1500e-003**		**3.2600e-003**	**3.2600e-003**		**3.2600e-003**	**3.2600e-003**	**0.0000**	**185.2878**	**185.2878**	**0.0452**	**0.0000**	**186.4179**

3.3 Building Construction - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0195	0.6729	0.1406	1.6600e-003	0.0386	3.0000e-003	0.0416	0.0111	2.8700e-003	0.0140	0.0000	158.3919	158.3919	0.0112	0.0000	158.6725
Worker	0.0859	0.0687	0.6828	1.8600e-003	0.1965	1.3000e-003	0.1978	0.0522	1.2000e-003	0.0534	0.0000	167.9602	167.9602	5.0000e-003	0.0000	168.0852
Total	**0.1054**	**0.7416**	**0.8234**	**3.5200e-003**	**0.2351**	**4.3000e-003**	**0.2394**	**0.0633**	**4.0700e-003**	**0.0674**	**0.0000**	**326.3521**	**326.3521**	**0.0162**	**0.0000**	**326.7577**

3.3 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	0.2006	1.8391	1.7487	2.8400e-003		0.1011	0.1011		0.0951	0.0951	0.0000	244.3773	244.3773	0.0590	0.0000	245.8513
Total	**0.2006**	**1.8391**	**1.7487**	**2.8400e-003**		**0.1011**	**0.1011**		**0.0951**	**0.0951**	**0.0000**	**244.3773**	**244.3773**	**0.0590**	**0.0000**	**245.8513**

3.3 Building Construction - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0220	0.8101	0.1646	2.1700e-003	0.0509	1.3600e-003	0.0523	0.0147	1.3000e-003	0.0160	0.0000	207.7627	207.7627	0.0143	0.0000	208.1212
Worker	0.1056	0.0812	0.8276	2.3700e-003	0.2591	1.6700e-003	0.2608	0.0688	1.5400e-003	0.0704	0.0000	214.4451	214.4451	5.9500e-003	0.0000	214.5939
Total	**0.1276**	**0.8913**	**0.9921**	**4.5400e-003**	**0.3100**	**3.0300e-003**	**0.3130**	**0.0835**	**2.8400e-003**	**0.0863**	**0.0000**	**422.2078**	**422.2078**	**0.0203**	**0.0000**	**422.7150**

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	0.0346	0.2358	1.8421	2.8400e-003		4.3000e-003	4.3000e-003		4.3000e-003	4.3000e-003	0.0000	244.3770	244.3770	0.0590	0.0000	245.8510
Total	**0.0346**	**0.2358**	**1.8421**	**2.8400e-003**		**4.3000e-003**	**4.3000e-003**		**4.3000e-003**	**4.3000e-003**	**0.0000**	**244.3770**	**244.3770**	**0.0590**	**0.0000**	**245.8510**

3.3 Building Construction - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0220	0.8101	0.1646	2.1700e-003	0.0509	1.3600e-003	0.0523	0.0147	1.3000e-003	0.0160	0.0000	207.7627	207.7627	0.0143	0.0000	208.1212
Worker	0.1056	0.0812	0.8276	2.3700e-003	0.2591	1.6700e-003	0.2608	0.0688	1.5400e-003	0.0704	0.0000	214.4451	214.4451	5.9500e-003	0.0000	214.5939
Total	**0.1276**	**0.8913**	**0.9921**	**4.5400e-003**	**0.3100**	**3.0300e-003**	**0.3130**	**0.0835**	**2.8400e-003**	**0.0863**	**0.0000**	**422.2078**	**422.2078**	**0.0203**	**0.0000**	**422.7150**

3.4 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0157	0.1615	0.1832	2.8000e-004		8.4700e-003	8.4700e-003		7.7900e-003	7.7900e-003	0.0000	25.0294	25.0294	8.0900e-003	0.0000	25.2317
Paving	6.5600e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0223**	**0.1615**	**0.1832**	**2.8000e-004**		**8.4700e-003**	**8.4700e-003**		**7.7900e-003**	**7.7900e-003**	**0.0000**	**25.0294**	**25.0294**	**8.0900e-003**	**0.0000**	**25.2317**

3.4 Paving - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	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	9.6000e-004	7.4000e-004	7.5000e-003	2.0000e-005	2.3500e-003	2.0000e-005	2.3600e-003	6.2000e-004	1.0000e-005	6.4000e-004	0.0000	1.9445	1.9445	5.0000e-005	0.0000	1.9459
Total	**9.6000e-004**	**7.4000e-004**	**7.5000e-003**	**2.0000e-005**	**2.3500e-003**	**2.0000e-005**	**2.3600e-003**	**6.2000e-004**	**1.0000e-005**	**6.4000e-004**	**0.0000**	**1.9445**	**1.9445**	**5.0000e-005**	**0.0000**	**1.9459**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.5100e-003	0.0152	0.2162	2.8000e-004		4.7000e-004	4.7000e-004		4.7000e-004	4.7000e-004	0.0000	25.0293	25.0293	8.0900e-003	0.0000	25.2317
Paving	6.5600e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0101**	**0.0152**	**0.2162**	**2.8000e-004**		**4.7000e-004**	**4.7000e-004**		**4.7000e-004**	**4.7000e-004**	**0.0000**	**25.0293**	**25.0293**	**8.0900e-003**	**0.0000**	**25.2317**

3.4 Paving - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	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	9.6000e-004	7.4000e-004	7.5000e-003	2.0000e-005	2.3500e-003	2.0000e-005	2.3600e-003	6.2000e-004	1.0000e-005	6.4000e-004	0.0000	1.9445	1.9445	5.0000e-005	0.0000	1.9459
Total	**9.6000e-004**	**7.4000e-004**	**7.5000e-003**	**2.0000e-005**	**2.3500e-003**	**2.0000e-005**	**2.3600e-003**	**6.2000e-004**	**1.0000e-005**	**6.4000e-004**	**0.0000**	**1.9445**	**1.9445**	**5.0000e-005**	**0.0000**	**1.9459**

3.5 Architectural Coating - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.2632					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.7400e-003	0.0191	0.0227	4.0000e-005		1.1800e-003	1.1800e-003		1.1800e-003	1.1800e-003	0.0000	3.1916	3.1916	2.2000e-004	0.0000	3.1970
Total	**1.2659**	**0.0191**	**0.0227**	**4.0000e-005**		**1.1800e-003**	**1.1800e-003**		**1.1800e-003**	**1.1800e-003**	**0.0000**	**3.1916**	**3.1916**	**2.2000e-004**	**0.0000**	**3.1970**

3.5 Architectural Coating - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	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	2.4900e-003	1.9100e-003	0.0195	6.0000e-005	6.1100e-003	4.0000e-005	6.1500e-003	1.6200e-003	4.0000e-005	1.6600e-003	0.0000	5.0557	5.0557	1.4000e-004	0.0000	5.0592
Total	**2.4900e-003**	**1.9100e-003**	**0.0195**	**6.0000e-005**	**6.1100e-003**	**4.0000e-005**	**6.1500e-003**	**1.6200e-003**	**4.0000e-005**	**1.6600e-003**	**0.0000**	**5.0557**	**5.0557**	**1.4000e-004**	**0.0000**	**5.0592**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.2632					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.7000e-004	1.6100e-003	0.0229	4.0000e-005		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	3.1916	3.1916	2.2000e-004	0.0000	3.1970
Total	**1.2635**	**1.6100e-003**	**0.0229**	**4.0000e-005**		**5.0000e-005**	**5.0000e-005**		**5.0000e-005**	**5.0000e-005**	**0.0000**	**3.1916**	**3.1916**	**2.2000e-004**	**0.0000**	**3.1970**

3.5 Architectural Coating - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	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	2.4900e-003	1.9100e-003	0.0195	6.0000e-005	6.1100e-003	4.0000e-005	6.1500e-003	1.6200e-003	4.0000e-005	1.6600e-003	0.0000	5.0557	5.0557	1.4000e-004	0.0000	5.0592
Total	**2.4900e-003**	**1.9100e-003**	**0.0195**	**6.0000e-005**	**6.1100e-003**	**4.0000e-005**	**6.1500e-003**	**1.6200e-003**	**4.0000e-005**	**1.6600e-003**	**0.0000**	**5.0557**	**5.0557**	**1.4000e-004**	**0.0000**	**5.0592**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.2450	1.8705	2.8176	0.0113	0.8481	7.9500e-003	0.8561	0.2273	7.4400e-003	0.2348	0.0000	1,050.9731	1,050.9731	0.0579	0.0000	1,052.4205
Unmitigated	0.2459	1.8782	2.8393	0.0114	0.8567	8.0200e-003	0.8647	0.2296	7.5100e-003	0.2371	0.0000	1,060.0622	1,060.0622	0.0582	0.0000	1,061.5172

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
General Office Building	1,072.56	239.21	102.10	2,249,715	2,227,218
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Total	1,072.56	239.21	102.10	2,249,715	2,227,218

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
General Office Building	14.70	6.60	6.60	33.00	48.00	19.00	77	19	4
Other Non-Asphalt Surfaces	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0
Parking Lot	14.70	6.60	6.60	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Office Building	0.553113	0.036408	0.180286	0.116335	0.016165	0.005101	0.018218	0.063797	0.001357	0.001565	0.005903	0.000808	0.000944
Other Non-Asphalt Surfaces	0.553113	0.036408	0.180286	0.116335	0.016165	0.005101	0.018218	0.063797	0.001357	0.001565	0.005903	0.000808	0.000944
Parking Lot	0.553113	0.036408	0.180286	0.116335	0.016165	0.005101	0.018218	0.063797	0.001357	0.001565	0.005903	0.000808	0.000944

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Install High Efficiency Lighting

Install Energy Efficient Appliances

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	305.6624	305.6624	0.0126	2.6100e-003	306.7559
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	349.3845	349.3845	0.0144	2.9800e-003	350.6344
NaturalGas Mitigated	1.3700e-003	0.0125	0.0105	7.0000e-005		9.5000e-004	9.5000e-004		9.5000e-004	9.5000e-004	0.0000	13.5825	13.5825	2.6000e-004	2.5000e-004	13.6632
NaturalGas Unmitigated	1.8300e-003	0.0166	0.0140	1.0000e-004		1.2600e-003	1.2600e-003		1.2600e-003	1.2600e-003	0.0000	18.1100	18.1100	3.5000e-004	3.3000e-004	18.2176

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Office Building	339368	1.8300e-003	0.0166	0.0140	1.0000e-004		1.2600e-003	1.2600e-003		1.2600e-003	1.2600e-003	0.0000	18.1100	18.1100	3.5000e-004	3.3000e-004	18.2176
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		**1.8300e-003**	**0.0166**	**0.0140**	**1.0000e-004**		**1.2600e-003**	**1.2600e-003**		**1.2600e-003**	**1.2600e-003**	**0.0000**	**18.1100**	**18.1100**	**3.5000e-004**	**3.3000e-004**	**18.2176**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
General Office Building	254526	1.3700e-003	0.0125	0.0105	7.0000e-005		9.5000e-004	9.5000e-004		9.5000e-004	9.5000e-004	0.0000	13.5825	13.5825	2.6000e-004	2.5000e-004	13.6632
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		**1.3700e-003**	**0.0125**	**0.0105**	**7.0000e-005**		**9.5000e-004**	**9.5000e-004**		**9.5000e-004**	**9.5000e-004**	**0.0000**	**13.5825**	**13.5825**	**2.6000e-004**	**2.5000e-004**	**13.6632**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Office Building	949062	302.3916	0.0125	2.5800e-003	303.4734
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	147488	46.9928	1.9400e-003	4.0000e-004	47.1610
Total		**349.3845**	**0.0144**	**2.9800e-003**	**350.6344**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
General Office Building	826589	263.3688	0.0109	2.2500e-003	264.3111
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	132739	42.2936	1.7500e-003	3.6000e-004	42.4449
Total		**305.6624**	**0.0126**	**2.6100e-003**	**306.7559**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.5319	4.0000e-005	4.8000e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	9.3200e-003	9.3200e-003	2.0000e-005	0.0000	9.9300e-003
Unmitigated	0.5319	4.0000e-005	4.8000e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	9.3200e-003	9.3200e-003	2.0000e-005	0.0000	9.9300e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.1263					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.4051					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	4.5000e-004	4.0000e-005	4.8000e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	9.3200e-003	9.3200e-003	2.0000e-005	0.0000	9.9300e-003
Total	**0.5319**	**4.0000e-005**	**4.8000e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**	**0.0000**	**9.3200e-003**	**9.3200e-003**	**2.0000e-005**	**0.0000**	**9.9300e-003**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.1263					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.4051					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	4.5000e-004	4.0000e-005	4.8000e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	9.3200e-003	9.3200e-003	2.0000e-005	0.0000	9.9300e-003
Total	**0.5319**	**4.0000e-005**	**4.8000e-003**	**0.0000**		**2.0000e-005**	**2.0000e-005**		**2.0000e-005**	**2.0000e-005**	**0.0000**	**9.3200e-003**	**9.3200e-003**	**2.0000e-005**	**0.0000**	**9.9300e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	99.2454	0.4545	0.0115	114.0181
Unmitigated	114.6825	0.5677	0.0142	133.1148

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Office Building	17.2828 / 10.5927	114.6825	0.5677	0.0142	133.1148
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		**114.6825**	**0.5677**	**0.0142**	**133.1148**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
General Office Building	13.8263 / 10.5927	99.2454	0.4545	0.0115	114.0181
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		**99.2454**	**0.4545**	**0.0115**	**114.0181**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	4.5891	0.2712	0.0000	11.3694
Unmitigated	18.3565	1.0848	0.0000	45.4774

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Office Building	90.43	18.3565	1.0848	0.0000	45.4774
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		**18.3565**	**1.0848**	**0.0000**	**45.4774**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
General Office Building	22.6075	4.5891	0.2712	0.0000	11.3694
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		**4.5891**	**0.2712**	**0.0000**	**11.3694**

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

Table 2: Screening Table for Implementation of GHG Reduction Measures for Commercial Development

Feature	Description	Assigned Point Values	Project Points
Reduction Measure R2E7: Commercial/Industrial Energy Efficiency Development			
Building Envelope			
Insulation	2008 baseline (walls R-13; roof/attic R-30)	0 points	
	Modestly Enhanced Insulation (walls R-13, roof/attic R-38))	15 points	
	Enhanced Insulation (rigid wall insulation R-13, roof/attic R-38)	18 points	
	Greatly Enhanced Insulation (spray foam insulated walls R-15 or higher, roof/attic R-38 or higher)	20 points	
Windows	2008 Baseline Windows (0.57 U-factor, 0.4 solar heat gain coefficient [SHGC})	0 points	
	Modestly Enhanced Window Insulation (0.4 U-factor, 0.32 SHGC)	7 points	
	Enhanced Window Insulation (0.32 U-factor, 0.25 SHGC)	8 points	
	Greatly Enhanced Window Insulation (0.28 or less U-factor, 0.22 or less SHGC)	12 points	
Cool Roof			
	Modest Cool Roof (CRRC Rated 0.15 aged solar reflectance, 0.75 thermal emittance)	12 points	
	Enhanced Cool Roof (CRRC Rated 0.2 aged solar reflectance, 0.75 thermal emittance)	14 points	
	Greatly Enhanced Cool Roof (CRRC Rated 0.35 aged solar reflectance, 0.75 thermal emittance)	16 points	
Air Infiltration	Minimizing leaks in the building envelope is as important as the insulation properties of the building. Insulation does not work effectively if there is excess air leakage.		
	Air barrier applied to exterior walls, calking, and visual inspection such as the HERS Verified Quality Insulation Installation (QII or equivalent)	12 points	
	Blower Door HERS Verified Envelope Leakage or equivalent	10 points	
Thermal Storage of Building	Thermal storage is a design characteristic that helps keep a constant temperature in the building. Common thermal storage devices include strategically placed water filled columns, water storage tanks, and thick masonry walls.		
	Modest Thermal Mass (10% of floor or 10% of walls 12” or more thick exposed concrete or masonry with no permanently installed floor covering such as carpet, linoleum, wood or other insulating materials)	4 points	
	Enhanced Thermal Mass (20% of floor or 20% of walls 12” or more thick exposed concrete or masonry with no permanently installed floor covering such as carpet, linoleum, wood or other insulating materials)	6 points	

Feature	Description	Assigned Point Values	Project Points
	Enhanced Thermal Mass (80% of floor or 80% of walls 12" or more thick exposed concrete or masonry with no permanently installed floor covering such as carpet, linoleum, wood or other insulating materials)	24 points	
Indoor Space Efficiencies			
Heating/ Cooling Distribution System	Minimum Duct Insulation (R-4.2 required)	0 points	
	Modest Duct insulation (R-6)	8 points	
	Enhanced Duct Insulation (R-8)	10 points	
	Distribution loss reduction with inspection (HERS Verified Duct Leakage or equivalent)	14 points	
Space Heating/ Cooling Equipment	2008 Minimum HVAC Efficiency (EER 13/60% AFUE or 7.7 HSPF)	0 points	
	Improved Efficiency HVAC (EER 14/65% AFUE or 8 HSPF)	7 points	
	High Efficiency HVAC (EER 15/72% AFUE or 8.5 HSPF)	8 points	
	Very High Efficiency HVAC (EER 16/80% AFUE or 9 HSPF)	12 points	
Commercial Heat Recovery Systems	Heat recovery strategies employed with commercial laundry, cooking equipment, and other commercial heat sources for reuse in HVAC air intake or other appropriate heat recovery technology. Point values for these types of systems will be determined based upon design and engineering data documenting the energy savings.	TBD	
Water Heaters	2008 Minimum Efficiency (0.57 Energy Factor)	0 points	
	Improved Efficiency Water Heater (0.675 Energy Factor)	14 points	
	High Efficiency Water Heater (0.72 Energy Factor)	16 points	
	Very High Efficiency Water Heater (0.92 Energy Factor)	19 points	
	Solar Pre-heat System (0.2 Net Solar Fraction)	4 points	
	Enhanced Solar Pre-heat System (0.35 Net Solar Fraction)	8 points	
Daylighting	Daylighting is the ability of each room within the building to provide outside light during the day reducing the need for artificial lighting during daylight hours.		
	All peripheral rooms within building have at least one window or skylight	1 points	
	All rooms within building have daylight (through use of windows, solar tubes, skylights, etc.)	5 points	
	All rooms daylighted	7 points	
Artificial Lighting	2008 Minimum (required)	0 points	
	Efficient Lights (25% of in-unit fixtures considered high efficacy. High efficacy is defined as 40 lumens/watt for 15 watt or less fixtures; 50 lumens/watt for 15-40 watt fixtures, 60 lumens/watt for fixtures >40watt)	9 points	

Feature	Description	Assigned Point Values	Project Points
	High Efficiency Lights (50% of in-unit fixtures are high efficacy)	12 points	
	Very High Efficiency Lights (100% of in-unit fixtures are high efficacy)	14 points	
Appliances	Star Commercial Refrigerator (new)	4 points	
	Energy Star Commercial Dish Washer (new)	4 points	
	Energy Star Commercial Cloths Washing	4 points	
Miscellaneous Commercial/Industrial Building Efficiencies			
Building Placement	North/South alignment of building or other building placement such that the orientation of the buildings optimizes conditions for natural heating, cooling, and lighting.	6 point	
Shading	At least 90% of south-facing glazing will be shaded by vegetation or overhangs at noon on Jun 21st.	6 Points	
Other	This allows innovation by the applicant to provide design features that increases the energy efficiency of the project not provided in the table. Note that engineering data will be required documenting the energy efficiency of innovative designs and point values given based upon the proven efficiency beyond Title 24 Energy Efficiency Standards.	TBD	
Existing Commercial building Retrofits	The applicant may wish to provide energy efficiency retrofit projects to existing commercial buildings to further the point value of their project. Retrofitting existing commercial buildings within the City is a key reduction measure that is needed to reach the reduction goal. The potential for an applicant to take advantage of this program will be decided on a case by case basis and must have the approval of the City Planning Department. The decision to allow applicants to ability to participate in this program will be evaluated based upon, but not limited to the following: Will the energy efficiency retrofit project benefit low income or disadvantaged communities? Does the energy efficiency retrofit project fit within the overall assumptions in the reduction measure associated with commercial building energy efficiency retrofits? Does the energy efficiency retrofit project provide co-benefits important to the City? Point value will be determined based upon engineering and design criteria of the energy efficiency retrofit project.	TBD	
Reduction Measure R2E9 and R2E10: New Commercial/Industrial Renewable Energy			
Photovoltaic	Solar Photovoltaic panels installed on commercial buildings or in collective		

Feature	Description	Assigned Point Values	Project Points
	arrangements within a commercial development such that the total power provided augments:		
	Solar Ready Roofs (sturdy roof and electric hookups)	2 points	
	10 percent of the power needs of the project	8 points	
	20 percent of the power needs of the project	14 points	
	30 percent of the power needs of the project	20 points	
	40 percent of the power needs of the project	26 points	
	50 percent of the power needs of the project	32 points	
	60 percent of the power needs of the project	38 points	
	70 percent of the power needs of the project	44 points	
	80 percent of the power needs of the project	50 points	
	90 percent of the power needs of the project	56 points	
	100 percent of the power needs of the project	60 points	
Wind turbines	Some areas of the City lend themselves to wind turbine applications. Analysis of the areas capability to support wind turbines should be evaluated prior to choosing this feature.		
	Wind turbines as part of the commercial development such that the total power provided augments:		
	10 percent of the power needs of the project	8 points	
	20 percent of the power needs of the project	14 points	
	30 percent of the power needs of the project	20 points	
	40 percent of the power needs of the project	26 points	
	50 percent of the power needs of the project	32 points	
	60 percent of the power needs of the project	38 points	
	70 percent of the power needs of the project	44 points	
	80 percent of the power needs of the project	50 points	
	90 percent of the power needs of the project	56 points	
	100 percent of the power needs of the project	60 points	
Off-site renewable energy project	The applicant may submit a proposal to supply an off-site renewable energy project such as renewable energy retrofits of existing commercial/industrial that will help implement reduction measures associated with existing buildings. These off-site renewable energy retrofit project proposals will be determined on a case by case basis accompanied by a detailed plan documenting the quantity of renewable energy the proposal will generate. Point values will be based upon the energy generated by the proposal.	TBD	
Other Renewable Energy Generation	The applicant may have innovative designs or unique site circumstances (such as geothermal) that allow the project to generate electricity from renewable energy not provided in the table. The ability to supply other renewable energy and the point values allowed will be decided based upon	TBD	

Feature	Description	Assigned Point Values	Project Points
	engineering data documenting the ability to generate electricity.		
Reduction Measure R2E7: Warehouse Renewable Energy Incentive Program			
Warehouse Photovoltaic	This measure is for warehouse projects and involves partnership with Sothern California Edison and California Public Utilities Commissions to develop an incentive program for solar installation on new and retrofit existing warehouses. A mandatory minimum solar requirement for new warehouse space. Solar Photovoltaic panels installed on warehouses or in collective arrangements within a logistics/warehouse complex such that the total power provided augments:		
	Solar Ready Roof (sturdy roof and electric hookups)	2 points	
	10 percent of the power needs of the project	4 points	
	20 percent of the power needs of the project	5 points	
	30 percent of the power needs of the project	7 points	
	40 percent of the power needs of the project	9 points	
	50 percent of the power needs of the project	11 points	
	60 percent of the power needs of the project	13 points	
	70 percent of the power needs of the project	15 points	
	80 percent of the power needs of the project	17 points	
	90 percent of the power needs of the project	19 points	
	100 percent of the power needs of the project	21 points	
Reduction Measure R2WC1: R2WC-1: Per Capita Water Use Reduction Commercial/Industrial			
Irrigation and Landscaping			
Water Efficient Landscaping	Eliminate conventional turf from landscaping	0 points	
	Only moderate water using plants	3 points	
	Only low water using plants	4 points	
	Only California Native landscape that requires no or only supplemental irrigation	8 points	
Trees	Increase tree planting in parking areas 50% beyond City Code requirements	TBD	
Water Efficient irrigation systems	Low precipitation spray heads< .75”/hr or drip irrigation	1 point	
	Weather based irrigation control systems combined with drip irrigation (demonstrate 20 reduced water use)	5 points	
Recycled Water	Recycled water connection (purple pipe)to irrigation system on site	5 points	
Storm water Reuse Systems	Innovative on-site stormwater collection, filtration and reuse systems are being developed that provide supplemental irrigation water and provide vector control. These systems can greatly reduce the irrigation needs of a project. Point values for these types of systems will be determined based	TBD	

Feature	Description	Assigned Point Values	Project Points
	upon design and engineering data documenting the water savings.		
Potable Water			
Showers	Water Efficient Showerheads (2.0 gpm)	3 points	
Toilets	Water Efficient Toilets/Urinals (1.5gpm) Waterless Urinals (note that commercial buildings having both waterless urinals and high efficiency toilets will have a combined point value of 6 points)	3 points 4 points	
Faucets	Water Efficient faucets (1.28gpm)	3 points	
Commercial Dishwashers	Water Efficient dishwashers (20% water savings)	4 points	
Commercial Laundry Washers	Water Efficient laundry (15% water savings) High Efficiency laundry Equipment that captures and reuses rinse water (30% water savings)	3 points 6 points	
Commercial Water Operations Program	Establish an operational program to reduce water loss from pools, water features, etc., by covering pools, adjusting fountain operational hours, and using water treatment to reduce draw down and replacement of water. Point values for these types of plans will be determined based upon design and engineering data documenting the water savings.	TBD	
Reduction Measure R2T2: Employment Based Trip and VMT Reduction Policy			
Compressed Work Week	Reduce the number of days per week that employees need to be on site will reduce the number of vehicle trips associated with commercial/industrial development. Compressed work week such that full time employees are on site: days per week 5 days per week 4 days per week on site 3 days per week on site	 0 points 4 points 8 points	
Car/Vanpools	Car/vanpool program Car/vanpool program with preferred parking Car/vanpool with guaranteed ride home program Subsidized employee incentive car/vanpool program Combination of all the above	1 point 2 points 3 points 5 points 6 points	
Employee Bicycle/ Pedestrian Programs	Complete sidewalk to residential within ½ mile Complete bike path to residential within 3 miles Bike lockers and secure racks	1 point 1 point 1 point	

Feature	Description	Assigned Point Values	Project Points
	Showers and changing facilities Subsidized employee walk/bike program Note combine all applicable points for total value	2 points 3 points	
Shuttle/Transit Programs	Local transit within ¼ mile Light rail transit within ½ mile Shuttle service to light rail transit station Guaranteed ride home program Subsidized Transit passes Note combine all applicable points for total value	1 point 3 points 5 points 1 points 2 points	
CRT	Employer based Commute Trip Reduction (CRT). CRTs apply to commercial, offices, or industrial projects that include a reduction of vehicle trip or VMT goal using a variety of employee commutes trip reduction methods. The point value will be determined based upon a TIA that demonstrates the trip/VMT reductions. Suggested point ranges: Incentive based CRT Programs (1-8 points) Mandatory CRT programs (5-20 points)	TBD	
Other Trip Reductions	Other trip or VMT reduction measures not listed above with TIA and/or other traffic data supporting the trip and/or VMT for the project.	TBD	
Reduction Measure R2T4: Signal Synchronization and Intelligent Traffic Systems			
Signal improvements	Signal synchronization-1 point per signal Traffic signals connected to ITS	1 point/signal 3 points/ signal	
Reduction Measure R2T5: Renewable Fuel/Low Emissions Vehicles (EV Charging Stations)			
Electric Vehicles	Provide public charging station for use by an electric vehicle (ten points for each charging station within the facility).	10 points	
Reduction Measure R2T6: Vehicle Trip Reduction Measures			
Mixed Use	Mixes of land uses that complement one another in a way that reduces the need for vehicle trips can greatly reduce GHG emissions. The point value of mixed use projects will be determined based upon traffic studies that demonstrate trip reductions and/or reductions in vehicle miles traveled	TBD	
Local Retail Near Residential (Commercial only Projects)	Having residential developments within walking and biking distance of local retail helps to reduce vehicle trips and/or vehicle miles traveled. The point value of residential projects in close proximity to local retail will be determined based upon traffic studies that demonstrate trip reductions	TBD	

Feature	Description	Assigned Point Values	Project Points
	and/or reductions in vehicle miles traveled		
Reduction Measure R2W5: Construction and Demolition Debris Diversion Program			
Recycling of Construction/ Demolition Debris	Recycle 2% of debris (required) Recycle 5% of debris Recycle 8 % of debris Recycle 10% of debris Recycle 12% of debris Recycle 15% of debris Recycle 20% of debris	0 points 1 point 2 points 3 points 4 points 5 points 6 points	
Reduction Measure R2W6: 75 Percent Solid Waste Diversion Program			
Recycling	County initiated recycling program diverting 75% of waste requires coordination with commercial development to realize this goal. The following recycling features will help the County fulfill this goal: Provide separated recycling bins within each commercial building/floor and provide large external recycling collection bins at central location for collection truck pick-up Provide commercial/industrial recycling programs that fulfills an on-site goal of 75% diversion of solid waste	 2 points 5 points	
Total Points from Commercial/Industrial Project:			

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