Appendix C

Air Quality and Greenhouse Gas Report

AIR QUALITY & GREENHOUSE GAS IMPACT ANALYSIS

FOR

CITY OF INDIO OLD TOWN/DOWNTOWN SPECIFIC PLAN

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INTRODUCTION

This report provides and overview of existing environmental conditions and applicable regulatory framework. Impacts associated with implementation of the proposed Indio Downtown/Old Town Specific Plan (Specific Plan or Project) are analyzed. Supporting materials from this report are located in Appendix A.

PROJECT SUMMARY

The proposed Specific Plan includes an area of roughly 0.3 square miles within the downtown area of Indio. The DSP is generally bounded by Indio Boulevard to the north, Highway 111 to the south, Jackson Street to the east, and Deglet Noor Street to the west.

The proposed Specific Plan would supersede the 1997 Old Town Indio Specific Plan with a plan that emphasizes a walkable and mixed-use environment that complements the City's Old Town characteristics while embracing newer development opportunities. The goal of the proposed Specific Plan is to encourage and promote economic development and revitalization to enhance the City's attractiveness to the local and regional marketplace. The proposed Specific Plan seeks to facilitate the adaptive reuse of existing structures and promote infill development vacant or underutilized properties. The Proposed Specific Plan would also facilitate and encourage residential mixed-use, commercial/retail, and transit-supportive development.

AIR QUALITY

EXISTING SETTING

Geography

The City of Indio is located in Riverside County and within the Salton Sea Air Basin (SSAB). The SSAB consists largely of the Coachella Valley. Coachella Valley is generally aligned from the northwest to the southeast and is bound by the San Jacinto Mountains to the west and the Little San Bernardino Mountains to the east.

Climate

The climate of the Coachella Valley is a continental, desert-type, with hot summers, mild winters, and very little annual rainfall. Precipitation is less than six inches annually and occurs mostly in the winter months from active frontal systems, and in the late summer months from thunderstorms. Temperatures exceed 100 degrees Fahrenheit, on the average, for four months each year, with daily highs near 110 degrees Fahrenheit during July and August. Summer nights are very mild with minimum temperatures in the mid-70's. During the winter season, daytime highs are quite mild, but the dry air is conducive to nocturnal radiational cooling, with early morning lows around 40 degrees.

Winds

The Coachella Valley is exposed to frequent gusty winds. The strongest and most persistent winds typically occur immediately to the east of Banning Pass, which is noted as a wind power generation resource area. Aside from this locale, the wind conditions in the remainder of the valley are

geographically distinct. Stronger winds tend to occur in the open mid-portion of the valley, while lighter winds tend to occur closer to the foothills. Less frequently, widespread gusty winds occur over all areas of the valley.

There are two primary causes of these widespread wind conditions: (1) strong pressure and air mass density differences between the desert air mass and the marine-modified coastal air mass; and (2) strong downbursts from summertime thunderstorms. In the first condition, surface low pressure in the desert causes cooler and denser ocean-modified air to move through Banning Pass into the Coachella Valley. As synoptic (or very large-scale) weather patterns reinforce the localized regime through wind-inducing surface pressure gradients, strong and widespread winds result that frequently exceed 40 mph. These winds can persist for many hours and generally have a west-through-north wind component.
By comparison, winds generated by summer thunderstorms are more localized in nature, but the strong downward rushes of cooler air can produce wind gusts that occasionally exceed 60 mph. These wind gusts and gust "fronts" can pick up large amounts of natural desert soils which, once suspended in the atmosphere, can be transported over large distances, even though the gustiness subsides. Since the necessary weather pattern for producing such thunderstorms is one in which high level tropical moisture is transported into the deserts from areas to the southeast, these storms are typically associated with erratic southeasterly winds.

Northwesterly winds dominate throughout the year, with southeasterly winds showing a secondary peak frequency. Stronger winds occur most often in the spring and summer months. High-wind situations, which can produce widespread dust storms, are limited primarily to the spring months of April through June, although these conditions more rarely can occur any time during the year. In Palm Springs, where the winds are not as severe as other parts of the Valley, the frequency of hourly-averaged wind speeds over 30 mph is very low.

Pollutant Dispersion

Air pollutant concentrations are primarily determined by the amount of pollutant emissions in an area and the degree to which these pollutants are dispersed in the atmosphere. The stability of the atmosphere is one of the key factors affecting pollutant dispersion. Atmospheric stability regulates the amount of vertical and horizontal air exchange, or mixing, that can occur within a given air basin. Restricted mixing and low wind speeds are generally associated with a high degree of stability in the atmosphere. These conditions are characteristic of temperature inversions.

In the atmosphere, air temperatures normally decrease as altitude increases. At varying distances above the earth's surface, however, a reversal of this gradient can occur. This condition, termed an inversion, is simply a warm layer of air above a layer of cooler air, and it has the effect of limiting the vertical dispersion of pollutants. The height of the inversion determines the size of the mixing volume trapped below. Inversion strength or intensity is measured by the thickness of the layer and the difference in temperature between the base and the top of the inversion. The strength of the inversion determines how easily it can be broken by winds or solar heating.

The Coachella Valley typically experiences surface inversions. Due to strong surface heating, these inversions are usually broken allowing pollutants to be more easily dispersed. Weak, surface inversions are caused by radiational cooling of air in contact with the cold surface of the earth at night. In valleys

and low lying areas this condition is intensified by the addition of cold air flowing down slope from the hills and pooling on the valley floor.

The presence of the Pacific high pressure cell can cause the air to warm to a temperature higher than the air below. This highly stable atmospheric condition, termed a subsidence inversion can act as a nearly impenetrable lid to the vertical mixing of pollutants. The strength of these inversions makes them difficult to disrupt. Consequently, they can persist for one or more days, causing air stagnation and the buildup of pollutants. Highest or worst-case ozone levels are often associated with the presence of this type of inversion.

Within the Coachella Valley, there is also a natural sand migration process that has direct and indirect effects on air quality. Called "blowsand," this natural sand migration process produces PM_{10} in two ways: (1) by direct particle erosion and fragmentation (natural PM_{10}), and (2) by secondary effects, as sand deposits on road surfaces are ground into PM_{10} by moving vehicles and resuspended in the air (man-made PM_{10}).

Ambient Air Quality

Air pollutant concentrations are measured at several monitoring stations in the SSAB. The Indio-Jackson Street monitoring station is the closest representative monitoring station with sufficient data to meet U.S. EPA and/or California Air Resources Board (ARB) criteria for quality assurance. The Indio-Jackson Street monitoring station monitors ambient concentrations of ozone, PM_{10}, and $PM_{2.5}$. Ambient data for NO_2 and CO were obtained from the Palm Springs-Fire Station monitoring station. Ambient monitoring data were obtained for the last three years of available measurement data (i.e., 2013 through 2015) and are summarized in Table 1. As depicted, the state and national ozone and PM_{10} standards were exceeded on numerous occasions during the past 3 years.

Air Pollutants of Concern

Criteria Air Pollutants

For the protection of public health and welfare, the Federal Clean Air Act (FCAA) required that the United States Environmental Protection Agency (U.S. EPA) establish National Ambient Air Quality Standards (NAAQS) for various pollutants. These pollutants are referred to as "criteria" pollutants because the U.S. EPA publishes criteria documents to justify the choice of standards. These standards define the maximum amount of an air pollutant that can be present in ambient air. An ambient air quality standard is generally specified as a concentration averaged over a specific time period, such as one hour, eight hours, 24 hours, or one year. The different averaging times and concentrations are meant to protect against different exposure effects. Standards established for the protection of human health are referred to as primary standards; whereas, standards established for the prevention of environmental and property damage are called secondary standards. The FCAA allows states to adopt additional or more health-protective standards. The following provides a summary discussion of the criteria air pollutants of primary concern.

Table 1
Summary of Ambient Air Quality Monitoring Data

Pollutant	Monitoring Year		
	2013	2014	2015
Ozone			
Maximum concentration (1-hour/8-hour average)	0.105/0.087	0.095/0.091	0.093/0.085
Number of days state/national 1-hour standard exceeded	2/0	2/0	0/0
Number of days state/national 8-hour standard exceeded	38/18	30/10	12/4
Nitrogen Dioxide (NO_2)			
Maximum concentration (1-hour average)	52.2	46.3	41.5
Annual average	7	NA	6
Number of days state/national standard exceeded	0/0	0/0	0/0
Suspended Particulate Matter ($PM_{2.5}$)			
Maximum concentration (national/state)	25.8/25.8	18.3/18.3	24.6/24.6
Annual Average (national/state)	8.3/8.3	NA/NA	NA/NA
Number of days national standard exceeded (measured/calculated)	0/0	0/NA	0/NA
Suspended Particulate Matter (PM_{10})			
Maximum concentration (national/state)	255.2/159.0	322.3/299.0	381.0/382.0
Number of days state standard exceeded (measured/calculated)	14/85.2	15/94.9	13/NA
Number of days national standard exceeded (measured/calculated)	3/3.0	6/6.1	3/NA
Carbon Monoxide (CO)			
Maximum concentration (1-hour/8-hour)	3.2/1.4	2.2/0.8	2.0/0.7
Number of days state standards exceeded (1-hour/8-hour)	0/0	0/0	0/0
Number of days national standards exceeded (1-hour/8-hour)	0/0	0/0	0/0

ppm = parts per million by volume, µg/m^3 = micrograms per cubic meter, NA=Not Available

1. *Based on ambient concentrations obtained from the Indio-Jackson Street monitoring Station. Ambient data for NO_2 and CO obtained from the Palm Springs-Fire Station monitoring station.*
2. *Measured days are those days that an actual measurement was greater than the standard. Calculated days are estimated days that a measurement would have exceeded the standard had measurements been collected every day.*

Source: ARB 2016a

Ozone (O_3) is a reactive gas consisting of three atoms of oxygen. In the troposphere, it is a product of the photochemical process involving the sun's energy. It is a secondary pollutant that is formed when NO_X and volatile organic compounds (VOC), also referred to as reactive organic gases (ROG) react in the presence of sunlight. Ozone at the earth's surface causes numerous adverse health effects and is a criteria pollutant. It is a major component of smog. In the stratosphere, ozone exists naturally and shields Earth from harmful incoming ultraviolet radiation.

High concentrations of ground level ozone can adversely affect the human respiratory system and aggravate cardiovascular disease and many respiratory ailments. Ozone also damages natural ecosystems such as forests and foothill communities, agricultural crops, and some man-made materials, such as rubber, paint, and plastics.

Reactive Organic Gas (ROG) is a reactive chemical gas, composed of hydrocarbon compounds that may contribute to the formation of smog by their involvement in atmospheric chemical reactions. No separate health standards exist for ROG as a group. Because some compounds that make up ROG are also toxic, like the carcinogen benzene, they are often evaluated as part of a toxic risk assessment. Total Organic Gases (TOGs) includes all of the ROGs, in addition to low reactivity organic compounds like methane and acetone. ROGs and VOC are subsets of TOG.

Volatile Organic Compounds (VOC) are hydrocarbon compounds that exist in the ambient air. VOCs contribute to the formation of smog and may also be toxic. VOC emissions are a major precursor to the formation of ozone. VOCs often have an odor, and some examples include gasoline, alcohol, and the solvents used in paints.

Oxides of Nitrogen (NO_X) are a family of gaseous nitrogen compounds and is a precursor to the formation of ozone and particulate matter. The major component of NO_X, nitrogen dioxide (NO_2), is a reddish-brown gas that is toxic at high concentrations. NO_X results primarily from the combustion of fossil fuels under high temperature and pressure. On-road and off-road motor vehicles and fuel combustion are the major sources of this air pollutant.

Particulate Matter (PM), also known as particle pollution, is a complex mixture of extremely small particles and liquid droplets. Particle pollution 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. U.S. EPA is concerned about particles that are 10 micrometers in diameter or smaller because those 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. U.S. EPA groups particle pollution into three categories based on their size and where they are deposited:

- "Inhalable coarse particles ($PM_{2.5}$- PM_{10})," such as those found near roadways and dusty industries, are between 2.5 and 10 micrometers in diameter. $PM_{2.5\text{-}10}$ is deposited in the thoracic region of the lungs.
- "Fine particles ($PM_{2.5}$)," such as those found in smoke and haze, are 2.5 micrometers in diameter and smaller. These particles can be directly emitted from sources such as forest fires, or they can form when gases emitted from power plants, industries and automobiles react in the air. They penetrate deeply into the thoracic and alveolar regions of the lungs.
- “Ultrafine particles (UFP),” are very small particles less than 0.1 micrometers in diameter largely resulting from the combustion of fossils fuels, meat, wood and other hydrocarbons. While UFP mass is a small portion of $PM_{2.5}$, its high surface area, deep lung penetration, and transfer into the bloodstream can result in disproportionate health impacts relative to their mass.

PM_{10}, $PM_{2.5}$, and UFP include primary pollutants (emitted directly to the atmosphere) as well as secondary pollutants (formed in the atmosphere by chemical reactions among precursors). Generally speaking, $PM_{2.5}$ and UFP are emitted by combustion sources like vehicles, power generation, industrial processes, and wood burning, while PM_{10} sources include these same sources plus roads and farming activities. Fugitive windblown dust and other area sources also represent a source of airborne dust.

Numerous scientific studies have linked both long- and short-term particle pollution exposure to a variety of health problems. Long-term exposures, such as those experienced by people living for many years in areas with high particle levels, have been associated with problems such as reduced lung function and the development of chronic bronchitis and even premature death. Short-term exposures to particles (hours or days) can aggravate lung disease, causing asthma attacks and also acute (short-term) bronchitis, and may also increase susceptibility to respiratory infections. In people with heart disease, short-term exposures have been linked to heart attacks and arrhythmias. Healthy children and adults

have not been reported to suffer serious effects from short term exposures, although they may experience temporary minor irritation when particle levels are elevated.

Carbon Monoxide (CO) is an odorless, colorless gas that is highly toxic. It is formed by the incomplete combustion of fuels and is emitted directly into the air (unlike ozone). The main source of CO is on-road motor vehicles. Other CO sources include other mobile sources, miscellaneous processes, and fuel combustion from stationary sources. Because of the local nature of CO problems, ARB and U.S. EPA designate urban areas as CO nonattainment areas instead of the entire basin as with ozone and PM_{10}. Motor vehicles are by far the largest source of CO emissions. Emissions from motor vehicles have been declining since 1985, despite increases in vehicle miles traveled, with the introduction of new automotive emission controls and fleet turnover.

Sulfur Dioxide (SO_2) is a colorless, irritating gas with a "rotten egg" smell formed primarily by the combustion of sulfur-containing fossil fuels. However, like airborne NO_X, suspended SO_X particles contribute to the poor visibility. These SO_X particles can also combine with other pollutants to form $PM_{2.5}$. The prevalence of low-sulfur fuel use has minimized problems from this pollutant.

Lead (Pb) is a metal that is a natural constituent of air, water, and the biosphere. Lead is neither created nor destroyed in the environment, so it essentially persists forever. The health effects of lead poisoning include loss of appetite, weakness, apathy, and miscarriage. Lead can also cause lesions of the neuromuscular system, circulatory system, brain, and gastrointestinal tract. Gasoline-powered automobile engines were a major source of airborne lead through the use of leaded fuels. The use of leaded fuel has been mostly phased out, with the result that ambient concentrations of lead have dropped dramatically.

Hydrogen Sulfide (H_2S) is associated with geothermal activity, oil and gas production, refining, sewage treatment plants, and confined animal feeding operations. Hydrogen sulfide is extremely hazardous in high concentrations; especially in enclosed spaces (800 ppm can cause death). OSHA regulates workplace exposure to H_2S.

Other Pollutants

The State of California has established air quality standards for some pollutants not addressed by Federal standards. The ARB has established State standards for hydrogen sulfide, sulfates, vinyl chloride, and visibility reducing particles. The following section summarizes these pollutants and provides a description of the pollutants' physical properties, health and other effects, sources, and the extent of the problems.

Sulfates (SO_4^{2-}) are the fully oxidized ionic form of sulfur. Sulfates occur in combination with metal and/or hydrogen ions. In California, emissions of sulfur compounds occur primarily from the combustion of petroleum-derived fuels (e.g., gasoline and diesel fuel) that contain sulfur. This sulfur is oxidized to SO_2 during the combustion process and subsequently converted to sulfate compounds in the atmosphere. The conversion of SO_2 to sulfates takes place comparatively rapidly and completely in urban areas of California due to regional meteorological features.

The ARB sulfates standard is designed to prevent aggravation of respiratory symptoms. Effects of sulfate exposure at levels above the standard include a decrease in ventilator function, aggravation of

asthmatic symptoms, and an increased risk of cardio-pulmonary disease. Sulfates are particularly effective in degrading visibility, and, due to the fact that they are usually acidic, can harm ecosystems and damage materials and property.

Visibility Reducing Particles: Are a mixture of suspended particulate matter consisting of dry solid fragments, solid cores with liquid coatings, and small droplets of liquid. The standard is intended to limit the frequency and severity of visibility impairment due to regional haze and is equivalent to a 10-mile nominal visual range.

Vinyl Chloride (C_2H_3Cl or **VCM)** is a colorless gas that does not occur naturally. It is formed when other substances such as trichloroethane, trichloroethylene, and tetrachloro-ethylene are broken down. Vinyl chloride is used to make polyvinyl chloride which is used to make a variety of plastic products, including pipes, wire and cable coatings, and packaging materials.

Odors

Typically odors are generally regarded as an annoyance rather than a health hazard. However, manifestations of a person's reaction to foul odors can range from the psychological (i.e. irritation, anger, or anxiety) to the physiological, including circulatory and respiratory effects, nausea, vomiting, and headache.

The ability to detect odors varies considerably among the population and overall is quite subjective. Some individuals have the ability to smell very minute quantities of specific substances; others may not have the same sensitivity but may have sensitivities to odors of other substances. In addition, people may have different reactions to the same odor and in fact an odor that is offensive to one person may be perfectly acceptable to another (e.g., fast food restaurant). It is important to also note that an unfamiliar odor is more easily detected and is more likely to cause complaints than a familiar one. This is because of the phenomenon known as odor fatigue, in which a person can become desensitized to almost any odor and recognition only occurs with an alteration in the intensity.

Quality and intensity are two properties present in any odor. The quality of an odor indicates the nature of the smell experience. For instance, if a person describes an odor as flowery or sweet, then the person is describing the quality of the odor. Intensity refers to the strength of the odor. For example, a person may use the word strong to describe the intensity of an odor. Odor intensity depends on the odorant concentration in the air. When an odorous sample is progressively diluted, the odorant concentration decreases. As this occurs, the odor intensity weakens and eventually becomes so low that the detection or recognition of the odor is quite difficult. At some point during dilution, the concentration of the odorant reaches a detection threshold. An odorant concentration below the detection threshold means that the concentration in the air is not detectable by the average human.

Toxic Air Contaminants

Toxic air contaminants (TACs) are air pollutants that may cause or contribute to an increase in mortality or serious illness, or which may pose a hazard to human health. TACs are usually present in minute quantities in the ambient air, but due to their high toxicity, they may pose a threat to public health even at very low concentrations. Because there is no threshold level below which adverse health impacts are not expected to occur, TACs differ from criteria pollutants for which acceptable levels of exposure can be determined and for which state and federal governments have set ambient air quality standards.

TACs, therefore, are not considered "criteria pollutants" under either the FCAA or the California Clean Air Act (CCAA), and are thus not subject to National or State AAQS. TACs are not considered criteria pollutants in that the federal and California Clean Air Acts do not address them specifically through the setting of National or State AAQS. Instead, the U.S. EPA and ARB regulate Hazardous Air Pollutants (HAPs) and TACs, respectively, through statutes and regulations that generally require the use of the maximum or best available control technology to limit emissions. In conjunction with District rules, these federal and state statutes and regulations establish the regulatory framework for TACs. At the national levels, the U.S. EPA has established National Emission Standards for HAPs (NESHAPs), in accordance with the requirements of the FCAA and subsequent amendments. These are technology-based source-specific regulations that limit allowable emissions of HAPs.

Within California, TACs are regulated primarily through the Tanner Air Toxics Act (AB 1807) and the Air Toxics Hot Spots Information and Assessment Act of 1987 (AB 2588). The Tanner Act sets forth a formal procedure for ARB to designate substances as TACs. This includes research, public participation, and scientific peer review before ARB designates a substance as a TAC. Existing sources of TACs that are subject to the Air Toxics Hot Spots Information and Assessment Act are required to: (1) prepare a toxic emissions inventory; (2) prepare a risk assessment if emissions are significant; (3) notify the public of significant risk levels; and (4) prepare and implement risk reduction measures.

At the state level, the ARB has authority for the regulation of emissions from motor vehicles, fuels, and consumer products. Most recently, Diesel-exhaust particulate matter (DPM) was added to the ARB list of TACs. DPM is the primary TACs of concern for mobile sources. Of all controlled TACs, emissions of DPM are estimated to be responsible for about 70 percent of the total ambient TAC risk. The ARB has made the reduction of the public's exposure to DPM one of its highest priorities, with an aggressive plan to require cleaner diesel fuel and cleaner diesel engines and vehicles (ARB 2005).

At the local level, air districts have the authority over stationary or industrial sources. All projects that require air quality permits from the South Coast Air Quality Management District (SCAQMD) are evaluated for TAC emissions. The SCAQMD limits emissions and public exposure to TACs through a number of programs. The SCAQMD prioritizes TAC-emitting stationary sources, based on the quantity and toxicity of the TAC emissions and the proximity of the facilities to sensitive receptors. The SCAQMD requires a comprehensive health risk assessment for facilities that are classified in the significant-risk category, pursuant to AB 2588.

Land Use Compatibility with TAC Emission Sources

The ARB published an informational guide entitled: *Air Quality and Land Use Handbook: A Community Health Perspective* (Handbook) in 2005. The purpose of this guide is to provide information to aid local jurisdictions in addressing issues and concerns related to the placement of sensitive land uses near major sources of air pollution. The CARB's Handbook includes recommended separation distances for various land uses that are based on relatively conservative estimations of emissions based on source-specific information. However, these recommendations are not site specific and should not be interpreted as defined "buffer zones". It is also important to note that the recommendations of the Handbook are advisory and need to be balanced with other State and local policies (ARB 2005). Depending on site and project-specific conditions, an assessment of potential increases in exposure to TACs may be warranted for proposed development projects located within the distances identified. CARB-recommended separation distances for various sources of emissions are summarized in Table 2.

Table 2
Recommendations on Siting New Sensitive Land Uses
Near Air Pollutant Sources

Source Category	Advisory Recommendations
Freeways and High-Traffic Roads	• Avoid 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.
Distribution Centers	• Avoid siting new sensitive land uses within 1,000 feet of a distribution center (that accommodates more than 100 trucks per day, more than 40 trucks with operating transport refrigeration units (TRUs) per day, or where TRU unit operations exceed 300 hours per week). • Take into account the configuration of existing distribution centers and avoid locating residences and other new sensitive land uses near entry and exit points.
Rail Yards	• Avoid siting new sensitive land uses within 1,000 feet of a major service and maintenance rail yard. • Within one mile of a rail yard, consider possible siting limitations and mitigation approaches.
Ports	• Avoid siting of new sensitive land uses immediately downwind of ports in the most heavily impacted zones. Consult local air districts or the ARB on the status of pending analyses of health risks.
Refineries	• Avoid siting new sensitive land uses immediately downwind of petroleum refineries. Consult with local air districts and other local agencies to determine an appropriate separation.
Chrome Platers	• Avoid siting new sensitive land uses within 1,000 feet of a chrome plater.
Dry Cleaners Using Perchloroethylene	• Avoid siting new sensitive land uses within 300 feet of any dry cleaning operation. For operations with two or more machines, provide 500 feet. For operations with 3 or more machines, consult with the local air district. • Do not site new sensitive land uses in the same building with perchloroethylene dry cleaning operations.
Gasoline Dispensing Facilities	• Avoid siting new sensitive land uses within 300 feet of a large gas station (defined as a facility with a throughput of 3.6 million gallons per year or greater). A 50 foot separation is recommended for typical gas dispensing facilities.

Recommendations are advisory, are not site specific, and may not fully account for future reductions in emissions, including those resulting from compliance with existing/future regulatory requirements.
Source: ARB 2005

Sensitive Receptors

One of the most important reasons for air quality standards is the protection of those members of the population who are most sensitive to the adverse health effects of air pollution, termed "sensitive receptors." The term “sensitive receptors” refers to specific population groups, as well as the land uses where individuals would reside for long periods. Commonly identified sensitive population groups are children, the elderly, the acutely ill, and the chronically ill. Commonly identified sensitive land uses would include facilities that house or attract children, the elderly, people with illnesses, or others who are especially sensitive to the effects of air pollutants. Residential dwellings, schools, parks, playgrounds, childcare centers, convalescent homes, and hospitals are examples of sensitive land uses. Sensitive land uses within the Specific Plan area consist predominantly of residential land uses, schools, and community parks.

REGULATORY FRAMEWORK

Air quality within the Project area is regulated by several jurisdictions including the U.S. EPA, ARB, and the SCAQMD. Each of these jurisdictions develops rules, regulations, and policies to attain the goals or directives imposed upon them through legislation. Although U.S. EPA regulations may not be superseded, both state and local regulations may be more stringent.

Federal

U.S. Environmental Protection Agency

At the federal level, the U.S. EPA has been charged with implementing national air quality programs. The U.S. EPA's air quality mandates are drawn primarily from the FCAA, which was signed into law in 1970. Congress substantially amended the FCAA in 1977 and again in 1990.

Federal Clean Air Act

The FCAA required the U.S. EPA to establish NAAQS, and also set deadlines for their attainment. Two types of NAAQS have been established: primary standards, which protect public health, and secondary standards, which protect public welfare from non-health-related adverse effects, such as visibility restrictions. NAAQS are summarized in Table 3.

Toxic Substances Control Act

The Toxic Substances Control Act first authorized the U.S. EPA to regulate asbestos in schools and Public and Commercial buildings under Title II of the law, which is also known as the Asbestos Hazard Emergency Response Act (AHERA). AHERA requires Local Education Agencies to inspect their schools for asbestos-containing building materials (ACBM) and to prepare management plans to reduce the asbestos hazard. The Act also established a program for the training and accreditation of individuals performing certain types of asbestos work.

National Emission Standards for Hazardous Air Pollutants

Pursuant to the FCAA of 1970, the U.S. EPA established the National Emission Standards for Hazardous Air Pollutants (NESHAPs). These are technology-based source-specific regulations that limit allowable emissions of HAPs. Among these sources include ACBM. NESHAPs include requirements pertaining to the inspection, notification, handling, and disposal of ACBM associated with the demolition and renovation of structures.

State

California Air Resources Board

The ARB is the agency responsible for coordination and oversight of state and local air pollution control programs in California and for implementing the California Clean Air Act of 1988. Other ARB duties include monitoring air quality (in conjunction with air monitoring networks maintained by air pollution control districts and air quality management districts), establishing the California Ambient Air Quality Standards (CAAQS), which in many cases are more stringent than the NAAQS, and setting emissions standards for new motor vehicles. The CAAQS are summarized in Table 3. The emission standards established for motor vehicles differ depending on various factors including the model year, and the type of vehicle, fuel and engine used.

Table 3
Summary of Ambient Air Quality Standards & Attainment Designations for the Coachella Valley

Pollutant	Averaging Time	California Standards		National Standards	
		Concentration	Attainment Status	Primary	Attainment Status
Ozone (O_3)	1-hour	0.09 ppm	Non-Attainment	–	Non-Attainment
	8-hour	0.070 ppm		0.070 ppm	
Particulate Matter (PM_{10})	AAM	20 µg/m3	Non-Attainment	–	Non-Attainment
	24-hour	50 µg/m3		150 µg/m3	
Fine Particulate Matter ($PM_{2.5}$)	AAM	12 µg/m3	Attainment	12 µg/m3	Unclassified/ Attainment
	24-hour	No Standard		35 µg/m3	
Carbon Monoxide (CO)	1-hour	20 ppm	Attainment	35 ppm	Unclassified/ Attainment
	8-hour	9 ppm		9 ppm	
Nitrogen Dioxide (NO_2)	AAM	0.030 ppm	Attainment	0.053 ppm	Unclassified/ Attainment
	1-hour	0.18 ppm		0.100 ppb[b]	
Sulfur Dioxide (SO_2)	AAM	–	Attainment	0.03 ppm	Unclassified
	24-hour	0.04 ppm		0.14 ppm	
	3-hour	–		--	
	1-hour	0.25 ppm		75 ppb	
Lead	30-day Average	1.5 µg/m3	Attainment	–	Unclassified/ Attainment
	Calendar Quarter	–		1.5 µg/m3	
	Rolling 3-Month Average	–		0.15 µg/m3	
Sulfates	24-hour	25 µg/m3	Attainment	No Federal Standards	
Hydrogen Sulfide	1-hour	0.03 ppm (42 µg/m3)	Unclassified		
Vinyl Chloride	24-hour	0.01 ppm (26 µg/m3)	Attainment		
Visibility-Reducing Particle Matter	8-hour	Extinction coefficient: 0.23/kilometer-visibility of 10 miles or more (0.07-30 miles or more for Lake Tahoe) due to particles when the relative humidity is less than 70%.	Unclassified		

a. No federal 1-hour standard.
b. To attain this standard, the 3-year average of the 98th percentile daily maximum 1-hour average at each monitor within an area must not exceed 0.100 ppm (effective January 22, 2010).
Source: SCAQMD 2016

California Clean Air Act

The CCAA requires that all air districts in the state endeavor to achieve and maintain CAAQS for Ozone, CO, SO_2, and NO_2 by the earliest practical date. The CCAA specifies that districts focus particular attention on reducing the emissions from transportation and area-wide emission sources, and the act provides districts with authority to regulate indirect sources. Each district plan is required to either (1) achieve a 5 percent annual reduction, averaged over consecutive 3-year periods, in district-wide emissions of each non-attainment pollutant or its precursors, or (2) to provide for implementation of all feasible measures to reduce emissions. Any planning effort for air quality attainment would thus need to consider both state and federal planning requirements.

Assembly Bills 1807 & 2588 - Toxic Air Contaminants

Within California, TACs are regulated primarily through AB 1807 (Tanner Air Toxics Act) and AB 2588 (Air Toxics Hot Spots Information and Assessment Act of 1987). The Tanner Air Toxics Act sets forth a formal procedure for ARB to designate substances as TACs. This includes research, public participation, and scientific peer review before ARB designates a substance as a TAC. Existing sources of TACs that are subject to the Air Toxics Hot Spots Information and Assessment Act are required to: (1) prepare a toxic emissions inventory; (2) prepare a risk assessment if emissions are significant; (3) notify the public of significant risk levels; and (4) prepare and implement risk reduction measures.

In-Use Off-Road Diesel Vehicle Regulation

On July 26, 2007, the ARB adopted a regulation to reduce DPM and NO_X emissions from in-use (existing) off-road heavy-duty diesel vehicles in California. The regulation applies to self-propelled diesel-fueled vehicles that cannot be registered and licensed to drive on-road, as well as two-engine vehicles that drive on road, with the limited exception of two-engine sweepers. Examples include loaders, crawler tractors, skid steers, backhoes, forklifts, airport ground support equipment, water well drilling rigs, and two-engine cranes. Such vehicles are used in construction, mining, and industrial operations. The regulation does not apply to stationary equipment or portable equipment such as generators. The off-road vehicle regulation, establishes emissions performance requirements, establishes reporting, disclosure, and labeling requirements for off-road vehicles, and limits unnecessary idling.

Regional

South Coast Air Quality Management District

Because Southern California has one of the worst air quality problems in the nation, the SCAQMD was created by the 1977 Lewis Air Quality Management Act. Four county air pollution control agencies were merged into one regional district to better address the issue of improving air quality in Southern California. Under the act, revised and renamed the Lewis-Presley Air Quality Management Act in 1988, the SCAQMD is the agency principally responsible for comprehensive air pollution control in the SSAB. Specifically, the SCAQMD is responsible for monitoring air quality and planning, implementing, and enforcing programs designed to attain and maintain state and federal ambient air quality standards in the district. Programs developed include air quality rules and regulations that regulate stationary source emissions, including area and point sources and certain mobile source emissions. The SCAQMD is also responsible for establishing permitting requirements and issuing permits for stationary sources and ensuring that new, modified, or relocated stationary sources do not create net emissions increases. The SCAQMD enforces air quality rules and regulations through a variety of means, including inspections, educational and training programs, and fines.

The SCAQMD is also the lead agency in charge of developing the Air Quality Management Plan (AQMP), with input from the SCAG and ARB. The AQMP is a comprehensive plan that includes control strategies for stationary and area sources, as well as for on-road and off-road mobile sources. SCAG has the primary responsibility for providing future growth projections and the development and implementation of transportation control measures. ARB in coordination with federal agencies provides the control element for mobile sources.

Air Quality Management Plan

The 2012 AQMP was adopted by the SCAQMD Governing Board on December 7, 2012. The purpose of the AQMP is to set forth a comprehensive and integrated program that will lead the SCAB into compliance with the federal 24-hour $PM_{2.5}$ air quality standard, and to provide an update to the Basin's commitments towards meeting the federal 8-hour ozone standards. The AQMP incorporates the latest scientific and technological information and planning assumptions, including the 2012 Regional Transportation Plan/Sustainable Communities Strategy and updated emission inventory methodologies for various source categories. SCAQMD staff is currently in the process of developing the 2016 AQMP

Coachella Valley PM10 State Implementation Plan

On June 21, 2002, the AQMD adopted the *2002 Coachella Valley PM_{10} State Implementation Plan* (CVSIP). The CVSIP establishes additional controls needed to demonstrate expeditious attainment of the PM_{10} standards in the Coachella Valley, located in the SSAB.

Land Use Planning Guidance

The SCAQMD has prepared the *Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning*, which was issued in May 2005. This document serves as a tool to assist local governments in the development of General Plans and other planning decisions that affect air quality. The guidance contained in this document will strengthen the partnership between SCAQMD and local governments and help to achieve ambient air quality standards, reduce public exposure to source-specific air pollution, and to lower health risk associated with cumulative air pollution impacts.

Southern California Association of Governments

The Southern California Association of Governments (SCAG) is the regional planning agency for Los Angeles, Orange, Ventura, Riverside, San Bernardino, and Imperial Counties and serves as a forum for regional issues relating to transportation, the economy, community development, and the environment. Under federal law, SCAG is designated as a Metropolitan Planning Organization (MPO) and under state law as a Regional Transportation Planning Agency and a Council of Governments.

On April 7, 2016, the Regional Council of the Southern California Association of Governments (SCAG) adopted the *2016-2040 Regional Transportation Plan/Sustainable Communities Strategy* (RTP/SCS). California's Sustainable Communities and Climate Protection Act, or Senate Bill (SB) 375, requires SCAG to develop a Sustainable Communities Strategy (SCS) to reduce greenhouse gas (GHG) emissions from automobiles and light trucks through integrated transportation, land use, housing, and environmental planning. The SCS provides a plan for meeting the greenhouse gas emission-reduction targets set by the ARB for the SCAG region. The *2016-2040 RTP/SCS* has been designed to achieve minimum GHG

reductions (below 2005 levels) of 8 percent by 2020, 18 percent by 2035, and 21 percent by 2040. SCAG is also responsible under the FCAA for determining federal air quality conformity of projects, plans, and programs within the SCAQMD.

Regulatory Attainment Designations

Under the CCAA, the ARB is required to designate areas of the state as attainment, nonattainment, or unclassified with respect to applicable standards. An "attainment" designation for an area signifies that pollutant concentrations did not violate the applicable standard in that area. A "nonattainment" designation indicates that a pollutant concentration violated the applicable standard at least once, excluding those occasions when a violation was caused by an exceptional event, as defined in the criteria. Depending on the frequency and severity of pollutants exceeding applicable standards, the nonattainment designation can be further classified as serious nonattainment, severe nonattainment, or extreme nonattainment, with extreme nonattainment being the most severe of the classifications. An "unclassified" designation signifies that the data does not support either an attainment or nonattainment designation. The CCAA divides districts into moderate, serious, and severe air pollution categories, with increasingly stringent control requirements mandated for each category.

The U.S. EPA designates areas for ozone, CO, and NO_2 as "does not meet the primary standards," "cannot be classified," or "better than national standards." For SO_2, areas are designated as "does not meet the primary standards," "does not meet the secondary standards," "cannot be classified," or "better than national standards." However, the ARB terminology of attainment, nonattainment, and unclassified is more frequently used. The U.S. EPA uses the same sub-categories for nonattainment status: serious, severe, and extreme. In 1991, U.S. EPA assigned new nonattainment designations to areas that had previously been classified as Group I, II, or III for PM_{10} based on the likelihood that they would violate national PM_{10} standards. All other areas are designated "unclassified."

The state and national attainment status designations for the Coachella Valley are summarized in Table 3. The Coachella Valley is currently designated as a nonattainment area with respect to the State and Federal ozone and PM_{10} standards. The Coachella Valley is designated attainment or unclassified for the remaining State and Federal standards.

ENVIRONMENTAL IMPACTS

Significance Threshold Criteria

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project would:

AQ-1: Conflict with or obstruct implementation of the applicable air quality plan.

AQ-2: Violate any air quality standard or contribute substantially to an existing or projected air quality violation.

AQ-3: Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors).

AQ-4: Expose sensitive receptors to substantial pollutant concentrations.

AQ-5: Create objectionable odors affecting a substantial number of people.

South Coast Air Quality Management District Thresholds

The quantifiable thresholds shown below are currently recommended by the SCAQMD and are used to determine the significance of air quality impacts associated with proposed projects.

Regional Air Quality Impacts

Regional significance thresholds recommended by SCAQMD are summarized in Table 4. Individual projects that generate emissions in excess of these mass emissions thresholds would be considered to have a potentially significant impact, which could interfere with regional air quality attainment plans.

Table 4
SCAQMD-Recommended CEQA Significance Thresholds for Coachella Valley

Pollutant	Construction & Operational Emissions (lbs/day)
VOC	75
NO_X	100
CO	550
PM_{10}	150
$PM_{2.5}$	55
SO_X	150

Exposure to Localized Pollutant Concentrations

In addition to the mass emissions thresholds identified above, the SCAQMD has established the following threshold criteria to determine if a project has the potential to contribute to a localized exceedance of the state Ambient Air Quality Standards in the immediate vicinity of the site:

- California State 1-hour CO standard of 20.0 ppm
- California State 8-hour CO standard of 9.0 ppm
- California State 1-hour NO_2 standard of 0.25 ppm
- SCAQMD 24-hour construction PM_{10} LST of 10.4 µg/m^3
- SCAQMD 24-hour construction $PM_{2.5}$ LST of 10.4 µg/m^3
- SCAQMD 24-hour operational PM_{10} LST of 2.5 µg/m^3
- SCAQMD 24-hour operational $PM_{2.5}$ LST of 2.5 µg/m^3

The SCAQMD provides screening criteria that can be relied upon to determine if the daily emissions for proposed construction or operational activities would have a potential to exceed the Localized Significance Thresholds (LSTs). LSTs represent the maximum emissions at a project site that are not expected to cause or contribute to an exceedance of the most stringent federal or state AAQS. LSTs are based on the ambient concentrations of that pollutant within the project area and the distance to the nearest sensitive receptor. An LST analysis for construction activities is applicable to projects five acres, or less, in size; but can be used to screen larger projects to determine whether or not dispersion modeling may be required. If calculated daily emissions are below the LST screening levels the project would be considered to have a less than significant impact.

In addition to the above criteria for evaluation of localized air quality impacts, projects that would result in emissions of carcinogenic or toxic contaminants that exceed the maximum individual cancer risk of 10 in one million or a hazard index of one would be considered to have a potentially significant impact.

Methodology

Short-term emissions associated with construction activities are largely dependent on the type of development proposed, area of ground disturbance, amount of buildings to be demolished, equipment required, and construction schedules. Because much of this information for specific future development projects is unknown at this time, construction-related impacts were qualitatively discussed.

Long-term operational increases in emissions of criteria air pollutants were calculated using the California Emissions Estimator Model (CalEEMod). Modeling was conducted for the proposed Specific Plan based on projected increases in land use types and trip-generation rates identified in the traffic analysis prepared for this project (Kimley-Horn and Associates 2016). Emissions modeling files are provided in Appendix A.

Increased exposure of sensitive land uses to localized concentrations of TACs were qualitatively assessed. Localized concentrations of mobile-source CO were evaluated using the Caline4 computer program in accordance with screening assessment criteria identified in the California Department of Transportation's *Transportation Project-Level Carbon Monoxide Protocol* (Caltrans 1997). Emissions modeling files are provided in Appendix A.

Impacts and Mitigation Measures

Short-term Construction Emissions

Impact AQ-1: *Construction activities associated with future development could result in a considerable increase of criteria air pollutants and precursor pollutants for which the region is designated non-attainment. As a result, this impact is considered* ***potentially significant****.* **[Thresholds AQ-2 and AQ-3]**

Construction of proposed future land uses would generate construction-generated emissions. Construction-generated emissions are short-term and of temporary duration, lasting only as long as activities occur, but possess the potential to represent a significant air quality impact. Construction activities that typically result in short-term emissions may include, but are not limited to, demolition, site grading and excavation, road paving, motor vehicle exhaust associated with construction equipment and worker trips, and the movement of construction equipment, especially on unpaved surfaces. Emissions of airborne particulate matter are largely dependent on the amount of ground disturbance associated with site preparation activities.

As discussed above, there are no specific development requests proposed at this time, and thus no modeling of potential construction emissions was performed. However, future development associated with the proposed Specific Plan would be anticipated to result in an increase in short-term construction-generated emissions. Emissions associated with individual construction projects may exceed the SCAQMD's significance thresholds. Compliance with SCAQMD's rules, regulations, and mitigation measures for the control of construction-generated emissions would help to reduce this impact, but not

necessarily to a less than significant level. As a result, this impact would be considered ***potentially significant***.

Mitigation Measures

MM AQ-1. The City shall require future development projects that are subject to discretionary review to incorporate the following measures:

a. Contractors shall use high-pressure-low-volume (HPLV) paint applicators with a minimum transfer efficiency of at least 50 percent;
b. Use required coatings and solvents with a VOC content lower than required under SCAQMD Rule 1113. To the extent locally available, use zero VOC content paints.
c. Diesel-powered off-road construction equipment (50 hp, or greater) shall meet U.S. EPA Tier 4 emissions standards, to the extent locally available.
d. Idling of all on and off-road diesel-fueled vehicles shall not be permitted when not in use. Signs shall be posted in the designated queuing areas and or job site to remind drivers and operators of the no idling limitation.
e. Fuel all off-road and portable diesel powered equipment with ARB certified motor vehicle diesel fuel (non-taxed version suitable for use off-road);
f. Construction equipment engines shall be maintained in good conditions and properly tuned, in accordance with manufacturer's specifications;
g. Building materials that do not require painting shall be used during construction to the extent available.
h. Use alternatively-fueled (e.g., compressed natural gas, liquefied natural gas, propane, biodiesel) or electrically powered equipment, to the extent locally available.
i. On-road diesel vehicles shall comply with Section 2485 of Title 13 of the California Code of Regulations. This regulation limits idling from diesel-fueled commercial motor vehicles with gross vehicular weight ratings of more than 10,000 pounds and licensed for operation on highways. It applies to California and non-California based vehicles. In general, the regulation specifies that drivers of said vehicles:
j. Shall not idle the vehicle's primary diesel engine for greater than 5 minutes at any location, except as noted in Subsection (d) of the regulation; and,
k. Shall not operate a diesel-fueled auxiliary power system to power a heater, air conditioner, or any ancillary equipment on that vehicle during sleeping or resting in a sleeper berth for greater than 5.0 minutes at any location when within 1,000 feet of a restricted area, except as noted in Subsection (d) of the regulation.
l. All demolition and construction activities that are capable of generating fugitive dust shall be required to implement dust control measures in accordance with SCAQMD Rule 403, Fugitive Dust, and Rule 403.1, Supplemental Fugitive Dust Control Requirements for Coachella Valley Sources. In accordance with SCAQMD requirements, larger construction projects (e.g., activities with a disturbed area of more than 5,000 square feet) may also be required to prepare a fugitive dust control plan. Fugitive dust control measures to be implemented may include, but are not necessarily limited to, the following:
    - All active portions of demolition and construction sites shall be watered twice daily to prevent excessive amounts of dust;
    - Non-toxic soil stabilizers shall be applied to all inactive construction areas (previously graded areas inactive for 20 days or more, assuming no rain),

- according to manufacturers' specifications;
- All excavating and grading operations shall be suspended when wind gusts (as instantaneous gust) exceed 25 miles per hour;
- On-site vehicle speed shall be limited to 15 miles per hour;
- All on-site roads shall be paved as soon as feasible, watered twice daily, or chemically stabilized;
- Visible dust beyond the property line which emanates from the project shall be prevented to the maximum extent feasible;
- All material transported off-site shall be either sufficiently watered or securely covered to prevent excessive amounts of dust prior to departing the job site;
- Track-out devices shall be used at all construction site access points;
- All delivery truck tires shall be watered down and/or scraped down prior to departing the job site;
- For large development projects, a construction relations officer shall be appointed to act as a community liaison concerning on-site construction activity including resolution of issues related to fugitive dust generation;
- Streets shall be swept at the end of the day if visible soil material is carried onto adjacent paved public roads and use of SCAQMD Rule 1186 and 1186.1 certified street sweepers or roadway; and
- Replace ground cover in disturbed areas as quickly as possible.
- All trucks that are to haul excavated or graded material on-site shall comply with State Vehicle Code Section 23114 (Spilling Loads on Highways), with special attention to Sections 23114(b)(F),(e)(4) as amended, regarding the prevention of such material spilling onto public streets and roads.

Significance after Mitigation

Implementation of the above recommended mitigation measures would help to reduce short-term air quality impacts. However, emissions associated with some future development projects could potentially exceed SCAQMD-recommended significance thresholds. As a result, this impact is considered ***significant and unavoidable***.

Long-term Operational Emissions

Impact AQ-2: F*uture development associated with implementation of the proposed Specific Plan could result in a considerable increase of criteria air pollutants and precursor pollutants for which the region is designated non-attainment. As a result, this impact is considered* ***potentially significant.*** **[Thresholds AQ-2 and AQ-3]**

The proposed Specific Plan's estimated buildout potential is summarized in Table 5. As noted, future development within the Project area would result in a mix of land uses that would promote infill and multi-modal transportation.

Table 5
Summary of Proposed Development Potential within the Project Area

Land Use	Unit	Existing	Proposed	Change
Residential Single-Family	DU	26	0	-26
Residential-Condo/Townhouse	DU	76	500	424
General Commercial/ Shopping Center	SF	572,036	420,300	-151,736
Quality Restaurant	SF	0	93,400	93,400
High Turnover Restaurant	SF	0	93,400	93,400
General Office	SF	0	326,900	326,900
Manufacturing	SF	67,138	0	-67,138
Public Institutional	SF	160,058	0	-160,058

DU=Dwelling Units
SF=Square Feet of Floor Area
Source: Kimley-Horn and Associates 2016

Long-term operational emissions associated with existing land uses and future development were quantified using the California Emissions Estimator Model (CalEEMod) and are summarized in Table 6 and Table 7, respectively. Modeling was conducted for both summer and winter operational conditions under future buildout year 2035 conditions.

Table 6
Operational Emissions at Buildout (Year 2035) – Existing Land Uses

Source	Emissions (lbs/day)[1]					
	ROG	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Summer Conditions						
Area	179.9	3.2	204.9	0.4	27.6	27.6
Energy	0.2	1.8	1.2	0.0	0.1	0.1
Mobile	28.2	230.5	275.7	1.7	151.9	41.0
Total:	208.3	235.5	481.8	2.1	179.6	68.7
Winter Conditions						
Area	179.9	3.2	204.9	0.4	27.6	27.6
Energy	0.2	1.8	1.2	0.0	0.1	0.1
Mobile	23.4	226.6	245.3	1.6	151.9	41.0
Total:	203.5	231.6	451.4	2.0	179.6	68.7

1. Totals may not sum due to rounding.
Refer to Appendix A for emissions modeling assumptions and results.

In comparison to existing land uses, as noted in Table 7, buildout of the proposed Specific Plan would result in overall increases of ROG, CO, PM_{10}, and $PM_{2.5}$. Projected increases in emissions are largely a result of changes in emissions associated with the use of wood-burning fireplaces and energy use. Seasonal variations of operational emissions are largely due to varying emission rates for on-road vehicles. It is important to note that SMAQMD's recommended thresholds of significance were established for individual development projects. The thresholds do not apply to cumulative development or multiple projects. Furthermore, actual emissions associated with future development will vary, depending project-specific design, site conditions, and building techniques. Nonetheless, increased emissions of criteria air pollutants and ozone precursors associated with future development could potentially exceed SCAQMD's significance thresholds. In addition, emissions associated with future development may conflict with regional air quality planning efforts for the attainment and

maintenance of ambient air quality standards. As a result, this impact would be considered ***potentially significant***.

Table 7
Operational Emissions at Buildout (Year 2035)
Proposed Specific Plan without Mitigation

Source	Emissions (lbs/day)[1]					
	ROG	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Summer Conditions						
Area	798.1	15.4	985.8	1.7	132.7	132.7
Energy	2.0	17.7	13.5	0.1	1.4	1.4
Mobile	30.7	254.2	284.0	1.7	153.1	41.3
Total:	830.8	287.3	1,283.3	3.5	287.2	175.4
Change Compared to Existing Land Uses:	622.5	51.8	801.5	1.4	107.6	106.7
Winter Conditions						
Area	798.1	15.4	985.8	1.7	132.7	132.7
Energy	2.0	17.7	13.5	0.1	1.4	1.4
Mobile	25.4	249.6	254.8	1.6	153.1	41.4
Total:	825.5	282.7	1,254.1	3.4	287.2	175.5
Change Compared to Existing Land Uses:	*622.0*	*51.1*	*802.7*	*1.4*	*107.6*	*106.8*
SCAQMD Significance Thresholds[3]:	*55*	*55*	*550*	*150*	*150*	*55*

1. Totals may not sum due to rounding.
2. Emissions were quantified based on projected future development potential within the Specific Plan area (refer to Table 5).
3. SMAQMD Significance Thresholds apply to individual projects and are presented for informational purposes only.
Refer to Appendix A for emissions modeling assumptions and results.

Proposed Mitigation

MM AQ-2. The City shall require future development projects that are subject to discretionary review to incorporate emission-reduction measures to address significant long-term regional air quality impacts. Such measures may include, but are not necessarily limited to, the following:

a. Increase building envelope energy efficiency standards in excess of applicable building standards and encourage new development to achieve zero net energy use.
b. Install energy-efficient appliances, interior lighting, and building mechanical systems.
c. Incorporate renewable energy sources in the project design (e.g., solar photovoltaic panels).
d. Install higher efficacy public street and exterior lighting.
e. Use daylight as an integral part of lighting systems in buildings.
f. Use trees, landscaping and sun screens on west and south exterior building walls to reduce energy use.
g. Install light colored "cool" roofs, cool pavements.
h. Install solar and tankless hot water heaters.
i. Encourage energy audits to be performed on residences prior to sale or other transfer of title. Provide prospective owners with recommendations for retrofit measures to be given to the buyer prior to transfer of title.
j. Include mixed-use, infill, and higher density in development projects to support the reduction of vehicle trips, promote alternatives to individual vehicle travel, and promote efficient delivery of services and goods.

k. Limit idling time for commercial vehicles, including delivery and construction vehicles.
l. Prohibit the installation of wood-burning fireplaces and stoves.
m. Incorporate design measures and infrastructure that promotes safe and efficient use of alternative modes of transportation (e.g., neighborhood electric vehicles, bicycles) pedestrian access, and public transportation use. Such measures may include incorporation of electric vehicle charging stations, bike lanes, bicycle-friendly intersections, and bicycle parking and storage facilities.
n. Incorporate design measures that promote ride sharing programs (e.g., by designating a certain percentage of parking spaces for ride sharing vehicles, designating adequate passenger loading and unloading and waiting areas for ride sharing vehicles, and providing a web site or message board for coordinating rides).
o. Incorporate measures that reduce water use (e.g., installation of low-flow fixtures, water-efficient irrigation systems and landscaping)
p. Incorporate measures that reduce waste generation.
q. Encourage new residential development to be constructed to allow for easy implementation of gray water systems that redirect water from washbasins, showers, and tubs for use in toilet flushing, irrigation, and other non-potable uses.

Significance after Mitigation

Implementation of the above recommended mitigation measures would help to reduce overall long-term air quality impacts. For instance, the prohibited use of wood-burning hearths associated with the development of future residential land uses would result in reductions of approximately 765 lbs/day of ROG, 14 lbs/day of NO_X, 945 lbs/day of CO, and roughly 132 lbs/day of PM_{10} and $PM_{2.5}$. Future development would also be subject to newer building standards, which would result in additional emissions reductions associated with energy use, water use, and waste generation. Future development would also be anticipated to incorporate improvements that would promote increased pedestrian access within the area, use of alternative modes of transportation, and increased access to nearby transit services. These measures would help to further reduce mobile-source related emissions. In comparison to existing land uses, the implementation of these mitigation measures would result in overall emissions reductions (refer to Table 8). However, even with mitigation, some individual development projects could potentially exceed SCAQMD-recommended significance thresholds. As a result, this impact is considered ***significant and unavoidable***.

Table 8
Operational Emissions at Buildout (Year 2035)
Proposed Specific Plan with Mitigation

Source	Emissions (lbs/day)[1]					
	ROG	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Summer Conditions						
Area	32.86	0.5	41.2	0.0	0.2	0.2
Energy	2.0	17.7	13.5	0.1	1.4	1.4
Mobile	30.7	254.2	284.0	1.7	153.1	41.3
Total:	65.56	272.4	338.7	1.8	154.7	42.9
Change Compared to Existing Land Uses:	-142.7	36.9	-143.1	-0.3	-24.9	-25.8
Winter Conditions						
Area	32.86	0.5	41.2	0.0	0.2	0.2
Energy	2.0	17.7	13.5	0.1	1.4	1.4
Mobile	25.4	249.6	254.8	1.6	153.1	41.3
Total:	60.26	267.8	309.5	1.7	154.7	42.9
Change Compared to Existing Land Uses:	-143.2	36.2	-141.9	-0.3	-24.9	-25.8
SCAQMD Significance Thresholds[3]:	*55*	*55*	*550*	*150*	*150*	*55*

1. Totals may not sum due to rounding.
2. Emissions were quantified based on projected future development potential within the Project area (refer to Table 5).Includes mitigation measures to provide increased energy and water conservation, use of low VOC paints, prohibited use of wood-burning hearths, increased recycling/diversion of solid waste, and vehicle trip-reductions.
3. SMAQMD Significance Thresholds apply to individual projects and are presented for informational purposes only.
Refer to Appendix A for emissions modeling assumptions and results.

Exposure to Mobile-Source Air Toxics

Impact AQ-3: *Implementation of the proposed Project is not anticipated to result in new major sources of TACs. However, future development associated with implementation of the proposed Specific Plan could result in new sensitive land used located in close proximity to stationary sources of TACs. This impact is considered* ***potentially significant****.* **[Threshold AQ-4]**

As previously discussed, the proposed Specific Plan could result in the development of new residential and commercial land uses within the Planning Area. Subsequent land use activities associated with implementation of the proposed Specific Plan could potentially include short-term, construction sources of toxic air contaminants (TACs) and long-term, operational sources of TACs, including stationary and mobile sources.

Short-Term Exposure

Construction projects can result in short-term increases of TACs, as well as, emissions of airborne fugitive dust. Emissions of DPM emitted from construction vehicles is of particular concern. Exposure to DPM results in a greater incidence of chronic non-cancer health effects, such as cough, labored breathing, chest tightness, wheezing, and bronchitis. However, various other TACs from diesel exhaust also contribute to both cancer and non-cancer health risks. Construction-generated emissions of fine particulate matter ($PM_{2.5}$) can also contribute to significant health impacts, particularly among the more sensitive population groups (i.e., children, elderly, etc.).

The amount of TACs generated during construction of individual projects would vary depending on numerous factors, including the size of the development, the type, age and number of pieces of equipment required, and hours of use. Furthermore, it is anticipated that multiple construction projects could occur simultaneously within a given year and within a given area. Without detailed construction information (i.e., construction schedules, demolition, grading, excavation, and construction requirements), construction-generated emissions of TACs for individual projects cannot be quantified at this time.

Depending on the construction activities required and distances to nearby receptors, it is conceivable that some development projects may be large enough such that the project-level significance thresholds would be exceeded. In the event that a significant impact is identified for an individual project, SCAQMD-recommended mitigation measures would be required to reduce project-related impacts. However, even with mitigation, it may not be possible to reduce potential emissions of TACS and all health-related risks to nearby receptors to levels below the SCAQMD thresholds. As a result, this impact would be considered ***potentially significant***.

Long-Term Exposure

Development of future land uses may include potential stationary sources of TACs, such as diesel-powered emergency-use power generators. The type and level of TAC emissions emitted would depend upon the nature of the land use and the specific methods and operations that involve toxic air emissions. Pursuant to SCAQMD rules and regulations, including SCAQMD Rule 1401 (New Source Review of Toxic Air Contaminants), major stationary sources having the potential to emit TACs would be required to obtain permits from the SCAQMD. Permits may be issued provided the source is constructed and operated in accordance with applicable SCAQMD rules and regulations. Given that compliance with applicable standards and regulations would be required, TAC emissions from new major stationary sources would not be anticipated to result in an increased risk to nearby sensitive receptors that would exceed applicable significance thresholds. However, some proposed projects may include the operation of non-permitted sources of TAC emissions or the location of new sensitive land uses in close proximity to existing stationary sources of emissions.

In addition to the long-term exposure to stationary emission sources, new land uses may also be exposed to emissions from mobile sources. As previously noted in Table 2, major roadways of potential concern with regard to mobile-source TACs typically include roadways with average-daily traffic (ADT) volumes of 100,000 or more. Within the planning area, State Route 91 (SR-111) and Indio Boulevard are considered the primary sources of mobile-source TAC emissions. Existing traffic volumes along these roadways average approximately 25,000 ADT, or less. Under buildout year 2035 conditions, projected future traffic volumes along these same roadway segments would be approximately 30,000 ADT, or less (Kimley-Horn and Associates 2016). No roadways located in the Project area are projected to approach or exceed 100,000 ADT. Because some proposed projects may include the operation of non-permitted sources of TAC emissions or the location of new sensitive land uses in close proximity to existing stationary sources of emissions, this impact would be considered ***potentially significant***.

Mitigation Measures

MM AQ-3. To reduce the potential for short-term exposure of sensitive receptors to TACs emitted during demolition and construction related activities, the following measures shall be implemented:

a. Implement MM AQ-1.
b. Demolition of onsite structures shall comply with SCAQMD Rule 1403, Asbestos Emissions From Demolition/Renovation.
c. If during demolition of existing structures, paint is separated from the construction materials (e.g. chemically or physically), the paint waste will be evaluated independently from the building material by a qualified hazardous materials inspector to determine its proper management. All hazardous materials shall be handled and disposed in accordance with local, state and federal regulations. According to the Department of Toxic Substances Control (DTSC), if paint is not removed from the building material during demolition (and is not chipping or peeling), the material can be disposed of as construction debris (a non-hazardous waste). The landfill operator will be contacted prior to disposal of building material debris to determine any specific requirements the landfill may have regarding the disposal of lead-based paint materials. The disposal of demolition debris shall comply with any such requirements.

MM AQ-4. To reduce long-term exposure of sensitive receptors to localized pollutants**,** the City shall require future development projects that are subject to discretionary review to incorporate measures to address significant long-term local air quality impacts. Such measures may include, but are not necessarily limited to, the following:

a. Ensure that sensitive land uses such as residences, schools, hospitals, hotels, and parks are buffered from stationary emission sources or adequate mitigation incorporated to reduce potentially significant impacts in accordance with SCAQMD-recommended guidance.
b. Designate truck routes to avoid sensitive land uses, where feasible.

Significance after Mitigation

With implementation of MM AQ-3 and MM AQ-4, future development projects would be required to evaluate and mitigate localized air quality impacts, including those resulting in the exposure of sensitive receptors to localized concentrations of TACs. Mitigation measures may include, but are not limited to, the use of setbacks, site design considerations, and emission controls in accordance with SCAQMD permitting requirements. Continued enforcement of SCAQMD Rule 402 would further reduce potential nuisance-related impacts. With implementation of proposed Mitigation Measure___, this impact would be considered ***less than significant***.

Exposure to Mobile-Source Carbon Monoxide

Impact AQ-4: *Implementation of the proposed Specific Plan would not be anticipated to result in mobile-source CO concentrations that would exceed applicable ambient air quality standards. This impact is considered* ***less than significant****.* **[Threshold AQ-4]**

Mobile sources, which are regulated primarily by ARB or U.S. EPA, produce the largest amount of CO emissions in the Basin. The on-road motor vehicle control strategy is primarily based on adopted regulations, such as the 1990 ARB Low-Emission Vehicles and Clean Fuels (LEV/Clean Fuels) regulations, Phase 2 Reformulated Gasoline Program, oxygenated fuel regulation, and enhancements to the Inspection and Maintenance (I/M) or Smog Check program. The emission reductions resulting from these already adopted regulations have helped to reduce CO emissions from mobile sources. However, under specific meteorological and operational conditions, such as near areas of heavily congested vehicle traffic, CO concentrations may reach unhealthy levels. If inhaled, CO can be adsorbed easily by the blood stream and can inhibit oxygen delivery to the body, which can cause significant health effects ranging from slight headaches to death. The most serious effects are felt by individuals susceptible to oxygen deficiencies, including people with anemia and those suffering from chronic lung or heart disease.

Mobile-source emissions of CO are a direct function of traffic volume, speed, and delay. Transport of CO is extremely limited because it disperses rapidly with distance from the source under normal meteorological conditions. For this reason, modeling of mobile-source CO concentrations is typically recommended for sensitive land uses located near signalized roadway intersections that are projected to operate at unacceptable levels of service (i.e., LOS E or F). Based on the traffic analysis prepared for this project, the intersection of Jackson Street/SR-111 is projected to operate at LOS E during build-out year 2035 PM peak-hour conditions.

Mobile-source CO concentrations for the intersection of Jackson Street/SR-111 were quantified using the Caline4 computer program based on peak-hour traffic data derived from the traffic analysis prepared for this Project. To be conservative, 1-hour and 8-hour receptor locations were placed at 3 and 7 meters from the roadway edge, respectively. Background 1-hour and 8-hour CO concentrations were conservatively based on the last year of monitored ambient concentrations obtained from the Palm Springs-Fire Station monitoring station (i.e., 2.0 and 0.7, respectively). Based on the modeling conducted, predicted 1-hour and 8-hour CO concentrations at this intersection would be approximately 2.6 ppm and 1.1 ppm, respectively. Predicted CO concentrations at other intersections, which are projected to operate at acceptable LOS, are anticipated to be less. Predicted 1-hour and 8-hour CO concentrations at roadway intersections are not projected to exceed applicable CAAQS or NAAQS. This impact is considered ***less than significant***.

Mitigation Measures

None required.

Exposure to Odorous Emissions

Impact AQ-5: *Implementation of the proposed Specific Plan could result in the development of new sources of odors. New land uses may result in the frequent exposure of sensitive receptors to nuisance odors. This impact is considered* ***potentially significant****.* **[Threshold AQ-5]**

The occurrence and severity of odor impacts depends on numerous factors, including the nature, frequency, and intensity of the source, wind speed and direction, and the sensitivity of the receptors. While offensive odors rarely cause any physical harm, they still can be very unpleasant, leading to considerable distress among the public and often generating citizen complaints to local governments and regulatory agencies. Projects with the potential to frequently expose members of the public to objectionable odors would be deemed to have a significant impact.

Implementation of the proposed Specific Plan would result in the development of new residential and commercial land uses within the planning area. Residential dwellings are not considered major sources of odorous emissions and no major existing sources of odors were identified in the Project area that occupants of future development would be exposed to on a frequent basis. However, restaurant and commercial uses may include odor-emitting sources. Emission sources commonly associated with commercial uses, such as fast food restaurants (particularly those using charbroiling equipment) and dry-cleaning facilities, are not typically considered major odor emissions sources. Though such sources do not typically affect large numbers of people, sensitive receptors located within close proximity could be exposed to odors on a frequent basis. Odor-generating sources can sometimes reduce impacts by modifying operations or by installing odor-controlling equipment. The SCAQMD has adopted a nuisance rule (Rule 402) that prohibits the discharge of air contaminants that cause "injury, detriment, nuisance or annoyance" to any "considerable number of persons." The rule does not establish a quantitative threshold for odors nor does the rule define "considerable number of persons". Continued enforcement of SCAQMD Rule 402 would help to reduce this impact. In addition, short-term construction activities would create minor and temporary emissions of odors. The predominant sources of construction-generated odors would be the operation of diesel-powered equipment, as well as the application of architectural coatings and asphalt paving. However, because odors associated with such sources would be temporary and would disperse rapidly with distance from the source, construction-generated odors would be considered less than significant. Given that the type and location of future commercial land uses have not yet been identified, the frequent exposure of sensitive receptors to nuisance odors could potentially occur. As a result this impact is considered ***potentially significant***.

Mitigation Measures

Implement MM AQ-4.

With implementation of MM AQ-4, future development projects would be required to evaluate and mitigate localized air quality impacts, including those resulting in the exposure of sensitive receptors to localized concentrations of odors. Mitigation measures may include, but are not limited to, the use of setbacks, site design considerations, and emission controls in accordance with SCAQMD permitting requirements. Continued enforcement of SCAQMD Rule 402 would further reduce potential nuisance-related impacts. With implementation of MM AQ-4, this impact would be considered ***less than significant***.

Consistency with Regional Plans

Impact AQ-6: F*uture development associated with implementation of the proposed Specific Plan could result in a considerable increase of criteria air pollutants and precursor pollutants for which the region is designated non-attainment. Increased emissions may conflict with applicable air quality planning efforts. As a result, this impact is considered* ***potentially significant****.* **[Threshold AQ-1]**

According to SCAQMD's *CEQA Air Quality Handbook* (1993), a review of the project's consistency with the AQMP is required for new or amended general plan elements. The purpose of this consistency determination is to ensure that the growth projections contained in the General Plan or General Plan Update are consistent with the projections upon which the AQMPs are based. There are two key indicators of project consistency, which include: (1) Whether the project would result in an increase in the frequency or severity of existing air quality violations, cause or contribute to new violations, or delay timely attainment of the AAQS or interim emission reductions in the AQMP; and, (2) Whether the project would exceed the growth projections identified in the AQMP.

Consistency Indicator 1

The Coachella Valley is currently designated as a nonattainment area with respect to the state and federal ozone and PM_{10} standards. As noted in Impacts 1 and 2, future development associated with implementation of the proposed Specific Plan could result in increased emissions of regional criteria air pollutants and precursors that would be projected to exceed SCAQMD's project-level significance thresholds. Although these thresholds are intended to apply to individual development projects, future development associated with implementation of the proposed Specific Plan could contribute to an increase in frequency and/or severity of air quality violations, which may delay attainment of the ambient air quality standards. As a result, the proposed Specific Plan would not be consistent with the AQMP under the first indicator.

Consistency Indicator 2

The AQMP is based, in part, on projections in population, employment, and vehicle miles traveled. These estimates are developed by SCAG based largely on projections identified in local and regional plans. As a result, local plans are result in increased population and employment that exceeds SCAG's projections would also be considered to conflict with the AQMP.

In comparison to existing land uses, the proposed Specific Plan would result in the potential for an increased population of approximately 793 individuals and an estimated decrease in employment of roughly 402 individuals. These changes in population and employment within the Project area would not result in overall changes in City-wide population or employment projections that would conflict with those identified by SCAG, upon which SCAG's RTP/SCS and SCAQMD's AQMP are based. As a result, the proposed Specific Plan would be consistent with the AQMP under the second indicator.

Impact Summary

Implementation of the proposed Specific Plan would not result in increased population or employment growth that would conflict with those identified by SCAG, upon which SCAG's RTP/SCS and SCAQMD's AQMP are based. However, future development associated with implementation of the proposed Specific Plan could result in increased emissions of regional criteria air pollutants and precursors that

would be projected to exceed SCAQMD's project-level significance thresholds. This would be considered a ***potentially significant*** impact.

Mitigation Measures

Implement MM AQ-1 and MM AQ-2.

Significance after Mitigation

Implementation of MM AQ-1 and MM AQ-2 would help to reduce overall construction and operational emissions. However, emissions associated with some future development projects could potentially exceed SCAQMD-recommended significance thresholds. As a result, this impact is considered ***significant and unavoidable***.

Cumulative Impacts

The project is located within the SSAB, which is considered the geographic context for cumulative air quality impacts associated with implementation of the proposed Specific Plan.

Cumulative Short-term Air Quality Impacts

Impact AQ-7: F*uture development associated with implementation of the proposed Specific Plan could result in a considerable increase in construction-related pollutants and precursors for which the region is designated non-attainment. Increased emissions may conflict with applicable air quality planning efforts resulting in a potentially significant and cumulatively considerable air quality impact.* **[Threshold AQ-3]**

As noted in *Impact AQ-1*, future development associated with the proposed Specific Plan would be anticipated to result in an increase in short-term construction-generated emissions. Emissions associated with individual construction projects may exceed the SCAQMD's significance thresholds. Compliance with SCAQMD's rules, regulations, and mitigation measures for the control of construction-generated emissions would help to reduce this impact, but not necessarily to a less than significant level. At the project level, project's that are determined to have a potentially significant air quality impact to regional air quality would generally be considered to result in a potentially significant cumulative contribution to regional air quality impacts. As a result, this impact would be considered ***potentially significant and cumulatively considerable***.

Implementation of MM *AQ-1*, would help to reduce short-term air quality impacts. However, emissions associated with some future development projects could potentially exceed SCAQMD-recommended significance thresholds. As a result, this impact is considered ***significant and unavoidable***.

Cumulative Long-term Air Quality Impacts

Impact AQ-8: F*uture associated with implementation of the proposed Specific Plan could result in a considerable increase in operational pollutants and precursors for which the region is designated non-attainment. Increased emissions may conflict with applicable air quality planning efforts resulting in a potentially significant and cumulatively considerable air quality impact.* **[Threshold AQ-3]**

As noted in *Impact AQ-2*, increased emissions of criteria air pollutants associated with future development could potentially exceed SCAQMD's significance thresholds. As a result, emissions associated with future development may conflict with regional air quality planning efforts for the attainment and maintenance of ambient air quality standards. As a result, implementation of the proposed Specific Plan would be considered to have a potentially significant cumulative contribution to regional air quality impacts. As a result, this impact would be considered ***potentially significant and cumulatively considerable****.*

Implementation of the MM *AQ-2*, would help to reduce long-term air quality impacts. However, emissions associated with some future development projects could potentially exceed SCAQMD-recommended significance thresholds. As a result, this impact is considered ***significant and unavoidable***.

Cumulative Localized Air Quality Impacts

Impact AQ-9: F*uture development associated with implementation of the proposed Specific Plan would not be anticipated to result in an increased cumulative exposure of sensitive land uses to localized pollutant concentrations. This impact is considered* ***less than significant****.* **[Threshold AQ-3]**

The proposed future development associated with implementation of the proposed Specific Plan could result in the installation of new stationary sources of TACs or odors. Continued compliance with SCAQMD rules and regulations would help to ensure that emissions from individual stationary sources associated with future development would not exceed applicable air quality standards or result in significant impacts to nearby receptors. In addition, implementation of the MM *AQ-3*, would help to reduce localized air quality impacts associated with future individual development projects and no major existing stationary sources of TACs or odors have been identified in the Specific Plan area. For these reasons, this impact would be considered ***less than significant****.*

GREENHOUSE GASES AND CLIMATE CHANGE

EXISTING SETTING

To fully understand global climate change, it is important to recognize the naturally occurring "greenhouse effect" and to define the greenhouse gases (GHGs) that contribute to this phenomenon. Various gases in the earth's atmosphere, classified as atmospheric GHGs, play a critical role in determining the earth's surface temperature. Solar radiation enters the earth's atmosphere from space and a portion of the radiation is absorbed by the earth's surface. The earth emits this radiation back toward space, but the properties of the radiation change from high-frequency solar radiation to lower-frequency infrared radiation. Greenhouse gases, which are transparent to solar radiation, are effective in absorbing infrared radiation. As a result, this radiation that otherwise would have escaped back into space is now retained, resulting in a warming of the atmosphere. This phenomenon is known as the greenhouse effect. Among the prominent GHGs contributing to the greenhouse effect are carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. Primary GHGs attributed to global climate change, are discussed, as follows:

- **Carbon Dioxide**. Carbon dioxide (CO_2) is a colorless, odorless gas. CO_2 is emitted in a number of ways, both naturally and through human activities. The largest source of CO_2 emissions globally is the combustion of fossil fuels such as coal, oil, and gas in power plants, automobiles, industrial facilities, and other sources. A number of specialized industrial production processes and product uses such as mineral production, metal production, and the use of petroleum-based products can also lead to CO_2 emissions. The atmospheric lifetime of CO_2 is variable because it is so readily exchanged in the atmosphere (U.S. EPA 2016).

- **Methane**. Methane (CH_4) is a colorless, odorless gas that is not flammable under most circumstances. CH_4 is the major component of natural gas, about 87% by volume. It is also formed and released to the atmosphere by biological processes occurring in anaerobic environments. Methane is emitted from a variety of both human-related and natural sources. Human-related sources include fossil fuel production, animal husbandry (enteric fermentation in livestock and manure management), rice cultivation, biomass burning, and waste management. These activities release significant quantities of methane to the atmosphere. Natural sources of methane include wetlands, gas hydrates, permafrost, termites, oceans, freshwater bodies, non-wetland soils, and other sources such as wildfires. Methane's atmospheric lifetime is about 12 years (U.S. EPA 2016).

- **Nitrous Oxide**. Nitrous oxide (N_2O) is a clear, colorless gas with a slightly sweet odor. N_2O is produced by both natural and human-related sources. Primary human-related sources of N_2O are agricultural soil management, animal manure management, sewage treatment, mobile and stationary combustion of fossil fuels, adipic acid production, and nitric acid production. N_2O is also produced naturally from a wide variety of biological sources in soil and water, particularly microbial action in wet tropical forests. The atmospheric lifetime of N_2O is approximately 120 years (U.S. EPA 2016).

- **Hydrofluorocarbons.** Hydrofluorocarbons (HFCs) are man-made chemicals, many of which have been developed as alternatives to ozone-depleting substances for industrial, commercial, and consumer products. The only significant emissions of HFCs before 1990 were of the chemical HFC-23, which is generated as a byproduct of the production of HCFC-22 (or Freon 22, used in air

conditioning applications). The atmospheric lifetime for HFCs varies from just over a year for HFC-152a to 260 years for HFC-23. Most of the commercially used HFCs have atmospheric lifetimes of less than 15 years (e.g., HFC-134a, which is used in automobile air conditioning and refrigeration, has an atmospheric life of 14 years) (U.S. EPA 2016).

- **Perfluorocarbons.** Perfluorocarbons (PFCs) are colorless, highly dense, chemically inert, and nontoxic. There are seven PFC gases: perfluoromethane (CF_4), perfluoroethane (C_2F_6), perfluoropropane (C_3F_8), perfluorobutane (C_4F_{10}), perfluorocyclobutane (C_4F_8), perfluoropentane (C_5F_{12}), and perfluorohexane (C_6F1_4). Natural geological emissions have been responsible for the PFCs that have accumulated in the atmosphere in the past; however, the largest current source is aluminum production, which releases CF_4 and C_2F_6 as byproducts. The estimated atmospheric lifetimes for CF_4 and C_2F_6 are 50,000 and 10,000 years, respectively (U.S. EPA 2016).

- **Nitrogen Trifluoride**. Nitrogen trifluoride (NF_3) is an inorganic, colorless, odorless, toxic, nonflammable gas used as an etchant in microelectronics. Nitrogen trifluoride is predominantly employed in the cleaning of the plasma-enhanced chemical vapor deposition chambers in the production of liquid crystal displays and silicon-based thin film solar cells. It has a global warming potential of 17,200 carbon dioxide equivalents (CO_2e). While NF_3 may have a lower global warming potential than other chemical etchants, it is still a potent GHG. In 2009, NF_3 was listed by California as a high global warming potential GHG to be listed and regulated under Assembly Bill (AB) 32 (Section 38505 Health and Safety Code).

- **Sulfur Hexafluoride**. Sulfur hexafluoride (SF_6) is an inorganic compound that is colorless, odorless, nontoxic, and generally nonflammable. SF_6 is primarily used as an electrical insulator in high voltage equipment. The electric power industry uses roughly 80% of all SF_6 produced worldwide. Leaks of SF_6 occur from aging equipment and during equipment maintenance and servicing. SF_6 has an atmospheric life of 3,200 years (U.S. EPA 2016).

- **Black Carbon**. Black carbon is the most strongly light-absorbing component of particulate matter (PM) emitted from burning fuels such as coal, diesel, and biomass. Black carbon contributes to climate change both directly by absorbing sunlight and indirectly by depositing on snow and by interacting with clouds and affecting cloud formation. Black carbon is considered a short-lived species, which can vary spatially and, consequently, it is very difficult to quantify associated global-warming potentials. The main sources of black carbon in California are wildfires, off-road vehicles (locomotives, marine vessels, tractors, excavators, dozers, etc.), on-road vehicles (cars, trucks, and buses), fireplaces, agricultural waste burning, and prescribed burning (planned burns of forest or wildlands). California has been an international leader in reducing emissions of black carbon, with close to 95 percent control expected by 2020 due to existing programs that target reducing PM from diesel engines and burning activities (ARB 2016b).

Each GHG differs in its ability to absorb heat in the atmosphere based on the lifetime, or persistence, of the gas molecule in the atmosphere. Often, estimates of GHG emissions are presented in carbon dioxide equivalents (CO_2e), which weight each gas by its global warming potential (GWP). Expressing GHG emissions in carbon dioxide equivalents takes the contribution of all GHG emissions to the greenhouse effect and converts them to a single unit equivalent to the effect that would occur if only CO_2 were being emitted. Table 9 provides a summary of the GWP for GHG emissions of typical concern with regard to community development projects, based on a 100-year time horizon. As indicated, Methane

traps over 25 times more heat per molecule than CO_2, and N_2O absorbs roughly 298 times more heat per molecule than CO_2. Additional GHG with high GWP include Nitrogen trifluoride, Sulfur hexafluoride, Perfluorocarbons, and black carbon.

Table 9
Global Warming Potential for Greenhouse Gases

Greenhouse Gas	Global Warming Potential (100-year)
Carbon Dioxide (CO_2)	1
Methane (CH_4)	25
Nitrous Dioxide (N_2O)	298

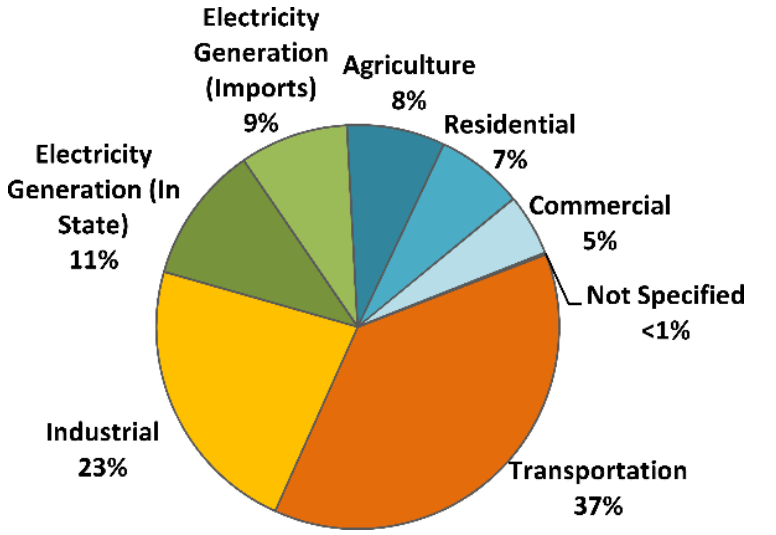
**Based on IPCC GWP values for 100-year time horizon*
Source: IPCC 2007

Sources of GHG Emissions

On a global scale, GHG emissions are predominantly associated with activities related to energy production; changes in land use, such as deforestation and land clearing; industrial sources; agricultural activities; transportation; waste and wastewater generation; and commercial and residential land uses. World-wide, energy production including the burning of coal, natural gas, and oil for electricity and heat is the largest single source of global GHG emissions (U.S. EPA 2008, 2015).

In 2013, GHG emissions within California totaled 459 million metric tons (MMT) of CO_2e. GHG emissions, by sector, are summarized in Figure 1. Within California, the transportation sector is the largest contributor, accounting for approximately 37 percent of the total state-wide GHG emissions. Emissions associated with industrial uses are the second largest contributor, totaling roughly 23 percent. Electricity generation totaled roughly 20 percent (ARB 2016b).

Figure 1
California Greenhouse Gas Emissions Inventory



Source: ARB 2016b.

Effects of Global Climate Change

There are uncertainties as to exactly what the climate changes will be in various local areas of the earth. There are also uncertainties associated with the magnitude and timing of other consequences of a warmer planet: sea level rise, spread of certain diseases out of their usual geographic range, the effect on agricultural production, water supply, sustainability of ecosystems, increased strength and frequency of storms, extreme heat events, increased air pollution episodes, and the consequence of these effects on the economy.

Within California, climate changes would likely alter the ecological characteristics of many ecosystems throughout the state. Such alterations would likely include increases in surface temperatures and changes in the form, timing, and intensity of precipitation. For instance, historical records are depicting an increasing trend toward earlier snowmelt in the Sierra Nevada. This snow pack is a principal supply of water for the state, providing roughly 50 percent of state's annual runoff. If this trend continues, some areas of the state may experience an increased danger of floods during the winter months and possible exhaustion of the snowpack during spring and summer months. An earlier snowmelt would also impact the State's energy resources. Currently, approximately 20 percent of California's electricity comes from hydropower. An early exhaustion of the Sierra snowpack, may force electricity producers to switch to more costly or non-renewable forms of electricity generation during spring and summer months. A changing climate may also impact agricultural crop yields, coastal structures, and biodiversity. As a result, resultant changes in climate will likely have detrimental effects on some of California's largest industries, including agriculture, wine, tourism, skiing, recreational and commercial fishing, and forestry.

REGULATORY FRAMEWORK

Federal

Executive Order 13514

Executive Order 13514 is focused on reducing GHGs internally in federal agency missions, programs and operations, but also direct federal agencies to participate in the Interagency Climate Change Adaptation Task Force, which is engaged in developing a national strategy for adaptation to climate change (Caltrans 2016).

On April 2, 2007, in Massachusetts v. U.S. EPA, 549 U.S. 497 (2007), the Supreme Court found that GHGs are air pollutants covered by the Clean Air Act and that the U.S. EPA has the authority to regulate GHG. The Court held that the U.S. EPA Administrator must determine whether or not emissions of GHGs from new motor vehicles cause or contribute to air pollution which may reasonably be anticipated to endanger public health or welfare, or whether the science is too uncertain to make a reasoned decision (Caltrans 2016).

On December 7, 2009, the U.S. EPA Administrator signed two distinct findings regarding GHGs under section 202(a) of the Clean Air Act:

- Endangerment Finding: The Administrator found that the current and projected concentrations of the six key well-mixed GHGs (CO_2, CH_4, N_2O, HFCs, PFCs, and SF_6) in the atmosphere threaten the public health and welfare of current and future generations.

- Cause or Contribute Finding: The Administrator found that the combined emissions of these well-mixed GHGs from new motor vehicles and new motor vehicle engines contribute to the GHG pollution which threatens public health and welfare.

Although these findings did not themselves impose any requirements on industry or other entities, this action was a prerequisite to finalizing the U.S. EPA's Proposed Greenhouse Gas Emission Standards for Light-Duty Vehicles, which was published on September 15, 2009. On May 7, 2010 the final Light-Duty Vehicle Greenhouse Gas Emissions Standards and Corporate Average Fuel Economy Standards was published in the Federal Register.

U.S. EPA and the National Highway Traffic Safety Administration (NHTSA) are taking coordinated steps to enable the production of a new generation of clean vehicles with reduced GHG emissions and improved fuel efficiency from on-road vehicles and engines. These next steps include developing the first-ever GHG regulations for heavy-duty engines and vehicles, as well as additional light-duty vehicle GHG regulations. These steps were outlined by President Obama in a Presidential Memorandum on May 21, 2010.

The final combined U.S. EPA and NHTSA standards that make up the first phase of this national program apply to passenger cars, light-duty trucks, and medium-duty passenger vehicles, covering model years 2012 through 2016. The standards require these vehicles to meet an estimated combined average emissions level of 250 grams of CO_2 per mile, (the equivalent to 35.5 miles per gallon if the automobile industry were to meet this CO_2 level solely through fuel economy improvements). Together, these standards will cut GHG emissions by an estimated 960 million metric tons and 1.8 billion barrels of oil over the lifetime of the vehicles sold under the program (model years 2012-2016). On August 28, 2012, U.S. EPA and NHTSA issued their joint rule to extend this national program of coordinated greenhouse gas and fuel economy standards to model years 2017 through 2025 passenger vehicles (Caltrans 2016).

State

Assembly Bill 1493

AB 1493 (Pavley) of 2002 (Health and Safety Code Sections 42823 and 43018.5) requires the ARB to develop and adopt the nation's first GHG emission standards for automobiles. These standards are also known as Pavley I. The California Legislature declared in AB 1493 that global warming is a matter of increasing concern for public health and the environment. It cites several risks that California faces from climate change, including a reduction in the state's water supply, an increase in air pollution caused by higher temperatures, harm to agriculture, an increase in wildfires, damage to the coastline, and economic losses caused by higher food, water, energy, and insurance prices. The bill also states that technological solutions to reduce GHG emissions would stimulate California's economy and provide jobs. In 2004, the State of California submitted a request for a waiver from federal clean air regulations, as the State is authorized to do under the Clean Air Act, to allow the State to require reduced tailpipe emissions of CO_2. In late 2007, the U.S. EPA denied California's waiver request and declined to promulgate adequate federal regulations limiting GHG emissions. In early 2008, the State brought suit against the U.S. EPA related to this denial.

In January 2009, President Obama instructed the U.S. EPA to reconsider the Bush Administration's denial of California's and 13 other states' requests to implement global warming pollution standards for cars and trucks. In June 2009, the U.S. EPA granted California's waiver request, enabling the State to enforce its GHG emissions standards for new motor vehicles beginning with the current model year.

Also in 2009, President Obama announced a national policy aimed at both increasing fuel economy and reducing GHG pollution for all new cars and trucks sold in the US. The new standards would cover model years 2012 to 2016 and would raise passenger vehicle fuel economy to a fleet average of 35.5 miles per gallon by 2016. When the national program takes effect, California has committed to allowing automakers who show compliance with the national program to also be deemed in compliance with state requirements. California is committed to further strengthening these standards beginning in 2017 to obtain a 45 percent GHG reduction from the 2020 model year vehicles.

Executive Order S-6-06

Executive Order S-6-06 (State of California), signed on April 25, 2006, established two primary goals related to the use of biofuels within California, including: (1) by 2010, 20 percent of its biofuels need to be produced within California; increasing to 40 percent by 2020 and 75 percent by 2050; and (2) by 2010, 20 percent of the renewable electricity should be generated from biomass resources within the state, maintaining this level through 2020.

Executive Order No. S-3-05

Executive Order S-3-05 (State of California) proclaims that California is vulnerable to the impacts of climate change. It declares that increased temperatures could reduce the Sierra's snowpack, further exacerbate California's air quality problems, and potentially cause a rise in sea levels. To combat those concerns, the Executive Order established total greenhouse gas emission targets. Specifically, emissions are to be reduced to the 2000 level by 2010, to the 1990 level by 2020, and to 80 percent below the 1990 level by 2050.

The Executive Order directed the secretary of the California Environmental Protection Agency (CalEPA) to coordinate a multi-agency effort to reduce greenhouse gas emissions to the target levels. The secretary will also submit biannual reports to the governor and state legislature describing (1) progress made toward reaching the emission targets, (2) impacts of global warming on California's resources, and (3) mitigation and adaptation plans to combat these impacts. To comply with the Executive Order, the secretary of CalEPA created a Climate Action Team made up of members from various state agencies and commissions. The Climate Action Team released its first report in March 2006 and continues to release periodic reports on progress. The report proposed to achieve the targets by building on voluntary actions of California businesses, local government and community actions, as well as through state incentive and regulatory programs.

Assembly Bill 32 - California Global Warming Solutions Act of 2006

AB 32 (Health and Safety Code Sections 38500, 38501, 28510, 38530, 38550, 38560, 38561–38565, 38570, 38571, 38574, 38580, 38590, 38592–38599) requires that statewide GHG emissions be reduced to 1990 levels by the year 2020. The gases that are regulated by AB 32 include carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, nitrogen trifluoride, and sulfur hexafluoride. The reduction to 1990 levels will be accomplished through an enforceable statewide cap on GHG emissions that will be phased in starting in 2012. To effectively implement the cap, AB 32 directs ARB to develop

and implement regulations to reduce statewide GHG emissions from stationary sources. AB 32 specifies that regulations adopted in response to AB 1493 should be used to address GHG emissions from vehicles. However, AB 32 also includes language stating that if the AB 1493 regulations cannot be implemented, then ARB should develop new regulations to control vehicle GHG emissions under the authorization of AB 32.

AB 32 requires that ARB adopt a quantified cap on GHG emissions representing 1990 emissions levels and disclose how it arrives at the cap, institute a schedule to meet the emissions cap, and develop tracking, reporting, and enforcement mechanisms to ensure that the state achieves reductions in GHG emissions necessary to meet the cap. AB 32 also includes guidance to institute emissions reductions in an economically efficient manner and conditions to ensure that businesses and consumers are not unfairly affected by the reductions.

Climate Change Scoping Plan

In October 2008, ARB published its Climate Change Proposed Scoping Plan, which is the State's plan to achieve GHG reductions in California required by AB 32. The Scoping Plan contains the main strategies California will implement to achieve reduction of 169 million metric tons of CO_2e, or approximately 30 percent from the state's projected 2020 emissions level of 596 $MMTCO_2e$ under a business-as-usual scenario (this is a reduction of 42 $MMTCO_2e$, or almost 10 percent, from 2002–2004 average emissions). The Scoping Plan also includes ARB-recommended GHG reductions for each emissions sector of the state's GHG inventory. The largest proposed GHG reduction recommendations are from improving emissions standards for light-duty vehicles (estimated reductions of 31.7 $MMTCO_2e$), implementation of the Low Carbon Fuel Standard (15.0 $MMTCO_2e$) program, energy efficiency measures in buildings and appliances and the widespread development of combined heat and power systems (26.3 $MMTCO_2e$), and a renewable portfolio standard for electricity production (21.3 $MMTCO_2e$). The Scoping Plan identifies the local equivalent of AB 32 targets as a 15 percent reduction below baseline GHG emissions level, with baseline interpreted as GHG emissions levels between 2003 and 2008.

A key component of the Scoping Plan is the Renewable Portfolio Standard, which is intended to increase the percentage of renewables in California's electricity mix to 33 percent by year 2020, resulting in a reduction of 21.3 $MMTCO_2e$. Sources of renewable energy include, but are not limited to, biomass, wind, solar, geothermal, hydroelectric, and anaerobic digestion. Increasing the use of renewables will decrease California's reliance on fossil fuels, thus reducing GHG emissions.

The Scoping Plan states that land use planning and urban growth decisions will play important roles in the state's GHG reductions because local governments have primary authority to plan, zone, approve, and permit how land is developed to accommodate population growth and the changing needs of their jurisdictions. (Meanwhile, ARB is also developing an additional protocol for community emissions.) ARB further acknowledges that decisions on how land is used will have large impacts on the GHG emissions that will result from the transportation, housing, industry, forestry, water, agriculture, electricity, and natural gas emissions sectors. The Scoping Plan states that the ultimate GHG reduction assignment to local government operations is to be determined. With regard to land use planning, the Scoping Plan expects approximately 5.0 $MMTCO_2e$ will be achieved associated with implementation of Senate Bill 375, which is discussed further below. The Climate Change Proposed Scoping Plan was approved by ARB on December 11, 2008.

The First Update of the Scoping Plan was approved by the ARB on May 22, 2014, which looked past 2020 to set mid-term goals (2030-2035) on the road to reaching the 2050 goals.

Senate Bill 1368

Senate Bill (SB) 1368 (codified at Public Utilities Code Chapter 3) is the companion bill of AB 32. SB 1368 required the California Public Utilities Commission (CPUC) to establish a GHG emissions performance standard for baseload generation from investor-owned utilities by February 1, 2007. The bill also required the California Energy Commission (CEC) to establish a similar standard for local publicly owned utilities by June 30, 2007. These standards cannot exceed the GHG emission rate from a baseload combined-cycle natural-gas-fired plant. The legislation further requires that all electricity provided to California, including imported electricity, must be generated from plants that meet the standards set by the CPUC and the CEC.

Senate Bill 97

SB 97 was signed in August 2007 and acknowledged that climate change was a prominent environmental issue that required analysis under CEQA. This bill directed the Governor's Office of Planning and Research (OPR), which is part of the State Natural Resources Agency, to prepare, develop, and transmit to ARB guidelines for the feasible mitigation of GHG emissions (or the effects of GHG emissions), as required by CEQA. The CEQA Guidelines Amendments became effective on March 18, 2010.

Senate Bill 1078 and Governor's Order S-14-08 (California Renewables Portfolio Standards)

Senate Bill 1078 (Public Utilities Code Sections 387, 390.1, 399.25 and Article 16) addresses electricity supply and requires that retail sellers of electricity, including investor-owned utilities and community choice aggregators, provide a minimum 20 percent of their supply from renewable sources by 2017. This Senate Bill will affect statewide GHG emissions associated with electricity generation. In 2008, Governor Schwarzenegger signed Executive Order S-14-08, which set the Renewables Portfolio Standard target to 33 percent by 2020. It directed state government agencies and retail sellers of electricity to take all appropriate actions to implement this target. Executive Order S-14-08 was later superseded by Executive Order S-21-09 on September 15, 2009. Executive Order S-21-09 directed the ARB to adopt regulations requiring 33 percent of electricity sold in the State come from renewable energy by 2020. This Executive Order was superseded by statute SB X1-2 in 2011, which obligates all California electricity providers, including investor-owned utilities and publicly owned utilities, to obtain at least 33 percent of their energy from renewable electrical generation facilities by 2020, with interim targets of 20 percent by 2013 and 25 percent by 2016.

ARB is required by current law, AB 32 of 2006, to regulate sources of GHGs to meet a state goal of reducing greenhouse gas emissions to 1990 levels by 2020 and an 80 percent reduction of 1990 levels by 2050. The CEC and CPUC serve in advisory roles to help ARB develop the regulations to administer the 33 percent by 2020 requirement. ARB is also authorized to increase the target and accelerate and expand the time frame.

Senate Bill 350

SB 350 was signed into law in October 2015. SB 350 reduces GHG emissions and addressing climate change through several key areas, including an increase in the renewables portfolio standard (RPS), higher energy efficiency requirements for buildings, initial strategies towards a regional electricity grid,

and improved infrastructure for electric vehicle charging stations. Specifically, SB 350 requires the following to reduce statewide GHG emissions:

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

Senate Bill 375

SB 375 requires Metropolitan Planning Organizations (MPOs) to adopt a sustainable communities strategy (SCS) or alternative planning strategy (APS) that will address land use allocation in that MPOs regional transportation plan. ARB, in consultation with MPOs, establishes regional reduction targets for GHGs emitted by passenger cars and light trucks 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. ARB is also charged with reviewing each MPO's SCS or APS for consistency with its assigned targets. If MPOs do not meet the GHG reduction targets, funding for transportation projects may be withheld.

Mandatory Reporting of Greenhouse Gas Emissions

Reporting of greenhouse gases by major sources is required by the California Global Warming Solutions Act (AB 32, 2006). Revisions to the existing ARB mandatory GHG reporting regulation were considered at the board hearing on December 16, 2010. The revised regulation was approved by the California Office of Administrative Law and became effective on January 1, 2012. The revised regulation affects industrial facilities, suppliers of transportation fuels, natural gas, natural gas liquids, liquefied petroleum gas, and carbon dioxide, operators of petroleum and natural gas systems, and electricity retail providers and marketers.

Cap-and-Trade Regulation

The cap-and-trade regulation is a key element in California's climate plan. It sets a statewide limit on sources responsible for 85 percent of California's greenhouse gas emissions, and establishes a price signal needed to drive long-term investment in cleaner fuels and more efficient use of energy. The cap-and-trade rules came into effect on January 1, 2013 and apply to large electric power plants and large industrial plants. In 2015, they will extend to fuel distributors (including distributors of heating and transportation fuels). At that stage, the program will encompass around 360 businesses throughout California and nearly 85 percent of the state's total greenhouse gas emissions.

Under the cap-and-trade regulation, companies must hold enough emission allowances to cover their emissions, and are free to buy and sell allowances on the open market. California held its first auction of greenhouse gas allowances on November 14, 2012. California's GHG cap-and-trade system will reduce GHG emissions from regulated entities by approximately 16 percent, or more, by 2020.

California Building Code

The California Building Code contains standards that regulate the method of use, properties, performance, or types of materials used in the construction, alteration, improvement, repair, or rehabilitation of a building or other improvement to real property. The California Building Code is adopted every three years by the Building Standards Commission (BSC). In the interim, the BSC also adopts annual updates to make necessary mid-term corrections. The CBC standards apply statewide; however, a local jurisdiction may amend a CBC standard if it makes a finding that the amendment is reasonably necessary due to local climatic, geological, or topographical conditions.

Green Building Standards

In essence, green buildings standards are indistinguishable from any other building standards. Both are contained in the California Building Code and regulate the construction of new buildings and improvements. The only practical distinction between the two is that whereas the focus of traditional building standards has been protecting public health and safety, the focus of green building standards is to improve environmental performance.

AB 32, which mandates the reduction in greenhouse gas emissions in California to 1990 levels by 2020, increased the urgency around the adoption of green building standards. In its scoping plan for the implementation of AB 32, ARB identified energy use as the second largest contributor to California's GHG emissions, constituting roughly 25 percent of all such emissions. In recommending a green building strategy as one element of the scoping plan, ARB estimated that green building standards would reduce GHG emissions by approximately 26 million metric tons of CO_2e ($MMTCO_2e$) by 2020.

The green buildings standards were most recently updated in 2013. The 2013 building energy efficiency standards are 25 percent more efficient than previous standards for residential construction and 30 percent more efficient for non-residential construction (CEC 2016).

Regional

2016-2040 Regional Transportation Plan/Sustainable Communities Strategy

On April 7, 2016, the Regional Council of the Southern California Association of Governments (SCAG) adopted the *2016-2040 Regional Transportation Plan/Sustainable Communities Strategy* (RTP/SCS). California's Sustainable Communities and Climate Protection Act, or Senate Bill (SB) 375, requires SCAG to develop a Sustainable Communities Strategy (SCS) to reduce greenhouse gas (GHG) emissions from automobiles and light trucks through integrated transportation, land use, housing, and environmental planning. The SCS provides a plan for meeting the greenhouse gas emission-reduction targets set by the ARB for the SCAG region. The *2016-2040 RTP/SCS* has been designed to achieve minimum GHG reductions (below 2005 levels) of 8 percent by 2020, 18 percent by 2035, and 21 percent by 2040.

This goals of the *2016-2040 RTP/SCS* are intended to help carry out our vision for improved mobility, a strong economy and sustainability. The goals of the *2016-2040 RTP/SCS* are as follows:

- Align the plan investments and policies with improving regional economic development and competitiveness
- Maximize mobility and accessibility for all people and goods in the region
- Ensure travel safety and reliability for all people and goods in the region
- Preserve and ensure a sustainable regional transportation system

- Maximize the productivity of our transportation system
- Protect the environment and health of our residents by improving air quality and encouraging active transportation (non-motorized transportation, such as bicycling and walking)
- Actively encourage and create incentives for energy efficiency, where possible
- Encourage land use and growth patterns that facilitate transit and non-motorized transportation
- Maximize the security of the regional transportation system through improved system monitoring, rapid recovery planning, and coordination with other security agencies

Local

City of Indio 2010 GHG Emissions Inventory

In 2012, following the Local Governments for Sustainability (formerly the International Council for Local Environmental Initiatives) (ICLEI)/Statewide Energy Efficiency Collaborative (SEEC) protocol, the City prepared a community-wide GHG emissions inventory. The intent of the inventory was to take stock of emission sources and sectors in order to identify policies that would further reduce GHG emissions in the City. Based on this inventory, annual community-wide GHG emissions totaled 610,340 MTCO2e. Residential and commercial energy use constituted a majority of the GHG emissions accounting for roughly 66 % of the total GHG emissions inventory; whereas, mobile sources constituted approximately 25% of the inventory. Solid waste, water and wastewater, and fugitive emissions sources constituted the remaining approximately 9 percent of the City's GHG emissions inventory (City of Indio 2016a,b).

City of Indio Proposed General Plan Update/Climate Action Plan

The City of Indio is currently in the process of preparing the City of Indio General Plan Update (GPU). As part of this effort, the City is also preparing a Climate Action Plan (CAP). The City of Indio GPU and CAP include various measures to reduce GHG emissions from various sectors and emission sources, including transportation, waste generation, water use and energy use. The purpose of the CAP includes the following objectives (City of Indio 2015):

- Inspire municipal and community climate protection
- Demonstrate that the City is doing its part to meet State mandates (Executive Order S-3-05, AB 32, SB 375, Executive Order S-3-08)
- Provide a roadmap for pursuing community-wide and municipal reductions in GHG emissions
- Streamline GHG analysis for development undergoing CEQA review

ENVIRONMENTAL IMPACTS

Significance Threshold Criteria

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project would:

GHG-1: Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.

GHG-2: Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

At present time, SCAQMD has not yet adopted GHG thresholds for the assessment of project- or plan-level GHG impacts. The SCAQMD is considering a tiered approach to determine the significance of residential and commercial projects. However, the SCAQMD has prepared draft thresholds, which were initially released in October 2008 with subsequent revisions to these draft thresholds released in November 2009. Based on these draft thresholds, At the plan-level, a project would be considered to have a significant impact if emissions would exceed an efficiency target of 6.6 MTCO2e per service population (SP) per year. Service population is typically defined as the total population and employment growth associated with the project. The SCAQMD has not announced when the finalized version of the draft GHG thresholds will be presented to the SCAQMD Governing Board for adoption.

As previously noted, the City of Indio is in the process of preparing the City of Indio GPU and CAP. Although not yet adopted, the CAP establishes a GHG emission target of 5.9 MT CO_2e/capita for year 2030. Based on the analysis prepared for the City's GPU, this target threshold would equate to a service population threshold of 4.5 $MTCO_2e$/SP for 2030 (City of Indio 2016b). This threshold is lower than the SCAQMD's draft threshold of 6.6 $MTCO_2e$/SP. Therefore, to ensure a conservative analysis, Project-generated GHG emissions were evaluated in comparison to the City's threshold of 4.5 $MTCO_2e$/SP. The significance of the project's consistency with an applicable plan was evaluated in comparison to the GHG-reduction measures contained in the 2016-2040 RTP/SCS, as well as, the GHG-reduction measures contained in the proposed City of Indio's GPU/CAP.

Methodology

Short-term GHG emissions associated with construction activities are largely dependent on the type of development proposed, off-road equipment and on-road vehicles required, and construction schedules. Because much of this information for specific future development projects is unknown at this time, construction-related impacts were qualitatively discussed.

Long-term operational increases of GHG emissions were calculated using the California Emissions Estimator Model (CalEEMod). Modeling was conducted for the proposed Specific Plan based on projected increases in land use types and trip-generation rates identified in the traffic analysis prepared for this project. Emissions modeling files are provided in Appendix A.

Impacts and Mitigation Measures

Greenhouse Gas Emissions

Impact GHG-1: *GHG emissions generated by future development associated with implementation of the proposed Specific Plan would have a potentially significant impact on the environment.* **[Threshold GHG-1]**

Annual operational emissions associated with existing land uses and proposed future development for buildout (year 2035) operational conditions are summarized in Table 10 and Table 11, respectively. As noted in Table 10, existing land uses would generate a total of approximately 28,741 $MTCO_2e$/year. As noted in Table 11, the proposed Specific Plan would generate approximately 38,716 $MTCO_2e$/year. Estimated GHG emissions associated with the proposed Specific Plan would be largely associated with increases in motor vehicle use, which would constitute roughly 58 percent to the projected total increase in emissions. Of the remaining emissions, roughly 33 percent would be associated with energy use, 4 percent with water use, 3 percent with waste generation, and 2 percent associated with area

sources. In comparison to existing land uses, future development associated with implementation of the proposed Specific Plan would result in an overall increase in GHG emissions of approximately 9,976 $MTCO_2e$/year, without mitigation.

Table 10
Annual Operational GHG Emissions at Buildout
Existing Land Uses

Source	Emissions ($MTCO_2e$)	Percent Contribution
Area	159.3	0.6
Energy Use	4,953.9	17.2
Mobile	22,281.6	77.5
Waste	452.9	1.6
Water	893.1	3.1
Total:	28,740.7	
Service Population (SP):	3,287	
$MTCO_2e$/SP:	9.0	

Totals may not sum due to rounding. Emissions were quantified using the CalEEMod computer program. Refer to Appendix A for emissions modeling assumptions and results.

Table 11
Annual Operational GHG Emissions at Buildout
Proposed Specific Plan without Mitigation

Source	Emissions ($MTCO_2e$)	Percent Contribution
Area	765.8	2.0
Energy Use	12,694.9	32.8
Mobile	22,512.9	58.1
Waste	1,092.3	2.8
Water	1,650.6	4.3
Total:	38,716.4	
Change Compared to Existing Land Uses:	*9,975.7*	
Service Population (SP):	4,210	
$MTCO_2e$/SP:	9.2	

Totals may not sum due to rounding. Emissions were quantified using the CalEEMod computer program based on projected future development associated with implementation of the proposed Specific Plan and trip-generation rates derived from the traffic analysis prepared for this project. Refer to Appendix A for emissions modeling assumptions and results.

For land use plans, service population is typically defined based on the total estimates of population and employment. With implementation of the proposed Specific Plan the estimated population for residential uses would total approximately 1,665 individuals and total employees would be approximately 2,545. Based on these estimates, the service population for the Project area would be 4,210 (Kimley Horn 2016, SCAG 2001). Based on this service population and the estimated GHG emissions noted in Table 11, buildout of the proposed Specific Plan would result in an estimated 9.2 $MTCO_2e$/SP, without mitigation. Estimated GHG emissions would exceed the draft SCAQMD threshold of 6.6 $MTCO_2e$/SP, as well as, the City of Indio's threshold of 4.5 $MTCO_2e$/SP. Therefore, adoption of the Project would generate GHG emissions, either directly or indirectly, that would have a ***potentially significant impact*** on the environment.

Mitigation Measures

Implement MM AQ-1 and MM AQ-2.

Significance after Mitigation

MM AQ-1 would include measures to reduce mobile-source emissions from both on-road vehicles and off-road equipment, which would help to reduce short-term GHG emissions, such as black carbon. *MM AQ-2* would help to promote the use of alternative means of transportation, energy and water conservation, and waste reduction, which would help to reduce long-term operational GHG emissions associated with future development.

As noted in Table 12, implementation of the proposed mitigation measures could reduce long-term operation GHG emissions to approximately 36,864 $MTCO_2e$/year. In comparison to existing land uses, the proposed land uses would result in overall increase in annual GHG emissions of approximately 8,123 $MTCO_2e$/year. The actual reductions achieved would vary depending on multiple factors, including the type of land uses ultimately developed and the applicable measures implemented. In addition, it is important to note that this estimate assumes compliance with current building standards. Future energy use-related emissions would likely be less, particularly if future development within the Project area were to achieve the goal of zero net energy use, as identified in the City's CAP and General Plan Update. However, although the proposed Specific Plan would result in overall increases of GHG emissions, in comparison to existing land uses, estimated GHG emissions per service population would be reduced to approximately 8.8 $MTCO_2e$/SP. If all future development were to achieve net zero energy use, estimated GHG emissions on a service population basis would be further reduced to approximately 5.7 $MTCO_2e$/SP, below the draft SCAQMD threshold of 6.6 $MTCO_2e$/SP. However, even under these conditions, GHG emissions on a service population basis would still be projected to exceed the City of Indio's threshold of 4.5 $MTCO_2e$/SP. Additional reductions could be achieved depending on the reductions achieved for the other sectors, particularly measures that would result in reduced motor vehicle use and VMT. However, because the effectiveness of these measures cannot be accurately quantified at this time and to ensure a conservative analysis, this impact is considered ***significant and unavoidable***.

Table 12
Annual Operational GHG Emissions at Buildout
Proposed Specific Plan with Mitigation

Source	Emissions ($MTCO_2e$)[1]	Percent Contribution
Area	8.6	<0.1
Energy Use	12,694.9	34.4
Mobile	22,512.9	61.1
Waste	273.1	0.7
Water	1,374.0	3.7
Total:	36,863.5	
Change Compared to Existing Land Uses:	8,122.8	
Service Population (SP):	4,210	
$MTCO_2e$/SP with Energy Use:	8.8	
$MTCO_2e$/SP without Energy Use[2]:	5.7	

Totals may not sum due to rounding. Emissions were quantified using the CalEEMod computer program based on projected future development associated with implementation of the Project and trip-generation rates derived from the traffic analysis prepared for this project.

1. *Includes mitigation measures to provide increased energy and water conservation, use of low VOC paints, prohibited use of wood-burning hearths, increased recycling/diversion of solid waste, and vehicle trip-reduction.*
2. *Assumes net zero energy use for proposed future development.*

Refer to Appendix A for emissions modeling assumptions and results.

Consistency with Applicable GHG Plans, Policies or Regulations

Impact GHG-2: *Implementation of the proposed Specific Plan would not conflict with an applicable GHG-reduction plan, policy or regulation.* **[Threshold GHG-2]**

In October 2008, ARB published its Climate Change Proposed Scoping Plan, which is the State's plan to achieve GHG reductions in California required by AB 32. The Scoping Plan includes measures to reduce GHG emissions associated with transportation, electricity consumption, natural gas usage, water conservation, green buildings, and recycling and waste management. AB 32 measures are generally applied at the state level and are largely not under the jurisdiction of local agencies, with the exception of measures related to SB 375. California's Sustainable Communities and Climate Protection Act, or Senate Bill (SB) 375, requires SCAG to develop a SCS to reduce GHG emissions from automobiles and light trucks through integrated transportation, land use, housing, and environmental planning. On April 7, 2016, the Regional Council of the SCAG adopted the *2016-2040 RTP/SCS*. The SCS component provides a plan for meeting the GHG-reduction targets set by the ARB for the SCAG region.

The proposed Specific Plan would promote a multi-modal transportation system and would result in increased development density within close proximity to local destinations, including the Indio Transportation Center, which would support local and regional goals for reductions in motor vehicle use and decreased vehicle miles traveled (VMT). The proposed Specific Plan incorporates numerous mitigation measures that would be consistent with, and help implement AB-32 GHG-reduction goals, including those related to energy and water conservation, the promotion of alternative modes of transportation, and waste reduction. As noted in Table 13, the proposed Specific Plan would be consistent with the goals established in SCAG's *2016-2040 RTP/SCS*. The proposed Specific Plan would also be consistent with the GHG-reduction policies contained in the City's GPU/CAP (refer to Table 14). For these reasons, the proposed Specific Plan would not conflict with applicable GHG-reduction plans, policies, or regulations. This impact is considered ***less than significant***.

Table 13
Consistency with 2016-2040 RTP/SCS Goals

Goals	Project Consistency
Align the plan investments and policies with improving regional economic development and competitiveness.	*Consistent*. Mitigation measures have been included to promote a safe and efficient multi-modal transportation system. The proposed Specific Plan would result in increased development density within the downtown area and within close proximity of local destinations, including the City of Indio Transportation Station. Proposed mitigation measures would help to promote regional economic development, competiveness, and transportation efficiency.
Maximize mobility and accessibility for all people and goods in the region.	
Ensure travel safety and reliability for all people and goods in the region.	
Protect the environment and health of our residents by improving air quality and encouraging active transportation (non-motorized transportation, such as bicycling and walking).	*Consistent*. Mitigation has been included to promote improvements that would result in the safe and efficient use of alternative modes of transportation (e.g., bicycle, low or zero-emission vehicles, NEVs), public transportation, and pedestrian access. These measures would help to provide a safe, efficient, and sustainable multi-modal transportation system. The project would promote measures that would result in an overall reduction of mobile-source emissions.
Encourage land use and growth patterns that facilitate transit and non-motorized transportation	
Preserve and ensure a sustainable regional transportation system.	
Maximize the productivity of our transportation system.	
Maximize the security of the regional transportation system through improved system monitoring, rapid recovery planning, and coordination with other security agencies.	
Actively encourage and create incentives for energy efficiency, where possible.	
Source: SCAG 2016	

Table 14
Consistency with Applicable Measures Identified in the City of Indio General Plan Update / Climate Action Plan

General Plan Update/Climate Action Plan Measure	Project Consistency
GPU CE-5.4 / CAP RES-2 Energy Conservation Policies – Encourage energy audits to be performed on residences prior to sale or transfer of title and provide prospective owners with recommendations for retrofit measures. Residential Transfer of Title Energy Disclosures – Encourage energy audits to be performed on residences prior to sale or other transfer of title. Provide prospective owners with recommendations for retrofit measures to be given to the buyer prior to transfer of title.	*Consistent*. Mitigation has been included to encourage energy audits to be performed on residences prior to sale or other transfer of title. Provide prospective owners with recommendations for retrofit measures to be given to the buyer prior to transfer of title.
CAP RES-4 Residential Solar Photovoltaic Financing – Set a community-wide goal of installing 1,000 kilowatts of solar capacity on existing residential rooftops annually. This goal translates to approximately 200 residential photovoltaic (PV) systems. Encourage installation of solar panels by continuing to aggressively promote Indio's Ygrene and HERO Program to reach additional homes. Additionally, consider partnering with the Imperial Irrigation district to gather and distribute information on actual savings achieved by residential PV systems.	*Consistent*. Mitigation has been included to promote the installation of solar panels for new residential and commercial development.
CAP COM-2 Non-Residential Solar Photovoltaic Financing – Set a community-wide goal of installing 2,500 kW of solar capacity on existing non-residential properties annually. Encourage installation of solar panels by expanding Indio's Ygrene and HERO Program to include	

Table 14
Consistency with Applicable Measures Identified in the City of Indio General Plan Update / Climate Action Plan

General Plan Update/Climate Action Plan Measure	Project Consistency
financing options non-residential properties. Additionally, consider partnering with Imperial Irrigation District to gather and distribute information on actual savings achieved by commercial PV systems.	
GPU CE-5.2 / CAP RES-5 Energy Conservation Policies – Strive to achieve zero net energy use for new residential development by 2020 and zero net energy use for new commercial development by 2030 consistent with the California Public Utilities Commission's California Long Term Energy Efficiency Strategic Plan. Residential Zero Net Energy Use Developments by 2020 – Encourage all new residential buildings to have zero net energy by 2020 consistent with the California Public Utilities Commission's California Long Term Energy Efficiency Strategic Plan.	*Consistent*. Mitigation has been included to promote zero net energy use for new residential development by 2020 and zero net energy use for new commercial development by 2030 consistent with the California Public Utilities Commission's California Long Term Energy Efficiency Strategic Plan.
CAP COM-3 Non-Residential Zero Net Energy Use Developments by 2030 – Encourage all new commercial buildings to have zero net energy by 2030 consistent with the California Public Utilities Commission's California Long Term Energy Efficiency Strategic Plan.	
CAP COM-1 Commercial Benchmarking – Incorporate commercial outreach in the Energy Awareness Program (see Residential Energy Efficiency Education). Aggressively promote commercial benchmarking using the Environmental Protection Agency's ENERGY STAR Portfolio Manager or equivalent benchmarking tool.	*Consistent*. Mitigation has been included to improve energy efficiency of new commercial uses. Such measures include, but are not limited to, the installation of energy-efficient appliances and building mechanical systems.
GPU LU-2.0 / CAP TRANS-1 Sustainable Development Pattern Goals – A sustainable land use pattern that fosters a healthy and thriving Indio. Adoption of General Plan Land Use Designations – Present to City Council for consideration land use designations proposed in the General Plan Update.	*Consistent*. Mitigation has been included to promote improvements that would result in the safe and efficient use of alternative modes of transportation (e.g., bicycle, low or zero-emission vehicles, NEVs), public transportation, and pedestrian access. These measures would help to provide safe and efficient transportation facilities for all travel modes between local land use destinations, including the nearby Indio Transportation Center.
GPU ME-9.0 / CAP TRANS-2 Bicycle Mobility Goals – A comprehensive and integrated bikeway system, which provides for the safe and efficient movement of cyclists of all abilities and ages. Improved Bicycle Infrastructure – Present to City Council for consideration policies included in the General Plan Update Mobility Element that include improving the City's bicycle network. Increase mileage of bicycle facilities from the existing condition (22 miles) to 98 miles.	
GPU ME-12.0 / CAP TRANS-3 Golf Cart, Neighborhood Electric Vehicle (NEV), and Alternative-Fuel Vehicle Mobility Goals – A system of golf cart, NEV, and alternative-fuel vehicle routes and offering an alternative transportation mode, and connecting residential land uses and activity centers. Golf Cart Infrastructure Improvements – Implement General Plan Policies ME-12.1 and 12.2. Consistent with ME-12.1 and 12.2, encourage infrastructure that promotes the use of golf carts. This may include encouraging installation of golf cart paths with new developments that connect to a larger transportation network or encouraging installation of charging stations at non-residential uses.	

Table 14
Consistency with Applicable Measures Identified in the City of Indio General Plan Update / Climate Action Plan

General Plan Update/Climate Action Plan Measure	Project Consistency
CAP WAT-1 Water Conservation Rate Schedule – (Continuing measure) In January 2014, the Indio Water Authority approved a "20 x 2020" water conservation rate schedule intended to reduce water use by 20 percent by the year 2020. This measure would include increasing the water use reduction target from 20 to 32 percent and would include continued implementation of a tiered rate schedule, seasonal rates, and/or excess-use surcharges to reduce peak demands during summer months. Supplemental water conservation measures may include turf reduction rebates, water-efficient appliance rebates, and distribution of indoor water conservation kits.	*Consistent*. Mitigation has been included to reduce water use. Such measures include, but are not limited to, the installation of low-flow fixtures, the use of water-efficient irrigation systems, and water-efficient landscaping.
CAP WAT-2 Landscape and Water Conservation Ordinance – the Coachella Valley Model Water Efficient Landscape Ordinance. The ordinance establishes a structure for planning, designing, installing, and maintaining water efficient landscapes for new and rehabilitated projects. Included in the ordinance is a structure for review and approval of landscape projects by both the Coachella Valley Water District and the City of Indio. A primary component of the ordinance is establishment of Maximum Applied Water Allowances (MAWA) that reduces water use to the lowest practical amount. Specific water reduction measures required of each project include separate requiring separate landscaping water meters, high flow sensors (leak detection), smart controllers, and landscape appropriate irrigation such as drip systems.	
GPU CE-3.5 / CAP WAT-3 Domestic Water Facilities Policies – Encourage new residential development to be constructed to allow for easy implementation of gray water systems that redirect water from washbasins, showers, and tubs for use in toilet flushing, irrigation, and other non-potable uses. Graywater Ordinance – Encourage new residential developments to be constructed for easy implementation of gray water systems that redirect water from washbasins, showers, and tubs.	*Consistent*. Mitigation has been included to promote the use of gray water systems for new residential development that redirects water from washbasins, showers, and tubs for use in toilet flushing, irrigation, and other non-potable uses.
Source: City of Indio 2016b	

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APPENDIX A

Emissions Modeling

EXISTING - ESTIMATED SERVICE POPULATION

LAND USE	QTY	RATE	POP
EMPLOYMENT			
	160.06		
COMMERCIAL	572036	268	2,134
MANUFACTURING	67138	1548	43
PUBLIC/INSTITUTIONAL	160058	208	770
			2947
POPULATION			
RESIDENTIAL MULTI-FAMILY	76	3.33	253
RESIDENTIAL SINGLE-FAMILY	26	3.33	87
			340
		SERVICE POPULATON:	3,287

PROPOSED PROJECT - ESTIMATED SERVICE POPULATION

LAND USE	QTY	RATE	POP	
EMPLOYMENT				
SHOPPING CENTER	420,300	268.00	1,568	
QUALITY RESTAURANT	93,400	629.00	148	
HIGH-TURNOVER RESTAURANT	93,400	629.00	148	
GENERAL OFFICE	326,900	481.00	680	
			2,545	-402
POPULATION				
RESIDENTIAL	500	3.33	1,665	1,325
		SERVICE POPULATION:	4,210	

Based on estimated average employees per sqft , by land use, for Riverside County.

Source: SCAG. October 31, 2001. *Employment Density Study Summary Report.*

Available at website url: https://www.mwcog.org/uploads/committee-documents/YV5WXFhW20110503134223.pdf

SUMMARY OF PROJECT TRIP GENERATION - INDIO DOWNTOWN SP

	QTY	UNIT	DAILY TRIPS W/O PASSBY REDUCTIONS	PASSBY REDUCTIONS	DAILY TRIPS W/ PASSBY REDUCTIONS	TRIP-GEN RATE W/ PASSBY REDUCTIONS WEEKDAY	SAT	SUN
CONDO/TOWNHOUSE	500	DU	2905		2905	5.81	5.67	4.84
SHOPPING CENTER	420.3	KSF	17947	0.25	13460	32.03	1.85	0.79
QUALITY RESTAURANT	93.4	KSF	8401	0.36	5377	57.57	60.39	46.18
HIGH TURNOVER RESTAURANT	93.4	KSF	11876	0.36	7601	81.38	101.36	84.38
GENERAL OFFICE	326.9	KSF	3606		3606	11.03	2.46	1.05
			44735		32949			

Indio Downtown Specific Plan -Existing Land Uses

Riverside-Mojave Desert SCAQMD County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	160.06	1000sqft	3.67	160,060.00	0
Manufacturing	67.14	1000sqft	1.54	67,140.00	0
Condo/Townhouse	76.00	Dwelling Unit	4.75	76,000.00	217
Single Family Housing	26.00	Dwelling Unit	8.44	46,800.00	74
Regional Shopping Center	572.04	1000sqft	13.13	572,040.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	28
Climate Zone	15			**Operational Year**	2035
Utility Company	Imperial Irrigation District				
CO2 Intensity (lb/MWhr)	967.62	**CH4 Intensity (lb/MWhr)**	0.022	**N2O Intensity (lb/MWhr)**	0.005

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Includes RPS adjustment.

Land Use - Existing land uses:76 MFR, 160.06 KSF GEN OFFICE, 67.14 KSF MANUFACTURING, 572.04 KSF REG SHOPPING CTR, 28 SFR.

Construction Phase - CONSTRUCTION NOT INCLUDED.

Off-road Equipment - CONST NOT INCLUDED

Trips and VMT - CONST NOT INCLUDED

Vehicle Trips - Based on default trip generation rates and fleet mix.

Area Coating -

Energy Use - Energy and water usage rates based on model defaults.

Solid Waste - Waste generation rates based on model defaults.

Indio Downtown Specific Plan -Existing Land Uses - Riverside-Mojave Desert SCAQMD County, Annual

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	35.00	1.00
tblEnergyUse	LightingElect	4.45	3.75
tblEnergyUse	LightingElect	3.62	3.01
tblEnergyUse	LightingElect	8.20	5.77
tblEnergyUse	NT24E	3,125.85	4,109.59
tblEnergyUse	NT24E	5,089.81	6,680.41
tblEnergyUse	NT24NG	2,951.00	6,030.00
tblEnergyUse	NT24NG	5,950.14	6,030.00
tblEnergyUse	T24E	933.44	958.04
tblEnergyUse	T24E	4.03	3.22
tblEnergyUse	T24E	2.89	2.31
tblEnergyUse	T24E	5.95	4.80
tblEnergyUse	T24E	1,269.07	1,077.77
tblEnergyUse	T24NG	18,983.37	21,055.10
tblEnergyUse	T24NG	4.20	3.49
tblEnergyUse	T24NG	16.76	15.43
tblEnergyUse	T24NG	2.29	1.93
tblEnergyUse	T24NG	30,907.53	31,096.40
tblOffRoadEquipment	UsageHours	6.00	0.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.022
tblProjectCharacteristics	CO2IntensityFactor	1270.9	967.62
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.005
tblProjectCharacteristics	OperationalYear	2018	2035
tblTripsAndVMT	WorkerTripNumber	65.00	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					
2016	4.0999	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Maximum	**4.0999**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**						**0.0000**

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					
2016	4.0999	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Maximum	**4.0999**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**						**0.0000**

	ROG	NOx	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**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
		Highest		

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	10.2997	0.1396	9.1135	0.0147		1.1353	1.1353		1.1353	1.1353						159.2580
Energy	0.0380	0.3364	0.2248	2.0700e-003		0.0262	0.0262		0.0262	0.0262						4,953.8733
Mobile	3.5259	34.5629	37.5221	0.2381	22.3187	0.0956	22.4143	5.9735	0.0891	6.0626						22,281.6151
Waste						0.0000	0.0000		0.0000	0.0000						452.8679
Water						0.0000	0.0000		0.0000	0.0000						893.0504
Total	**13.8635**	**35.0390**	**46.8605**	**0.2549**	**22.3187**	**1.2572**	**23.5758**	**5.9735**	**1.2507**	**7.2241**						**28,740.6645**

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	10.2997	0.1396	9.1135	0.0147		1.1353	1.1353		1.1353	1.1353						159.2580
Energy	0.0380	0.3364	0.2248	2.0700e-003		0.0262	0.0262		0.0262	0.0262						4,953.8733
Mobile	3.5259	34.5629	37.5221	0.2381	22.3187	0.0956	22.4143	5.9735	0.0891	6.0626						22,281.6151
Waste						0.0000	0.0000		0.0000	0.0000						452.8679
Water						0.0000	0.0000		0.0000	0.0000						893.0504
Total	**13.8635**	**35.0390**	**46.8605**	**0.2549**	**22.3187**	**1.2572**	**23.5758**	**5.9735**	**1.2507**	**7.2241**						**28,740.6645**

	ROG	NOx	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	Architectural Coating	Architectural Coating	11/15/2016	11/15/2016	5	1	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 255,960; Residential Outdoor: 85,320; Non-Residential Indoor: 1,198,860; Non-Residential Outdoor: 399,620; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	0.00	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
Architectural Coating	1	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Architectural Coating - 2016

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	4.0999					0.0000	0.0000		0.0000	0.0000						0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						0.0000
Total	**4.0999**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**						**0.0000**

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
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**						**0.0000**

3.2 Architectural Coating - 2016

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	4.0999					0.0000	0.0000		0.0000	0.0000						0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						0.0000
Total	**4.0999**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**						**0.0000**

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
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**						**0.0000**

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	3.5259	34.5629	37.5221	0.2381	22.3187	0.0956	22.4143	5.9735	0.0891	6.0626						22,281.6151
Unmitigated	3.5259	34.5629	37.5221	0.2381	22.3187	0.0956	22.4143	5.9735	0.0891	6.0626						22,281.6151

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Condo/Townhouse	441.56	430.92	367.84	1,467,696	1,467,696
General Office Building	1,765.46	393.75	168.06	4,320,955	4,320,955
Manufacturing	256.47	100.04	41.63	900,863	900,863
Regional Shopping Center	24,426.11	28,584.84	14438.29	51,028,802	51,028,802
Single Family Housing	247.52	257.66	224.12	839,340	839,340
Total	27,137.12	29,767.21	15,239.94	58,557,656	58,557,656

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Condo/Townhouse	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Manufacturing	16.60	8.40	6.90	59.00	28.00	13.00	92	5	3
Regional Shopping Center	16.60	8.40	6.90	16.30	64.70	19.00	54	35	11
Single Family Housing	14.70	5.90	8.70	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	0.565475	0.033834	0.192058	0.100675	0.009211	0.004032	0.016699	0.069908	0.001423	0.001062	0.004327	0.000756	0.000539
Manufacturing	0.565475	0.033834	0.192058	0.100675	0.009211	0.004032	0.016699	0.069908	0.001423	0.001062	0.004327	0.000756	0.000539
Condo/Townhouse	0.565475	0.033834	0.192058	0.100675	0.009211	0.004032	0.016699	0.069908	0.001423	0.001062	0.004327	0.000756	0.000539
Single Family Housing	0.565475	0.033834	0.192058	0.100675	0.009211	0.004032	0.016699	0.069908	0.001423	0.001062	0.004327	0.000756	0.000539
Regional Shopping Center	0.565475	0.033834	0.192058	0.100675	0.009211	0.004032	0.016699	0.069908	0.001423	0.001062	0.004327	0.000756	0.000539

5.0 Energy Detail

Historical Energy Use: Y

5.1 Mitigation Measures Energy

Indio Downtown Specific Plan -Existing Land Uses - Riverside-Mojave Desert SCAQMD County, Annual

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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						4,575.7400
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000						4,575.7400
NaturalGas Mitigated	0.0380	0.3364	0.2248	2.0700e-003		0.0262	0.0262		0.0262	0.0262						378.1333
NaturalGas Unmitigated	0.0380	0.3364	0.2248	2.0700e-003		0.0262	0.0262		0.0262	0.0262						378.1333

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Condo/Townhouse	2.05847e+006	0.0111	0.0949	0.0404	6.1000e-004		7.6700e-003	7.6700e-003		7.6700e-003	7.6700e-003						110.5004
General Office Building	558609	3.0100e-003	0.0274	0.0230	1.6000e-004		2.0800e-003	2.0800e-003		2.0800e-003	2.0800e-003						29.9867
Manufacturing	2.18608e+006	0.0118	0.1072	0.0900	6.4000e-004		8.1400e-003	8.1400e-003		8.1400e-003	8.1400e-003						117.3507
Regional Shopping Center	1.27565e+006	6.8800e-003	0.0625	0.0525	3.8000e-004		4.7500e-003	4.7500e-003		4.7500e-003	4.7500e-003						68.4780
Single Family Housing	965286	5.2000e-003	0.0445	0.0189	2.8000e-004		3.6000e-003	3.6000e-003		3.6000e-003	3.6000e-003						51.8175
Total		**0.0380**	**0.3364**	**0.2248**	**2.0700e-003**		**0.0262**	**0.0262**		**0.0262**	**0.0262**						**378.1333**

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					
Condo/Townhouse	2.05847e+006	0.0111	0.0949	0.0404	6.1000e-004		7.6700e-003	7.6700e-003		7.6700e-003	7.6700e-003						110.5004
General Office Building	558609	3.0100e-003	0.0274	0.0230	1.6000e-004		2.0800e-003	2.0800e-003		2.0800e-003	2.0800e-003						29.9867
Manufacturing	2.18608e+006	0.0118	0.1072	0.0900	6.4000e-004		8.1400e-003	8.1400e-003		8.1400e-003	8.1400e-003						117.3507
Regional Shopping Center	1.27565e+006	6.8800e-003	0.0625	0.0525	3.8000e-004		4.7500e-003	4.7500e-003		4.7500e-003	4.7500e-003						68.4780
Single Family Housing	965286	5.2000e-003	0.0445	0.0189	2.8000e-004		3.6000e-003	3.6000e-003		3.6000e-003	3.6000e-003						51.8175
Total		**0.0380**	**0.3364**	**0.2248**	**2.0700e-003**		**0.0262**	**0.0262**		**0.0262**	**0.0262**						**378.1333**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Condo/Townhouse	461223				202.8601
General Office Building	1.56219e+006				687.0967
Manufacturing	694228				305.3424
Regional Shopping Center	7.44224e+006				3,273.3234
Single Family Housing	243543				107.1174
Total					**4,575.7400**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Condo/Townhouse	461223				202.8601
General Office Building	1.56219e+006				687.0967
Manufacturing	694228				305.3424
Regional Shopping Center	7.44224e+006				3,273.3234
Single Family Housing	243543				107.1174
Total					**4,575.7400**

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	10.2997	0.1396	9.1135	0.0147		1.1353	1.1353		1.1353	1.1353						159.2580
Unmitigated	10.2997	0.1396	9.1135	0.0147		1.1353	1.1353		1.1353	1.1353						159.2580

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	0.4100					0.0000	0.0000		0.0000	0.0000						0.0000
Consumer Products	3.3318					0.0000	0.0000		0.0000	0.0000						0.0000
Hearth	6.5256	0.1274	8.0552	0.0146		1.1294	1.1294		1.1294	1.1294						157.4777
Landscaping	0.0323	0.0122	1.0583	6.0000e-005		5.8700e-003	5.8700e-003		5.8700e-003	5.8700e-003						1.7803
Total	**10.2997**	**0.1396**	**9.1135**	**0.0147**		**1.1353**	**1.1353**		**1.1353**	**1.1353**						**159.2580**

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	0.4100					0.0000	0.0000		0.0000	0.0000						0.0000
Consumer Products	3.3318					0.0000	0.0000		0.0000	0.0000						0.0000
Hearth	6.5256	0.1274	8.0552	0.0146		1.1294	1.1294		1.1294	1.1294						157.4777
Landscaping	0.0323	0.0122	1.0583	6.0000e-005		5.8700e-003	5.8700e-003		5.8700e-003	5.8700e-003						1.7803
Total	**10.2997**	**0.1396**	**9.1135**	**0.0147**		**1.1353**	**1.1353**		**1.1353**	**1.1353**						**159.2580**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated				893.0504
Unmitigated				893.0504

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Condo/Townhouse	4.95171 / 3.12173				50.3530
General Office Building	28.4481 / 17.4359				286.8462
Manufacturing	15.5261 / 0				110.0522
Regional Shopping Center	42.3724 / 25.9702				427.2479
Single Family Housing	1.82431 / 1.15011				18.5511
Total					**893.0504**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Condo/Townhouse	4.95171 / 3.12173				50.3530
General Office Building	28.4481 / 17.4359				286.8462
Manufacturing	15.5261 / 0				110.0522
Regional Shopping Center	42.3724 / 25.9702				427.2479
Single Family Housing	1.82431 / 1.15011				18.5511
Total					**893.0504**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated				452.8679
Unmitigated				452.8679

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Condo/Townhouse	34.96				17.5814
General Office Building	148.86				74.8619
Manufacturing	83.25				41.8666
Regional Shopping Center	600.64				302.0628
Single Family Housing	32.8				16.4952
Total					**452.8679**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Condo/Townhouse	34.96				17.5814
General Office Building	148.86				74.8619
Manufacturing	83.25				41.8666
Regional Shopping Center	600.64				302.0628
Single Family Housing	32.8				16.4952
Total					**452.8679**

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

Indio Downtown Specific Plan -Existing Land Uses

Riverside-Mojave Desert SCAQMD County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	160.06	1000sqft	3.67	160,060.00	0
Manufacturing	67.14	1000sqft	1.54	67,140.00	0
Condo/Townhouse	76.00	Dwelling Unit	4.75	76,000.00	217
Single Family Housing	26.00	Dwelling Unit	8.44	46,800.00	74
Regional Shopping Center	572.04	1000sqft	13.13	572,040.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	28
Climate Zone	15			**Operational Year**	2035
Utility Company	Imperial Irrigation District				
CO2 Intensity (lb/MWhr)	967.62	**CH4 Intensity (lb/MWhr)**	0.022	**N2O Intensity (lb/MWhr)**	0.005

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Includes RPS adjustment.

Land Use - Existing land uses:76 MFR, 160.06 KSF GEN OFFICE, 67.14 KSF MANUFACTURING, 572.04 KSF REG SHOPPING CTR, 28 SFR.

Construction Phase - CONSTRUCTION NOT INCLUDED.

Off-road Equipment - CONST NOT INCLUDED

Trips and VMT - CONST NOT INCLUDED

Vehicle Trips - Based on default trip generation rates and fleet mix.

Area Coating -

Energy Use - Energy and water usage rates based on model defaults.

Solid Waste - Waste generation rates based on model defaults.

Indio Downtown Specific Plan -Existing Land Uses - Riverside-Mojave Desert SCAQMD County, Winter

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	35.00	1.00
tblEnergyUse	LightingElect	4.45	3.75
tblEnergyUse	LightingElect	3.62	3.01
tblEnergyUse	LightingElect	8.20	5.77
tblEnergyUse	NT24E	3,125.85	4,109.59
tblEnergyUse	NT24E	5,089.81	6,680.41
tblEnergyUse	NT24NG	2,951.00	6,030.00
tblEnergyUse	NT24NG	5,950.14	6,030.00
tblEnergyUse	T24E	933.44	958.04
tblEnergyUse	T24E	4.03	3.22
tblEnergyUse	T24E	2.89	2.31
tblEnergyUse	T24E	5.95	4.80
tblEnergyUse	T24E	1,269.07	1,077.77
tblEnergyUse	T24NG	18,983.37	21,055.10
tblEnergyUse	T24NG	4.20	3.49
tblEnergyUse	T24NG	16.76	15.43
tblEnergyUse	T24NG	2.29	1.93
tblEnergyUse	T24NG	30,907.53	31,096.40
tblOffRoadEquipment	UsageHours	6.00	0.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.022
tblProjectCharacteristics	CO2IntensityFactor	1270.9	967.62
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.005
tblProjectCharacteristics	OperationalYear	2018	2035
tblTripsAndVMT	WorkerTripNumber	65.00	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					
2016	8,199.8712	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Maximum	**8,199.8712**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**						**0.0000**

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					
2016	8,199.8712	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Maximum	**8,199.8712**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**						**0.0000**

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

2.2 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	179.9222	3.2057	204.9338	0.3564		27.5935	27.5935		27.5935	27.5935						4,249.5885
Energy	0.2081	1.8433	1.2320	0.0114		0.1438	0.1438		0.1438	0.1438						2,283.9486
Mobile	23.4248	226.6077	245.3260	1.5472	151.2382	0.6404	151.8787	40.4233	0.5969	41.0202						159,587.9265
Total	**203.5551**	**231.6567**	**451.4917**	**1.9150**	**151.2382**	**28.3777**	**179.6160**	**40.4233**	**28.3342**	**68.7575**						**166,121.4637**

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	179.9222	3.2057	204.9338	0.3564		27.5935	27.5935		27.5935	27.5935						4,249.5885
Energy	0.2081	1.8433	1.2320	0.0114		0.1438	0.1438		0.1438	0.1438						2,283.9486
Mobile	23.4248	226.6077	245.3260	1.5472	151.2382	0.6404	151.8787	40.4233	0.5969	41.0202						159,587.9265
Total	**203.5551**	**231.6567**	**451.4917**	**1.9150**	**151.2382**	**28.3777**	**179.6160**	**40.4233**	**28.3342**	**68.7575**						**166,121.4637**

	ROG	NOx	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	Architectural Coating	Architectural Coating	11/15/2016	11/15/2016	5	1	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 255,960; Residential Outdoor: 85,320; Non-Residential Indoor: 1,198,860; Non-Residential Outdoor: 399,620; Striped Parking Area: 0 (Architectural Coating - sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	0.00	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
Architectural Coating	1	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Architectural Coating - 2016

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	8,199.8712					0.0000	0.0000		0.0000	0.0000						0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						0.0000
Total	**8,199.8712**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**						**0.0000**

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
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**						**0.0000**

3.2 Architectural Coating - 2016

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	8,199.8712					0.0000	0.0000		0.0000	0.0000						0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						0.0000
Total	**8,199.8712**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**						**0.0000**

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
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**						**0.0000**

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	23.4248	226.6077	245.3260	1.5472	151.2382	0.6404	151.8787	40.4233	0.5969	41.0202						159,587.9265
Unmitigated	23.4248	226.6077	245.3260	1.5472	151.2382	0.6404	151.8787	40.4233	0.5969	41.0202						159,587.9265

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Condo/Townhouse	441.56	430.92	367.84	1,467,696	1,467,696
General Office Building	1,765.46	393.75	168.06	4,320,955	4,320,955
Manufacturing	256.47	100.04	41.63	900,863	900,863
Regional Shopping Center	24,426.11	28,584.84	14438.29	51,028,802	51,028,802
Single Family Housing	247.52	257.66	224.12	839,340	839,340
Total	27,137.12	29,767.21	15,239.94	58,557,656	58,557,656

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Condo/Townhouse	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Manufacturing	16.60	8.40	6.90	59.00	28.00	13.00	92	5	3
Regional Shopping Center	16.60	8.40	6.90	16.30	64.70	19.00	54	35	11
Single Family Housing	14.70	5.90	8.70	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	0.565475	0.033834	0.192058	0.100675	0.009211	0.004032	0.016699	0.069908	0.001423	0.001062	0.004327	0.000756	0.000539
Manufacturing	0.565475	0.033834	0.192058	0.100675	0.009211	0.004032	0.016699	0.069908	0.001423	0.001062	0.004327	0.000756	0.000539
Condo/Townhouse	0.565475	0.033834	0.192058	0.100675	0.009211	0.004032	0.016699	0.069908	0.001423	0.001062	0.004327	0.000756	0.000539
Single Family Housing	0.565475	0.033834	0.192058	0.100675	0.009211	0.004032	0.016699	0.069908	0.001423	0.001062	0.004327	0.000756	0.000539
Regional Shopping Center	0.565475	0.033834	0.192058	0.100675	0.009211	0.004032	0.016699	0.069908	0.001423	0.001062	0.004327	0.000756	0.000539

5.0 Energy Detail

Historical Energy Use: Y

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.2081	1.8433	1.2320	0.0114		0.1438	0.1438		0.1438	0.1438						2,283.9486
NaturalGas Unmitigated	0.2081	1.8433	1.2320	0.0114		0.1438	0.1438		0.1438	0.1438						2,283.9486

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Condo/Townhouse	5639.64	0.0608	0.5197	0.2212	3.3200e-003		0.0420	0.0420		0.0420	0.0420						667.4295
General Office Building	1530.44	0.0165	0.1500	0.1260	9.0000e-004		0.0114	0.0114		0.0114	0.0114						181.1213
Manufacturing	5989.26	0.0646	0.5872	0.4932	3.5200e-003		0.0446	0.0446		0.0446	0.0446						708.8055
Regional Shopping Center	3494.93	0.0377	0.3426	0.2878	2.0600e-003		0.0260	0.0260		0.0260	0.0260						413.6115
Single Family Housing	2644.62	0.0285	0.2437	0.1037	1.5600e-003		0.0197	0.0197		0.0197	0.0197						312.9807
Total		**0.2081**	**1.8433**	**1.2320**	**0.0114**		**0.1438**	**0.1438**		**0.1438**	**0.1438**						**2,283.9486**

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					
Condo/Townhouse	5.63964	0.0608	0.5197	0.2212	3.3200e-003		0.0420	0.0420		0.0420	0.0420						667.4295
General Office Building	1.53044	0.0165	0.1500	0.1260	9.0000e-004		0.0114	0.0114		0.0114	0.0114						181.1213
Manufacturing	5.98926	0.0646	0.5872	0.4932	3.5200e-003		0.0446	0.0446		0.0446	0.0446						708.8055
Regional Shopping Center	3.49493	0.0377	0.3426	0.2878	2.0600e-003		0.0260	0.0260		0.0260	0.0260						413.6115
Single Family Housing	2.64462	0.0285	0.2437	0.1037	1.5600e-003		0.0197	0.0197		0.0197	0.0197						312.9807
Total		**0.2081**	**1.8433**	**1.2320**	**0.0114**		**0.1438**	**0.1438**		**0.1438**	**0.1438**						**2,283.9486**

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	179.9222	3.2057	204.9338	0.3564		27.5935	27.5935		27.5935	27.5935						4,249.5885
Unmitigated	179.9222	3.2057	204.9338	0.3564		27.5935	27.5935		27.5935	27.5935						4,249.5885

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	2.2465					0.0000	0.0000		0.0000	0.0000						0.0000
Consumer Products	18.2564					0.0000	0.0000		0.0000	0.0000						0.0000
Hearth	159.1611	3.1082	196.4671	0.3559		27.5466	27.5466		27.5466	27.5466						4,233.8894
Landscaping	0.2582	0.0975	8.4667	4.5000e-004		0.0470	0.0470		0.0470	0.0470						15.6991
Total	**179.9222**	**3.2057**	**204.9338**	**0.3564**		**27.5935**	**27.5935**		**27.5935**	**27.5935**						**4,249.5885**

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	2.2465					0.0000	0.0000		0.0000	0.0000						0.0000
Consumer Products	18.2564					0.0000	0.0000		0.0000	0.0000						0.0000
Hearth	159.1611	3.1082	196.4671	0.3559		27.5466	27.5466		27.5466	27.5466						4,233.8894
Landscaping	0.2582	0.0975	8.4667	4.5000e-004		0.0470	0.0470		0.0470	0.0470						15.6991
Total	**179.9222**	**3.2057**	**204.9338**	**0.3564**		**27.5935**	**27.5935**		**27.5935**	**27.5935**						**4,249.5885**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Indio Downtown Specific Plan -Existing Land Uses

Riverside-Mojave Desert SCAQMD County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	160.06	1000sqft	3.67	160,060.00	0
Manufacturing	67.14	1000sqft	1.54	67,140.00	0
Condo/Townhouse	76.00	Dwelling Unit	4.75	76,000.00	217
Single Family Housing	26.00	Dwelling Unit	8.44	46,800.00	74
Regional Shopping Center	572.04	1000sqft	13.13	572,040.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	28
Climate Zone	15			**Operational Year**	2035
Utility Company	Imperial Irrigation District				
CO2 Intensity (lb/MWhr)	967.62	**CH4 Intensity (lb/MWhr)**	0.022	**N2O Intensity (lb/MWhr)**	0.005

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Includes RPS adjustment.

Land Use - Existing land uses:76 MFR, 160.06 KSF GEN OFFICE, 67.14 KSF MANUFACTURING, 572.04 KSF REG SHOPPING CTR, 28 SFR.

Construction Phase - CONSTRUCTION NOT INCLUDED.

Off-road Equipment - CONST NOT INCLUDED

Trips and VMT - CONST NOT INCLUDED

Vehicle Trips - Based on default trip generation rates and fleet mix.

Area Coating -

Energy Use - Energy and water usage rates based on model defaults.

Solid Waste - Waste generation rates based on model defaults.

Indio Downtown Specific Plan -Existing Land Uses - Riverside-Mojave Desert SCAQMD County, Summer

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	35.00	1.00
tblEnergyUse	LightingElect	4.45	3.75
tblEnergyUse	LightingElect	3.62	3.01
tblEnergyUse	LightingElect	8.20	5.77
tblEnergyUse	NT24E	3,125.85	4,109.59
tblEnergyUse	NT24E	5,089.81	6,680.41
tblEnergyUse	NT24NG	2,951.00	6,030.00
tblEnergyUse	NT24NG	5,950.14	6,030.00
tblEnergyUse	T24E	933.44	958.04
tblEnergyUse	T24E	4.03	3.22
tblEnergyUse	T24E	2.89	2.31
tblEnergyUse	T24E	5.95	4.80
tblEnergyUse	T24E	1,269.07	1,077.77
tblEnergyUse	T24NG	18,983.37	21,055.10
tblEnergyUse	T24NG	4.20	3.49
tblEnergyUse	T24NG	16.76	15.43
tblEnergyUse	T24NG	2.29	1.93
tblEnergyUse	T24NG	30,907.53	31,096.40
tblOffRoadEquipment	UsageHours	6.00	0.00
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.022
tblProjectCharacteristics	CO2IntensityFactor	1270.9	967.62
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.005
tblProjectCharacteristics	OperationalYear	2018	2035
tblTripsAndVMT	WorkerTripNumber	65.00	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					
2016	8,199.8712	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Maximum	**8,199.8712**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**						**0.0000**

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					
2016	8,199.8712	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Maximum	**8,199.8712**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**						**0.0000**

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

2.2 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	179.9222	3.2057	204.9338	0.3564		27.5935	27.5935		27.5935	27.5935						4,249.5885
Energy	0.2081	1.8433	1.2320	0.0114		0.1438	0.1438		0.1438	0.1438						2,283.9486
Mobile	28.1446	230.5280	275.7253	1.6748	151.2382	0.6366	151.8748	40.4233	0.5932	41.0165						172,525.5788
Total	**208.2748**	**235.5771**	**481.8910**	**2.0425**	**151.2382**	**28.3739**	**179.6121**	**40.4233**	**28.3305**	**68.7539**						**179,059.1159**

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	179.9222	3.2057	204.9338	0.3564		27.5935	27.5935		27.5935	27.5935						4,249.5885
Energy	0.2081	1.8433	1.2320	0.0114		0.1438	0.1438		0.1438	0.1438						2,283.9486
Mobile	28.1446	230.5280	275.7253	1.6748	151.2382	0.6366	151.8748	40.4233	0.5932	41.0165						172,525.5788
Total	**208.2748**	**235.5771**	**481.8910**	**2.0425**	**151.2382**	**28.3739**	**179.6121**	**40.4233**	**28.3305**	**68.7539**						**179,059.1159**

	ROG	NOx	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	Architectural Coating	Architectural Coating	11/15/2016	11/15/2016	5	1	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 255,960; Residential Outdoor: 85,320; Non-Residential Indoor: 1,198,860; Non-Residential Outdoor: 399,620; Striped Parking Area: 0 (Architectural Coating - sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	0.00	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
Architectural Coating	1	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Architectural Coating - 2016

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	8,199.8712					0.0000	0.0000		0.0000	0.0000						0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						0.0000
Total	**8,199.8712**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**						**0.0000**

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
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**						**0.0000**

3.2 Architectural Coating - 2016

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	8,199.8712					0.0000	0.0000		0.0000	0.0000						0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000						0.0000
Total	**8,199.8712**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**						**0.0000**

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
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Worker	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**						**0.0000**

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	28.1446	230.5280	275.7253	1.6748	151.2382	0.6366	151.8748	40.4233	0.5932	41.0165						172,525.5788
Unmitigated	28.1446	230.5280	275.7253	1.6748	151.2382	0.6366	151.8748	40.4233	0.5932	41.0165						172,525.5788

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Condo/Townhouse	441.56	430.92	367.84	1,467,696	1,467,696
General Office Building	1,765.46	393.75	168.06	4,320,955	4,320,955
Manufacturing	256.47	100.04	41.63	900,863	900,863
Regional Shopping Center	24,426.11	28,584.84	14438.29	51,028,802	51,028,802
Single Family Housing	247.52	257.66	224.12	839,340	839,340
Total	27,137.12	29,767.21	15,239.94	58,557,656	58,557,656

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Condo/Townhouse	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
Manufacturing	16.60	8.40	6.90	59.00	28.00	13.00	92	5	3
Regional Shopping Center	16.60	8.40	6.90	16.30	64.70	19.00	54	35	11
Single Family Housing	14.70	5.90	8.70	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	0.565475	0.033834	0.192058	0.100675	0.009211	0.004032	0.016699	0.069908	0.001423	0.001062	0.004327	0.000756	0.000539
Manufacturing	0.565475	0.033834	0.192058	0.100675	0.009211	0.004032	0.016699	0.069908	0.001423	0.001062	0.004327	0.000756	0.000539
Condo/Townhouse	0.565475	0.033834	0.192058	0.100675	0.009211	0.004032	0.016699	0.069908	0.001423	0.001062	0.004327	0.000756	0.000539
Single Family Housing	0.565475	0.033834	0.192058	0.100675	0.009211	0.004032	0.016699	0.069908	0.001423	0.001062	0.004327	0.000756	0.000539
Regional Shopping Center	0.565475	0.033834	0.192058	0.100675	0.009211	0.004032	0.016699	0.069908	0.001423	0.001062	0.004327	0.000756	0.000539

5.0 Energy Detail

Historical Energy Use: Y

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.2081	1.8433	1.2320	0.0114		0.1438	0.1438		0.1438	0.1438						2,283.9486
NaturalGas Unmitigated	0.2081	1.8433	1.2320	0.0114		0.1438	0.1438		0.1438	0.1438						2,283.9486

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Condo/Townhouse	5639.64	0.0608	0.5197	0.2212	3.3200e-003		0.0420	0.0420		0.0420	0.0420						667.4295
General Office Building	1530.44	0.0165	0.1500	0.1260	9.0000e-004		0.0114	0.0114		0.0114	0.0114						181.1213
Manufacturing	5989.26	0.0646	0.5872	0.4932	3.5200e-003		0.0446	0.0446		0.0446	0.0446						708.8055
Regional Shopping Center	3494.93	0.0377	0.3426	0.2878	2.0600e-003		0.0260	0.0260		0.0260	0.0260						413.6115
Single Family Housing	2644.62	0.0285	0.2437	0.1037	1.5600e-003		0.0197	0.0197		0.0197	0.0197						312.9807
Total		**0.2081**	**1.8433**	**1.2320**	**0.0114**		**0.1438**	**0.1438**		**0.1438**	**0.1438**						**2,283.9486**

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					
Condo/Townhouse	5.63964	0.0608	0.5197	0.2212	3.3200e-003		0.0420	0.0420		0.0420	0.0420						667.4295
General Office Building	1.53044	0.0165	0.1500	0.1260	9.0000e-004		0.0114	0.0114		0.0114	0.0114						181.1213
Manufacturing	5.98926	0.0646	0.5872	0.4932	3.5200e-003		0.0446	0.0446		0.0446	0.0446						708.8055
Regional Shopping Center	3.49493	0.0377	0.3426	0.2878	2.0600e-003		0.0260	0.0260		0.0260	0.0260						413.6115
Single Family Housing	2.64462	0.0285	0.2437	0.1037	1.5600e-003		0.0197	0.0197		0.0197	0.0197						312.9807
Total		**0.2081**	**1.8433**	**1.2320**	**0.0114**		**0.1438**	**0.1438**		**0.1438**	**0.1438**						**2,283.9486**

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	179.9222	3.2057	204.9338	0.3564		27.5935	27.5935		27.5935	27.5935						4,249.5885
Unmitigated	179.9222	3.2057	204.9338	0.3564		27.5935	27.5935		27.5935	27.5935						4,249.5885

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	2.2465					0.0000	0.0000		0.0000	0.0000						0.0000
Consumer Products	18.2564					0.0000	0.0000		0.0000	0.0000						0.0000
Hearth	159.1611	3.1082	196.4671	0.3559		27.5466	27.5466		27.5466	27.5466						4,233.8894
Landscaping	0.2582	0.0975	8.4667	4.5000e-004		0.0470	0.0470		0.0470	0.0470						15.6991
Total	**179.9222**	**3.2057**	**204.9338**	**0.3564**		**27.5935**	**27.5935**		**27.5935**	**27.5935**						**4,249.5885**

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	2.2465					0.0000	0.0000		0.0000	0.0000						0.0000
Consumer Products	18.2564					0.0000	0.0000		0.0000	0.0000						0.0000
Hearth	159.1611	3.1082	196.4671	0.3559		27.5466	27.5466		27.5466	27.5466						4,233.8894
Landscaping	0.2582	0.0975	8.4667	4.5000e-004		0.0470	0.0470		0.0470	0.0470						15.6991
Total	**179.9222**	**3.2057**	**204.9338**	**0.3564**		**27.5935**	**27.5935**		**27.5935**	**27.5935**						**4,249.5885**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Proposed Indio Downtown Specific Plan

Riverside-Mojave Desert SCAQMD County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	326.90	1000sqft	7.50	326,900.00	0
High Turnover (Sit Down Restaurant)	93.40	1000sqft	2.14	93,400.00	0
Quality Restaurant	93.40	1000sqft	2.14	93,400.00	0
Condo/Townhouse	500.00	Dwelling Unit	31.25	500,000.00	1430
Regional Shopping Center	420.30	1000sqft	9.65	420,300.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	28
Climate Zone	15			**Operational Year**	2035
Utility Company	Imperial Irrigation District				
CO2 Intensity (lb/MWhr)	967.62	**CH4 Intensity (lb/MWhr)**	0.022	**N2O Intensity (lb/MWhr)**	0.005

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Includes RPS adjustment.

Land Use - Based on traffic analysis data. Includes passby reductions.

Construction Phase - Construction not included in this model run.

Off-road Equipment - Construction not included in this model run.

Trips and VMT - Construction not included in this model run.

Vehicle Trips - Based on traffic analysis data. Includes passby reductions. Trip lengths and vehicle mix based on model defaults.

Energy Use - Energy/water use and waste generation rates based on model defaults.

Mobile Land Use Mitigation -

Area Mitigation - Includes use of low-VOC content paints (maximum VOC content 50 g/L residential 100 g/L commercial). No hearths.

Energy Mitigation - Assumes compliance with current building codes.

Water Mitigation - Includes installation of low-flow water fixtures and water-efficient irrigation systems. Percent reductions based on model defaults.

Waste Mitigation - Assumes target waste diversion rate of 75% (CalRecycle 2016).

Proposed Indio Downtown Specific Plan - Riverside-Mojave Desert SCAQMD County, Annual

Table Name	Column Name	Default Value	New Value
tblAreaMitigation	UseLowVOCPaintParkingCheck	False	True
tblFleetMix	FleetMixLandUseSubType	General Office Building	Condo/Townhouse
tblFleetMix	FleetMixLandUseSubType	High Turnover (Sit Down Restaurant)	General Office Building
tblFleetMix	FleetMixLandUseSubType	Quality Restaurant	High Turnover (Sit Down Restaurant)
tblFleetMix	FleetMixLandUseSubType	Condo/Townhouse	Quality Restaurant
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.022
tblProjectCharacteristics	CO2IntensityFactor	1270.9	967.62
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.005
tblProjectCharacteristics	OperationalYear	2018	2035
tblVehicleTrips	ST_TR	158.37	101.36
tblVehicleTrips	ST_TR	94.36	60.39
tblVehicleTrips	ST_TR	49.97	1.85
tblVehicleTrips	SU_TR	131.84	84.38
tblVehicleTrips	SU_TR	72.16	46.18
tblVehicleTrips	SU_TR	25.24	0.79
tblVehicleTrips	WD_TR	127.15	81.38
tblVehicleTrips	WD_TR	89.95	57.57
tblVehicleTrips	WD_TR	42.70	32.03

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					
2016	0.0792	1.5500e-003	4.6700e-003	1.0000e-005	7.5000e-004	1.0000e-004	8.5000e-004	2.0000e-004	1.0000e-004	3.0000e-004						0.8327
Maximum	**0.0792**	**1.5500e-003**	**4.6700e-003**	**1.0000e-005**	**7.5000e-004**	**1.0000e-004**	**8.5000e-004**	**2.0000e-004**	**1.0000e-004**	**3.0000e-004**						**0.8327**

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					
2016	0.0792	1.5500e-003	4.6700e-003	1.0000e-005	7.5000e-004	1.0000e-004	8.5000e-004	2.0000e-004	1.0000e-004	3.0000e-004						0.8327
Maximum	**0.0792**	**1.5500e-003**	**4.6700e-003**	**1.0000e-005**	**7.5000e-004**	**1.0000e-004**	**8.5000e-004**	**2.0000e-004**	**1.0000e-004**	**3.0000e-004**						**0.8327**

	ROG	NOx	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**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
		Highest		

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	37.2989	0.6721	43.8767	0.0704		5.4585	5.4585		5.4585	5.4585						765.7523
Energy	0.3601	3.2333	2.4574	0.0196		0.2488	0.2488		0.2488	0.2488						12,694.8538
Mobile	3.7641	37.4925	38.1705	0.2405	22.0642	0.0963	22.1605	5.9054	0.0897	5.9951						22,512.8861
Waste						0.0000	0.0000		0.0000	0.0000						1,092.3172
Water						0.0000	0.0000		0.0000	0.0000						1,650.6147
Total	**41.4231**	**41.3979**	**84.5046**	**0.3306**	**22.0642**	**5.8036**	**27.8678**	**5.9054**	**5.7970**	**11.7024**						**38,716.4240**

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	5.9258	0.0594	5.1501	2.7000e-004		0.0286	0.0286		0.0286	0.0286						8.6479
Energy	0.3601	3.2333	2.4574	0.0196		0.2488	0.2488		0.2488	0.2488						12,694.8538
Mobile	3.7641	37.4925	38.1705	0.2405	22.0642	0.0963	22.1605	5.9054	0.0897	5.9951						22,512.8861
Waste						0.0000	0.0000		0.0000	0.0000						273.0793
Water						0.0000	0.0000		0.0000	0.0000						1,374.0477
Total	**10.0500**	**40.7852**	**45.7779**	**0.2604**	**22.0642**	**0.3737**	**22.4379**	**5.9054**	**0.3671**	**6.2725**						**36,863.5148**

	ROG	NOx	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	**75.74**	**1.48**	**45.83**	**21.22**	**0.00**	**93.56**	**19.48**	**0.00**	**93.67**	**46.40**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**4.79**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Architectural Coating	Architectural Coating	11/16/2016	11/16/2016	5	75	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 1,012,500; Residential Outdoor: 337,500; Non-Residential Indoor: 1,401,000; Non-Residential Outdoor: 467,000; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
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
Architectural Coating	1	136.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Architectural Coating - 2016

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	0.0786					0.0000	0.0000		0.0000	0.0000						0.0000
Off-Road	1.8000e-004	1.1900e-003	9.4000e-004	0.0000		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004						0.1280
Total	**0.0788**	**1.1900e-003**	**9.4000e-004**	**0.0000**		**1.0000e-004**	**1.0000e-004**		**1.0000e-004**	**1.0000e-004**						**0.1280**

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
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Worker	4.6000e-004	3.7000e-004	3.7300e-003	1.0000e-005	7.5000e-004	1.0000e-005	7.5000e-004	2.0000e-004	0.0000	2.0000e-004						0.7047
Total	**4.6000e-004**	**3.7000e-004**	**3.7300e-003**	**1.0000e-005**	**7.5000e-004**	**1.0000e-005**	**7.5000e-004**	**2.0000e-004**	**0.0000**	**2.0000e-004**						**0.7047**

3.2 Architectural Coating - 2016

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	0.0786					0.0000	0.0000		0.0000	0.0000						0.0000
Off-Road	1.8000e-004	1.1900e-003	9.4000e-004	0.0000		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004						0.1280
Total	**0.0788**	**1.1900e-003**	**9.4000e-004**	**0.0000**		**1.0000e-004**	**1.0000e-004**		**1.0000e-004**	**1.0000e-004**						**0.1280**

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
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Worker	4.6000e-004	3.7000e-004	3.7300e-003	1.0000e-005	7.5000e-004	1.0000e-005	7.5000e-004	2.0000e-004	0.0000	2.0000e-004						0.7047
Total	**4.6000e-004**	**3.7000e-004**	**3.7300e-003**	**1.0000e-005**	**7.5000e-004**	**1.0000e-005**	**7.5000e-004**	**2.0000e-004**	**0.0000**	**2.0000e-004**						**0.7047**

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	3.7641	37.4925	38.1705	0.2405	22.0642	0.0963	22.1605	5.9054	0.0897	5.9951						22,512.8861
Unmitigated	3.7641	37.4925	38.1705	0.2405	22.0642	0.0963	22.1605	5.9054	0.0897	5.9951						22,512.8861

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Condo/Townhouse	2,905.00	2,835.00	2420.00	9,655,895	9,655,895
General Office Building	3,605.71	804.17	343.25	8,824,941	8,824,941
High Turnover (Sit Down Restaurant)	7,600.89	9,467.02	7881.09	10,776,597	10,776,597
Quality Restaurant	5,377.04	5,640.43	4313.21	7,492,130	7,492,130
Regional Shopping Center	13,462.21	777.56	332.04	21,140,452	21,140,452
Total	32,950.85	19,524.18	15,289.59	57,890,015	57,890,015

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Condo/Townhouse	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
High Turnover (Sit Down	16.60	8.40	6.90	8.50	72.50	19.00	37	20	43
Quality Restaurant	16.60	8.40	6.90	12.00	69.00	19.00	38	18	44
Regional Shopping Center	16.60	8.40	6.90	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
Condo/Townhouse	0.565475	0.033834	0.192058	0.100675	0.009211	0.004032	0.016699	0.069908	0.001423	0.001062	0.004327	0.000756	0.000539
General Office Building	0.565475	0.033834	0.192058	0.100675	0.009211	0.004032	0.016699	0.069908	0.001423	0.001062	0.004327	0.000756	0.000539
High Turnover (Sit Down Restaurant)	0.565475	0.033834	0.192058	0.100675	0.009211	0.004032	0.016699	0.069908	0.001423	0.001062	0.004327	0.000756	0.000539
Quality Restaurant	0.565475	0.033834	0.192058	0.100675	0.009211	0.004032	0.016699	0.069908	0.001423	0.001062	0.004327	0.000756	0.000539
Regional Shopping Center	0.565475	0.033834	0.192058	0.100675	0.009211	0.004032	0.016699	0.069908	0.001423	0.001062	0.004327	0.000756	0.000539

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Proposed Indio Downtown Specific Plan - Riverside-Mojave Desert SCAQMD County, Annual

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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						9,110.4635
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000						9,110.4635
NaturalGas Mitigated	0.3601	3.2333	2.4574	0.0196		0.2488	0.2488		0.2488	0.2488						3,584.3903
NaturalGas Unmitigated	0.3601	3.2333	2.4574	0.0196		0.2488	0.2488		0.2488	0.2488						3,584.3903

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Condo/Townhouse	1.35426e+007	0.0730	0.6240	0.2655	3.9800e-003		0.0505	0.0505		0.0505	0.0505						726.9766
General Office Building	1.14088e+006	6.1500e-003	0.0559	0.0470	3.4000e-004		4.2500e-003	4.2500e-003		4.2500e-003	4.2500e-003						61.2435
High Turnover (Sit Down Restaurant)	2.55757e+007	0.1379	1.2537	1.0531	7.5200e-003		0.0953	0.0953		0.0953	0.0953						1,372.9284
Quality Restaurant	2.55757e+007	0.1379	1.2537	1.0531	7.5200e-003		0.0953	0.0953		0.0953	0.0953						1,372.9284
Regional Shopping Center	937269	5.0500e-003	0.0459	0.0386	2.8000e-004		3.4900e-003	3.4900e-003		3.4900e-003	3.4900e-003						50.3135
Total		**0.3600**	**3.2333**	**2.4574**	**0.0196**		**0.2488**	**0.2488**		**0.2488**	**0.2488**						**3,584.3903**

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					
Condo/Townhouse	1.35426e+007	0.0730	0.6240	0.2655	3.9800e-003		0.0505	0.0505		0.0505	0.0505						726.9766
General Office Building	1.14088e+006	6.1500e-003	0.0559	0.0470	3.4000e-004		4.2500e-003	4.2500e-003		4.2500e-003	4.2500e-003						61.2435
High Turnover (Sit Down Restaurant)	2.55757e+007	0.1379	1.2537	1.0531	7.5200e-003		0.0953	0.0953		0.0953	0.0953						1,372.9284
Quality Restaurant	2.55757e+007	0.1379	1.2537	1.0531	7.5200e-003		0.0953	0.0953		0.0953	0.0953						1,372.9284
Regional Shopping Center	937269	5.0500e-003	0.0459	0.0386	2.8000e-004		3.4900e-003	3.4900e-003		3.4900e-003	3.4900e-003						50.3135
Total		**0.3600**	**3.2333**	**2.4574**	**0.0196**		**0.2488**	**0.2488**		**0.2488**	**0.2488**						**3,584.3903**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Condo/Townhouse	3.03437e+006				1,334.6059
General Office Building	3.19054e+006				1,403.2982
High Turnover (Sit Down Restaurant)	4.51029e+006				1,983.7608
Quality Restaurant	4.51029e+006				1,983.7608
Regional Shopping Center	5.4681e+006				2,405.0378
Total					**9,110.4635**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Condo/Townhouse	3.03437e+006				1,334.6059
General Office Building	3.19054e+006				1,403.2982
High Turnover (Sit Down Restaurant)	4.51029e+006				1,983.7608
Quality Restaurant	4.51029e+006				1,983.7608
Regional Shopping Center	5.4681e+006				2,405.0378
Total					**9,110.4635**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

No Hearths Installed

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	5.9258	0.0594	5.1501	2.7000e-004		0.0286	0.0286		0.0286	0.0286						8.6479
Unmitigated	37.2989	0.6721	43.8767	0.0704		5.4585	5.4585		5.4585	5.4585						765.7523

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	0.5893					0.0000	0.0000		0.0000	0.0000						0.0000
Consumer Products	5.1818					0.0000	0.0000		0.0000	0.0000						0.0000
Hearth	31.3731	0.6127	38.7267	0.0702		5.4299	5.4299		5.4299	5.4299						757.1044
Landscaping	0.1547	0.0594	5.1501	2.7000e-004		0.0286	0.0286		0.0286	0.0286						8.6479
Total	**37.2989**	**0.6721**	**43.8767**	**0.0704**		**5.4585**	**5.4585**		**5.4585**	**5.4585**						**765.7523**

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	0.5893					0.0000	0.0000		0.0000	0.0000						0.0000
Consumer Products	5.1818					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
Landscaping	0.1547	0.0594	5.1501	2.7000e-004		0.0286	0.0286		0.0286	0.0286						8.6479
Total	**5.9258**	**0.0594**	**5.1501**	**2.7000e-004**		**0.0286**	**0.0286**		**0.0286**	**0.0286**						**8.6479**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated				1,374.0477
Unmitigated				1,650.6147

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Condo/Townhouse	32.577 / 20.5377				331.2698
General Office Building	58.1012 / 35.6104				585.8430
High Turnover (Sit Down Restaurant)	28.35 / 1.80958				209.7931
Quality Restaurant	28.35 / 1.80958				209.7931
Regional Shopping Center	31.1327 / 19.0813				313.9156
Total					**1,650.6147**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Condo/Townhouse	26.0616 / 19.2849				278.9656
General Office Building	46.4809 / 33.4382				492.8619
High Turnover (Sit Down Restaurant)	22.68 / 1.69919				169.0636
Quality Restaurant	22.68 / 1.69919				169.0636
Regional Shopping Center	24.9061 / 17.9174				264.0930
Total					**1,374.0477**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated				273.0793
Unmitigated				1,092.3172

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Condo/Townhouse	230				115.6674
General Office Building	304.02				152.8921
High Turnover (Sit Down Restaurant)	1111.46				558.9549
Quality Restaurant	85.23				42.8623
Regional Shopping Center	441.32				221.9405
Total					**1,092.3172**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Condo/Townhouse	57.5				28.9168
General Office Building	76.005				38.2230
High Turnover (Sit Down Restaurant)	277.865				139.7387
Quality Restaurant	21.3075				10.7156
Regional Shopping Center	110.33				55.4851
Total					**273.0793**

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

Proposed Indio Downtown Specific Plan

Riverside-Mojave Desert SCAQMD County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	326.90	1000sqft	7.50	326,900.00	0
High Turnover (Sit Down Restaurant)	93.40	1000sqft	2.14	93,400.00	0
Quality Restaurant	93.40	1000sqft	2.14	93,400.00	0
Condo/Townhouse	500.00	Dwelling Unit	31.25	500,000.00	1430
Regional Shopping Center	420.30	1000sqft	9.65	420,300.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	28
Climate Zone	15			**Operational Year**	2035
Utility Company	Imperial Irrigation District				
CO2 Intensity (lb/MWhr)	967.62	**CH4 Intensity (lb/MWhr)**	0.022	**N2O Intensity (lb/MWhr)**	0.005

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Includes RPS adjustment.

Land Use - Based on traffic analysis data. Includes passby reductions.

Construction Phase - Construction not included in this model run.

Off-road Equipment - Construction not included in this model run.

Trips and VMT - Construction not included in this model run.

Vehicle Trips - Based on traffic analysis data. Includes passby reductions. Trip lengths and vehicle mix based on model defaults.

Energy Use - Energy/water use and waste generation rates based on model defaults.

Mobile Land Use Mitigation -

Area Mitigation - Includes use of low-VOC content paints (maximum VOC content 50 g/L residential 100 g/L commercial). No hearths.

Energy Mitigation - Assumes compliance with current building codes.

Water Mitigation - Includes installation of low-flow water fixtures and water-efficient irrigation systems. Percent reductions based on model defaults.

Waste Mitigation - Assumes target waste diversion rate of 75% (CalRecycle 2016).

Proposed Indio Downtown Specific Plan - Riverside-Mojave Desert SCAQMD County, Summer

Table Name	Column Name	Default Value	New Value
tblAreaMitigation	UseLowVOCPaintParkingCheck	False	True
tblFleetMix	FleetMixLandUseSubType	General Office Building	Condo/Townhouse
tblFleetMix	FleetMixLandUseSubType	High Turnover (Sit Down Restaurant)	General Office Building
tblFleetMix	FleetMixLandUseSubType	Quality Restaurant	High Turnover (Sit Down Restaurant)
tblFleetMix	FleetMixLandUseSubType	Condo/Townhouse	Quality Restaurant
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.022
tblProjectCharacteristics	CO2IntensityFactor	1270.9	967.62
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.005
tblProjectCharacteristics	OperationalYear	2018	2035
tblVehicleTrips	ST_TR	158.37	101.36
tblVehicleTrips	ST_TR	94.36	60.39
tblVehicleTrips	ST_TR	49.97	1.85
tblVehicleTrips	SU_TR	131.84	84.38
tblVehicleTrips	SU_TR	72.16	46.18
tblVehicleTrips	SU_TR	25.24	0.79
tblVehicleTrips	WD_TR	127.15	81.38
tblVehicleTrips	WD_TR	89.95	57.57
tblVehicleTrips	WD_TR	42.70	32.03

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					
2016	158.5396	3.0540	10.5502	0.0199	1.5202	0.2067	1.7269	0.4032	0.2059	0.6091						1,969.7526
Maximum	**158.5396**	**3.0540**	**10.5502**	**0.0199**	**1.5202**	**0.2067**	**1.7269**	**0.4032**	**0.2059**	**0.6091**						**1,969.7526**

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					
2016	158.5396	3.0540	10.5502	0.0199	1.5202	0.2067	1.7269	0.4032	0.2059	0.6091						1,969.7526
Maximum	**158.5396**	**3.0540**	**10.5502**	**0.0199**	**1.5202**	**0.2067**	**1.7269**	**0.4032**	**0.2059**	**0.6091**						**1,969.7526**

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

2.2 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	798.0577	15.4185	985.7536	1.7135		132.6645	132.6645		132.6645	132.6645						20,431.4989
Energy	1.9729	17.7168	13.4649	0.1076		1.3631	1.3631		1.3631	1.3631						21,649.9396
Mobile	30.6682	254.1768	284.0240	1.7225	152.4176	0.6528	153.0704	40.7386	0.6082	41.3468						177,529.6800
Total	**830.6987**	**287.3121**	**1,283.2426**	**3.5435**	**152.4176**	**134.6803**	**287.0979**	**40.7386**	**134.6357**	**175.3743**						**219,611.1185**

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	32.8602	0.4751	41.2005	2.1900e-003		0.2291	0.2291		0.2291	0.2291						76.2614
Energy	1.9729	17.7168	13.4649	0.1076		1.3631	1.3631		1.3631	1.3631						21,649.9396
Mobile	30.6682	254.1768	284.0240	1.7225	152.4176	0.6528	153.0704	40.7386	0.6082	41.3468						177,529.6800
Total	**65.5012**	**272.3686**	**338.6894**	**1.8323**	**152.4176**	**2.2449**	**154.6626**	**40.7386**	**2.2004**	**42.9389**						**199,255.8810**

	ROG	NOx	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	**92.11**	**5.20**	**73.61**	**48.29**	**0.00**	**98.33**	**46.13**	**0.00**	**98.37**	**75.52**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**9.27**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Architectural Coating	Architectural Coating	11/16/2016	11/16/2016	5	75	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 1,012,500; Residential Outdoor: 337,500; Non-Residential Indoor: 1,401,000; Non-Residential Outdoor: 467,000; Striped Parking Area: 0 (Architectural Coating - sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
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
Architectural Coating	1	136.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Architectural Coating - 2016

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	157.1574					0.0000	0.0000		0.0000	0.0000						0.0000
Off-Road	0.3685	2.3722	1.8839	2.9700e-003		0.1966	0.1966		0.1966	0.1966						282.2776
Total	**157.5259**	**2.3722**	**1.8839**	**2.9700e-003**		**0.1966**	**0.1966**		**0.1966**	**0.1966**						**282.2776**

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
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Worker	1.0138	0.6817	8.6663	0.0170	1.5202	0.0101	1.5303	0.4032	9.3300e-003	0.4125						1,687.4751
Total	**1.0138**	**0.6817**	**8.6663**	**0.0170**	**1.5202**	**0.0101**	**1.5303**	**0.4032**	**9.3300e-003**	**0.4125**						**1,687.4751**

3.2 Architectural Coating - 2016

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	157.1574					0.0000	0.0000		0.0000	0.0000						0.0000
Off-Road	0.3685	2.3722	1.8839	2.9700e-003		0.1966	0.1966		0.1966	0.1966						282.2776
Total	**157.5259**	**2.3722**	**1.8839**	**2.9700e-003**		**0.1966**	**0.1966**		**0.1966**	**0.1966**						**282.2776**

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
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Worker	1.0138	0.6817	8.6663	0.0170	1.5202	0.0101	1.5303	0.4032	9.3300e-003	0.4125						1,687.4751
Total	**1.0138**	**0.6817**	**8.6663**	**0.0170**	**1.5202**	**0.0101**	**1.5303**	**0.4032**	**9.3300e-003**	**0.4125**						**1,687.4751**

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	30.6682	254.1768	284.0240	1.7225	152.4176	0.6528	153.0704	40.7386	0.6082	41.3468						177,529.6800
Unmitigated	30.6682	254.1768	284.0240	1.7225	152.4176	0.6528	153.0704	40.7386	0.6082	41.3468						177,529.6800

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Condo/Townhouse	2,905.00	2,835.00	2420.00	9,655,895	9,655,895
General Office Building	3,605.71	804.17	343.25	8,824,941	8,824,941
High Turnover (Sit Down Restaurant)	7,600.89	9,467.02	7881.09	10,776,597	10,776,597
Quality Restaurant	5,377.04	5,640.43	4313.21	7,492,130	7,492,130
Regional Shopping Center	13,462.21	777.56	332.04	21,140,452	21,140,452
Total	32,950.85	19,524.18	15,289.59	57,890,015	57,890,015

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Condo/Townhouse	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
High Turnover (Sit Down	16.60	8.40	6.90	8.50	72.50	19.00	37	20	43
Quality Restaurant	16.60	8.40	6.90	12.00	69.00	19.00	38	18	44
Regional Shopping Center	16.60	8.40	6.90	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
Condo/Townhouse	0.565475	0.033834	0.192058	0.100675	0.009211	0.004032	0.016699	0.069908	0.001423	0.001062	0.004327	0.000756	0.000539
General Office Building	0.565475	0.033834	0.192058	0.100675	0.009211	0.004032	0.016699	0.069908	0.001423	0.001062	0.004327	0.000756	0.000539
High Turnover (Sit Down Restaurant)	0.565475	0.033834	0.192058	0.100675	0.009211	0.004032	0.016699	0.069908	0.001423	0.001062	0.004327	0.000756	0.000539
Quality Restaurant	0.565475	0.033834	0.192058	0.100675	0.009211	0.004032	0.016699	0.069908	0.001423	0.001062	0.004327	0.000756	0.000539
Regional Shopping Center	0.565475	0.033834	0.192058	0.100675	0.009211	0.004032	0.016699	0.069908	0.001423	0.001062	0.004327	0.000756	0.000539

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	1.9729	17.7168	13.4649	0.1076		1.3631	1.3631		1.3631	1.3631						21,649.9396
NaturalGas Unmitigated	1.9729	17.7168	13.4649	0.1076		1.3631	1.3631		1.3631	1.3631						21,649.9396

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Condo/Townhouse	37102.9	0.4001	3.4193	1.4550	0.0218		0.2765	0.2765		0.2765	0.2765						4,390.9836
General Office Building	3125.7	0.0337	0.3064	0.2574	1.8400e-003		0.0233	0.0233		0.0233	0.0233						369.9148
High Turnover (Sit Down Restaurant)	70070.5	0.7557	6.8697	5.7705	0.0412		0.5221	0.5221		0.5221	0.5221						8,292.5724
Quality Restaurant	70070.5	0.7557	6.8697	5.7705	0.0412		0.5221	0.5221		0.5221	0.5221						8,292.5724
Regional Shopping Center	2567.86	0.0277	0.2518	0.2115	1.5100e-003		0.0191	0.0191		0.0191	0.0191						303.8965
Total		**1.9729**	**17.7168**	**13.4649**	**0.1076**		**1.3631**	**1.3631**		**1.3631**	**1.3631**						**21,649.9396**

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					
Condo/Townhouse	37.1029	0.4001	3.4193	1.4550	0.0218		0.2765	0.2765		0.2765	0.2765						4,390.9836
General Office Building	3.1257	0.0337	0.3064	0.2574	1.8400e-003		0.0233	0.0233		0.0233	0.0233						369.9148
High Turnover (Sit Down Restaurant)	70.0705	0.7557	6.8697	5.7705	0.0412		0.5221	0.5221		0.5221	0.5221						8,292.5724
Quality Restaurant	70.0705	0.7557	6.8697	5.7705	0.0412		0.5221	0.5221		0.5221	0.5221						8,292.5724
Regional Shopping Center	2.56786	0.0277	0.2518	0.2115	1.5100e-003		0.0191	0.0191		0.0191	0.0191						303.8965
Total		**1.9729**	**17.7168**	**13.4649**	**0.1076**		**1.3631**	**1.3631**		**1.3631**	**1.3631**						**21,649.9396**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

No Hearths Installed

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	32.8602	0.4751	41.2005	2.1900e-003		0.2291	0.2291		0.2291	0.2291						76.2614
Unmitigated	798.0577	15.4185	985.7536	1.7135		132.6645	132.6645		132.6645	132.6645						20,431.4989

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	3.2293					0.0000	0.0000		0.0000	0.0000						0.0000
Consumer Products	28.3932					0.0000	0.0000		0.0000	0.0000						0.0000
Hearth	765.1975	14.9434	944.5532	1.7113		132.4354	132.4354		132.4354	132.4354						20,355.2375
Landscaping	1.2377	0.4751	41.2005	2.1900e-003		0.2291	0.2291		0.2291	0.2291						76.2614
Total	**798.0577**	**15.4185**	**985.7536**	**1.7135**		**132.6645**	**132.6645**		**132.6645**	**132.6645**						**20,431.4989**

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	3.2293					0.0000	0.0000		0.0000	0.0000						0.0000
Consumer Products	28.3932					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
Landscaping	1.2377	0.4751	41.2005	2.1900e-003		0.2291	0.2291		0.2291	0.2291						76.2614
Total	**32.8602**	**0.4751**	**41.2005**	**2.1900e-003**		**0.2291**	**0.2291**		**0.2291**	**0.2291**						**76.2614**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

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

Proposed Indio Downtown Specific Plan

Riverside-Mojave Desert SCAQMD County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	326.90	1000sqft	7.50	326,900.00	0
High Turnover (Sit Down Restaurant)	93.40	1000sqft	2.14	93,400.00	0
Quality Restaurant	93.40	1000sqft	2.14	93,400.00	0
Condo/Townhouse	500.00	Dwelling Unit	31.25	500,000.00	1430
Regional Shopping Center	420.30	1000sqft	9.65	420,300.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	28
Climate Zone	15			**Operational Year**	2035
Utility Company	Imperial Irrigation District				
CO2 Intensity (lb/MWhr)	967.62	**CH4 Intensity (lb/MWhr)**	0.022	**N2O Intensity (lb/MWhr)**	0.005

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Includes RPS adjustment.

Land Use - Based on traffic analysis data. Includes passby reductions.

Construction Phase - Construction not included in this model run.

Off-road Equipment - Construction not included in this model run.

Trips and VMT - Construction not included in this model run.

Vehicle Trips - Based on traffic analysis data. Includes passby reductions. Trip lengths and vehicle mix based on model defaults.

Energy Use - Energy/water use and waste generation rates based on model defaults.

Mobile Land Use Mitigation -

Area Mitigation - Includes use of low-VOC content paints (maximum VOC content 50 g/L residential 100 g/L commercial). No hearths.

Energy Mitigation - Assumes compliance with current building codes.

Water Mitigation - Includes installation of low-flow water fixtures and water-efficient irrigation systems. Percent reductions based on model defaults.

Waste Mitigation - Assumes target waste diversion rate of 75% (CalRecycle 2016).

Proposed Indio Downtown Specific Plan - Riverside-Mojave Desert SCAQMD County, Winter

Table Name	Column Name	Default Value	New Value
tblAreaMitigation	UseLowVOCPaintParkingCheck	False	True
tblFleetMix	FleetMixLandUseSubType	General Office Building	Condo/Townhouse
tblFleetMix	FleetMixLandUseSubType	High Turnover (Sit Down Restaurant)	General Office Building
tblFleetMix	FleetMixLandUseSubType	Quality Restaurant	High Turnover (Sit Down Restaurant)
tblFleetMix	FleetMixLandUseSubType	Condo/Townhouse	Quality Restaurant
tblProjectCharacteristics	CH4IntensityFactor	0.029	0.022
tblProjectCharacteristics	CO2IntensityFactor	1270.9	967.62
tblProjectCharacteristics	N2OIntensityFactor	0.006	0.005
tblProjectCharacteristics	OperationalYear	2018	2035
tblVehicleTrips	ST_TR	158.37	101.36
tblVehicleTrips	ST_TR	94.36	60.39
tblVehicleTrips	ST_TR	49.97	1.85
tblVehicleTrips	SU_TR	131.84	84.38
tblVehicleTrips	SU_TR	72.16	46.18
tblVehicleTrips	SU_TR	25.24	0.79
tblVehicleTrips	WD_TR	127.15	81.38
tblVehicleTrips	WD_TR	89.95	57.57
tblVehicleTrips	WD_TR	42.70	32.03

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					
2016	158.5157	3.0809	8.9710	0.0182	1.5202	0.2067	1.7269	0.4032	0.2059	0.6091						1,797.0948
Maximum	**158.5157**	**3.0809**	**8.9710**	**0.0182**	**1.5202**	**0.2067**	**1.7269**	**0.4032**	**0.2059**	**0.6091**						**1,797.0948**

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					
2016	158.5157	3.0809	8.9710	0.0182	1.5202	0.2067	1.7269	0.4032	0.2059	0.6091						1,797.0948
Maximum	**158.5157**	**3.0809**	**8.9710**	**0.0182**	**1.5202**	**0.2067**	**1.7269**	**0.4032**	**0.2059**	**0.6091**						**1,797.0948**

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

2.2 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	798.0577	15.4185	985.7536	1.7135		132.6645	132.6645		132.6645	132.6645						20,431.4989
Energy	1.9729	17.7168	13.4649	0.1076		1.3631	1.3631		1.3631	1.3631						21,649.9396
Mobile	25.4148	249.5666	254.7501	1.5898	152.4176	0.6571	153.0747	40.7386	0.6123	41.3509						164,050.6016
Total	**825.4453**	**282.7019**	**1,253.9687**	**3.4108**	**152.4176**	**134.6846**	**287.1022**	**40.7386**	**134.6398**	**175.3784**						**206,132.0400**

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	32.8602	0.4751	41.2005	2.1900e-003		0.2291	0.2291		0.2291	0.2291						76.2614
Energy	1.9729	17.7168	13.4649	0.1076		1.3631	1.3631		1.3631	1.3631						21,649.9396
Mobile	25.4148	249.5666	254.7501	1.5898	152.4176	0.6571	153.0747	40.7386	0.6123	41.3509						164,050.6016
Total	**60.2479**	**267.7585**	**309.4155**	**1.6996**	**152.4176**	**2.2492**	**154.6669**	**40.7386**	**2.2045**	**42.9430**						**185,776.8025**

	ROG	NOx	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	**92.70**	**5.29**	**75.33**	**50.17**	**0.00**	**98.33**	**46.13**	**0.00**	**98.36**	**75.51**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**9.87**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Architectural Coating	Architectural Coating	11/16/2016	11/16/2016	5	75	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 1,012,500; Residential Outdoor: 337,500; Non-Residential Indoor: 1,401,000; Non-Residential Outdoor: 467,000; Striped Parking Area: 0 (Architectural Coating - sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
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
Architectural Coating	1	136.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Architectural Coating - 2016

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	157.1574					0.0000	0.0000		0.0000	0.0000						0.0000
Off-Road	0.3685	2.3722	1.8839	2.9700e-003		0.1966	0.1966		0.1966	0.1966						282.2776
Total	**157.5259**	**2.3722**	**1.8839**	**2.9700e-003**		**0.1966**	**0.1966**		**0.1966**	**0.1966**						**282.2776**

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
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Worker	0.9899	0.7087	7.0871	0.0152	1.5202	0.0101	1.5303	0.4032	9.3300e-003	0.4125						1,514.8172
Total	**0.9899**	**0.7087**	**7.0871**	**0.0152**	**1.5202**	**0.0101**	**1.5303**	**0.4032**	**9.3300e-003**	**0.4125**						**1,514.8172**

3.2 Architectural Coating - 2016

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	157.1574					0.0000	0.0000		0.0000	0.0000						0.0000
Off-Road	0.3685	2.3722	1.8839	2.9700e-003		0.1966	0.1966		0.1966	0.1966						282.2776
Total	**157.5259**	**2.3722**	**1.8839**	**2.9700e-003**		**0.1966**	**0.1966**		**0.1966**	**0.1966**						**282.2776**

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
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000						0.0000
Worker	0.9899	0.7087	7.0871	0.0152	1.5202	0.0101	1.5303	0.4032	9.3300e-003	0.4125						1,514.8172
Total	**0.9899**	**0.7087**	**7.0871**	**0.0152**	**1.5202**	**0.0101**	**1.5303**	**0.4032**	**9.3300e-003**	**0.4125**						**1,514.8172**

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	25.4148	249.5666	254.7501	1.5898	152.4176	0.6571	153.0747	40.7386	0.6123	41.3509						164,050.6016
Unmitigated	25.4148	249.5666	254.7501	1.5898	152.4176	0.6571	153.0747	40.7386	0.6123	41.3509						164,050.6016

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Condo/Townhouse	2,905.00	2,835.00	2420.00	9,655,895	9,655,895
General Office Building	3,605.71	804.17	343.25	8,824,941	8,824,941
High Turnover (Sit Down Restaurant)	7,600.89	9,467.02	7881.09	10,776,597	10,776,597
Quality Restaurant	5,377.04	5,640.43	4313.21	7,492,130	7,492,130
Regional Shopping Center	13,462.21	777.56	332.04	21,140,452	21,140,452
Total	32,950.85	19,524.18	15,289.59	57,890,015	57,890,015

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Condo/Townhouse	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
High Turnover (Sit Down	16.60	8.40	6.90	8.50	72.50	19.00	37	20	43
Quality Restaurant	16.60	8.40	6.90	12.00	69.00	19.00	38	18	44
Regional Shopping Center	16.60	8.40	6.90	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
Condo/Townhouse	0.565475	0.033834	0.192058	0.100675	0.009211	0.004032	0.016699	0.069908	0.001423	0.001062	0.004327	0.000756	0.000539
General Office Building	0.565475	0.033834	0.192058	0.100675	0.009211	0.004032	0.016699	0.069908	0.001423	0.001062	0.004327	0.000756	0.000539
High Turnover (Sit Down Restaurant)	0.565475	0.033834	0.192058	0.100675	0.009211	0.004032	0.016699	0.069908	0.001423	0.001062	0.004327	0.000756	0.000539
Quality Restaurant	0.565475	0.033834	0.192058	0.100675	0.009211	0.004032	0.016699	0.069908	0.001423	0.001062	0.004327	0.000756	0.000539
Regional Shopping Center	0.565475	0.033834	0.192058	0.100675	0.009211	0.004032	0.016699	0.069908	0.001423	0.001062	0.004327	0.000756	0.000539

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	1.9729	17.7168	13.4649	0.1076		1.3631	1.3631		1.3631	1.3631						21,649.9396
NaturalGas Unmitigated	1.9729	17.7168	13.4649	0.1076		1.3631	1.3631		1.3631	1.3631						21,649.9396

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Condo/Townhouse	37102.9	0.4001	3.4193	1.4550	0.0218		0.2765	0.2765		0.2765	0.2765						4,390.9836
General Office Building	3125.7	0.0337	0.3064	0.2574	1.8400e-003		0.0233	0.0233		0.0233	0.0233						369.9148
High Turnover (Sit Down Restaurant)	70070.5	0.7557	6.8697	5.7705	0.0412		0.5221	0.5221		0.5221	0.5221						8,292.5724
Quality Restaurant	70070.5	0.7557	6.8697	5.7705	0.0412		0.5221	0.5221		0.5221	0.5221						8,292.5724
Regional Shopping Center	2567.86	0.0277	0.2518	0.2115	1.5100e-003		0.0191	0.0191		0.0191	0.0191						303.8965
Total		**1.9729**	**17.7168**	**13.4649**	**0.1076**		**1.3631**	**1.3631**		**1.3631**	**1.3631**						**21,649.9396**

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					
Condo/Townhouse	37.1029	0.4001	3.4193	1.4550	0.0218		0.2765	0.2765		0.2765	0.2765						4,390.9836
General Office Building	3.1257	0.0337	0.3064	0.2574	1.8400e-003		0.0233	0.0233		0.0233	0.0233						369.9148
High Turnover (Sit Down Restaurant)	70.0705	0.7557	6.8697	5.7705	0.0412		0.5221	0.5221		0.5221	0.5221						8,292.5724
Quality Restaurant	70.0705	0.7557	6.8697	5.7705	0.0412		0.5221	0.5221		0.5221	0.5221						8,292.5724
Regional Shopping Center	2.56786	0.0277	0.2518	0.2115	1.5100e-003		0.0191	0.0191		0.0191	0.0191						303.8965
Total		**1.9729**	**17.7168**	**13.4649**	**0.1076**		**1.3631**	**1.3631**		**1.3631**	**1.3631**						**21,649.9396**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

Use Low VOC Paint - Non-Residential Interior

Use Low VOC Paint - Non-Residential Exterior

No Hearths Installed

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	32.8602	0.4751	41.2005	2.1900e-003		0.2291	0.2291		0.2291	0.2291						76.2614
Unmitigated	798.0577	15.4185	985.7536	1.7135		132.6645	132.6645		132.6645	132.6645						20,431.4989

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	3.2293					0.0000	0.0000		0.0000	0.0000						0.0000
Consumer Products	28.3932					0.0000	0.0000		0.0000	0.0000						0.0000
Hearth	765.1975	14.9434	944.5532	1.7113		132.4354	132.4354		132.4354	132.4354						20,355.2375
Landscaping	1.2377	0.4751	41.2005	2.1900e-003		0.2291	0.2291		0.2291	0.2291						76.2614
Total	**798.0577**	**15.4185**	**985.7536**	**1.7135**		**132.6645**	**132.6645**		**132.6645**	**132.6645**						**20,431.4989**

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	3.2293					0.0000	0.0000		0.0000	0.0000						0.0000
Consumer Products	28.3932					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
Landscaping	1.2377	0.4751	41.2005	2.1900e-003		0.2291	0.2291		0.2291	0.2291						76.2614
Total	**32.8602**	**0.4751**	**41.2005**	**2.1900e-003**		**0.2291**	**0.2291**		**0.2291**	**0.2291**						**76.2614**

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

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