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Air Quality and Greenhouse Gas Analysis Report
Beaumont Commercial Development Mixed Use Project
City of Beaumont, Riverside County, California

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ACRONYMS AND ABBREVIATIONS

°C	degrees Celsius
°F	degrees Fahrenheit
µg/m^3	micrograms per cubic meter
AB	Assembly Bill
AQMP	Air Quality Management Plan
ARB	California Air Resources Board
BAU	Business as Usual
BMP	Best Management Practices
CAAQS	California Ambient Air Quality Standards
CalEEMod	California Emissions Estimator Model
CAPCOA	California Air Pollution Control Officers Association
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CO	carbon monoxide
CO_2	carbon dioxide equivalent
CPUC	California Public Utility Commission
DPM	diesel particulate matter
EMFAC	Emission Factors
EPA	United States Environmental Protection Agency
GHG	greenhouse gas
IPCC	United Nations Intergovernmental Panel on Climate Change
ITE	Institute of Transportation Engineers
LCFS	Low Carbon Fuel Standard
LEV	Low-Emission Vehicle
LST	localized significance threshold
MMT	million metric tons
mph	miles per hour
NO_2	nitrogen dioxide
NO_X	oxides of nitrogen
PM	particulate matter
ppb	parts per billion
ppm	parts per million
ROG	reactive organic gases
RPS	renewables portfolio standard
SB	Senate Bill

SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SIP	State Implementation Plan
SoCAB	South Coast Air Basin
SO_X	sulfur oxides
SP	service populations
SRA	Source Receptor Area
TAC	toxic air contaminant
VMT	vehicle miles traveled
VOC	volatile organic compound
ZEV	zero-emission vehicles

SECTION 1: EXECUTIVE SUMMARY

1.1 - Purpose and Methods of Analysis

The following air quality and greenhouse gas (GHG) analysis was prepared to evaluate whether the estimated criteria air pollutant, ozone precursor, and GHG emissions generated from the Beaumont Commercial project would cause significant impacts to air resources in the project area. This assessment was conducted within the context of the California Environmental Quality Act (CEQA, California Public Resources Code Sections 21000, et seq.). The methodology follows South Coast Air Quality Management District (SCAQMD) recommendations for quantification of emissions and evaluation of potential impacts to air resources.

1.2 - Project Summary

1.2.1 - Site Location

The project site consists of approximately 2.3-acres of undeveloped land, Assessor Parcel Numbers (APNs) 400-530-006 and 400-530-007, located in the City of Beaumont, Riverside County, California.

Regional access to the site is provided via Interstate 10 (I-10) via the Oak Valley Parkway interchange, which runs along the southern boundary of the site. Local vehicular access to the site is provided via one point on Oak Valley Parkway on the southern boundary of the site, and one point on Oak Valley Village Circle on the northern boundary of the site.

Exhibit 1 provides a regional vicinity map of the project location, while Exhibit 2 provides a local vicinity map of the project location.

1.2.2 - Project Description

The proposed Project would develop a gas station with eight (8) fuel pumps (16 fueling stations), a 3,500 square foot convenience store (including 1,000 square foot quick serve restaurant) with an attached 1,700 square foot drive-thru restaurant, 6,250 square foot retail building, and 2,000 square foot restaurant (with drive-thru), on 2.3-acres in the City of Beaumont east of Interstate 10 (I-10) and north of Oak Valley Parkway (Exhibit 3).

1.3 - Summary of Analysis Results

The following is a summary of the analysis results. As shown below, the project would result in less than significant impacts for all air quality and GHG impact criteria analyzed.

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

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

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

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

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

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

Impact GHG-1: The project would generate direct and indirect GHG emissions; however, the project would not result in a significant impact on the environment.
Less than significant impact.

Impact GHG-2: The project would not conflict with any applicable plan, policy or regulation of an agency adopted to reduce the emissions of GHG.
Less than significant impact.

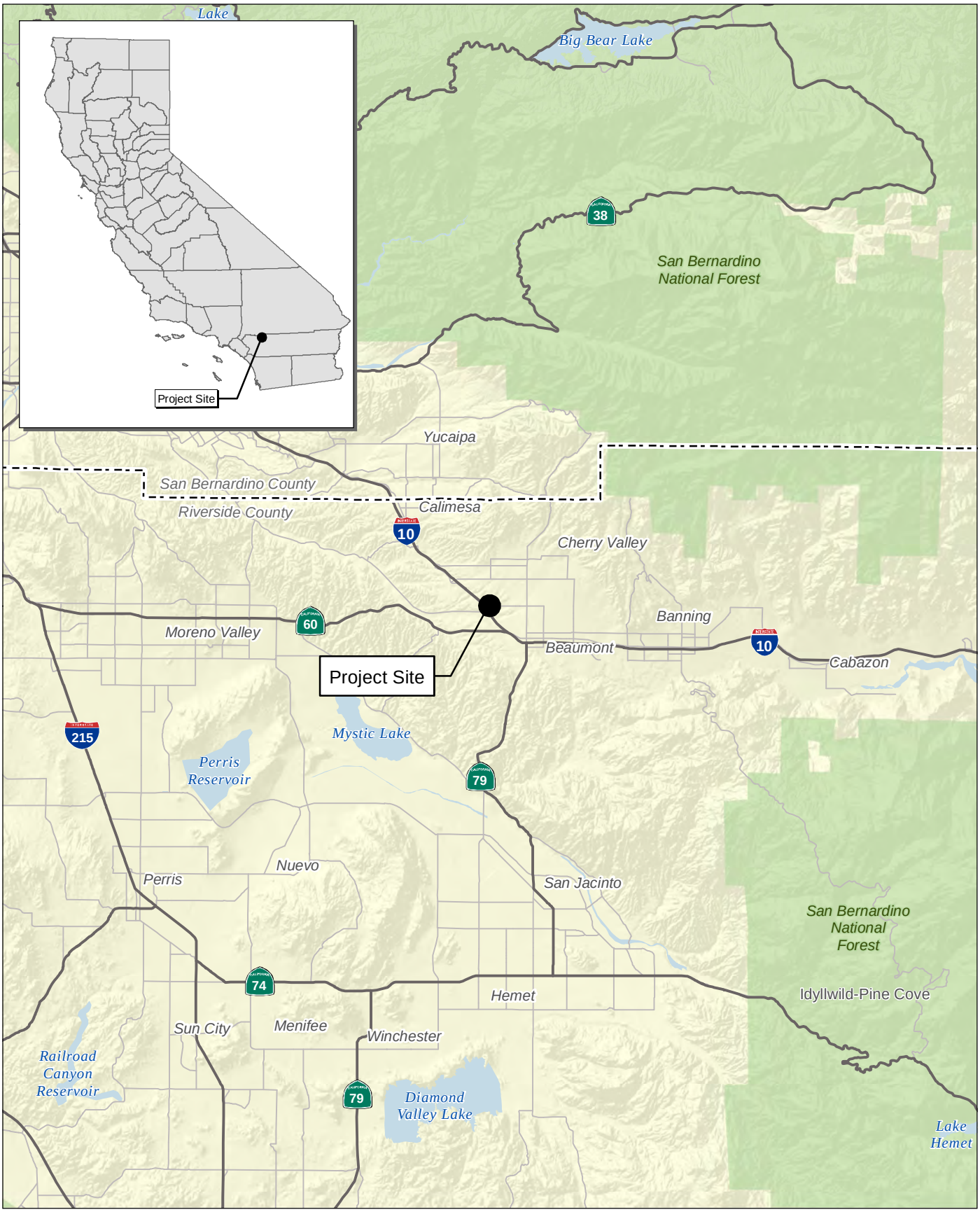
1.4 - Mitigation Measures Applied to the Project

Air Quality

No mitigation is required.

Greenhouse Gas Emissions

No mitigation is required.



Source: Census 2000 Data, The CaSIL

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5 2.5 0 5 Miles

Exhibit 1
Regional Location Map

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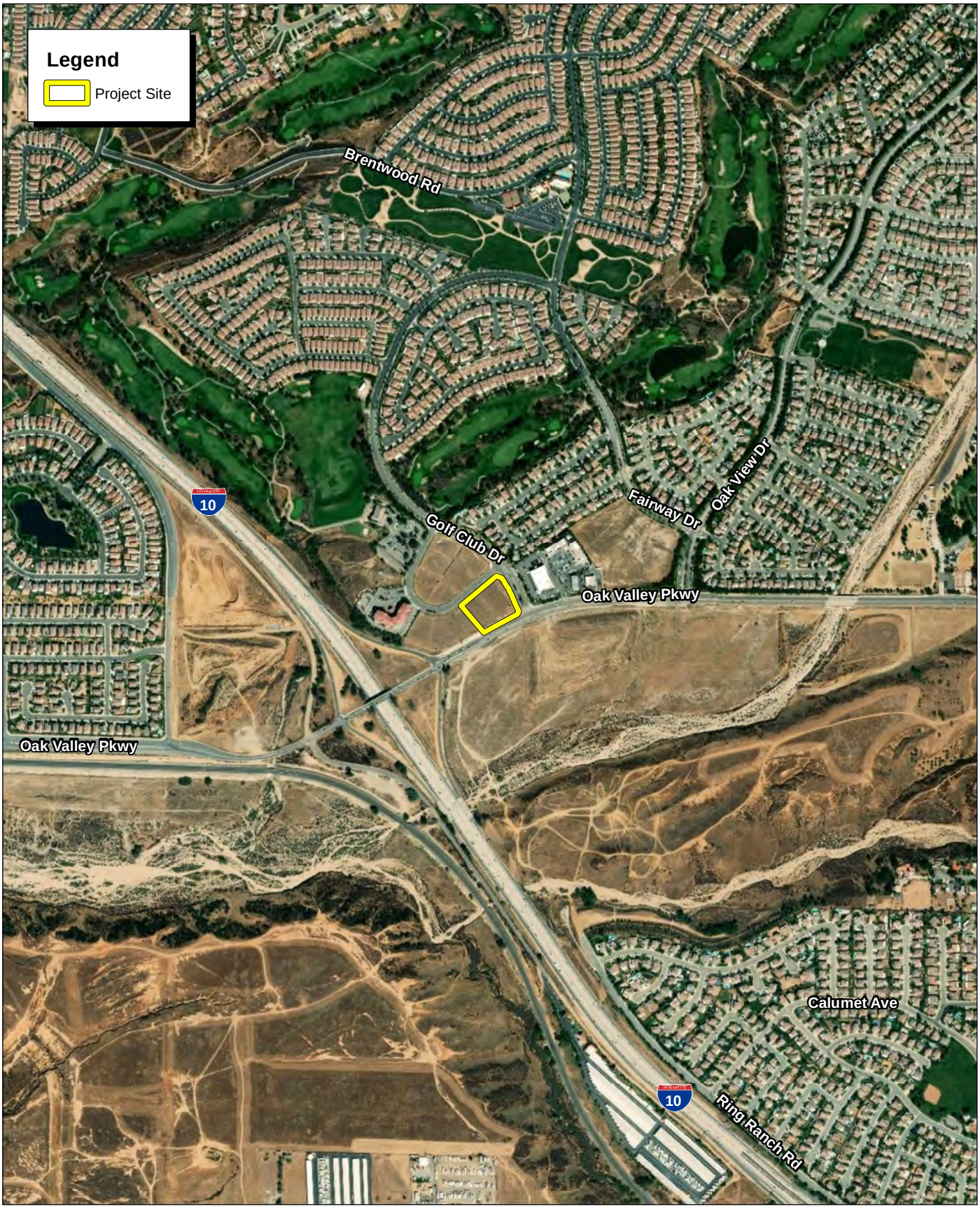

Source: ESRI Aerial Imagery.

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1,000 500 0 1,000
Feet

Exhibit 2
Local Vicinity Map
Aerial Base

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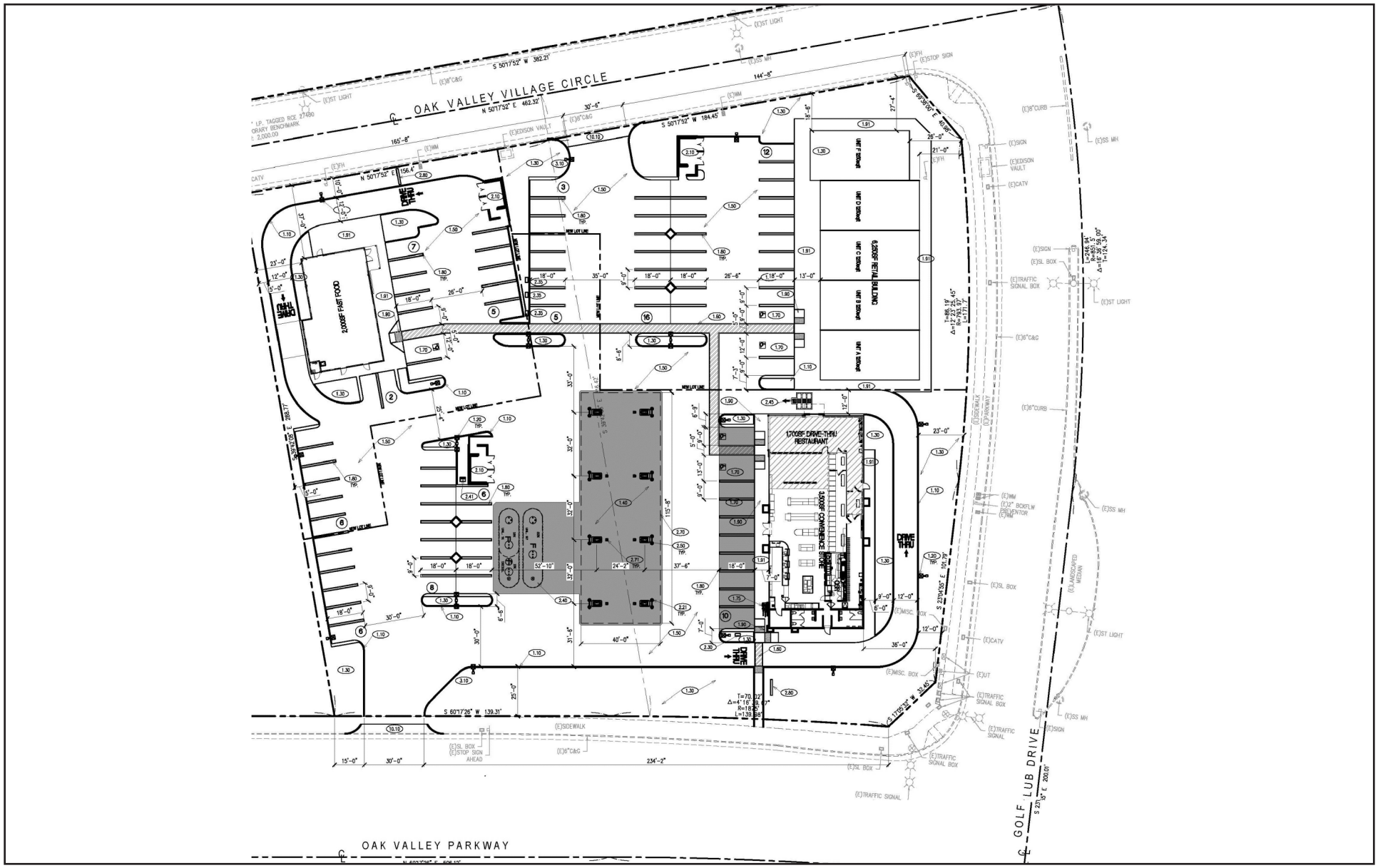

Source: CJC Design, Inc., December 2018.

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Exhibit 3
Site Plan

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SECTION 2: AIR QUALITY SETTING

2.1 - Environmental Setting

The project is located in the South Coast Air Basin (SoCAB). Regional and local air quality are impacted by topography, dominant airflows, atmospheric inversions, location, and season. The following section describes these conditions as they pertain to the SoCAB.

2.1.1 - South Coast Air Basin

The project is located in the City of Beaumont and is within the SoCAB. To the west of the SoCAB is the Pacific Ocean. To the north and east of the SoCAB are the San Gabriel, San Bernardino, and San Jacinto Mountains, while the southern limit of the SoCAB is the San Diego County line. The SoCAB consists of Orange County, all of Los Angeles County except for the Antelope Valley, the non-desert portion of western San Bernardino County, and the western and Coachella Valley portions of Riverside County. The air quality in the basin is impacted by dominant airflows, topography, atmospheric inversions, location, season, and time of day.

Dominant airflows provide the driving mechanism for transport and dispersion of air pollution. The mountains surrounding the region form natural horizontal barriers to the dispersion of air contaminants. Air pollution created in the coastal areas and around the western Riverside County area is transported inland until it reaches the mountains where the combination of mountains and inversion layers generally prevent further dispersion. This poor ventilation results in a gradual degradation of air quality from the coastal areas to inland areas. Air stagnation may occur during the early evening and early morning periods of transition between day and nighttime flows. The region also experiences periods of hot, dry winds from the desert, known as Santa Ana winds. If the Santa Ana winds are strong, they can surpass the sea breeze, which blows from the ocean to the land, and carry the suspended dust and pollutants out to the ocean. If the winds are weak, they are opposed by the sea breeze and cause stagnation, resulting in high pollution events.

The annual average temperature varies little throughout much of the SoCAB, ranging from the low to middle 60s, measured in degrees Fahrenheit (°F). The average temperatures in the project area typically range from the 30s to 90s (Western Regional Climate Center 2016). The majority of the annual rainfall in the area occurs between November and April. The average annual precipitation recorded at the Riverside Fire Station No. 3 Cooperative Observer Program Station in Riverside, California was 10.21 inches (WRCC 2016).

2.2 - Regulatory Setting

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

2.2.1 - Clean Air Act

Congress established much of the basic structure of the Clean Air Act (CAA) in 1970, and made major revisions in 1977 and 1990. Six common air pollutants (also known as criteria pollutants) are addressed in the CAA. The EPA calls these pollutants criteria air pollutants because it regulates them by developing human health-based and environmentally based criteria (science-based guidelines) for setting permissible levels. The set of limits based on human health are called primary standards. Primary federal standards are the levels of air quality necessary, with an adequate margin of safety, to protect the public health (ARB 2012a). Another set of limits intended to prevent environmental and property damage are called secondary standards (EPA 2016). The federal standards are called National Ambient Air Quality Standards (NAAQS). The air quality standards provide benchmarks for determining whether air quality is healthy at specific locations and whether development activities will cause or contribute to a violation of the standards. The criteria pollutants are:

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

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

2.2.2 - California Clean Air Act

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

2.2.3 - Toxic Air Contaminants

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

be regulated by source category. Authority to regulate these pollutants was delegated to individual states. The ARB and local air districts regulate TACs and HAPs in California.

2.2.4 - Air Pollutant Description and Health Effects

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

Table 1: Description of Air Pollutants

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

Table 1 (cont.): Description of Air Pollutants

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

Table 1 (cont.): Description of Air Pollutants

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

Table 1 (cont.): Description of Air Pollutants

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

Table 1 (cont.): Description of Air Pollutants

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

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

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

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

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

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

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

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

[g] The official level of the 1-hour NO_2 standard is 100 ppb, equal to 0.100ppm, which is shown here for the purpose of clearer comparison to the other standards.

Source of effects, properties, and sources: South Coast Air Quality Management District 2007; California Environmental Protection Agency 2002; California Air Resources Board 2009a; U.S. Environmental Protection Agency 2003, 2009, 2009b, 2010, 2011, and 2012a; National Toxicology Program 2011a and 2011b and 2016.
Source of standards: California Air Resources Board 2016a.

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

Toxic Air Contaminants Health Effects

A TAC is defined as an air pollutant that may cause or contribute to an increase in mortality or serious illness, or that may pose a hazard to human health. TACs are usually present in minute quantities in the ambient air; however, their high toxicity or health risk may pose a threat to public health even at low concentrations. The California Almanac of Emissions and Air Quality—2009 Edition (ARB 2009b) presents the relevant concentration and cancer risk data for the 10 TACs that pose the most substantial health risk in California based on available data. The ten TACs are acetaldehyde, benzene, 1.3-butadiene, carbon tetrachloride, hexavalent chromium, para-dichlorobenzene, formaldehyde, methylene chloride, perchloroethylene, and diesel particulate matter (DPM).

Some studies indicate that DPM poses the greatest health risk among the TACs listed above. A 10-year research program (ARB 1998) demonstrated that DPM from diesel-fueled engines is a human carcinogen and that chronic (long-term) inhalation exposure to DPM poses a chronic health risk. In addition to increasing the risk of lung cancer, exposure to diesel exhaust can have other health effects. Diesel exhaust can irritate the eyes, nose, throat, and lungs, and it can cause coughs, headaches, lightheadedness, and nausea. Diesel exhaust is a major source of fine particulate pollution as well, and studies have linked elevated particle levels in the air to increased hospital admissions, emergency room visits, asthma attacks, and premature deaths among those suffering from respiratory problems.

DPM differs from other TACs in that it is not a single substance, but a complex mixture of hundreds of substances. Although DPM is emitted by diesel-fueled, internal combustion engines, the composition of the emissions varies depending on engine type, operating conditions, fuel composition, lubricating oil, and whether an emission control system is present. Unlike the other TACs, however, no ambient monitoring data are available for DPM because no routine measurement method currently exists. The ARB has made preliminary concentration estimates based on a DPM exposure method. This method uses the ARB emissions inventory's PM_{10} database, ambient PM_{10} monitoring data, and the results from several studies to estimate concentrations of DPM.

Asbestos

Asbestos is the name given to a number of naturally occurring fibrous silicate minerals that have been mined for their useful properties such as thermal insulation, chemical and thermal stability, and high tensile strength. The three most common types of asbestos are chrysotile, amosite, and crocidolite. Chrysotile, also known as white asbestos, is the most common type of asbestos found in buildings. Chrysotile makes up approximately 90 to 95 percent of all asbestos contained in buildings in the United States. Exposure to asbestos is a health threat; exposure to asbestos fibers may result

in health issues such as lung cancer, mesothelioma (a rare cancer of the thin membranes lining the lungs, chest, and abdominal cavity), and asbestosis (a non-cancerous lung disease that causes scarring of the lungs). Exposure to asbestos can occur during demolition or remodeling of buildings that were constructed prior to the 1977 ban on asbestos for use in buildings. Exposure to naturally occurring asbestos can occur during soil-disturbing activities in areas with deposits present. No naturally occurring asbestos is located near the project site.

2.3 - Existing Air Quality Conditions

The local air quality can be evaluated by reviewing relevant air pollution concentrations near the project area. Table 2 summarizes 2015 through 2017 published monitoring data, which is the most recent 3-year period available. The table displays data from the Banning Airport air monitoring station, which is located approximately 8.3 miles southeast of the project site. The data shows that during the past few years, the project area has exceeded the standards for ozone (California and national), PM_{10} (California), and $PM_{2.5}$ (national). The data in the table reflects the concentration of the pollutants in the air, measured using air monitoring equipment. This differs from emissions, which are calculations of a pollutant being emitted over a certain period. No recent monitoring data for Riverside County was available for CO or SO_2. Generally, no monitoring is conducted for pollutants that are no longer likely to exceed ambient air quality standards.

Table 2: Air Quality Monitoring Summary

Air Pollutant	Averaging Time	Item	2015	2016	2017
Ozone[1]	1 Hour	Max 1 Hour (ppm)	**0.124**	**0.128**	**0.128**
		Days > State Standard (0.09 ppm)	16	26	50
	8 Hour	Max 8 Hour (ppm)	**0.098**	**0.106**	**0.106**
		Days > State Standard (0.07 ppm)	49	54	85
		Days > National Standard (0.07 ppm)	46	52	82
Carbon monoxide (CO)	8 Hour	Max 8 Hour (ppm)	ND	ND	ND
		Days > State Standard (9.0 ppm)	ND	ND	ND
		Days > National Standard (9 ppm)	ND	ND	ND
Nitrogen dioxide (NO_2)[1]	Annual	Annual Average (ppb)	8	8	8
	1 Hour	Max 1 Hour (ppb)	49.6	46.9	56.3
		Days > National Standard (100 ppb)	0	0	0
Sulfur dioxide (SO_2)	Annual	Annual Average (ppm)	ND	ND	ND
	24 Hour	Max 24 Hour (ppm)	ND	ND	ND
		Days > State Standard (0.04 ppm)	ND	ND	ND
Inhalable coarse particles (PM_{10})[1]	Annual	Annual Average ($\mu g/m^3$)	20.3	24.0	22.8

Table 2 (cont.): Air Quality Monitoring Summary

Air Pollutant	Averaging Time	Item	2015	2016	2017
	24 hour	24 Hour (µg/m^3)	**128.0**	**65.0**	**97.9**
		Days > State Standard (50 µg/m^3)	6.1	ID	ID
		Days > National Standard (150 µg/m^3)	0.0	0.0	0.0
Fine particulate matter ($PM_{2.5}$)[1]	Annual	Annual Average (µg/m^3)	ID	ID	11.4
	24 Hour	24 Hour (µg/m^3)	27.9	**110.5**	34.9
		Days > National Standard (35 µg/m^3)	ID	ID	ID

Notes:
> = exceed ppm = parts per million µg/m^3 = micrograms per cubic meter
ND = no data max = maximum
Bold = exceedance
State Standard = California Ambient Air Quality Standard
National Standard = National Ambient Air Quality Standard
[1] Banning Airport Monitoring Station
Source: ARB 2018a.

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

Table 3: Air Quality Index and Health Effects from Ozone

Air Quality Index/ 8-hour Ozone Concentration	Health Effects Description
AQI 100—Moderate	**Sensitive Groups**: Children and people with asthma are the groups most at risk.
Concentration 75 ppb	**Health Effects Statements**: Unusually sensitive individuals may experience respiratory symptoms.
	Cautionary Statements: Unusually sensitive people should consider limiting prolonged outdoor exertion.
AQI 150—Unhealthy for Sensitive Groups	**Sensitive Groups**: Children and people with asthma are the groups most at risk.
Concentration 95 ppb	**Health Effects Statements**: Increasing likelihood of respiratory symptoms and breathing discomfort in active children and adults and people with respiratory disease, such as asthma.

Table 3 (cont.): Air Quality Index and Health Effects from Ozone

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

The highest reading for the 8-hour ozone standard for the last three years at the Banning Airport monitoring station was 128 parts per billion (ppb) in both 2016 and 2017, which is between the 115 ppb cutoff point for Unhealthy (AQI 200) and the 139 ppb cutoff for Very Unhealthy (AQI 210).

2.3.1 - Attainment Status

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

Each standard has a different definition, or "form" of what constitutes attainment, based on specific air quality statistics. For example, the federal 8-hour CO standard is not to be exceeded more than once per year; therefore, an area is in attainment of the CO standard if no more than one 8-hour ambient air monitoring values exceeds the threshold per year. In contrast, the federal annual $PM_{2.5}$

standard is met if the three-year average of the annual average $PM_{2.5}$ concentration is less than or equal to the standard.

The current attainment designations for the SoCAB are shown in Table 4. With respect to the CAAQS, the Riverside County portion of the SoCAB is nonattainment for ozone, PM_{10}, and $PM_{2.5}$, and attainment or unclassified for all other pollutants. With respect to the NAAQS, the Riverside County portion of the SoCAB is nonattainment for ozone, $PM_{2.5}$, and lead and attainment or unclassified for all other pollutants.

Table 4: South Coast Air Basin Attainment Status

Pollutant	State Status	National Status
Ozone (1-hour) [a]	Nonattainment	Nonattainment (Extreme)
Ozone (8-hour)	Nonattainment	Nonattainment (Extreme)
Carbon monoxide	Attainment	Attainment (Maintenance)
Nitrogen dioxide (annual)	Attainment	Attainment (Maintenance)
Nitrogen dioxide (1-hour)	Attainment	Unclassifiable/Attainment
Sulfur dioxide	Attainment	Unclassified/Attainment
PM_{10}	Nonattainment	Attainment (Maintenance)
$PM_{2.5}$	Nonattainment	Nonattainment (Moderate)
Lead (Riverside County)	—	Attainment
Hydrogen Sulfide (H_2S)	Attainment	—
Sulfates	Attainment	—
Vinyl Chloride	Attainment	—

Notes:
[a] On June 15, 2005 the 1-Hour Ozone NAAQS was revoked for all areas except the 8-Hour Ozone nonattainment Early Action Compact (EAC) areas. however, the SoCAB has not attained this standard based on 2008-2010 data and is still subject to anti-backsliding requirements
Source: SCAQMD 2018

2.4 - Air Quality Plans and Regulations

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

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

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

Areas designated non-attainment must develop air quality plans and regulations to achieve standards by specified dates, depending on the severity of the exceedances. For much of the country, implementation of federal motor vehicle standards and compliance with federal permitting requirements for industrial sources are adequate to attain air quality standards on schedule. For many areas of California, however, additional State and local regulation is required to achieve the standards. Regulations adopted by California are described below.

2.4.1 - California Regulations

Low-Emission Vehicle Program

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

On-Road Heavy-Duty Vehicle Program

The ARB has adopted standards for emissions from various types of new on-road heavy-duty vehicles. Section 1956.8, Title 13, California Code of Regulations contains California's emission standards for on-road heavy-duty engines and vehicles, and test procedures. ARB has also adopted programs to reduce emissions from in-use heavy-duty vehicles including the Heavy-Duty Diesel Vehicle Idling Reduction Program, the Heavy-Duty Diesel In-Use Compliance Program, the Public Bus Fleet Rule and Engine Standards, and the School Bus Program and others (ARB 2013a).

ARB Regulation for In-Use Off-Road Diesel Vehicles

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. Such vehicles are used in construction, mining, and industrial operations. The regulation limits idling to no more than five consecutive minutes, requires reporting and labeling, and requires disclosure of the regulation upon vehicle sale.

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

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

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

ARB Airborne Toxic Control Measure for Asbestos

In July 2001, the ARB approved an Air Toxic Control Measure for construction, grading, quarrying, and surface mining operations to minimize emissions of naturally occurring asbestos. The regulation requires application of best management practices (BMPs) to control fugitive dust in areas known to have naturally occurring asbestos and requires notification to the local air district prior to commencement of ground-disturbing activities. The measure establishes specific testing, notification and engineering controls prior to grading, quarrying, or surface mining in construction zones where naturally occurring asbestos is located on projects of any size. There are additional notification and engineering controls at work sites larger than 1 acre in size. These projects require the submittal of a "Dust Mitigation Plan" and approval by the air district prior to the start of a project.

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

Areas are subject to the regulation if they are identified on maps published by the Department of Conservation as ultramafic rock units or if the Air Pollution Control Officer or owner/operator has knowledge of the presence of ultramafic rock, serpentine, or naturally occurring asbestos on the site. The measure also applies if ultramafic rock, serpentine, or asbestos is discovered during any operation or activity. Review of the Department of Conservation maps indicates that no ultramafic rock has been found near the project site.

Diesel Risk Reduction Plan

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

2.4.2 - South Coast Air Quality Management District

Standard Conditions

During construction and operation, the project must comply with applicable rules and regulations. The following are rules and regulations the project may be required to comply with, either directly or indirectly.

SCAQMD Rule 201 prohibits a person from building, erecting, installing, altering, or replacing any equipment or agricultural permit unit, the use of which may cause the issuance of air contaminants or the use of which may eliminate, reduce, or control the issuance of air contaminants without first obtaining written authorization for such construction from the Executive officer.

SCAQMD Rule 203 prohibits a person from operating or using any equipment or agricultural permit unit, the use of which may cause the issuance of air contaminants, or the use of which may reduce or control the issuance of air contaminants, without first obtaining a written permit to operate from the Executive Officer or except as provided in Rule 202 (temporary permit to operate).

SCAQMD Rule 402 prohibits a person from discharging from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause injury or damage to business or property.

SCAQMD Rule 403 governs emissions of fugitive dust during construction and operation activities. Compliance with this rule is achieved through the application of standard Best Management Practices, such as the application of water or chemical stabilizers to disturbed soils, covering haul vehicles, restricting vehicle speeds on unpaved roads to 15 miles per hour (mph), sweeping loose dirt from paved site access roadways, cessation of construction activity when winds exceed 25 mph, and establishing a permanent ground cover on finished sites.

Rule 403 requires that fugitive dust be controlled with the best available control measures, so that the presence of such dust does not remain visible in the atmosphere beyond the property line of the emission source. In addition, SCAQMD Rule 403 requires implementation of dust suppression techniques to prevent fugitive dust from creating a nuisance off-site. Applicable dust suppression techniques from Rule 403 are summarized below. Implementation of these dust suppression techniques can reduce the fugitive dust generation (and thus the PM_{10} component). Compliance with these rules would reduce impacts on nearby sensitive receptors.

Rule 403 measures may include but are not limited to the following:

- Apply nontoxic chemical soil stabilizers according to manufacturers' specifications to all inactive construction areas (previously graded areas inactive for 10 days or more).
- Water active sites at least three times daily. (Locations where grading is to occur will be thoroughly watered prior to earthmoving.)
- Cover all trucks hauling dirt, sand, soil, or other loose materials, or maintain at least 0.6 meters (2 feet) of freeboard (vertical space between the top of the load and top of the trailer) in accordance with the requirements of California Vehicle Code Section 23114.
- Reduce traffic speeds on all unpaved roads to 15 mph or less.
- Suspension of all grading activities when wind speeds (including instantaneous wind gusts) exceed 25 mph.
- Bumper strips or similar BMPs shall be provided where vehicles enter and exit the construction site onto paved roads, or wash off trucks and any equipment leaving the site each trip.
- Replanting disturbed areas as soon as practical.
- During all construction activities, construction contractors shall sweep on-site and off-site streets if silt is carried to adjacent public thoroughfares, to reduce the amount of particulate matter on public streets. All sweepers shall be compliant with SCAQMD Rule 1186.1, Less Polluting Sweepers.

SCAQMD Rule 461 applies to the transfer of gasoline from any tank truck, trailer, or railroad tank car into any stationary storage tank or mobile fueler, and from any stationary storage tank or mobile fueler into any mobile fueler or motor vehicle fuel tank.

SCAQMD Rule 481 applies to all spray painting and spray coating operations and equipment. This rule would apply to the application of architectural coatings to the exterior and interior or of the building walls.

SCAQMD Rule 1108 governs the sale, use, and manufacturing of asphalt and limits the volatile organic compound (VOC) content in asphalt used in the SoCAB. This rule would regulate the VOC content of asphalt used during construction. Therefore, all asphalt used during construction of the project must comply with SCAQMD Rule 1108.

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

SCAQMD Rule 1138 applies to owners and operators of commercial cooking operations, preparing food for human consumption. The rule requirements currently apply to chain-driven charbroilers used to cook meat. All other commercial restaurant cooking equipment including, but not limited to, under-fired charbroilers, may be subject to future rule provisions.

SCAQMD Rule 1143 governs the manufacture, sale, and use of paint thinners and solvents used in thinning of coating materials, cleaning of coating application equipment and other solvent cleaning operations by limiting their VOC content. This rule regulates the VOC content of solvents used during construction. Solvents used during the construction phase must comply with this rule.

SCAQMD Rule 1186 limits the presence of fugitive dust on paved and unpaved roads and sets certification protocols and requirements for street sweepers that are under contract to provide sweeping services to any federal, state, county, agency or special district such as water, air, sanitation, transit, or school district.

Air Quality Management Plans

The agency for air pollution control for the Los Angeles County portion of the SoCAB is the SCAQMD. The SCAQMD is responsible for controlling emissions primarily from stationary sources. The SCAQMD maintains air quality monitoring stations throughout the SoCAB and a portion of the Salton Sea Air Basin. The SCAQMD is also responsible for developing, updating, and implementing the Air Quality Management Plan (AQMP) for the region, in coordination with the Southern California Association of Governments (SCAG).

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

2016 AQMP

On March 3, 2017, the SCAQMD adopted the 2016 AQMP. The 2016 AQMP address strategies and measures to attain the 2008 federal 8-hour ozone standard by 2032, the 2012 federal annual $PM_{2.5}$ standard by 2021 to 2025, and the 2006 federal 24-hour $PM_{2.5}$ standard by 2019. The 2016 AQMP also examined the regulatory requirements for attaining the 2015 federal 8-hour ozone standard. The 2016 AQMP also updates previous attainment plans for ozone and $PM_{2.5}$ that have not yet been met (SCAQMD 2017). In general, the AQMP is updated every 3 to 4 years. However, the air quality planning process for the AQMP is continuous and each iteration is an update of the previous plan.

To ensure air quality goals will be met while minimizing impacts to the regional economy, the following policy objectives guided the development of the plan:

- Eliminate reliance on "black box" (future technologies) to the maximum extent possible by providing specific pathways to attainment with specific control measures.
- Calculate and take credit for co-benefits from other planning efforts (e.g., GHG reduction targets, energy efficiency, and transportation).
- Develop a strategy with fair-share emission reductions at the federal, State, and local levels such as a new federal engine emission standards and/or additional authority provided to the state or SCAQMD for mobile sources.
- Seek significant funding for incentives to implement early deployment and commercialization of known zero and near-zero technologies.
- Invest in strategies and technologies meeting multiple objectives regarding air quality, climate change, air toxic exposure, energy, and transportation.
- Enhance the socioeconomic analysis and select the most efficient and cost-effective path to achieve multi-pollutant and multi-deadline targets.
- Prioritize non-regulatory, innovative and "win-win" approaches for emission reductions.

The 2016 AQMP also demonstrates attainment of the 2008 Ozone Standard in Coachella Valley by 2026. The AQMP also demonstrates compliance with all applicable Federal Clean Air Act requirements pertaining to nonattainment areas pursuant to the EPA approved Implementation Rules, such as the annual average and summer planning emission inventory for criteria and precursor pollutants, attainment demonstrations, reasonably available control measure and reasonably available control technology analyses, reasonable further progress, particulate matter precursor requirements, vehicle miles traveled (VMT) demonstrations, and transportation conformity budgets for SoCAB.

The control measures in the 2016 AQMP are based on implementing all feasible control measures through the accelerated deployment of available cleaner technologies, BMPs, co-benefits from existing programs, and incentive measures. The 2016 AQMP control measures consist of three main components: (1) the SCAQMD's Stationary and Mobile Source Control Measures; (2) suggested State and federal Source Control Measures; and (3) Regional Transportation Plan Transportation Control Measures provided by SCAG. These measures rely on not only the traditional command-and-control approach, but also public incentive programs, as well as advanced technologies expected to be developed and deployed in the next several years.

SCAQMD CEQA Guidance

The SCAQMD has two roles under CEQA:

1. Lead Agency: responsible for preparing environmental analyses for its own projects (adoption of rules, regulations, or plans) or permit projects filed with the SCAQMD where the SCAQMD has primary approval authority over the project.

2. Commenting Agency: the SCAQMD reviews and comments on air quality analyses prepared by other public agencies (such as the project).

The SCAQMD also provides guidance and thresholds for CEQA air quality and GHG analyses. The result of this guidance as well as state regulations to control air pollution is an overall improvement in the project area.

2.4.3 - Local

City of Beaumont General Plan

The City of Beaumont adopted its General Plan in 2007. The City's applicable air quality goals and policies from the Resource Management Element are listed below

Resource Management Element

- **Goal 3:** The City of Beaumont will cooperate in regional efforts to improve air quality.
- **Policy 8:** The City of Beaumont will encourage incorporation of energy conservation features in new developments and in the renovation of existing development.
- **Policy 9:** The City of Beaumont will require feasible fugitive dust reduction techniques to be utilized during construction activities such as regularly watering down the construction area.

Beaumont Municipal Code

The Beaumont Municipal Code establishes the following air quality provisions that are relevant to the project.

Chapter 17.04 Performance Standards

Section 17.04.050 Air Quality

The ARB and the SCAQMD are the agencies responsible for the implementation of the Clean Air Act at the local level. In order to protect the health and welfare of those persons living, working, or visiting the City of Beaumont, the following performance standards with respect to air quality are outlined in this Section.

A. **Smoke and Particulates.** No smoke of any type shall be emitted from a source in excess of SCAQMD standards. No elements of dust, fly ash, vapors, fumes, gases or other forms of air pollution shall be permitted in excess of the standards set by the SCAQMD or that can cause damage to human health, animals, vegetation, or that can cause excessive soiling at any location.

B. **Permits.** Before a building or occupancy permit is issued by the City, the applicant shall be required to show proof that he has secured the necessary permits from the SCAQMD or that the project is exempt from SCAQMD regulations as of the date of filing of the City application.

C. **Enforcement and Standards.** In enforcing these regulations, the City shall use the same point of measurement as utilized by the SCAQMD. (Ordinance 920, Section 2, 09/2007.)

17.04.060 Odors

In order to protect the well-being of the community and to eliminate the blighting influences of odors, the following performance standards with respect to the generation of odors are outlined in this Section.

A. **Odor Generating Activities.** Any process that creates or emits any odors, gases, or other odorous matter shall comply with the standards set by the SCAQMD.

B. **Quantified Standard.** No odors, gases, and odorous matter shall be emitted in quantities to be detectable when diluted in a ratio of one (1) volume diluted air to four (4) volumes clean air at the point of greatest concentration. (Ordinance 920, Section 2, 9/2007.)

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SECTION 3: CLIMATE CHANGE SETTING

3.1 - Climate Change

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

The United Nations Intergovernmental Panel on Climate Change (IPCC) constructed several emission trajectories of GHGs needed to stabilize global temperatures and climate change impacts. In its Fourth Assessment Report, the IPCC predicted that the global mean temperature changes from 1990 to 2100, given six scenarios, could range from 1.1 degrees Celsius (°C) to 6.4°C. Regardless of analytical methodology, global average temperatures and sea levels are expected to rise under all scenarios (IPCC 2007a). The report also concluded that "[w]arming of the climate system is unequivocal," and that "[m]ost of the observed increase in global average temperatures since the mid-20th century is very likely due to the observed increase in anthropogenic greenhouse gas concentrations."

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

3.1.1 - Consequences of Climate Change in California

In California, climate change may result in consequences such as the following (from California Climate Change Center [CCCC] 2006 and Moser et al. 2009).

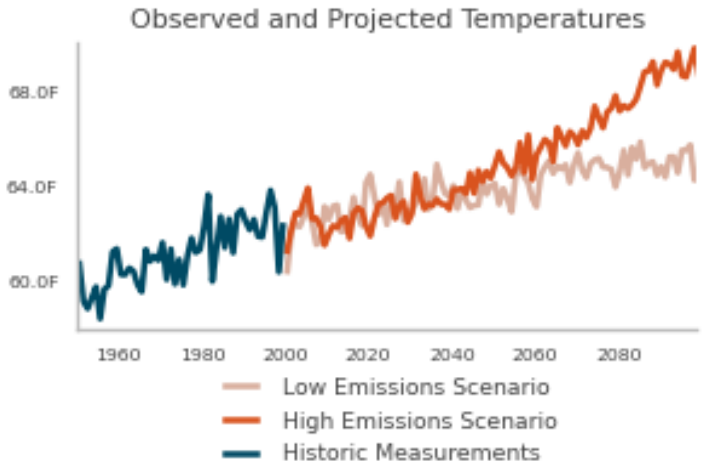
- **A reduction in the quality and supply of water from the Sierra snowpack.** If heat-trapping emissions continue unabated, more precipitation will fall as rain instead of snow, and the snow that does fall will melt earlier, reducing the Sierra Nevada spring snowpack by as much as 70 to 90 percent. This can lead to challenges in securing adequate water supplies. It can also lead to a potential reduction in hydropower.
- **Increased risk of large wildfires.** If rain increases as temperatures rise, wildfires in the grasslands and chaparral ecosystems of southern California are estimated to increase by approximately 30 percent toward the end of the 21st century because more winter rain will stimulate the growth of more plant "fuel" available to burn in the fall. In contrast, a hotter, drier climate could promote up to 90 percent more northern California fires by the end of the century by drying out and increasing the flammability of forest vegetation.
- **Reductions in the quality and quantity of certain agricultural products.** The crops and products likely to be adversely affected include wine grapes, fruit, nuts, and milk.

- **Exacerbation of air quality problems.** If temperatures rise to the medium warming range, there could be 75 to 85 percent more days with weather conducive to ozone formation in Los Angeles and the San Joaquin Valley, relative to today's conditions. This is more than twice the increase expected if rising temperatures remain in the lower warming range. This increase in air quality problems could result in an increase in asthma and other health-related problems.
- **A rise in sea levels resulting in the displacement of coastal businesses and residences.** During the past century, sea levels along California's coast have risen about seven inches. If emissions continue unabated and temperatures rise into the higher anticipated warming range, sea level is expected to rise an additional 22 to 35 inches by the end of the century. Elevations of this magnitude would inundate coastal areas with salt water, accelerate coastal erosion, threaten vital levees and inland water systems, and disrupt wetlands and natural habitats.
- **An increase temperature and extreme weather events.** Climate change is expected to lead to increases in the frequency, intensity, and duration of extreme heat events and heat waves in California. More heat waves can exacerbate chronic disease or heat-related illness.
- **A decrease in the health and productivity of California's forests.** Climate change can cause an increase in wildfires, an enhanced insect population, and establishment of non-native species.

Project Area (8th Street and Maple Avenue Area in Beaumont)

Figure 1 displays a chart of measured historical and projected annual average temperatures in the Beaumont area. As shown in the figure, temperatures are expected to rise in the low and high GHG emissions scenarios. The results indicate that temperatures are predicted to increase by 3.7 degrees °F under the low emission scenario and 6.7°F under the high emissions scenario (CalAdapt 2018).

Figure 1: Observed and Projected Temperatures for Climate Change in the Project Area



Source: CalAdapt 2018.

3.2 - Greenhouse Gases

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

Individual GHG compounds have varying global warming potential and atmospheric lifetimes. The global warming potential is the potential of a gas or aerosol to trap heat in the atmosphere. To describe how much global warming a given type and amount of GHG may cause, the CO_2 equivalent (CO_2e) is used. The calculation of the CO_2 equivalent is a consistent methodology for comparing GHG emissions since it normalizes various GHG emissions to a consistent reference gas, CO_2. For example, CH_4's warming potential of 25 indicates that CH_4 has 25 times greater warming effect than CO_2 on a molecule-per-molecule basis. A CO_2 equivalent is the mass emissions of an individual GHG multiplied by its global warming potential. As described in Table 5, the GHGs defined by Assembly Bill 32 (AB 32) (see the Climate Change Regulatory Environment section for a description) include CO_2, CH_4, N_2O, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. A seventh GHG, nitrogen trifluoride (NF_3), was added to Health and Safety Code Section 38505(g)(7) as a GHG of concern.

Table 5: Description of Greenhouse Gases

Greenhouse Gas	Description and Physical Properties	Sources
Nitrous oxide	Nitrous oxide (laughing gas) is a colorless GHG. It has a lifetime of 114 years. Its global warming potential is 298.	Microbial processes in soil and water, fuel combustion, and industrial processes.
Methane	Methane is a flammable gas and is the main component of natural gas. It has a lifetime of 12 years. Its global warming potential is 25.	Methane is extracted from geological deposits (natural gas fields). Other sources are landfills, fermentation of manure, and decay of organic matter.
Carbon dioxide	Carbon dioxide (CO_2) is an odorless, colorless, natural GHG. Carbon dioxide's global warming potential is 1. The concentration in 2005 was 379 parts per million (ppm), which is an increase of about 1.4 ppm per year since 1960.	Natural sources include decomposition of dead organic matter; respiration of bacteria, plants, animals, and fungus; evaporation from oceans; and volcanic outgassing. Anthropogenic sources are from burning coal, oil, natural gas, and wood.
Hydrofluorocarbons	Hydrofluorocarbons are a group of GHGs containing carbon, chlorine, and at least one hydrogen atom. Global warming potentials range from 140 to 11,700.	Hydrofluorocarbons are synthetic man-made chemicals used as a substitute for chlorofluorocarbons in applications such as automobile air conditioners and refrigerants.

Table 5 (cont.): Description of Greenhouse Gases

Greenhouse Gas	Description and Physical Properties	Sources
Perfluorocarbons	Perfluorocarbons have stable molecular structures and only break down by ultraviolet rays about 60 kilometers above Earth's surface. Because of this, they have long lifetimes, between 10,000 and 50,000 years. Global warming potentials range from 6,500 to 9,200.	Two main sources of perfluorocarbons are primary aluminum production and semiconductor manufacturing.
Sulfur hexafluoride	Sulfur hexafluoride (SF_6) is an inorganic, odorless, colorless, and nontoxic, nonflammable gas. It has a lifetime of 3,200 years. It has a high global warming potential, 23,900.	This gas is man-made and used for insulation in electric power transmission equipment in the magnesium industry, in semiconductor manufacturing, and as a tracer gas.
Nitrogen trifluoride	Nitrogen trifluoride (NF_3) was added to Health and Safety Code Section 38505(g)(7) as a GHG of concern. It has a high global warming potential of 17,200.	This gas is used in electronics manufacture for semiconductors and liquid crystal displays.
Sources: Compiled from a variety of sources, primarily Intergovernmental Panel on Climate Change 2007a and 2007b.		

The State of California has begun the process of addressing pollutants referred to as short-lived climate pollutants. The short-lived climate pollutants include three main components: black carbon, fluorinated gases, and methane. ARB approved the Short-Lived Climate Pollutant Reduction Strategy in March 2017. The ARB has completed an emission inventory of these pollutants, identified research needs, identified existing and potential new control measures that offer co-benefits, and coordinate with other State agencies and districts to develop measures (ARB 2016b). Sources of black carbon are already regulated by the ARB, and air district criteria pollutant and toxic regulations that control fine particulate emissions from diesel engines and other combustion sources (ARB 2015c). Additional controls on the sources of black carbon specifically for their GHG impacts beyond those required for toxic and fine particulates are not likely to be needed.

Human Health Effects of GHG Emissions

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

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

Potential effects of climate change on public health include:

- **Direct Temperature Effects:** Climate change may directly affect human health through increases in average temperatures, which are predicted to increase the incidence of heat waves and hot extremes.
- **Extreme Events:** Climate change may affect the frequency and severity of extreme weather events, such as hurricanes and extreme heat and floods, which can be destructive to human health and well-being.
- **Climate-Sensitive Diseases:** Climate change may increase the risk of some infectious diseases, particularly those diseases that appear in warm areas and are spread by mosquitoes and other insects, such as malaria, dengue fever, yellow fever, and encephalitis.
- **Air Quality:** Respiratory disorders may be exacerbated by warming-induced increases in the frequency of smog (ground-level ozone) events and particulate air pollution (EPA 2009a).

Although there could be health effects resulting from changes in the climate and the consequences that can occur, inhalation of GHGs at levels currently in the atmosphere would not result in adverse health effects, with the exception of ozone and aerosols (particulate matter). At very high indoor concentrations (not at levels existing outside), CO, methane (CH_4), sulfur hexafluoride, and some chlorofluorocarbons can cause suffocation as the gases can displace oxygen (CDC 2010 and OSHA 2003).

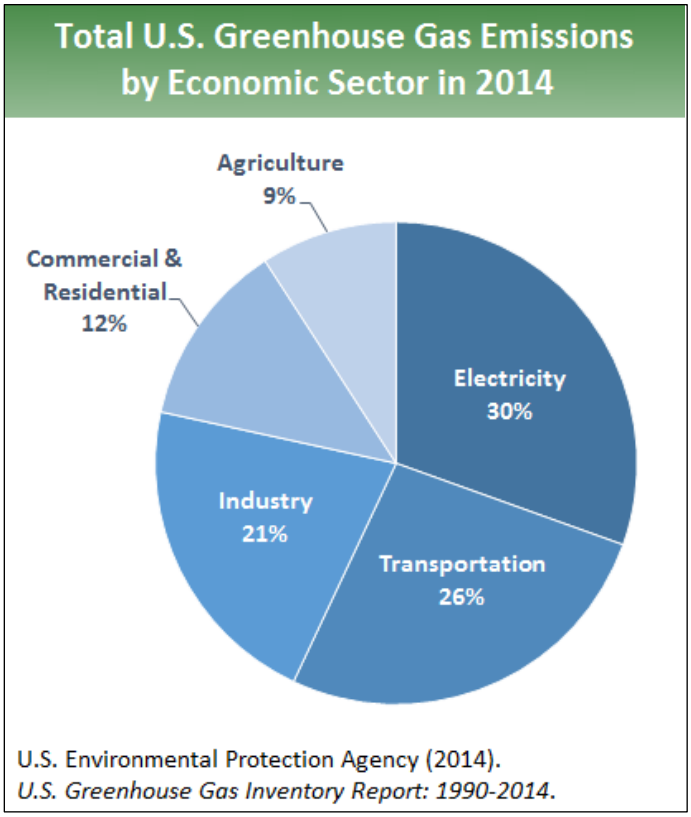
3.2.1 - Emissions Inventories

United States GHG Inventory

Total United States GHG emissions were approximately 1 percent higher in 2014 than in 2013 (EPA 2016). Figure 2 presents 2014 United States GHG emissions by economic sector.

Total United States GHG emissions increased by 7.4 percent from 1990 to 2014 (from 6,233.2 million metric tons [MMT] CO_2e in 1990 to 6,870.5 MMT CO_2e in 2014). Since 1990, United States emissions have increased at an average annual rate of 0.3 percent. In 2014, cool winter conditions led to an increase in CO_2e emissions associated with fuels used for heating in the residential and commercial sectors. Transportation emissions also increased because of a small increase in VMT. There was also an increase in industrial production across multiple sectors, resulting in slight increases in industrial-sector emissions (EPA 2016).

Figure 2: 2014 U.S. GHG Emissions by Gas

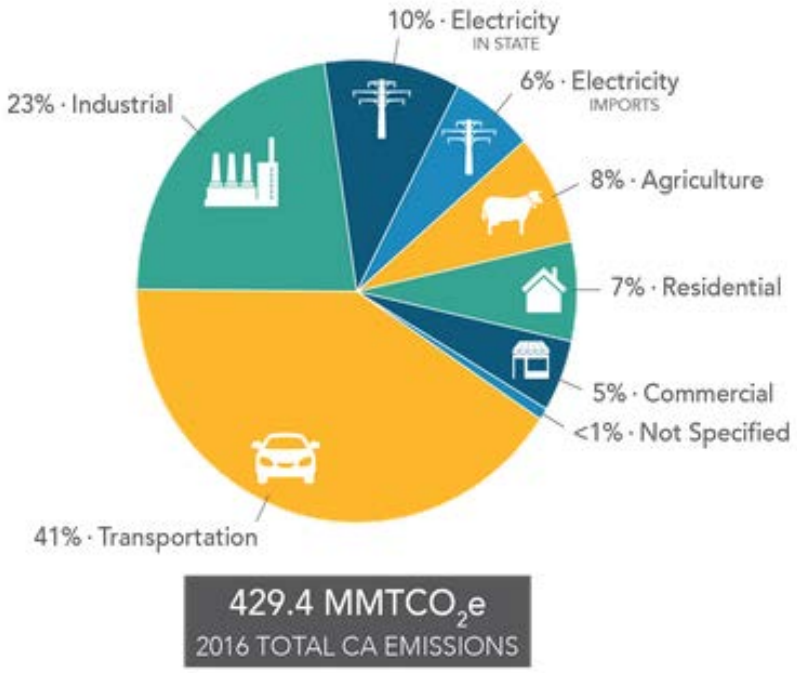


Source: EPA 2016.
Note: Emissions shown do not include carbon sinks such as change in land uses and forestry.

California GHG Inventory

As the second largest emitter of GHG emissions in the United States, and the 12th to first largest GHG emissions emitter in the world, California contributes a large quantity (429.24 MMT CO_2e in 2016) of GHG emissions to the atmosphere (CCCC 2006). Emissions of CO_2 are byproducts of fossil-fuel combustion and are attributable in large part to human activities associated with transportation, industry/manufacturing, electricity and natural gas consumption, and agriculture. In California, the transportation sector is the largest emitter at 41 percent of GHG emissions, followed by industry/manufacturing at 23 percent of GHG emissions (Figure 3) (ARB 2018b).

Figure 3: California GHG Emissions by Sector



Source: ARB 2018B.

3.3 - Regulatory Environment

3.3.1 - International

Intergovernmental Panel on Climate Change. In 1988, the United Nations and the World Meteorological Organization established the Intergovernmental Panel on Climate Change to assess the scientific, technical and socio-economic information relevant to understanding the scientific basis of risk of human-induced climate change, its potential impacts, and options for adaptation and mitigation.

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

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

emissions over the last 150 years; therefore, the Protocol places a heavier burden on developed nations under the principle of "common but differentiated responsibilities."

In 2001, President George W. Bush indicated that he would not submit the treaty to the United States Senate for ratification, which effectively ended American involvement in the Kyoto Protocol. There have been several meetings held to address international climate change commitments post Kyoto, the most notable of which were held by the United Nations Climate Change Committee. The meetings are gradually gaining consensus among participants on individual climate change issues. At the Climate Summit hosted by the United Nations in September 2014, heads of government, business and civil society announced actions in areas that would have the greatest impact on reducing emissions, including climate finance, energy, transport, industry, agriculture, cities, forests, and building resilience.

Paris Climate Change Agreement. Parties to the United Nations Framework Convention on Climate Change (UNFCCC) reached a landmark agreement on December 12 in Paris, charting a fundamentally new course in the two-decade-old global climate effort. Culminating a 4-year negotiating round, the new treaty ends the strict differentiation between developed and developing countries that characterized earlier efforts, replacing it with a common framework that commits all countries to put forward their best efforts and to strengthen them in the years ahead. This includes, for the first time, requirements that all parties report regularly on their emissions and implementation efforts, and undergo international review. The agreement and a companion decision by parties were the key outcomes of the conference, known as the 21st Session of the UNFCCC Conference of the Parties, or COP 21.

On June 1, 2017, President Trump announced the decision for the United States to withdraw from the Paris Climate Accord (White House 2017). California remains committed to combating climate change through programs aimed to reduce GHGs (ARB 2017b).

3.3.2 - Federal Regulations

Prior to the last decade, there were no concrete federal regulations of GHGs or major planning for climate change adaptation. Since then, federal activity has increased. The following are actions regarding the federal government, GHGs, and fuel efficiency.

GHG Endangerment. *Massachusetts v. EPA* (Supreme Court Case 05-1120) was argued before the United States Supreme Court on November 29, 2006, in which it was petitioned that the EPA regulate four GHGs, including CO_2, under Section 202(a)(1) of the CAA. A decision was made on April 2, 2007, in which the Supreme Court found that GHGs are air pollutants covered by the CAA. The Court held that the Administrator must determine whether emissions of GHGs from new motor vehicles cause or contribute to air pollution, which may reasonably be anticipated to endanger public health or welfare, or whether the science is too uncertain to make a reasoned decision. On December 7, 2009, the EPA Administrator signed two distinct findings regarding GHGs under section 202(a) of the CAA. These findings do not impose requirements on industry or other entities. However, this was a prerequisite for implementing GHG emissions standards for vehicles, as discussed in the section "Clean Vehicles" below. After a lengthy legal challenge, the United States

Supreme Court declined to review an Appeals Court ruling upholding that upheld the EPA Administrator findings (EPA 2009b).

Clean Vehicles. Congress first passed the Corporate Average Fuel Economy law in 1975 to increase the fuel economy of cars and light duty trucks. The law has become more stringent over time. On May 19, 2009, President Obama put in motion a new national policy to increase fuel economy for all new cars and trucks sold in the United States. On April 1, 2010, the EPA and the Department of Transportation's National Highway Safety Administration announced a joint final rule establishing a national program that would reduce GHG emissions and improve fuel economy for new cars and trucks sold in the United States.

The first phase of the national program applies to passenger cars, light-duty trucks, and medium-duty passenger vehicles, covering model years 2012 through 2016. They require these vehicles to meet an estimated combined average emissions level of 250 grams of CO_2 per mile, equivalent to 35.5 miles per gallon if the automobile industry were to meet this CO_2 level solely through fuel economy improvements. Together, these standards would cut CO_2 emissions by an estimated 960 million metric tons and 1.8 billion barrels of oil over the lifetime of the vehicles sold under the program (model years 2012–2016). The EPA and the National Highway Safety Administration issued final rules on a second-phase joint rulemaking, establishing national standards for light-duty vehicles for model years 2017 through 2025 in August 2012 (EPA 2012). The new standards for model years 2017 through 2025 apply to passenger cars, light-duty trucks, and medium duty passenger vehicles. The final standards are projected to result in an average industry fleetwide level of 163 grams/mile of CO_2 in model year 2025, which is equivalent to 54.5 miles per gallon (mpg) if achieved exclusively through fuel economy improvements.

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

Consolidated Appropriations Act (Mandatory GHG Reporting). The Consolidated Appropriations Act of 2008, passed in December 2007, requires the establishment of mandatory GHG reporting requirements. On September 22, 2009, the EPA issued the Final Mandatory Reporting of Greenhouse Gases Rule, which became effective January 1, 2010. Under the rule, suppliers of fossil fuels or industrial GHGs, manufacturers of vehicles and engines, and facilities that emit 25,000 metric tons or more per year of GHG emissions are required to submit annual reports to the EPA.

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

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

Standards of Performance for Greenhouse Gas Emissions for New Stationary Sources: Electric Utility Generating Units. As required by a settlement agreement, the EPA proposed new performance standards for CO_2 emissions for new, affected, fossil fuel-fired electric utility generating units on March 27, 2012. New sources greater than 25 megawatt would be required to meet an output based standard of 1,000 pounds of CO_2 per megawatt-hour, based on the performance of widely used natural gas combined cycle technology.

Cap and Trade. Cap and trade refers to a policy tool where emissions are limited to a certain amount and can be traded, or provides flexibility on how the emitter can comply. There is no federal GHG cap-and-trade program currently; however, some states have joined to create initiatives to provide a mechanism for cap and trade.

The Western Climate Initiative partner jurisdictions have developed a comprehensive initiative to reduce regional GHG emissions to 15 percent below 2005 levels by 2020. The partners are California, British Columbia, Manitoba, Ontario, and Quebec. Currently only California and Quebec are participating in the cap and trade program (C2ES 2015b).

3.3.3 - California

Legislative Actions to Reduce GHGs

The State of California legislature has enacted a series of bills that constitute the most aggressive program to reduce GHGs of any State in the nation. Some legislation such as the landmark AB 32 California Global Warming Solutions Act of 2006 was specifically enacted to address GHG emissions. Other legislation such as Title 24 and Title 20 energy standards were originally adopted for other purposes such as energy and water conservation, but also provide GHG reductions. This section describes the major provisions of the legislation.

AB 1493 Pavley Regulations and Fuel Efficiency Standards. California AB 1493, enacted on July 22, 2002, required the ARB to develop and adopt regulations that reduce GHGs emitted by passenger vehicles and light duty trucks. Implementation of the regulation was delayed by lawsuits filed by automakers and by the EPA's denial of an implementation waiver. The EPA subsequently granted the requested waiver in 2009, which was upheld by the by the United States District Court for the District of Columbia in 2011 (ARB 2013b). The standards were to be phased in during the 2009 through 2016 model years (ARB 2013c).

The second phase of the implementation for the Pavley bill was incorporated into Amendments to the Low-Emission Vehicle Program referred to as LEV III or the Advanced Clean Cars program. The Advanced Clean Car program combines the control of smog-causing pollutants and GHG emissions into a single coordinated package of requirements for model years 2017 through 2025. The regulation is anticipated to reduce GHGs from new cars by 34 percent from 2016 levels by 2025. The new rules will reduce pollutants from gasoline and diesel-powered cars, and deliver increasing numbers of zero-emission technologies, such as full battery electric cars, newly emerging plug-in hybrid electric vehicles and hydrogen fuel cell cars. The regulations will also ensure adequate fueling infrastructure is available for the increasing numbers of hydrogen fuel cell vehicles planned for deployment in California (ARB 2011).

AB 32. The California State Legislature enacted AB 32, the California Global Warming Solutions Act of 2006. AB 32 requires that GHGs emitted in California be reduced to 1990 levels by the year 2020. "Greenhouse gases" as defined under AB 32 include CO_2, CH_4, N_2O, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. Since AB 32 was enacted, a seventh chemical, nitrogen trifluoride, has also been added to the list of GHGs.

The ARB is the State agency charged with monitoring and regulating sources of GHGs. The ARB approved the 1990 GHG emissions level of 427 MMT CO_2e on December 6, 2007 (ARB 2007). Therefore, to meet the State's target, emissions generated in California in 2020 are required to be equal to or less than 427 MMT CO_2e. Emissions in 2020 in a Business as Usual (BAU) scenario were estimated to be 596 MMT CO_2e, which do not account for reductions from AB 32 regulations (ARB 2008). At that rate, a 28 percent reduction was required to achieve the 427 MMT CO_2e 1990 inventory. In October 2010, ARB prepared an updated 2020 forecast to account for the effects of the 2008 recession and slower forecasted growth. Under the updated forecast, a 21.7 percent reduction from BAU is required to achieve 1990 levels (ARB 2010).

ARB Scoping Plan. The ARB Climate Change Scoping Plan (Scoping Plan) contains measures designed to reduce the State's emissions to 1990 levels by the year 2020 to comply with AB 32 (ARB 2008). The Scoping Plan identifies recommended measures for multiple GHG emission sectors and the associated emission reductions needed to achieve the year 2020 emissions target—each sector has a different emission reduction target. Most of the measures target the transportation and electricity sectors. As stated in the Scoping Plan, the key elements of the strategy for achieving the 2020 GHG target include:

- Expanding and strengthening existing energy efficiency programs as well as building and appliance standards;
- Achieving a Statewide renewables energy mix of 33 percent;
- Developing a California cap-and-trade program that links with other Western Climate Initiative partner programs to create a regional market system;
- Establishing targets for transportation-related GHG emissions for regions throughout California and pursuing policies and incentives to achieve those targets;

- Adopting and implementing measures pursuant to existing State laws and policies, including California's clean car standards, goods movement measures, and the Low Carbon Fuel Standard; and
- Creating targeted fees, including a public goods charge on water use, fees on high global warming potential gases, and a fee to fund the administrative costs of the State's long-term commitment to AB 32 implementation.

In addition, the Scoping Plan differentiates between "capped" and "uncapped" strategies. Capped strategies are subject to the proposed cap-and-trade program. Implementation of the capped strategies is calculated to achieve a sufficient amount of reductions by 2020 to achieve the emission target contained in AB 32. Uncapped strategies that will not be subject to the cap-and-trade emissions caps and requirements are provided as a margin of safety by accounting for additional GHG emission reductions (ARB 2008).

The ARB approved the First Update to the Scoping Plan (Update) on May 22, 2014. The Update builds upon the Initial Scoping Plan with new strategies and recommendations.

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

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

1. SB 350
   - Achieve 50 percent Renewables Portfolio Standard (RPS) by 2030.
   - Doubling of energy efficiency savings by 2030.
2. Low Carbon Fuel Standard (LCFS)
   - Increased stringency (reducing carbon intensity 18 percent by 2030, up from 10 percent in 2020).

3. Mobile Source Strategy (Cleaner Technology and Fuels Scenario)
   - Maintaining existing GHG standards for light- and heavy-duty vehicles.
   - Put 4.2 million zero-emission vehicles (ZEVs) on the roads.
   - Increase ZEV buses, delivery and other trucks.
4. Sustainable Freight Action Plan
   - Improve freight system efficiency.
   - Maximize use of near-zero emission vehicles and equipment powered by renewable energy.
   - Deploy over 100,000 zero-emission trucks and equipment by 2030.
5. Short-Lived Climate Pollutant Reduction Strategy
   - Reduce emissions of methane and hydrofluorocarbons 40 percent below 2013 levels by 2030.
   - Reduce emissions of black carbon 50 percent below 2013 levels by 2030.
6. SB 375 Sustainable Communities Strategies
   - Increased stringency of 2035 targets.
7. Post-2020 Cap-and-Trade Program
   - Declining caps, continued linkage with Québec, and linkage to Ontario, Canada.
   - ARB will look for opportunities to strengthen the program to support more air quality co-benefits, including specific program design elements. In Fall 2016, ARB staff described potential future amendments including reducing the offset usage limit, redesigning the allocation strategy to reduce free allocation to support increased technology and energy investment at covered entities and reducing allocation if the covered entity increases criteria or toxics emissions over some baseline.
8. 20 percent reduction in GHG emissions from the refinery sector.
9. By 2018, develop Integrated Natural and Working Lands Action Plan to secure California's land base as a net carbon sink (ARB 2017c).

SB 1368—Emission Performance Standards. In 2006, the State Legislature adopted SB 1368, which was subsequently signed into law by the Governor. SB 1368 directs the California Public Utilities Commission to adopt a performance standard for GHG emissions for the future power purchases of California utilities. SB 1368 seeks to limit carbon emissions associated with electrical energy consumed in California by forbidding procurement arrangements for energy longer than 5 years from resources that exceed the emissions of a relatively clean, combined cycle natural gas power plant. The California Public Utilities Commission adopted the regulations required by SB 1368 on August 29, 2007. The regulations implementing SB 1368 establish a standard for baseload generation owned by, or under long-term contract to publicly owned utilities, of 1,100 pounds CO_2 per megawatt-hour (MWh).

SB 1078—Renewable Electricity Standards. On September 12, 2002, Governor Gray Davis signed SB 1078, requiring California to generate 20 percent of its electricity from renewable energy by 2017. SB 107 changed the due date to 2010 instead of 2017. On November 17, 2008, Governor Arnold Schwarzenegger signed Executive Order S-14-08, which established a Renewable Portfolio Standard

target for California requiring that all retail sellers of electricity serve 33 percent of their load with renewable energy by 2020. Governor Schwarzenegger also directed the ARB (Executive Order S-21-09) to adopt a regulation by July 31, 2010, requiring the State's load serving entities to meet a 33 percent renewable energy target by 2020. The ARB Board approved the Renewable Electricity Standard on September 23, 2010 by Resolution 10-23.

SB 350—Clean Energy and Pollution Reduction Act of 2015. The legislature recently approved and the Governor signed SB 350, which reaffirms California's commitment to reducing its GHG emissions and addressing climate change. Key provisions include 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. Provisions for a 50 percent reduction in the use of petroleum Statewide were removed from the Bill due to opposition and concern that it would prevent the Bill's passage. Specifically, SB 350 requires the following to reduce Statewide GHG emissions:

- Increase the amount of electricity procured from renewable energy sources from 33 percent to 50 percent by 2030, with interim targets of 40 percent by 2024, and 25 percent by 2027.
- Double the energy efficiency in existing buildings by 2030. This target will be achieved through the California Public Utility Commission (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 (California Leginfo 2015).

SBX 7-7—The Water Conservation Act of 2009. The legislation directs urban retail water suppliers to set individual 2020 per capita water use targets and begin implementing conservation measures to achieve those goals. Meeting this Statewide goal of 20 percent decrease in demand will result in a reduction of almost 2 million acre-feet in urban water use in 2020.

SB 100—The 100 Percent Clean Energy Act of 2018. The legislation directs the CPUC, CEC, and ARB to plan for 100 percent of total retail sales of electricity in California to come from eligible renewable energy resources and zero-carbon resources by December 31, 2045. This act amends Sections 399.11, 399.15, and 399.30 of, and adds Section 454.53 to, the Public Utilities Code, relating to energy.

Executive Orders Related to GHG Emissions

California's Executive Branch has taken several actions to reduce GHGs through the use of Executive Orders. Although not regulatory, they set the tone for the State and guide the actions of State agencies.

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

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

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

Executive Order S-01-07—Low Carbon Fuel Standard. The Governor signed Executive Order S 01-07 on January 18, 2007. The order mandates that a Statewide goal shall be established to reduce the carbon intensity of California's transportation fuels by at least 10 percent by 2020. In particular, the executive order established a Low Carbon Fuel Standard (LCFS) and directed the Secretary for Environmental Protection to coordinate the actions of the California Energy Commission, the ARB, the University of California, and other agencies to develop and propose protocols for measuring the "life-cycle carbon intensity" of transportation fuels. The ARB adopted the Low Carbon Fuel Standard on April 23, 2009.

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

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

Executive Order S-13-08. Executive Order S-13-08 states that "climate change in California during the next century is expected to shift precipitation patterns, accelerate sea level rise and increase temperatures, thereby posing a serious threat to California's economy, to the health and welfare of its population and to its natural resources." Pursuant to the requirements in the order, the 2009 California Climate Adaptation Strategy (California Natural Resources Agency 2009) was adopted, which is the ". . . first statewide, multi-sector, region-specific, and information-based climate change adaptation strategy in the United States." Objectives include analyzing risks of climate change in California, identifying and exploring strategies to adapt to climate change, and specifying a direction for future research.

Executive Order B-30-15. On April 29, 2015, Governor Edmund G. Brown Jr. issued an executive order to establish a California GHG reduction target of 40 percent below 1990 levels by 2030. The Governor's executive order aligns California's GHG reduction targets with those of leading international governments ahead of the United Nations Climate Change Conference in Paris late 2015. The executive order sets a new interim Statewide GHG emission reduction target to reduce GHG emissions to 40 percent below 1990 levels by 2030 in order to ensure California meets its target of reducing GHG emissions to 80 percent below 1990 levels by 2050, and directs the ARB to update the Climate Change Scoping Plan to express the 2030 target in terms of $MMCO_2e$. The executive order also requires the State's climate adaptation plan to be updated every three years and for the State to continue its climate change research program, among other provisions.

California Regulations and Building Codes

California has a long history of adopting regulations to improve energy efficiency in new and remodeled buildings. These regulations have kept California's energy consumption relatively flat even with rapid population growth.

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

Title 24 Energy Efficiency Standards. California Code of Regulations Title 24 Part 6: California's Energy Efficiency Standards for Residential and Nonresidential Buildings, was first adopted in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficient technologies and methods. Energy efficient buildings require less electricity; therefore, increased energy efficiency reduces fossil fuel consumption and decreases GHG emissions. The newest version of Title 24 adopted by the California Energy Commission (CEC) went into effect on January 1, 2017 (CEC 2016).

Title 24 California Green Building Standards Code (California Code of Regulations Title 24, Part 11 code) is a comprehensive and uniform regulatory code for all residential, commercial, and school buildings that went in effect January 1, 2011. The code is updated on a regular basis, with the most recent update consisting of the 2016 California Green Building Code Standards that became effective January 1, 2017. Local jurisdictions are permitted to adopt more stringent requirements, as State law provides methods for local enhancements. State building code provides the minimum standard that buildings need to meet in order to be certified for occupancy, which is generally enforced by the local building official.

Model Water Efficient Landscape Ordinance. The Model Water Efficient Landscape Ordinance (Ordinance) was required by AB 1881 Water Conservation Act. The bill required local agencies to

adopt a local landscape ordinance at least as effective in conserving water as the Model Ordinance by January 1, 2010. Reductions in water use of 20 percent consistent with (SBX-7-7) 2020 mandate are expected for Ordinance. Governor Brown's Drought Executive Order of April 1, 2015 (EO B-29-15) directed DWR to update the Ordinance through expedited regulation. The California Water Commission approved the revised Ordinance on July 15, 2015, which became effective on December 15, 2015. New development projects that include landscaped areas of 500 square feet or more are subject to the Ordinance.

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

Section 21097 was also added to the Public Resources Code, which provided an exemption until January 1, 2010 for transportation projects funded by the Highway Safety, Traffic Reduction, Air Quality, and Port Security Bond Act of 2006 or projects funded by the Disaster Preparedness and Flood Prevention Bond Act of 2006, in stating that the failure to analyze adequately the effects of GHGs would not violate CEQA. The Natural Resources Agency completed the approval process and the Amendments became effective on March 18, 2010.

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

California Supreme Court GHG Ruling

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

Specifically, the Court advised that:

- **Substantiation of Project Reductions from BAU**. A lead agency may use a BAU comparison based on the Scoping Plan's methodology if it also substantiates the reduction a particular project must achieve to comply with statewide goals (page 25).
- **Compliance with Regulatory Programs or Performance Based Standards**. A lead agency "might assess consistency with AB 32's goal in whole or part by looking to compliance with regulatory programs designed to reduce greenhouse gas emissions from particular activities" (page 26).

- **Compliance with GHG Reduction Plans or Climate Action Plans**. A lead agency may utilize "geographically specific GHG emission reduction plans" such as climate action plans or GHG emission reduction plans to provide a basis for the tiering or streamlining of project-level CEQA analysis (page 26).
- **Compliance with Local Air District Thresholds**. A lead agency may rely on "existing numerical thresholds of significance for greenhouse gas emissions" adopted by, for example, local air districts (page 27).

3.3.4 - Regional

The project is within the SoCAB, which is under the jurisdiction of the SCAQMD.

SCAQMD Regulation XXVII, Climate Change

SCAQMD Regulation XXVII currently includes three rules:

- The purpose of Rule 2700 is to define terms and post global warming potentials.
- The purpose of Rule 2701, SoCal Climate Solutions Exchange, is to establish a voluntary program to encourage, quantify, and certify voluntary, high quality certified GHG emission reductions in the SCAQMD.
- Rule 2702, GHG Reduction Program, was adopted on February 6, 2009. The purpose of this rule is to create a GHG Reduction Program for GHG emission reductions within the SCAQMD. The SCAQMD will fund projects through contracts in response to requests for proposals or purchase reductions from other parties.

3.3.5 - Local

The City of Beaumont adopted its Climate Action Plan, *Sustainable Beaumont: The City's Roadmap to Greenhouse Gas Reductions*, on October 6, 2015 (City of Beaumont 2015). The Sustainable Beaumont Plan first presents the updated inventories of its community and municipal GHG emissions, and then estimates future emissions in the City and establishes GHG reduction targets. Consistent with the State's adopted AB 32 GHG reduction target, the City set a goal to reduce emissions back to 1990 levels by the year 2020. This target was calculated as a 15 percent decrease from 2005 levels, as recommended in the AB 32 Scoping Plan. The Climate Action Plan also established a longer-term goal to reduce emissions 41.7 percent below 2012 levels by 2030, putting the City on a path towards the State's long-term goal to reduce emissions 80 percent below 1990 levels by 2050.

The Climate Action Plan also details a variety of goals, policies, and actions at the community and municipal levels aimed at conserving energy and reducing emissions in order to meet its GHG reduction targets. By implementing these Statewide and local reduction measures, the City would reduce its community-wide GHG emissions by 48.2 percent compared to the 2020 BAU emissions.

The Climate Plan details how Screening Tables can be used by developers as a flexible way to demonstrate GHG reductions within new developments. Screening tables are a menu of options of energy efficiency improvements, renewable energy options, water conservation measures, and

other options that provide predictable GHG reductions. Each option within a Screening Table would include point values based upon the GHG reduction that a given option would provide to a development project. The intent of the Climate Action Plan was to allow developers that selected options from the Screening Tables totaling 100 points or more to be determined to have provided a fair-share contribution of GHG reductions, and therefore, would be considered consistent with the Climate Action Plan. At the time of this writing, Screening Tables have not been developed for the City of Beaumont.

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SECTION 4: MODELING PARAMETERS AND ASSUMPTIONS

4.1 - Model Selection and Guidance

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

The California Emissions Estimator Model (CalEEMod) was developed in cooperation with the SCAQMD and other air districts throughout the state. CalEEMod is designed as a uniform platform for government agencies, land use planners, and environmental professionals to quantify potential criteria pollutant and GHG emissions associated with construction and operation from a variety of land uses. The current version of CalEEMod, version 2016.3.2, uses OFFROAD2011 and EMFAC2014 emission factors. Construction and operational emissions reported in this analysis were modeled using CalEEMod, version 2016.3.2.

4.1.1 - Construction

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

Construction activities would consist of site preparation, mass grading, building construction, asphalt paving of roadways, and architectural coating of the inside and outside of the buildings. For each construction activity, the construction equipment operating hours and numbers represent the average equipment activity over the duration of the activity. A conceptual construction schedule is provided in Table 6 that presents the duration for each construction activity. Table 7 presents the number of assumed construction equipment along with hours of operation per day, horsepower, and load factor. Where project-specific information was not available or unknown, default assumptions were used to complete emissions modeling. During grading, it is expected that the project would require 5,212 cubic yards of material to be exported based on information provided by the project

applicant. The grading phase was extended from the default of 6 days to 15 days to accommodate the anticipated hauling trips that construction of the project would require. The activity for construction equipment is based on the horsepower and load factors of the equipment. In general, the horsepower is the power of an engine—the greater the horsepower, the greater the power. The load factor is the average power of a given piece of equipment while in operation compared with its maximum rated horsepower. A load factor of 1.0 indicates that a piece of equipment continually operates at its maximum operating capacity. This analysis uses the CalEEMod default load factors for off-road equipment.

The construction schedule used in the analysis represents a "worst-case" analysis scenario since emission factors for construction equipment decrease as the analysis year increases, due to improvements in technology and compliance with more stringent regulatory requirements. Therefore, construction emissions would decrease if the construction schedule moves to later years. The duration of construction activity and associated equipment represent a reasonable approximation of the expected construction fleet as required by the CEQA Guidelines. Full construction emissions modeling parameters and assumptions are provided in Appendix A.

Table 6: Conceptual Construction Schedule

Construction Phase	Construction Schedule		Working Days
	Start Date	End Date	
Site Preparation	4/1/2019	4/3/2019	3
Grading	4/4/2019	4/24/2019	15
Building Construction	4/12/2019	2/13/2020	220
Paving	2/14/2020	2/27/2020	10
Architectural Coating	2/28/2020	3/12/2020	10
Source: CalEEMod Output (Appendix A).			

Table 7: Project Construction Equipment Assumptions

Phase Name	Equipment	Number	Hours per day	Horsepower	Load Factor
Site Preparation	Graders	1	8	187	0.41
	Scrapers	1	8	367	0.48
	Tractors/Loaders/Backhoes	1	7	97	0.37
Grading	Graders	1	8	187	0.41
	Rubber Tired Dozers	1	8	247	0.40
	Tractors/Loaders/Backhoes	2	7	97	0.37
Building Construction	Cranes	1	8	231	0.29
	Forklifts	2	7	89	0.20

Table 7 (cont.): Project Construction Equipment Assumptions

Phase Name	Equipment	Number	Hours per day	Horsepower	Load Factor
	Generator Sets	1	8	84	0.74
	Tractors/Loaders/Backhoes	1	6	97	0.37
	Welders	3	8	46	0.45
Paving	Cement and Mortar Mixers	1	8	9	0.56
	Pavers	1	8	130	0.42
	Paving Equipment	1	8	132	0.36
	Rollers	2	8	80	0.38
	Tractors/Loaders/Backhoes	1	8	97	0.37
Architectural Coating	Air Compressors	1	6	78	0.48
Source: CalEEMod Output (Appendix A).					

A summary of the construction-related vehicle trips is shown in Table 8. CalEEMod defaults for construction trips, trip lengths, and vehicle fleets were used. Note that the total number of off-site construction vehicle trips would not necessarily occur on the same day, since the various construction activities would vary each day and during the construction period.

Table 8: Construction Off-site Trips

Construction Activity	Worker (Trips per day)	Vendor (Trips per day)	Haul (Total Trips)
Site Preparation	8	0	0
Grading	10	0	652
Building Construction	41	17	0
Paving	15	0	0
Architectural Coating	8	0	0
Source: CalEEMod Output (Appendix A).			

Fugitive Dust

During grading activities, fugitive dust can be generated from the movement of dirt on the project site. CalEEMod estimates dust from dozers moving dirt around, dust from graders or scrapers leveling the land, and loading or unloading dirt into haul trucks. Every project within the SCAQMD's jurisdiction is required to comply with the requirements of SCAQMD Rule 403 (Fugitive Dust). SCAQMD Rule 403 requires fugitive dust generating activities follow best available control measures to reduce emissions of fugitive dust. As shown in Table 9, per SCAQMD guidance, the Rule 403 measures are accounted for in CalEEMod through selection of the appropriate mitigation measures in CalEEMod.

Table 9: Best Available Control Measures

Best Available Control Measure		Associated Measure in CalEEMod
Clearing and Grubbing		
02-1 02-2 02-3	Maintain stability of soil through pre-watering of site prior to clearing and grubbing. Stabilize soil during clearing and grubbing activities. Stabilize soil immediately after clearing and grubbing activities.	Water exposed surfaces three times per day
Earth Moving Activities		
08-1 08-2	Pre-apply water to depth of proposed cuts Re-apply water as necessary to maintain soils in a damp condition and to ensure that visible emissions do not exceed 100 feet in any direction	Water exposed surfaces three times per day
08-3	Stabilize soils once earth-moving activities are complete	
Import/Export of Bulk Materials		
09-1	Stabilize material while loading to reduce fugitive dust emissions.	Water exposed surfaces three times per day
09-3 09-4	Stabilize material while transporting to reduce fugitive dust emissions. Stabilize material while unloading to reduce fugitive dust emissions.	Water exposed surfaces three times per day
Landscaping		
10-1	Stabilize soils, materials, slopes	Water exposed surfaces three times per day
Staging Areas		
13-1	Stabilize staging areas during use by limiting vehicle speeds to 15 mph.	Reduce speed on unpaved roads to 15 mph.
Traffic Areas for Construction Activities		
15-1	Stabilize all off-road traffic and parking areas.	Water exposed surfaces three times per day
Source of Best Available Control Measures: SCAQMD Rule 403. Source of associated CalEEMod measures: CalEEMod Output (Appendix A).		

4.1.2 - Operation

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

Motor Vehicles

Motor vehicle emissions refer to exhaust and road dust emissions from the motor vehicles that would travel to and from and within the project site. The regional emissions from the project's mobile sources were estimated using the CalEEMod model. Project-specific trip rates were obtained

from the project's Traffic Impact Study (David and Associates 2018). No other changes were made to the default mobile source parameters to estimate emissions. The traffic analysis presented weekday trips based on trip rates from the Institute of Transportation Engineers (ITE) Trip Generation Manual, 10th Edition and then applied an internal trip reduction factor of ten percent to all the land uses. Table 10 presents the forecasted daily trip generation rates from the Traffic Impact Study.

Table 10: Project-Specific Trip Generation Rates

Land Use	Quantity	Units	Daily Trip Generation Rate[1] (trips/unit/day)			Daily Trips (trips/day)		
			Weekday	Saturday	Sunday	Weekday	Saturday	Sunday
Gas Station with Convenience Store	8[2]	Pumps	369.65	369.65[3]	369.65[3]	2,957	2,957[3]	2,957[3]
Fast Food Restaurant Attached to Convenience Store	1.7	1,000 sq ft	423.86	554.51	425.32	721	943	723
Fast Food Restaurant with Drive-Through Window (Close to Shopping Center)	2.0	1,000 sq ft	423.86	554.51	425.32	848	1,109	851
Shopping Center	6.25	1,000 sq ft	33.98	41.51	18.99	212	259	119

Notes:
sq ft = square feet
[1] Daily trip generation rates were calculated by taking the Adjusted Total trips (Total Trips—Internal Trips).
[2] One pump equals two fueling positions.
[3] Saturday and Sunday trip generation rates are not available for the Gas Station with Convenience Store land use; therefore, the weekday rate was applied to weekend trips.
Consistent with the assumptions in the project-specific traffic analysis, an internal trip reduction factor of ten percent was applied to all land uses.
Source: David and Associates 2018 and ITE Trip Generation Manual, 10th Edition

Other Emission Sources

Gasoline Transfer and Dispensing Activities

VOC emissions from gasoline transfer and dispensing activities at the proposed gas station were calculated based on maximum VOC limits of 0.15 pounds of VOC per 1,000 gallons from the loading of gasoline into storage tanks, and 0.38 pounds of VOC per 1,000 gallons from the dispensing of gasoline into vehicle fuel tanks, for a total of 0.53 pounds of VOC per 1,000 gallons of gasoline. For the proposed 16 fuel positions, an estimated throughput of 5.2 million gallons of gasoline per year would result in approximately 7.6 pounds of VOC emissions per day.

Area Sources

In addition to the typical mobile- and energy-source emissions, long-term operational emissions also include area-source emissions. Area-source emissions include occasional architectural coating activities for repainting and maintenance of the proposed buildings. CalEEMod assumes that

repainting occurs at a rate of 10 percent of the total proposed buildings per year. Therefore, on average, it is assumed that the buildings are fully repainted every 10 years.

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

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

Indirect Emissions

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

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

For electricity-related emissions, CalEEMod contains default electricity intensity factors for various utilities throughout California. For the purposes of the proposed project, the Southern California Edison emission factor was selected to quantify electricity emissions. The Southern California Edison emissions factors are based on compliance with the Renewable Portfolio Standard. The factors listed below were applied in estimating project emissions for the year 2020. The emission factors for Southern California Edison are as follows:

- Carbon dioxide: 553.67 pound per megawatt hour (lb/MWh)
- Methane: 0.029 lb/MWh
- Nitrous oxide: 0.006 lb/MWh

4.2 - Emissions Model Selection—Localized Assessment

Whereas the regional estimation of emissions quantifies the project's emissions throughout the region, the estimation of the project's local construction and operational emissions focuses on the emissions that the project generates on the project site or in the local area surrounding the project.

4.2.1 - Construction

The project's localized construction emissions would consist of those emissions generated from on-site construction activities including site preparation, grading, building construction, paving, and architectural coating. The localized construction emissions result exhaust emissions from the

operation of off-road construction equipment and the generation of fugitive dust from earth-moving activities. CalEEMod provides emissions outputs that separate the on- and off-site construction emissions. For the localized emissions analysis, only on-site emissions were used to compare with SCAQMD's Localized Significant Thresholds (LSTs).

4.2.2 - Operation

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

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SECTION 5: AIR QUALITY IMPACT ANALYSIS

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

5.1 - CEQA Guidelines

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

While the final determination of whether a project is significant is within the purview of the Lead Agency pursuant to Section 15064(b) of the CEQA Guidelines, SCAQMD recommends that its quantitative air pollution thresholds be used to determine the significance of project emissions. If the Lead Agency finds that the project has the potential to exceed these air pollution thresholds, the project should be considered to have significant air quality impacts.

5.1.1 - Thresholds of Significance

Based on Appendix G of the CEQA Guidelines, air quality impacts would occur if the proposed project would:

- Conflict with or obstruct implementation of the applicable air quality plan;
- Violate any air quality standard or contribute substantially to an existing or projected air quality violation;
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable Federal or State ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors);
- Expose sensitive receptors to substantial pollutant concentrations; and/or
- Create objectionable odors affecting a substantial number of people.

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

Regional Thresholds

Construction Emissions

Projects in the SoCAB would generate significant construction-related regional emissions if daily emissions would exceed:

- 75 pounds per day of VOC, also known as reactive organic gases (ROG);
- 100 pounds per day of NO_X;
- 550 pounds per day of CO;
- 150 pounds per day of sulfur oxides (SO_X);
- 150 pounds per day of PM_{10}; or
- 55 pounds per day of $PM_{2.5}$.

Regional Thresholds for Operational Emissions

Projects in the SoCAB would generate significant operational regional emissions if daily emissions would exceed:

- 55 pounds per day of VOC;
- 55 pounds per day of NO_X;
- 550 pounds per day of CO;
- 150 pounds per day of SO_X;
- 150 pounds per day of PM_{10}; or
- 55 pounds per day of $PM_{2.5}$.

Localized Air Quality Significance Thresholds

SCAQMD recommends that all air quality analyses include a localized assessment of both construction and operational emissions on nearby sensitive receptors. LSTs represent the maximum mass emissions from a project site that would not result in pollutant concentrations that exceed NAAQS or CAAQS. LSTs are based on the ambient concentrations of that pollutant within the Source Receptor Area (SRA) where a project is located, the distance to the nearest sensitive receptor, and the size of the project site, all of which are the primary factors that influence pollutant concentrations.

The SCAQMD provided the Final Localized Significance Threshold Methodology (dated June 2003, revised 2009) for guidance. The LST Methodology assists lead agencies in analyzing localized air quality impacts, particularly CO, NO_X, PM_{10}, and $PM_{2.5}$. The SCAQMD also provided screening look up tables for projects that disturb less than or equal to 5 acres in size. The appropriate LSTs can be determined based on the project's SRA, size, and distance to nearest sensitive receptor.

The appropriate SRA to obtain LSTs from is SRA 29-Banning Airport, since this area includes the project site. LSTs apply to CO, NO_2, PM_{10}, and $PM_{2.5}$. The SCAQMD produced look-up tables for projects that disturb less than or equal to 5 acres in size. The project site is approximately 2.3 acres; therefore, LSTs were obtained for a 2-acre site.

The nearest off-site sensitive receptors are single-family residential units located approximately 41 meters (134 feet) northeast of the project site. As a conservative estimate, the 25-meter thresholds depicted in the look-up tables were used.

Table 11 below shows the LSTs for NO_2, CO, PM_{10}, and $PM_{2.5}$ for both construction and operational activities.

Table 11: SCAQMD Local Air Quality Thresholds of Significance

Activity	Allowable Emissions (pounds/day)[1]			
	NO_X	CO	PM_{10}	$PM_{2.5}$
Construction	149	1,541	10	6
Operation	149	1,541	3	2

Notes:
[1] The nearest sensitive receptor is a single-family home located approximately 41 meters (134 feet) northeast of the project site; however, the thresholds were obtained for projects located within 25 meters of sensitive receptors.
Source: SCAQMD Mass Rate Look-Up Tables for a 2-acre site in SRA 29

Cumulative Significance Thresholds

The SCAQMD has published a report on how to address cumulative impacts from air pollution: White Paper on Potential Control Strategies to Address Cumulative Impacts from Air Pollution (SCAQMD 2003c). Projects that exceed the project-specific significance thresholds are considered by the SCAQMD to be cumulatively considerable. This is the reason project-specific and cumulative significance thresholds are the same. Conversely, projects that do not exceed the project-specific thresholds are generally not considered to be cumulatively significant.

5.2 - Impact Analysis

5.2.1 - Consistency with Air Quality Management Plan

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

Impact Analysis

To evaluate whether or not a project conflicts with, or obstructs the implementation of the applicable air quality plan (2016 AQMP for the South Coast Air Basin), the *SCAQMD CEQA Air Quality Handbook* states that there are two key indicators. These indicators are identified by the criteria discussed below.

1. **Indicator:** Whether the project will not result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations, or delay timely attainment of air quality standards or the interim emission reductions specified in the AQMP.

2. **Indicator:** According to Chapter 12 of the SCAQMD CEQA Air Quality Handbook, the purpose of the General Plan consistency findings is to determine whether a project is inconsistent with the growth assumptions incorporated into the air quality plan, and thus, whether it would interfere with the region's ability to comply with federal and California air quality standards.

Considering the recommended criteria in the SCAQMD's 1993 Handbook, this analysis uses the following criteria to address this potential impact:

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

Step 1: Project's Contribution to Air Quality Violations

According to the SCAQMD, the project is consistent with the AQMP if the project would not result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations, or delay timely attainment of air quality standards or the interim emission reductions specified in the AQMP (SCAQMD AQMP 1993, page 12-3). As shown in Impact AIR-2 and AIR-4 below, the project would not generate regional or localized construction or operational emissions that would exceed SCAQMD's thresholds of significance.

If a project's emissions do not exceed the SCAQMD regional thresholds for VOC, NO_X, CO, SO_X, PM_{10}, or $PM_{2.5}$, it follows that the project's emissions would not exceed the allowable limit for each project in order for the region to attain and maintain ambient air quality standards, which is the primary goal of air quality plans. As shown in Impact AIR-2 below, the project's regional construction and operational emissions would not exceed the SCAQMD regional thresholds of significance. Furthermore, as described in Impact AIR-4 below, the project's localized construction and operational emissions would not exceed the project location-specific SCAQMD LSTs. Considering this information, the project's construction and operational emissions would not contribute substantially to potential air quality violations and thus would comply with the applicable air quality plan.

Step 2: Assumptions in AQMP

The development of emission burdens used in AQMPs to demonstrate compliance with ambient air quality standards is based, in part, on land use patterns contained within local general plans. Therefore, it is reasonable to conclude that if a project is consistent with the applicable general plan land use designation, and if the general plan was adopted prior to the applicable AQMP, then the growth of VMT and/or population generated by said project would be consistent with the growth in VMT and population assumed within the AQMP. The City of Beaumont adopted its General Plan in 2007, which is prior to the adoption of the AQMP. The current City of Beaumont General Plan land use designation on the project site is Community Commercial, while the current zoning designation for the project site Commercial Community. According to the General Plan, Community Commercial is characterized by commercial shopping centers that serve adjacent neighborhoods. Furthermore, the General Plan identifies this land use as being appropriate for locations near freeway interchanges.

The proposed project site is vacant, and the project is proposing to develop a 6,250-square-foot shopping center, a gas station with 16 fueling positions, two fast food restaurants, and associated paving and landscaping. The proposed project is consistent with the current land use designation and would not require a General Plan amendment or a change in zoning. Therefore, growth supported by the project is reasonably accounted for in the AQMP.

Step 3: Control Measures

The AQMP contains a number of control measures, which are enforceable requirements through the adoption of rules and regulations. Applicable rules and regulations are listed below and are described in Section 2.4.2.

- **SCAQMD Rule 201** prohibits a person from building, installing, altering, or replacing equipment without a permit to construct.
- **SCAQMD Rule 203** prohibits a person from operating equipment without a permit to operate.
- **SCAQMD Rule 402** prohibits a person from discharging air contaminants.
- **SCAQMD Rule 403** governs emissions of fugitive dust during construction and operation activities. Rule 403 requires that fugitive dust be controlled with the best available control measures. Rule 403 measures collectively reduce air quality impacts at construction sites.
- **SCAQMD Rule 461** applies to the transfer of gasoline.
- **SCAQMD Rule 481** applies to all spray painting and spray coating operations and equipment.
- **SCAQMD Rule 1108** governs the sale, use, and manufacturing of asphalt and limits the VOC content in asphalt used in the SoCAB.
- **SCAQMD Rule 1113** governs the sale, use, and manufacturing of architectural coating and limits the VOC content in paints and paint solvents.
- **SCAQMD Rule 1138** applies to owners and operators of commercial cooking operations, preparing food for human consumption.
- **SCAQMD Rule 1143** governs the manufacture, sale, and use of paint thinners and solvents used in thinning of coating materials, cleaning of coating application equipment and other solvent cleaning operations by limiting their VOC content.
- **SCAQMD Rule 1186** limits the presence of fugitive dust on paved and unpaved roads.

The project would comply with all applicable SCAQMD rules and regulations. Therefore, the project complies with applicable emission control measures in the AQMPs.

Summary

In summary, the project would not exceed the growth assumptions in the AQMP. The project would not result in a regional or localized exceedance of criteria air pollutants and would comply with all applicable SCAQMD rules and regulations. Accordingly, the proposed project would not conflict with

or obstruct implementation of the applicable air quality plans, and, therefore, the impact would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation is required.

Level of Significance After Mitigation

Less than significant impact.

5.2.2 - Potential for Air Quality Standard Violation

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

Impact Analysis

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

The proposed project would generate regional criteria air pollutant and ozone precursor emissions resulting from short-term construction and long-term operational activities. SCAQMD has developed regional thresholds of significance for both construction and operational emissions. These thresholds are considered the allowable emissions limit for each project in order for the region to attain and maintain ambient air quality standards. Therefore, a project that would not generate daily regional emissions that exceed SCAQMD's thresholds would also not violate or contribute substantially to an existing or projected air quality violation. The project's regional construction and operational emissions, which include both on-site and off-site emissions, are evaluated separately below.

Construction Regional Emissions

Construction emissions are described as "short-term" or temporary in duration; however, they have the potential to represent a significant impact with respect to air quality. Construction of the project would result in the temporary generation of VOC, NO_X, CO, SO_X, PM_{10}, and $PM_{2.5}$ emissions from construction activities such as demolition, grading, building construction, architectural coating, and asphalt paving. Fugitive particulate matter dust emissions are primarily associated with earth disturbance and grading activities, and vary as a function of soil silt content, soil moisture, wind speed, acreage of disturbance area, and miles traveled by construction vehicles on-site and off-site. Construction-related NO_X emissions are primarily generated by exhaust emissions from heavy-duty

construction equipment, material and haul trucks, and construction worker vehicles. VOC emissions are mainly generated by exhaust emissions from construction vehicles, off-gas emissions associated with architectural coatings and asphalt paving.

Table 12 presents the project's maximum daily construction emissions for each construction activity and during the entire construction duration using the worst-case summer or winter daily construction-related criteria pollutant emissions for each phase of construction. For detailed assumptions, methodologies, and models used to estimate emissions, please refer to Section 4, Modeling Parameters and Assumptions and/or Appendix A of this report.

Table 12: Regional Construction Emissions by Construction Activity

Construction Activity	Regional Pollutant Emissions (pounds per day)[1]					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
2019						
Site Preparation	1.8	21.6	12.3	0.0	1.6	0.9
Grading	2.3	34.0	11.9	0.1	4.6	2.6
Building Construction—2019	2.8	21.0	17.4	0.0	1.7	1.2
Overlap of Building Construction and Grading	5.2	55.0	29.4	0.1	6.2	3.8
2020						
Building Construction—2020	2.5	19.3	16.9	0.0	1.5	1.1
Paving	1.6	11.6	12.4	0.0	0.8	0.7
Architectural Coating	19.2	1.7	2.2	0.0	0.2	0.1
2019–2020						
Maximum Daily Emissions	**19.2**	**55.0**	**29.4**	**0.1**	**6.2**	**3.8**
SCAQMD Significance Threshold	**75**	**100**	**550**	**150**	**150**	**55**
Exceed Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

Notes:
VOC = volatile organic compounds; NO_X = oxides of nitrogen; CO = carbon monoxide; SO_X =sulfur oxides;
PM_{10} = particulate matter with aerodynamic diameter less than 10 microns;
$PM_{2.5}$ = particulate matter with aerodynamic diameter less than 2.5 microns
[1] Assumes compliance with SCAQMD Rule 403.
Source of emissions: CalEEMod Output (see Appendix A).
Source of thresholds: SCAQMD 2015.

As shown in Table 12 the project's regional daily construction emissions would not exceed any of SCAQMD's thresholds of significance. Therefore, the short-term construction emissions would not violate or contribute substantially to an existing or projected air quality violation. The impact would be less than significant.

Operational Regional Emissions

Following construction of the project, long-term operational emissions would be generated, resulting from the day-to-day operations. Operational emissions for land use development projects are typically distinguished as mobile-, area-, and energy-source emissions. Mobile-source emissions are those associated with automobiles that would travel to and from the proposed project site. Area-source emissions are those associated with natural gas combustion for space and water heating, landscape maintenance activities, and periodic architectural coatings. Energy-source emissions are those associated with electricity consumption and are more pertinent for GHG emissions than air quality pollutants. For detailed assumptions, methodologies, and models used to estimate emissions, please refer to Section 4, Modeling Parameters and Assumptions, and Appendix A of this report. Table 13 presents the project's maximum daily operational emissions between summer and winter seasons.

Table 13: Operational Regional Pollutants

Operational Activity	Regional Pollutant Emissions (pounds per day) [1]					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Area	0.4	0.0	0.0	0.0	0.0	0.0
Energy	0.0	0.3	0.3	0.0	0.0	0.0
Mobile	8.7	53.3	52.0	0.2	9.9	2.8
Gasoline Transfer and dispensing activities[2]	7.6	—	—	—	—	—
Total Operational Emissions	**12.0**	**53.7**	**52.2**	**0.2**	**9.9**	**2.8**
SCAQMD Significance Threshold	**55**	**55**	**550**	**150**	**150**	**55**
Exceed Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

Notes:
VOC = volatile organic compounds; NO_X = oxides of nitrogen; CO = carbon monoxide; SO_X =sulfur oxides;
PM_{10} = particulate matter with aerodynamic diameter less than 10 microns;
$PM_{2.5}$ = particulate matter with aerodynamic diameter less than 2.5 microns
[1] Emissions shown represent the maximum daily emissions from summer and winter seasons for each operational emission source and pollutant. Therefore, total daily operational emissions represent maximum daily emissions that could occur throughout the year.
[2] VOC emissions from gasoline transfer and dispensing activities at the proposed gas station are were calculated based on maximum VOC limits of 0.15 pounds of VOC per 1,000 gallons from the loading of gasoline into storage tanks, and 0.38 pounds of VOC per 1,000 gallons from the dispensing of gasoline into vehicle fuel tanks.
Source of area-, energy-, and mobile-source emissions: CalEEMod Output (see Appendix A).
Source of thresholds: SCAQMD 2015.

As shown in Table 13, the project's regional daily operational emissions would not exceed any of SCAQMD's thresholds of significance. Therefore, the long-term daily operational emissions would not violate or contribute substantially to an existing or projected air quality violation. The impact would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation is required.

Level of Significance After Mitigation

Less than significant impact.

5.2.3 - Cumulative Impacts

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

Impact Analysis

This impact is related to the cumulative effect of a project's regional criteria pollutant emissions. As described above, the region is currently nonattainment for ozone, PM_{10}, and $PM_{2.5}$. However, by its nature, air pollution is largely a cumulative impact resulting from emissions generated over a large geographic region. The nonattainment status of regional pollutants is a result of past and present development within the air basin, and this regional impact is a cumulative impact. In other words, new development projects (such as the proposed project) within the air basin would contribute to this impact only on a cumulative basis. No single project would be sufficient in size, by itself, to result in nonattainment of regional air quality standards. Instead, a project's emissions may be individually limited, but cumulatively considerable when taken in combination with past, present, and future development projects.

The cumulative analysis focuses on whether a specific project would result in cumulatively considerable emissions. According to Section 15064(h)(4) of the CEQA Guidelines, the existence of significant cumulative impacts caused by other projects alone does not constitute substantial evidence that the project's incremental effects would be cumulatively considerable.

Rather, the determination of cumulative air quality impacts for construction and operational emissions is based on whether the project would result in regional emissions that exceed SCAQMD regional thresholds of significance for construction and operations on a project level. Projects that generate emissions below the SCAQMD significance thresholds would be considered consistent with regional air quality planning efforts and would not generate cumulatively considerable emissions.

Cumulative Construction Emissions

As shown above in Table 12, the project's maximum daily construction emissions would not exceed SCAQMD's regional thresholds of significance. Therefore, the project's construction emissions would not result in a cumulatively considerable incremental contribution to the existing cumulative air quality impacts. Furthermore, as described in Section 4, all construction activities would comply

with applicable SCAQMD rules and regulations, including Rule 403 to minimize fugitive PM dust emissions. Therefore, considering that the project's short-term construction emissions would not exceed any significance thresholds, the project would not result in a cumulatively considerable net increase of construction emissions. The cumulative impact from construction of the project would be less than significant.

Cumulative Operational Emissions

As shown above in Table 13, the project's maximum daily operational emissions would not exceed SCAQMD's regional thresholds of significance. Therefore, the project's operational emissions would not result in a cumulatively considerable incremental contribution to the existing cumulative air quality impacts. Considering that the project's long-term operational emissions would not exceed any significance thresholds, the project would not result in a cumulatively considerable net increase of operational emissions. The cumulative impact from long-term operation of the project would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation is required.

Level of Significance After Mitigation

Less than significant impact.

5.2.4 - Sensitive Receptors

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

Impact Analysis

This impact evaluates the potential for the project's construction and operational emissions to expose sensitive receptors to substantial pollutant concentration. Sensitive receptors are defined as those individuals who are sensitive to air pollution including children, the elderly, and persons with preexisting respiratory or cardiovascular illness. For purposes of CEQA, the SCAQMD considers a sensitive receptor to be a location where a sensitive individual could remain for 24 hours, such as residences, hospitals, or convalescent facilities (SCAQMD 2009). Commercial and industrial facilities are not included in the definition because employees do not typically remain on-site for 24 hours. However, when assessing the impact of pollutants with 1-hour or 8-hour standards (such as NO_2 and CO), commercial and/or industrial facilities would be considered sensitive receptors.

For the proposed project, the closest sensitive receptor is a single-family residence located approximately 134 feet northeast of the project site on the east side of Golf Club Drive. This analysis evaluates the potential for construction- and operational-related criteria air pollutant, ozone precursor, and TAC emissions to impact sensitive receptors.

Localized Significance Threshold Analysis—Criteria Pollutants

The localized construction and operational analyses use thresholds (i.e., LSTs) that represent the maximum emissions for a project that would not cause or contribute to an exceedance of the most stringent applicable federal or State ambient air quality standard (SCAQMD 2009). If the project's construction or operational emissions are under those thresholds, it follows that the project would not cause or contribute to an exceedance of the standard and would not expose sensitive receptors to substantial pollutant concentrations.

Localized Construction Analysis

As discussed in Section 4 (Modeling Parameters and Assumptions), the LST Methodology only applies to on-site emissions and states that "off-site mobile emissions from the project should not be included in the emissions compared to LSTs." Therefore, for purposes of the construction LST analysis, only on-site emissions were compared with the applicable LSTs. As outlined in Section 5.1.1 (Thresholds of Significance), the construction LSTs were obtained for a 2-acre project site located in SRA 29 with the nearest sensitive receptor being less than 25 meters away.

Table 14 presents the project's maximum daily on-site emissions compared with the applicable LSTs. Emissions estimates account for implementation of SCAQMD Rule 403, which is required for all projects regardless of significance.

Table 14: Comparison of Construction LSTs and Project Construction Emissions (Unmitigated)

Activity	Maximum On-site Emissions (pounds per day)			
	NO_X	CO	PM_{10}	$PM_{2.5}$
2019				
Site Preparation	21.5	11.9	1.5	0.9
Grading	22.7	10.2	3.6	2.3
Building Construction—2019	18.9	15.3	1.1	1.0
Overlap of Building Construction and Grading	41.7	25.4	4.7	3.3
2020				
Building Construction—2020	17.4	14.9	0.9	0.9
Paving	11.6	11.8	0.7	0.6
Architectural Coating	1.7	1.8	0.1	0.1
Maximum Daily Emissions	**41.7**	**25.4**	**4.7**	**3.3**
Construction Localized Significance Threshold	**149**	**1,541**	**10**	**6**
Exceed Threshold?	**No**	**No**	**No**	**No**

Notes:
MF = Microfiltration

NO_X = nitrogen oxides CO = carbon monoxide PM_{10} and $PM_{2.5}$ = particulate matter
Phases are assumed to not overlap; therefore, the maximum daily emissions are from the highest representative phase.
PM_{10} and $PM_{2.5}$ emissions are from the mitigated output to reflect compliance with SCAQMD Rule 403—Fugitive Dust.
Source of emissions: CalEEMod Output (Appendix A).
Source of thresholds: SCAQMD 2009, for SRA 29, 25 meters, 2-acre site.

As shown in Table 14, the project's maximum daily on-site emissions would not exceed any of the applicable SCAQMD LSTs. Therefore, the project's construction activities would not cause or contribute substantially to an existing or future ambient air quality standard violation. Accordingly, the project's construction-related criteria air pollutant and ozone precursor concentrations would not expose sensitive receptors to substantial pollutant concentrations. The impact would be less than significant.

Localized Operational Analysis

Similar to the construction LST analysis above, the applicable operational LSTs were obtained for a project located in SRA 29, a 2-acre project site, and the nearest sensitive receptor being within 25 meters (to provide a conservative analysis).

As described above, the LST Methodology recommends that only on-site emissions are evaluated using LSTs. Because a majority of the project's mobile-source emissions would occur on the local and regional roadway network away from the project, only the on-site area-, energy-, and mobile-source emissions were included in this analysis. A trip length of 0.1 mile was used in the modeling input assumptions to account for on-site emissions from mobile sources. Table 15 presents the project's maximum daily on-site emissions compared with the applicable LSTs.

Table 15: Comparison of Operational LSTs and Project Operational Emissions (Unmitigated)

Operational Activity	On-site Emissions (pounds per day)[1]			
	NO_X	CO	PM_{10}	$PM_{2.5}$
Area	0.0	0.0	0.0	0.0
Energy	0.3	0.3	0.0	0.0
Mobile	43.8	27.8	0.5	0.2
Maximum On-site Daily Emissions	**44.1**	**28.1**	**0.5**	**0.2**
Operations Localized Significance Threshold	**149**	**1,541**	**3**	**2**
Exceed Threshold?	**No**	**No**	**No**	**No**

Notes:
NO_X= nitrogen oxides CO = carbon monoxide PM_{10} and $PM_{2.5}$ = particulate matter
Unmitigated results were used to calculate totals.
[1] Emissions shown represent the maximum daily emissions from summer and winter seasons for each operational emission source and pollutant. Therefore, total daily operational emissions represent maximum daily emissions that could occur throughout the year.

Source of emissions: CalEEMod Output (Appendix A).
Source of thresholds: SCAQMD 2009, for SRA 29, 25 meters, 2-acre site.

As shown in Table 15, the project's maximum daily on-site operational emissions would not exceed any of the applicable SCAQMD LSTs. Therefore, the project's operational activities would not cause or contribute substantially to an existing or future ambient air quality standard violation. Accordingly, the project's operational criteria air pollutant and ozone precursor concentrations would not expose sensitive receptors to substantial pollutant concentrations. The impact would be less than significant.

Toxic Air Pollutants—On-site Workers

A variety of state and national programs protect workers from safety hazards, including high air pollutant concentrations (California OSHA and CDC 2012).

On-site workers are not required to be addressed through this health risk assessment process. A document published by the California Air Pollution Control Officers Association (CAPCOA 2009), Health Risk Assessments for Proposed Land Use Projects, indicates that on-site receptors are included in risk assessments if they are persons not employed by the project. Persons not employed by the project would not remain on-site for any significant period. Therefore, a health risk assessment for on-site workers is not required or recommended.

Toxic Air Pollutants—Construction

Construction-related activities would result in short-term, project-generated emissions of diesel particulate matter exhaust emissions from off-road, heavy-duty diesel equipment for site preparation (e.g., excavation, grading, and clearing), building construction, and other miscellaneous activities. DPM was identified as a TAC by the ARB in 1998.

Maximum PM_{10} and $PM_{2.5}$ emissions would occur during demolition, site preparation, and grading/excavation activities, which require the largest number of heavy-duty diesel equipment. This period is expected to last less than two months. Particulate matter emissions would decrease for the remaining construction period, because construction activities such as building construction and paving would require less construction equipment. While the maximum DPM emissions associated with grading/excavation activities would only occur for a portion of the overall construction period, this activity represents the worst-case condition for the total construction period. This would represent less than 1 percent of the total 70-year lifetime exposure period used to estimate health risks.

Therefore, because of the short exposure period, and the ongoing implementation of EPA and ARB requirements for cleaner fuels, diesel engine retrofits, and new low-emission diesel engine types, DPM generated by project construction is not expected to result in significant health risks to sensitive receptors. As a result, the impact would be less than significant, and mitigation would not be required.

Toxic Air Pollutants—Operations

Common sources of TACs include high traffic freeways, distribution centers, large gas dispensing facilities, and dry cleaners. Operation of the project would not include those uses and therefore would not emit TACs. The project could also include the possible use of charbroilers at the fast food restaurants. However, according to Rule 1138 and Rule 222 of the ARB, commercial charbroilers are permitted stationary sources regulated by the local air district.[1] In addition, TAC emissions created by the fast food charbroilers would be negligible due to their limited hours of operation and required filtration systems, and would result in a less than significant cancer risk and is therefore not analyzed further. Additional information regarding the project's gas dispensing component is provided below.

ARB Air Quality and Land Use Handbook contains recommendations that will "help keep California's children and other vulnerable populations out of harm's way with respect to nearby sources of air pollution" (ARB 2005), including recommendations for distances between sensitive receptors and certain land uses. The recommendation for siting fueling stations is as follows.

- **Fueling stations.** ARB recommends avoiding new sensitive land uses within 300 feet of a large fueling station (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.

As previously discussed, the nearest sensitive receptor is a single-family residence located approximately 134 feet northeast of the project site on the east side of Golf Club Drive. Specifically, the same receptor would be located approximately 351 feet from the nearest gas station pump proposed by the project. Both distances are greater than the 50-foot separation recommended for typical gas dispensing facilities. SCAQMD has developed estimates of cancer risks from industry-wide source categories, including retail gasoline dispensing facilities. The methodology used to estimate those risks are consistent with SCAQMD Rule 1401 and (2) California Air Pollution Control Officer Association (CAPCOA) risk assessment guidance for gasoline service stations. At a distance of 351 feet from a gas station pump, the nearest sensitive receptor would be exposed to a cancer risk of 1.72 in one million (SCAQMD 2007a).[2] The project would be subject to annual throughput reporting required by the SCAQMD. Furthermore, the project would be subject to State and regional requirements for vapor recovery systems to control gasoline emissions. Based on the distance to the nearest sensitive receptors and adherence to regulations, impacts would be less than significant.

Carbon Monoxide Hotspot Analysis

Project trips would contribute to vehicle volumes at existing and future local intersections. Local mobile-source CO emissions and concentrations near roadway intersections 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. However, under specific meteorological conditions, CO concentrations near roadways and/or intersections may reach

[1] Air Resources Board. Rule 1138. http://www.aqmd.gov/docs/default-source/rule-book/reg-xi/rule-1138.pdf?sfvrsn=4; Rule 222. http://www.aqmd.gov/docs/default-source/rule-book/reg-ii/Rule-222.pdf?sfvrsn=8.

[2] The estimate of 1.72 in a million is based on the estimated cancer risk from Banning, which is the closest service station in Table 3 of the SCAQMD document, a 100-meter receptor distance, and a 5.2 million gallon per year throughput volume.

unhealthy levels with respect to local sensitive land uses, such as residential units, hospitals, schools, and childcare facilities.

With the turnover of older vehicles, introduction of cleaner fuels and implementation of more stringent emissions control technology, CO concentrations in the SCAQMD have steadily declined. As described in Table 2, CO is not a pollutant of concern in the region and all air monitoring stations in the SoCAB have discontinued monitoring for this pollutant in the last 3 years.

Nevertheless, as part of the demonstration of CO attainment for the SoCAB (2003 Air Quality Management Plan and 1992 Federal Attainment Plan for Carbon Monoxide), SCAQMD evaluated potential CO exceedance throughout the air basin. As discussed in the 1992 CO Plan, peak CO concentrations in the SoCAB are due to unusual meteorological and topographical conditions, and not due to the impact of particular intersections. In the 1992 CO Plan, SCAQMD performed a CO hotspot analysis for the four busiest intersections in Los Angeles at the peak morning and afternoon peak-hours. The busiest intersection (Wilshire Boulevard and Veteran Avenue), which had traffic volumes of approximately 100,000 vehicles per day, was determined not to generate a CO hotspot even at peak morning and afternoon conditions. Thus, intersections with fewer than 100,000 vehicles per day would also not be anticipated to result in a CO hotspot.

The traffic impact report prepared for the project by David Evans and Associates (2018) identified the peak-hour traffic volumes for six intersections affected by the project. As identified in the traffic impact report, the maximum peak-hour intersection volume would occur at the Oak Valley Parkway/I-10 Westbound Ramps during the PM peak-hour. The estimated cumulative traffic volume at this intersection is 2,455 PM peak-hour trips. Using a conservative factor of 10 to calculate daily vehicles, this maximally impacted intersection would service approximately 24,550 vehicles per day, which is substantially less than the 100,000 vehicles determined in SCAQMD's CO hotspot analysis. Furthermore, this peak-hourly intersection traffic volume would be less than other air district CO hotspot screening values such as those of the Bay Area Air Quality Management District (44,000 vehicles per hour) and the Sacramento Metropolitan Air Quality Management District (31,600 vehicles per hour). Therefore, the project plus cumulative traffic would not contribute a substantial amount of traffic to existing or future intersections that could result in a CO hotspot. Thus, the operational CO impact would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation is required.

Level of Significance After Mitigation

Less than significant impact.

5.2.5 - Objectionable Odors

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

Impact Analysis

Odors can cause a variety of responses. The impact of an odor is dependent on interacting factors such as frequency (how often), intensity (strength), duration (in time), offensiveness (unpleasantness), location, and sensory perception. While offensive odors rarely cause any physical harm, they still can be very unpleasant, leading to considerable distress and often generating citizen complaints to local governments and regulatory agencies. Odor-related symptoms reported in a number of studies include nervousness, headache, sleeplessness, fatigue, dizziness, nausea, loss of appetite, stomach ache, sinus congestion, eye irritation, nose irritation, runny nose, sore throat, cough, and asthma exacerbation (SCAQMD 2007b).

The SCAQMD's role is to protect the public's health from air pollution by overseeing and enforcing regulations (SCAQMD 2007b). The SCAQMD's resolution activity for odor compliance is mandated under California Health & Safety Code Section 41700, and falls under SCAQMD Rule 402. This rule on Public Nuisance Regulation states: "A person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property."

The SCAQMD does not provide a suggested screening distance for a variety of odor-generating land uses and operations. However, the San Joaquin Valley Air Pollution Control District (SJVAPCD) does have a screening distance for odor sources. Those distances are used as a guide to assess whether nearby facilities could be sources of significant odors. Projects that would site a new receptor farther than the applicable screening distances from an existing odor source would not likely to have a significant impact. These screening distances by type of odor generator are listed in Table 16.

Table 16: Screening Levels for Potential Odor Sources

Odor Generator	Screening Distance
Wastewater Treatment Facilities	2 miles
Sanitary Landfill	1 mile
Transfer Station	1 mile
Composting Facility	1 mile
Petroleum Refinery	2 miles
Asphalt Batch Plant	1 mile
Chemical Manufacturing	1 mile
Fiberglass Manufacturing	1 mile

Painting/Coating Operations (e.g., auto body shop)	1 mile
Food Processing Facility	1 mile
Feed Lot/Dairy	1 mile
Rendering Plant	1 mile
Source: SJVAPCD 2015.	

Construction-related Odors

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

Operational-related Odors

The project consists of the development of retail and commercial uses that would not be considered typical odor-generating land uses. Land uses typically considered associated with odors include wastewater treatment facilities, waste-disposal facilities, or agricultural operations. Minor sources of odors, such as exhaust from mobile sources, are not typically associated with numerous odor complaints, but are known to have temporary and less concentrated odors. The vehicle trips generated by the project would occur throughout the day, so the exhaust would not be heavily concentrated for extended periods. The project could also result in odor from dispensing gasoline. The gas pumping areas are located over 350 feet from the nearest sensitive receptors; therefore, the odors from dispensing gasoline are not expected to be detectible to off-site sensitive receptors. Considering the low intensity of potential odor emissions and the distance to the nearest sensitive receptors, the project's operational activities would not expose receptors to objectionable odor emissions. Impacts would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation is required.

Level of Significance After Mitigation

Less than significant impact.

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SECTION 6: GREENHOUSE GAS IMPACT ANALYSIS

6.1 - CEQA Guidelines

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

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

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

(b) Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of GHGs.

6.1.1 - Thresholds of Significance for this Project

The SCAQMD developed interim recommended significance thresholds for GHGs for local lead agency consideration (SCAQMD draft local agency threshold) in 2008; however, the SCAQMD Board has not approved the thresholds as of the date of this analysis. The current interim thresholds consist of the following tiered approach:

- Tier 1 consists of evaluating whether or not the project qualifies for any applicable exemption under CEQA.
- Tier 2 consists of determining whether the project is consistent with a GHG reduction plan. If a project is consistent with a qualifying local GHG reduction plan, it does not have significant GHG emissions.
- Tier 3 consists of screening values, which the lead agency can choose, but must be consistent with all projects within its jurisdiction. A project's construction emissions are averaged over 30 years and are added to a project's operational emissions. If a project's emissions are under one of the following screening thresholds, then the project is less than significant:
  - All land use types: 3,000 MT CO_2e per year
  - Based on land use type: residential: 3,500 MT CO_2e per year; commercial: 1,400 MT CO_2e per year; industrial: 10,000 MT CO_2e; or mixed use: 3,000 MT CO_2e per year
- Tier 4 has the following options:
  - Option 1: Reduce emissions from BAU by a certain percentage; this percentage is currently undefined
  - Option 2: Early implementation of applicable AB 32 Scoping Plan measures
  - Option 3, 2020 target for service populations (SP), which includes residents and employees: 4.8 MT CO_2e/SP/year for projects and 6.6 MT CO_2e/SP/year for plans;

- Option 4, 2035 target: 3.0 MT CO_2e/SP/year for projects and 4.1 MT CO_2e/SP/year for plans

- Tier 5 involves mitigation offsets to achieve target significance threshold.

The SCAQMD provided substantial evidence is support of its threshold approach. The SCAQMD discusses its draft thresholds in the following excerpt (SCAQMD 2008c):

> The overarching policy objective with regard to establishing a GHG significance threshold for the purposes of analyzing GHG impacts pursuant to CEQA is to establish a performance standard or target GHG reduction objective that will ultimate contribute to reducing GHG emissions to stabilize climate change. Full implementation of the Governor's Executive Order S-3-05 would reduce GHG emissions 80 percent below 1990 levels or 90 percent below current levels by 2050. It is anticipated that achieving the Executive Order's objective would contribute to worldwide efforts to cap GHG concentrations at 450 ppm, thus, stabilizing global climate.
>
> As described below, staff's recommended interim GHG significance threshold proposal uses a tiered approach to determining significance. Tier 3, which is expected to be the primary tier by which the AQMD will determine significance for projects where it is the lead agency, uses the Executive Order S-3-05 goal as the basis for deriving the screening level. Specifically, the Tier 3 screening level for stationary sources is based on an emission capture rate of 90 percent for all new or modified projects. A 90 percent emission capture rate means that 90 percent of total emissions from all new or modified stationary source projects would be subject to some type of CEQA analysis, including a negative declaration, a mitigated negative declaration, or an environmental impact.
>
> Therefore, the policy objective of staff's recommended interim GHG significance threshold proposal for project's where the SCAQMD is the lead agency is to achieve an emission capture rate of 90 percent of all new or modified stationary source projects. A GHG significance threshold based on a 90 percent emission capture rate may be more appropriate to address the long-term adverse impacts associated with global climate change. Further, a 90 percent emission capture rate sets the emission threshold low enough to capture a substantial fraction of future stationary source projects that will be constructed to accommodate future statewide population and economic growth, while setting the emission threshold high enough to exclude small projects that will in aggregate contribute a relatively small fraction of the cumulative statewide GHG emissions. This assertion is based on the fact that staff estimates that these GHG emissions would account for less than one percent of future 2050 statewide GHG emissions target (85 MMT CO_2e/yr). In addition, these small projects would be subject to future applicable GHG control regulations that would further reduce their overall future contribution to the statewide GHG inventory.

In summary, the SCAQMD's draft threshold uses the Executive Order S-3-05 goal as the basis for the Tier 3 screening level. Achieving the Executive Order's objective would contribute to worldwide efforts to cap CO_2 concentrations at 450 ppm, thus stabilizing global climate.

The SCAQMD Tier 3 threshold was expanded to include non-industrial projects, as explained in the minutes from the most recent working group meeting (SCAQMD 2010):

Similarly, with regard to numerical residential/commercial GHG significance thresholds, at the 11/19/2009 stakeholder working group meeting staff presented two options that lead agencies could choose: option #1—separate numerical thresholds for residential projects (3,500 MT CO_2e/year), commercial projects (1,400 MT CO_2e/year), and mixed use projects (3,000 MT CO_2e/year) and; option #2—a single numerical threshold for all non-industrial projects of 3,000 MTCO_2e/year. If a lead agency chooses one option, it must consistently use that same option for all projects where it is lead agency. The current staff proposal is to recommend the use of option #2, but allow lead agencies to choose option #1 if they prefer that approach. To determine whether the proposed project would have a significant impact with respect to the generation of GHG emissions, this analysis utilizes the SCAQMD's draft Tier 3 threshold of 3,000 MT CO_2e per year.

Section 15064.4(b) of the CEQA Guideline amendments for GHG emissions state that a lead agency may take into account the following three considerations in assessing the significance of impacts from GHG emissions.

- **Consideration #1**: The extent to which the project may increase or reduce GHG emissions as compared to the existing environmental setting.
- **Consideration #2**: Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project.
- **Consideration #3**: The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions. Such regulations or requirements must be adopted by the relevant public agency through a public review process and must include specific requirements that reduce or mitigate the project's incremental contribution of GHG emissions. If there is substantial evidence that the possible effects of a particular project are still cumulatively considerable notwithstanding compliance with the adopted regulations or requirements, an Environmental Impact Report must be prepared for the project.

To determine whether the proposed project would have a significant impact with respect to the generation of GHG emissions, this analysis utilizes the SCAQMD's draft local agency Tier 3 threshold of 3,000 MT CO_2e per year. The second CEQA Checklist question would be evaluated by assessing the project's consistency with the City of Beaumont's Climate Action Plan, *Sustainable Beaumont: The City's Roadmap to Greenhouse Gas Reductions*.

6.2 - Impact Analysis

6.2.1 - Greenhouse Gas Inventory

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

6.2.2 - Impact Analysis

Although construction-related GHG emissions are temporary in nature, the total amount of emissions could have a substantial contribution to a project's total GHG emissions. SCAQMD recommends that construction-related GHG emissions be amortized over the life of the project, which is defined as 30 years, and added to annual operational emissions. As described above in Section 4 (Modeling Parameters and Assumptions), construction-related GHG emissions were modeled using the same assumptions and model (CalEEMod Version 2016.3.2) as those for air quality emissions. Construction-related GHG emissions would occur from fossil fuel combustion for heavy-duty construction equipment, material delivery and haul trucks, and construction worker vehicles. Table 17 presents the project's total construction-related GHG emissions and amortized construction emissions.

Table 17: Construction GHG Emissions

Construction Phase	On-site (MT CO_2e per year)	Off-site (MT CO_2e per year)	Total MT CO_2e per year
2019			
Site Preparation	3.3	0.1	3
Grading	14.0	24.6	39
Building Construction—2019	198.2	76.3	274
2020			
Building Construction—2020	33.4	12.7	46
Paving	7.8	0.7	9
Architectural Coating	1.3	0.4	2
Total	—	—	**373**
Amortized Emissions[1]	—	—	***12***

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

Following buildout of the project, long-term operational emissions would be generated from area-, energy-, and mobile-source emissions. As described in Section 4, indirect GHG emissions associated with water consumption and solid waste disposal would be generated by the proposed commercial

development. Table 18 presents the project's annual operational emissions along with the amortized construction emissions. Pursuant to SCAQMD's guidance, the sum of these emissions should be used to compare with the applicable threshold of significance.

Table 18: Operational GHG Emissions

Emissions Source	Emissions (MT CO_2e per year)
Area	0
Energy	150
Mobile	2,610
Waste	32
Water	10
Amortized Construction Emissions	12
Total Project Emissions	**2,815**
Applicable SCAQMD Threshold	**3,000**
Potentially Significant?	**No**
Notes: MT CO_2e = metric tons of carbon dioxide equivalent Unrounded results used to calculate totals. Source of emissions: CalEEMod Output (Appendix A). Source of threshold: SCAQMD, 2008.	

As shown in Table 18, the project's annual operational plus amortized construction emissions would generate 2,815 MT CO_2e per year, which would not exceed the SCAQMD's screening threshold of 3,000 MT CO_2e per year. This would be considered a less than significant impact.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation is required.

Level of Significance After Mitigation

Less than significant impact.

6.2.3 - Greenhouse Gas Reduction Plans

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

Impact Analysis

As described in Section 3.3 Regulatory Environment, the City of Beaumont adopted its Climate Action Plan, *Sustainable Beaumont: The City's Roadmap to Greenhouse Gas Reductions*, in October 2015 (City of Beaumont 2015). Consistent with the State's adopted AB 32 GHG reduction target, the City set a goal to reduce emissions to 1990 levels by the year 2020. This target was calculated as a 15 percent decrease from 2005 levels, as recommended in the AB 32 Scoping Plan. The Plan also established a longer-term goal to reduce emissions 41.7 percent below 2012 levels by 2030, putting the City on a path towards the State's long-term goal to reduce emissions 80 percent below 1990 levels by 2050. The Plan includes various goals and policies for reducing GHG emissions from community-wide sources as a means to meet their stated GHG reduction goals. The project's consistency with relevant goals and policies is assessed in Table 19 below.

Table 19: Consistency with Sustainable Beaumont

Reduction Goals and Policies	Project Consistency
Goal 4: Increase energy efficiency in new commercial development.	**Consistent.** New structures are required to comply with Title 24 Energy Efficiency Standards that are expected to increase in stringency over time. The project would comply with the applicable Title 24 Energy Efficiency Standards in effect at the time building permits are received. In addition, the project would comply with local building code regarding lighting efficiency.
Policy 4.1: Encourage or Require Energy Efficiency Standards Exceeding State Requirements	**Not applicable.** This is a policy calling for the City to encourage or require energy efficiency standards exceeding State requirements. The Climate Action Plan intended for this policy to be implemented through the use of Screening Tables; however, Screening Tables are not currently available at this time. Nonetheless, the project would comply with local building code regarding lighting efficiency.
Goal 5: Increase Energy Efficiency through Water Efficiency	**Consistent.** The project would comply with the California Green Building Standards Code. The project would also comply with the Model Water Efficient Landscape Ordinance as required by the City's development code.
Goal 6: Decrease energy demand through reducing urban heat island effect	**Consistent.** The project would incorporate landscaping throughout the project site. The incorporated landscaping would provide shade, absorb carbon, improve oxygenation, slow stormwater runoff, and reduce the heat island effect.
Policy 6.1: Tree Planting for Shading and Energy Efficiency	**Consistent.** The project would comply with any local shade tree planning requirements, including Beaumont's 2016 Landscape Standards.

Table 19 (cont.): Consistency with Sustainable Beaumont

Reduction Goals and Policies	Project Consistency
Policy 6.2: Light-reflecting Surfaces for Energy Efficiency	**Consistent.** The Statewide energy standards outline minimum "cool roof performance" qualities for roofing products. The project would be built with materials that the meet the mandated standards. Furthermore, the project would comply with any local light-reflecting requirements for other surfaces.
Goal 7: Decrease GHG emissions through reducing VMT.	**Consistent.** The project area includes a variety of features designed to provide safe and convenient travel for users of all modes of transportation. For instance, the project site is located less than 0.1 mile to the nearest bus stop and to the existing bicycle lane that runs parallel to the southern border of the project site on Oak Valley Parkway. In addition, the project would develop pedestrian connectivity features consistent with City standards. Enhancements to encourage walking and bicycling and the project's proximity to existing features would encourage the use of alternative modes of transportation. Furthermore, adding the various retail land uses to a currently undeveloped site would provide amenities to existing residences near the project site.
Goal 10: Decrease GHG emissions of new development through application of CEQA Screening Tables.	**Not applicable.** At the time of this writing, the City of Beaumont has not released Screening Tables.
Policy 10.1: Energy Efficiency and Renewable Energy in new development	**Consistent:** The project would at a minimum comply with the latest Title 24 energy efficiency standards, which are anticipated to be the 2019 Title 24 energy standards. The 2019 Title 24 energy standards go into effect January 1, 2020 and are estimated to be 5 percent more stringent compared to the 2016 Title 24 energy standards. 2016 Title 24 energy efficiency standards are 30 percent more stringent than previous standards for commercial projects. The 2016 Title 24 energy efficiency standards went into effect in January 2017.
Source Reduction Goals and Policies: City of Beaumont 2015.	

As shown in Table 19, the project would be consistent with all applicable goals and policies of the Sustainable Beaumont Plan. As previously mentioned, the implementation of the Plan puts the City on track to meet AB 32 Statewide GHG reduction goals. In addition, the Plan's 2030 forecast and reduction goals allows for strategic planning to enable the continuation of community-wide GHG reductions beyond 2020 consistent with SB 32. Because the Plan's reduction goals align with the with AB 32 Statewide GHG reduction goals and longer-term goals set forth by Executive Order S-03-05 and SB 32, consistency with the Climate Action Plan also demonstrates consistency with regional

and Statewide plans adopted to reduce GHG emissions. Considering the information above, and the fact that the project would comply with the General Plan land use designation for the project site to be consistent with the overall development goal for the City of Beaumont, implementation of the project would not conflict with any applicable plan, policy or regulation of an agency adopted to reduce the emissions of GHGs. This impact would be less than significant.

Level of Significance Before Mitigation

Less than significant impact.

Mitigation Measures

No mitigation is required.

Level of Significance After Mitigation

Less than significant impact.

SECTION 7: REFERENCES

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Appendix A: CalEEMod Output

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CalEEMod Output Files

Beaumont Commercial Development Project

Riverside-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	0.72	Acre	0.72	31,363.20	0
Other Non-Asphalt Surfaces	20.05	1000sqft	0.46	20,047.00	0
Parking Lot	79.00	Space	0.71	31,600.00	0
Fast Food Restaurant with Drive Thru	1.70	1000sqft	0.04	1,700.00	0
Fast Food Restaurant with Drive Thru	2.00	1000sqft	0.05	2,000.00	0
Convenience Market With Gas Pumps	3.50	1000sqft	0.08	3,500.00	0
Gasoline/Service Station	8.00	Pump	0.10	4,463.00	0
Strip Mall	6.25	1000sqft	0.14	6,250.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.4	**Precipitation Freq (Days)**	28
Climate Zone	10			**Operational Year**	2020
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	534.36	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Beaumont Commercial Development Project - Construction and Operations
CO2 intensity factor adjusted based on Renewable Portfolio Standard

Land Use - Based on site plan and project description

Construction Phase - Grading period extended from 6 days to 15 days

Grading - 5,212 cubic yards to be exported

Vehicle Trips - Trip rates based on information presented in the traffic report prepared for the project (David Evans and Associates 2018)

Construction Off-road Equipment Mitigation - Compliance with SCAQMD Rule 403

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	6.00	15.00
tblGrading	MaterialExported	0.00	5,212.00
tblLandUse	LandUseSquareFeet	20,050.00	20,047.00
tblLandUse	LandUseSquareFeet	1,129.40	4,463.00
tblLandUse	LotAcreage	0.03	0.10
tblProjectCharacteristics	CO2IntensityFactor	702.44	534.36
tblVehicleTrips	ST_TR	1,448.33	0.00
tblVehicleTrips	ST_TR	722.03	554.51
tblVehicleTrips	ST_TR	168.56	369.65
tblVehicleTrips	ST_TR	42.04	41.51
tblVehicleTrips	SU_TR	1,182.08	0.00
tblVehicleTrips	SU_TR	542.72	425.32
tblVehicleTrips	SU_TR	168.56	369.65
tblVehicleTrips	SU_TR	20.43	18.99
tblVehicleTrips	WD_TR	845.60	0.00
tblVehicleTrips	WD_TR	496.12	423.86
tblVehicleTrips	WD_TR	168.56	369.65
tblVehicleTrips	WD_TR	44.32	33.98

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019	0.2852	2.2645	1.7250	3.6200e-003	0.1109	0.1138	0.2247	0.0415	0.1087	0.1502	0.0000	315.2335	315.2335	0.0524	0.0000	316.5439
2020	0.1444	0.3761	0.3386	6.5000e-004	0.0102	0.0192	0.0294	2.7500e-003	0.0183	0.0211	0.0000	56.0308	56.0308	0.0100	0.0000	56.2811
Maximum	**0.2852**	**2.2645**	**1.7250**	**3.6200e-003**	**0.1109**	**0.1138**	**0.2247**	**0.0415**	**0.1087**	**0.1502**	**0.0000**	**315.2335**	**315.2335**	**0.0524**	**0.0000**	**316.5439**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2019	0.2852	2.2645	1.7250	3.6200e-003	0.0793	0.1138	0.1930	0.0259	0.1087	0.1346	0.0000	315.2333	315.2333	0.0524	0.0000	316.5436
2020	0.1444	0.3761	0.3386	6.5000e-004	0.0102	0.0192	0.0294	2.7500e-003	0.0183	0.0211	0.0000	56.0308	56.0308	0.0100	0.0000	56.2810
Maximum	**0.2852**	**2.2645**	**1.7250**	**3.6200e-003**	**0.0793**	**0.1138**	**0.1930**	**0.0259**	**0.1087**	**0.1346**	**0.0000**	**315.2333**	**315.2333**	**0.0524**	**0.0000**	**316.5436**

	ROG	NOx	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**	**26.12**	**0.00**	**12.45**	**35.22**	**0.00**	**9.10**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	4-1-2019	6-30-2019	0.9773	0.9773
2	7-1-2019	9-30-2019	0.7828	0.7828
3	10-1-2019	12-31-2019	0.7827	0.7827
4	1-1-2020	3-31-2020	0.5140	0.5140
		Highest	0.9773	0.9773

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0797	1.0000e-005	1.5600e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.0100e-003	3.0100e-003	1.0000e-005	0.0000	3.2100e-003
Energy	6.3500e-003	0.0578	0.0485	3.5000e-004		4.3900e-003	4.3900e-003		4.3900e-003	4.3900e-003	0.0000	148.9712	148.9712	5.8800e-003	2.1200e-003	149.7498
Mobile	1.1714	8.7804	8.2343	0.0280	1.5381	0.0247	1.5628	0.4121	0.0233	0.4354	0.0000	2,603.7902	2,603.7902	0.2604	0.0000	2,610.3012
Waste						0.0000	0.0000		0.0000	0.0000	12.9935	0.0000	12.9935	0.7679	0.0000	32.1907
Water						0.0000	0.0000		0.0000	0.0000	0.6191	7.7195	8.3387	0.0640	1.5900e-003	10.4122
Total	**1.2574**	**8.8382**	**8.2844**	**0.0283**	**1.5381**	**0.0291**	**1.5672**	**0.4121**	**0.0277**	**0.4398**	**13.6126**	**2,760.4840**	**2,774.0966**	**1.0982**	**3.7100e-003**	**2,802.6571**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0797	1.0000e-005	1.5600e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.0100e-003	3.0100e-003	1.0000e-005	0.0000	3.2100e-003
Energy	6.3500e-003	0.0578	0.0485	3.5000e-004		4.3900e-003	4.3900e-003		4.3900e-003	4.3900e-003	0.0000	148.9712	148.9712	5.8800e-003	2.1200e-003	149.7498
Mobile	1.1714	8.7804	8.2343	0.0280	1.5381	0.0247	1.5628	0.4121	0.0233	0.4354	0.0000	2,603.7902	2,603.7902	0.2604	0.0000	2,610.3012
Waste						0.0000	0.0000		0.0000	0.0000	12.9935	0.0000	12.9935	0.7679	0.0000	32.1907
Water						0.0000	0.0000		0.0000	0.0000	0.6191	7.7195	8.3387	0.0640	1.5900e-003	10.4122
Total	**1.2574**	**8.8382**	**8.2844**	**0.0283**	**1.5381**	**0.0291**	**1.5672**	**0.4121**	**0.0277**	**0.4398**	**13.6126**	**2,760.4840**	**2,774.0966**	**1.0982**	**3.7100e-003**	**2,802.6571**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	4/1/2019	4/3/2019	5	3	
2	Grading	Grading	4/4/2019	4/24/2019	5	15	
3	Building Construction	Building Construction	4/12/2019	2/13/2020	5	220	
4	Paving	Paving	2/14/2020	2/27/2020	5	10	
5	Architectural Coating	Architectural Coating	2/28/2020	3/12/2020	5	10	

Acres of Grading (Site Preparation Phase): 4.5

Acres of Grading (Grading Phase): 7.5

Acres of Paving: 1.89

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 26,870; Non-Residential Outdoor: 8,957; Striped Parking Area:

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Scrapers	1	8.00	367	0.48
Site Preparation	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Building Construction	Cranes	1	8.00	231	0.29
Building Construction	Forklifts	2	7.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	652.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	41.00	17.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

3.2 Site Preparation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.3900e-003	0.0000	2.3900e-003	2.6000e-004	0.0000	2.6000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.6300e-003	0.0323	0.0179	4.0000e-005		1.2800e-003	1.2800e-003		1.1800e-003	1.1800e-003	0.0000	3.3020	3.3020	1.0400e-003	0.0000	3.3281
Total	**2.6300e-003**	**0.0323**	**0.0179**	**4.0000e-005**	**2.3900e-003**	**1.2800e-003**	**3.6700e-003**	**2.6000e-004**	**1.1800e-003**	**1.4400e-003**	**0.0000**	**3.3020**	**3.3020**	**1.0400e-003**	**0.0000**	**3.3281**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.0000e-005	4.0000e-005	4.6000e-004	0.0000	1.3000e-004	0.0000	1.3000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1140	0.1140	0.0000	0.0000	0.1140
Total	**6.0000e-005**	**4.0000e-005**	**4.6000e-004**	**0.0000**	**1.3000e-004**	**0.0000**	**1.3000e-004**	**4.0000e-005**	**0.0000**	**4.0000e-005**	**0.0000**	**0.1140**	**0.1140**	**0.0000**	**0.0000**	**0.1140**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					9.3000e-004	0.0000	9.3000e-004	1.0000e-004	0.0000	1.0000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.6300e-003	0.0323	0.0179	4.0000e-005		1.2800e-003	1.2800e-003		1.1800e-003	1.1800e-003	0.0000	3.3020	3.3020	1.0400e-003	0.0000	3.3281
Total	**2.6300e-003**	**0.0323**	**0.0179**	**4.0000e-005**	**9.3000e-004**	**1.2800e-003**	**2.2100e-003**	**1.0000e-004**	**1.1800e-003**	**1.2800e-003**	**0.0000**	**3.3020**	**3.3020**	**1.0400e-003**	**0.0000**	**3.3281**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.0000e-005	4.0000e-005	4.6000e-004	0.0000	1.3000e-004	0.0000	1.3000e-004	4.0000e-005	0.0000	4.0000e-005	0.0000	0.1140	0.1140	0.0000	0.0000	0.1140
Total	**6.0000e-005**	**4.0000e-005**	**4.6000e-004**	**0.0000**	**1.3000e-004**	**0.0000**	**1.3000e-004**	**4.0000e-005**	**0.0000**	**4.0000e-005**	**0.0000**	**0.1140**	**0.1140**	**0.0000**	**0.0000**	**0.1140**

3.3 Grading - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0495	0.0000	0.0495	0.0253	0.0000	0.0253	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0152	0.1706	0.0761	1.5000e-004		8.0500e-003	8.0500e-003		7.4000e-003	7.4000e-003	0.0000	13.8885	13.8885	4.3900e-003	0.0000	13.9983
Total	**0.0152**	**0.1706**	**0.0761**	**1.5000e-004**	**0.0495**	**8.0500e-003**	**0.0575**	**0.0253**	**7.4000e-003**	**0.0327**	**0.0000**	**13.8885**	**13.8885**	**4.3900e-003**	**0.0000**	**13.9983**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.8700e-003	0.0854	0.0108	2.5000e-004	5.6200e-003	3.0000e-004	5.9200e-003	1.5400e-003	2.9000e-004	1.8300e-003	0.0000	23.8810	23.8810	1.5600e-003	0.0000	23.9200
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.7000e-004	2.7000e-004	2.8500e-003	1.0000e-005	8.2000e-004	1.0000e-005	8.3000e-004	2.2000e-004	0.0000	2.2000e-004	0.0000	0.7122	0.7122	2.0000e-005	0.0000	0.7127
Total	**2.2400e-003**	**0.0857**	**0.0136**	**2.6000e-004**	**6.4400e-003**	**3.1000e-004**	**6.7500e-003**	**1.7600e-003**	**2.9000e-004**	**2.0500e-003**	**0.0000**	**24.5932**	**24.5932**	**1.5800e-003**	**0.0000**	**24.6327**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0193	0.0000	0.0193	9.8700e-003	0.0000	9.8700e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0152	0.1706	0.0761	1.5000e-004		8.0500e-003	8.0500e-003		7.4000e-003	7.4000e-003	0.0000	13.8884	13.8884	4.3900e-003	0.0000	13.9983
Total	**0.0152**	**0.1706**	**0.0761**	**1.5000e-004**	**0.0193**	**8.0500e-003**	**0.0273**	**9.8700e-003**	**7.4000e-003**	**0.0173**	**0.0000**	**13.8884**	**13.8884**	**4.3900e-003**	**0.0000**	**13.9983**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.8700e-003	0.0854	0.0108	2.5000e-004	5.6200e-003	3.0000e-004	5.9200e-003	1.5400e-003	2.9000e-004	1.8300e-003	0.0000	23.8810	23.8810	1.5600e-003	0.0000	23.9200
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.7000e-004	2.7000e-004	2.8500e-003	1.0000e-005	8.2000e-004	1.0000e-005	8.3000e-004	2.2000e-004	0.0000	2.2000e-004	0.0000	0.7122	0.7122	2.0000e-005	0.0000	0.7127
Total	**2.2400e-003**	**0.0857**	**0.0136**	**2.6000e-004**	**6.4400e-003**	**3.1000e-004**	**6.7500e-003**	**1.7600e-003**	**2.9000e-004**	**2.0500e-003**	**0.0000**	**24.5932**	**24.5932**	**1.5800e-003**	**0.0000**	**24.6327**

3.4 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2405	1.7776	1.4339	2.3500e-003		0.1025	0.1025		0.0982	0.0982	0.0000	197.1691	197.1691	0.0410	0.0000	198.1945
Total	**0.2405**	**1.7776**	**1.4339**	**2.3500e-003**		**0.1025**	**0.1025**		**0.0982**	**0.0982**	**0.0000**	**197.1691**	**197.1691**	**0.0410**	**0.0000**	**198.1945**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.4200e-003	0.1844	0.0367	4.1000e-004	0.0101	1.3900e-003	0.0115	2.9100e-003	1.3300e-003	4.2400e-003	0.0000	39.5690	39.5690	3.3700e-003	0.0000	39.6533
Worker	0.0191	0.0139	0.1462	4.1000e-004	0.0424	2.7000e-004	0.0426	0.0113	2.4000e-004	0.0115	0.0000	36.5979	36.5979	1.0000e-003	0.0000	36.6229
Total	**0.0246**	**0.1984**	**0.1830**	**8.2000e-004**	**0.0525**	**1.6600e-003**	**0.0541**	**0.0142**	**1.5700e-003**	**0.0157**	**0.0000**	**76.1669**	**76.1669**	**4.3700e-003**	**0.0000**	**76.2762**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2405	1.7776	1.4339	2.3500e-003		0.1025	0.1025		0.0982	0.0982	0.0000	197.1688	197.1688	0.0410	0.0000	198.1943
Total	**0.2405**	**1.7776**	**1.4339**	**2.3500e-003**		**0.1025**	**0.1025**		**0.0982**	**0.0982**	**0.0000**	**197.1688**	**197.1688**	**0.0410**	**0.0000**	**198.1943**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.4200e-003	0.1844	0.0367	4.1000e-004	0.0101	1.3900e-003	0.0115	2.9100e-003	1.3300e-003	4.2400e-003	0.0000	39.5690	39.5690	3.3700e-003	0.0000	39.6533
Worker	0.0191	0.0139	0.1462	4.1000e-004	0.0424	2.7000e-004	0.0426	0.0113	2.4000e-004	0.0115	0.0000	36.5979	36.5979	1.0000e-003	0.0000	36.6229
Total	**0.0246**	**0.1984**	**0.1830**	**8.2000e-004**	**0.0525**	**1.6600e-003**	**0.0541**	**0.0142**	**1.5700e-003**	**0.0157**	**0.0000**	**76.1669**	**76.1669**	**4.3700e-003**	**0.0000**	**76.2762**

3.4 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0366	0.2789	0.2384	4.0000e-004		0.0152	0.0152		0.0145	0.0145	0.0000	33.2231	33.2231	6.7400e-003	0.0000	33.3917
Total	**0.0366**	**0.2789**	**0.2384**	**4.0000e-004**		**0.0152**	**0.0152**		**0.0145**	**0.0145**	**0.0000**	**33.2231**	**33.2231**	**6.7400e-003**	**0.0000**	**33.3917**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	7.7000e-004	0.0283	5.5300e-003	7.0000e-005	1.7200e-003	1.6000e-004	1.8800e-003	5.0000e-004	1.5000e-004	6.5000e-004	0.0000	6.6881	6.6881	5.3000e-004	0.0000	6.7015
Worker	3.0100e-003	2.1100e-003	0.0226	7.0000e-005	7.2100e-003	4.0000e-005	7.2500e-003	1.9100e-003	4.0000e-005	1.9600e-003	0.0000	6.0325	6.0325	1.5000e-004	0.0000	6.0363
Total	**3.7800e-003**	**0.0304**	**0.0281**	**1.4000e-004**	**8.9300e-003**	**2.0000e-004**	**9.1300e-003**	**2.4100e-003**	**1.9000e-004**	**2.6100e-003**	**0.0000**	**12.7207**	**12.7207**	**6.8000e-004**	**0.0000**	**12.7378**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0366	0.2789	0.2384	4.0000e-004		0.0152	0.0152		0.0145	0.0145	0.0000	33.2231	33.2231	6.7400e-003	0.0000	33.3916
Total	**0.0366**	**0.2789**	**0.2384**	**4.0000e-004**		**0.0152**	**0.0152**		**0.0145**	**0.0145**	**0.0000**	**33.2231**	**33.2231**	**6.7400e-003**	**0.0000**	**33.3916**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	7.7000e-004	0.0283	5.5300e-003	7.0000e-005	1.7200e-003	1.6000e-004	1.8800e-003	5.0000e-004	1.5000e-004	6.5000e-004	0.0000	6.6881	6.6881	5.3000e-004	0.0000	6.7015
Worker	3.0100e-003	2.1100e-003	0.0226	7.0000e-005	7.2100e-003	4.0000e-005	7.2500e-003	1.9100e-003	4.0000e-005	1.9600e-003	0.0000	6.0325	6.0325	1.5000e-004	0.0000	6.0363
Total	**3.7800e-003**	**0.0304**	**0.0281**	**1.4000e-004**	**8.9300e-003**	**2.0000e-004**	**9.1300e-003**	**2.4100e-003**	**1.9000e-004**	**2.6100e-003**	**0.0000**	**12.7207**	**12.7207**	**6.8000e-004**	**0.0000**	**12.7378**

3.5 Paving - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	5.7700e-003	0.0579	0.0590	9.0000e-005		3.2800e-003	3.2800e-003		3.0300e-003	3.0300e-003	0.0000	7.7529	7.7529	2.4600e-003	0.0000	7.8143
Paving	1.8700e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**7.6400e-003**	**0.0579**	**0.0590**	**9.0000e-005**		**3.2800e-003**	**3.2800e-003**		**3.0300e-003**	**3.0300e-003**	**0.0000**	**7.7529**	**7.7529**	**2.4600e-003**	**0.0000**	**7.8143**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.4000e-004	2.4000e-004	2.5800e-003	1.0000e-005	8.2000e-004	1.0000e-005	8.3000e-004	2.2000e-004	0.0000	2.2000e-004	0.0000	0.6897	0.6897	2.0000e-005	0.0000	0.6901
Total	**3.4000e-004**	**2.4000e-004**	**2.5800e-003**	**1.0000e-005**	**8.2000e-004**	**1.0000e-005**	**8.3000e-004**	**2.2000e-004**	**0.0000**	**2.2000e-004**	**0.0000**	**0.6897**	**0.6897**	**2.0000e-005**	**0.0000**	**0.6901**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	5.7700e-003	0.0579	0.0590	9.0000e-005		3.2800e-003	3.2800e-003		3.0300e-003	3.0300e-003	0.0000	7.7529	7.7529	2.4600e-003	0.0000	7.8143
Paving	1.8700e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**7.6400e-003**	**0.0579**	**0.0590**	**9.0000e-005**		**3.2800e-003**	**3.2800e-003**		**3.0300e-003**	**3.0300e-003**	**0.0000**	**7.7529**	**7.7529**	**2.4600e-003**	**0.0000**	**7.8143**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.4000e-004	2.4000e-004	2.5800e-003	1.0000e-005	8.2000e-004	1.0000e-005	8.3000e-004	2.2000e-004	0.0000	2.2000e-004	0.0000	0.6897	0.6897	2.0000e-005	0.0000	0.6901
Total	**3.4000e-004**	**2.4000e-004**	**2.5800e-003**	**1.0000e-005**	**8.2000e-004**	**1.0000e-005**	**8.3000e-004**	**2.2000e-004**	**0.0000**	**2.2000e-004**	**0.0000**	**0.6897**	**0.6897**	**2.0000e-005**	**0.0000**	**0.6901**

3.6 Architectural Coating - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0946					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.2100e-003	8.4200e-003	9.1600e-003	1.0000e-005		5.5000e-004	5.5000e-004		5.5000e-004	5.5000e-004	0.0000	1.2766	1.2766	1.0000e-004	0.0000	1.2791
Total	**0.0958**	**8.4200e-003**	**9.1600e-003**	**1.0000e-005**		**5.5000e-004**	**5.5000e-004**		**5.5000e-004**	**5.5000e-004**	**0.0000**	**1.2766**	**1.2766**	**1.0000e-004**	**0.0000**	**1.2791**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.8000e-004	1.3000e-004	1.3800e-003	0.0000	4.4000e-004	0.0000	4.4000e-004	1.2000e-004	0.0000	1.2000e-004	0.0000	0.3678	0.3678	1.0000e-005	0.0000	0.3681
Total	**1.8000e-004**	**1.3000e-004**	**1.3800e-003**	**0.0000**	**4.4000e-004**	**0.0000**	**4.4000e-004**	**1.2000e-004**	**0.0000**	**1.2000e-004**	**0.0000**	**0.3678**	**0.3678**	**1.0000e-005**	**0.0000**	**0.3681**

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	0.0946					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.2100e-003	8.4200e-003	9.1600e-003	1.0000e-005		5.5000e-004	5.5000e-004		5.5000e-004	5.5000e-004	0.0000	1.2766	1.2766	1.0000e-004	0.0000	1.2791
Total	**0.0958**	**8.4200e-003**	**9.1600e-003**	**1.0000e-005**		**5.5000e-004**	**5.5000e-004**		**5.5000e-004**	**5.5000e-004**	**0.0000**	**1.2766**	**1.2766**	**1.0000e-004**	**0.0000**	**1.2791**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.8000e-004	1.3000e-004	1.3800e-003	0.0000	4.4000e-004	0.0000	4.4000e-004	1.2000e-004	0.0000	1.2000e-004	0.0000	0.3678	0.3678	1.0000e-005	0.0000	0.3681
Total	**1.8000e-004**	**1.3000e-004**	**1.3800e-003**	**0.0000**	**4.4000e-004**	**0.0000**	**4.4000e-004**	**1.2000e-004**	**0.0000**	**1.2000e-004**	**0.0000**	**0.3678**	**0.3678**	**1.0000e-005**	**0.0000**	**0.3681**

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	1.1714	8.7804	8.2343	0.0280	1.5381	0.0247	1.5628	0.4121	0.0233	0.4354	0.0000	2,603.7902	2,603.7902	0.2604	0.0000	2,610.3012
Unmitigated	1.1714	8.7804	8.2343	0.0280	1.5381	0.0247	1.5628	0.4121	0.0233	0.4354	0.0000	2,603.7902	2,603.7902	0.2604	0.0000	2,610.3012

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Convenience Market With Gas Pumps	0.00	0.00	0.00		
Fast Food Restaurant with Drive Thru	720.56	942.67	723.04	792,075	792,075
Fast Food Restaurant with Drive Thru	847.72	1,109.02	850.64	931,853	931,853
Gasoline/Service Station	2,957.20	2,957.20	2957.20	1,912,684	1,912,684
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Strip Mall	212.38	259.44	118.69	391,391	391,391
Total	4,737.86	5,268.32	4,649.57	4,028,003	4,028,003

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
Convenience Market With Gas Pumps	16.60	8.40	6.90	0.80	80.20	19.00	14	21	65
Fast Food Restaurant with Drive Thru	16.60	8.40	6.90	2.20	78.80	19.00	29	21	50
Fast Food Restaurant with Drive Thru	16.60	8.40	6.90	2.20	78.80	19.00	29	21	50
Gasoline/Service Station	16.60	8.40	6.90	2.00	79.00	19.00	14	27	59
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Strip Mall	16.60	8.40	6.90	16.60	64.40	19.00	45	40	15

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Convenience Market With Gas Pumps	0.538064	0.038449	0.184390	0.122109	0.017402	0.005339	0.017250	0.067711	0.001365	0.001213	0.004629	0.000959	0.001120
Fast Food Restaurant with Drive Thru	0.538064	0.038449	0.184390	0.122109	0.017402	0.005339	0.017250	0.067711	0.001365	0.001213	0.004629	0.000959	0.001120
Gasoline/Service Station	0.538064	0.038449	0.184390	0.122109	0.017402	0.005339	0.017250	0.067711	0.001365	0.001213	0.004629	0.000959	0.001120
Other Asphalt Surfaces	0.538064	0.038449	0.184390	0.122109	0.017402	0.005339	0.017250	0.067711	0.001365	0.001213	0.004629	0.000959	0.001120
Other Non-Asphalt Surfaces	0.538064	0.038449	0.184390	0.122109	0.017402	0.005339	0.017250	0.067711	0.001365	0.001213	0.004629	0.000959	0.001120
Parking Lot	0.538064	0.038449	0.184390	0.122109	0.017402	0.005339	0.017250	0.067711	0.001365	0.001213	0.004629	0.000959	0.001120
Strip Mall	0.538064	0.038449	0.184390	0.122109	0.017402	0.005339	0.017250	0.067711	0.001365	0.001213	0.004629	0.000959	0.001120

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	86.0886	86.0886	4.6700e-003	9.7000e-004	86.4935
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	86.0886	86.0886	4.6700e-003	9.7000e-004	86.4935
NaturalGas Mitigated	6.3500e-003	0.0578	0.0485	3.5000e-004		4.3900e-003	4.3900e-003		4.3900e-003	4.3900e-003	0.0000	62.8826	62.8826	1.2100e-003	1.1500e-003	63.2563
NaturalGas Unmitigated	6.3500e-003	0.0578	0.0485	3.5000e-004		4.3900e-003	4.3900e-003		4.3900e-003	4.3900e-003	0.0000	62.8826	62.8826	1.2100e-003	1.1500e-003	63.2563

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					
Convenience Market With Gas Pumps	7770	4.0000e-005	3.8000e-004	3.2000e-004	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.4146	0.4146	1.0000e-005	1.0000e-005	0.4171
Fast Food Restaurant with Drive Thru	464848	2.5100e-003	0.0228	0.0191	1.4000e-004		1.7300e-003	1.7300e-003		1.7300e-003	1.7300e-003	0.0000	24.8061	24.8061	4.8000e-004	4.5000e-004	24.9535
Fast Food Restaurant with Drive Thru	546880	2.9500e-003	0.0268	0.0225	1.6000e-004		2.0400e-003	2.0400e-003		2.0400e-003	2.0400e-003	0.0000	29.1836	29.1836	5.6000e-004	5.4000e-004	29.3570
Gasoline/Service Station	145003	7.8000e-004	7.1100e-003	5.9700e-003	4.0000e-005		5.4000e-004	5.4000e-004		5.4000e-004	5.4000e-004	0.0000	7.7379	7.7379	1.5000e-004	1.4000e-004	7.7839
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Strip Mall	13875	7.0000e-005	6.8000e-004	5.7000e-004	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.7404	0.7404	1.0000e-005	1.0000e-005	0.7448
Total		**6.3500e-003**	**0.0578**	**0.0485**	**3.4000e-004**		**4.3900e-003**	**4.3900e-003**		**4.3900e-003**	**4.3900e-003**	**0.0000**	**62.8826**	**62.8826**	**1.2100e-003**	**1.1500e-003**	**63.2563**

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					
Convenience Market With Gas Pumps	7770	4.0000e-005	3.8000e-004	3.2000e-004	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.4146	0.4146	1.0000e-005	1.0000e-005	0.4171
Fast Food Restaurant with Drive Thru	464848	2.5100e-003	0.0228	0.0191	1.4000e-004		1.7300e-003	1.7300e-003		1.7300e-003	1.7300e-003	0.0000	24.8061	24.8061	4.8000e-004	4.5000e-004	24.9535
Fast Food Restaurant with Drive Thru	546880	2.9500e-003	0.0268	0.0225	1.6000e-004		2.0400e-003	2.0400e-003		2.0400e-003	2.0400e-003	0.0000	29.1836	29.1836	5.6000e-004	5.4000e-004	29.3570
Gasoline/Service Station	145003	7.8000e-004	7.1100e-003	5.9700e-003	4.0000e-005		5.4000e-004	5.4000e-004		5.4000e-004	5.4000e-004	0.0000	7.7379	7.7379	1.5000e-004	1.4000e-004	7.7839
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Strip Mall	13875	7.0000e-005	6.8000e-004	5.7000e-004	0.0000		5.0000e-005	5.0000e-005		5.0000e-005	5.0000e-005	0.0000	0.7404	0.7404	1.0000e-005	1.0000e-005	0.7448
Total		**6.3500e-003**	**0.0578**	**0.0485**	**3.4000e-004**		**4.3900e-003**	**4.3900e-003**		**4.3900e-003**	**4.3900e-003**	**0.0000**	**62.8826**	**62.8826**	**1.2100e-003**	**1.1500e-003**	**63.2563**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Convenience Market With Gas Pumps	44205	10.7145	5.8000e-004	1.2000e-004	10.7649
Fast Food Restaurant with Drive Thru	80716	19.5641	1.0600e-003	2.2000e-004	19.6561
Fast Food Restaurant with Drive Thru	94960	23.0166	1.2500e-003	2.6000e-004	23.1248
Gasoline/Service Station	45299.5	10.9798	6.0000e-004	1.2000e-004	11.0314
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	11060	2.6807	1.5000e-004	3.0000e-005	2.6934
Strip Mall	78937.5	19.1330	1.0400e-003	2.1000e-004	19.2230
Total		**86.0886**	**4.6800e-003**	**9.6000e-004**	**86.4935**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Convenience Market With Gas Pumps	44205	10.7145	5.8000e-004	1.2000e-004	10.7649
Fast Food Restaurant with Drive Thru	80716	19.5641	1.0600e-003	2.2000e-004	19.6561
Fast Food Restaurant with Drive Thru	94960	23.0166	1.2500e-003	2.6000e-004	23.1248
Gasoline/Service Station	45299.5	10.9798	6.0000e-004	1.2000e-004	11.0314
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	11060	2.6807	1.5000e-004	3.0000e-005	2.6934
Strip Mall	78937.5	19.1330	1.0400e-003	2.1000e-004	19.2230
Total		**86.0886**	**4.6800e-003**	**9.6000e-004**	**86.4935**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0797	1.0000e-005	1.5600e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.0100e-003	3.0100e-003	1.0000e-005	0.0000	3.2100e-003
Unmitigated	0.0797	1.0000e-005	1.5600e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.0100e-003	3.0100e-003	1.0000e-005	0.0000	3.2100e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	9.4600e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0701					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.5000e-004	1.0000e-005	1.5600e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.0100e-003	3.0100e-003	1.0000e-005	0.0000	3.2100e-003
Total	**0.0797**	**1.0000e-005**	**1.5600e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**3.0100e-003**	**3.0100e-003**	**1.0000e-005**	**0.0000**	**3.2100e-003**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	9.4600e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0701					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.5000e-004	1.0000e-005	1.5600e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005	0.0000	3.0100e-003	3.0100e-003	1.0000e-005	0.0000	3.2100e-003
Total	**0.0797**	**1.0000e-005**	**1.5600e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**	**0.0000**	**3.0100e-003**	**3.0100e-003**	**1.0000e-005**	**0.0000**	**3.2100e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	8.3387	0.0640	1.5900e-003	10.4122
Unmitigated	8.3387	0.0640	1.5900e-003	10.4122

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Convenience Market With Gas Pumps	0.259254 / 0.158898	1.3284	8.5200e-003	2.1000e-004	1.6049
Fast Food Restaurant with Drive Thru	1.12307 / 0.0716856	4.0938	0.0368	9.1000e-004	5.2838
Gasoline/Service Station	0.106255 / 0.0651241	0.5444	3.4900e-003	9.0000e-005	0.6578
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Strip Mall	0.462953 / 0.283746	2.3721	0.0152	3.8000e-004	2.8658
Total		**8.3387**	**0.0640**	**1.5900e-003**	**10.4122**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Convenience Market With Gas Pumps	0.259254 / 0.158898	1.3284	8.5200e-003	2.1000e-004	1.6049
Fast Food Restaurant with Drive Thru	1.12307 / 0.0716856	4.0938	0.0368	9.1000e-004	5.2838
Gasoline/Service Station	0.106255 / 0.0651241	0.5444	3.4900e-003	9.0000e-005	0.6578
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Strip Mall	0.462953 / 0.283746	2.3721	0.0152	3.8000e-004	2.8658
Total		**8.3387**	**0.0640**	**1.5900e-003**	**10.4122**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	12.9935	0.7679	0.0000	32.1907
Unmitigated	12.9935	0.7679	0.0000	32.1907

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Convenience Market With Gas Pumps	10.52	2.1355	0.1262	0.0000	5.2905
Fast Food Restaurant with Drive Thru	42.62	8.6515	0.5113	0.0000	21.4337
Gasoline/Service Station	4.31	0.8749	0.0517	0.0000	2.1675
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Strip Mall	6.56	1.3316	0.0787	0.0000	3.2990
Total		**12.9934**	**0.7679**	**0.0000**	**32.1907**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Convenience Market With Gas Pumps	10.52	2.1355	0.1262	0.0000	5.2905
Fast Food Restaurant with Drive Thru	42.62	8.6515	0.5113	0.0000	21.4337
Gasoline/Service Station	4.31	0.8749	0.0517	0.0000	2.1675
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Strip Mall	6.56	1.3316	0.0787	0.0000	3.2990
Total		**12.9934**	**0.7679**	**0.0000**	**32.1907**

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

Beaumont Commercial Development Project

Riverside-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	0.72	Acre	0.72	31,363.20	0
Other Non-Asphalt Surfaces	20.05	1000sqft	0.46	20,047.00	0
Parking Lot	79.00	Space	0.71	31,600.00	0
Fast Food Restaurant with Drive Thru	1.70	1000sqft	0.04	1,700.00	0
Fast Food Restaurant with Drive Thru	2.00	1000sqft	0.05	2,000.00	0
Convenience Market With Gas Pumps	3.50	1000sqft	0.08	3,500.00	0
Gasoline/Service Station	8.00	Pump	0.10	4,463.00	0
Strip Mall	6.25	1000sqft	0.14	6,250.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.4	**Precipitation Freq (Days)**	28
Climate Zone	10			**Operational Year**	2020
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	534.36	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Beaumont Commercial Development Project - Construction and Operations
CO2 intensity factor adjusted based on Renewable Portfolio Standard

Land Use - Based on site plan and project description

Construction Phase - Grading period extended from 6 days to 15 days

Grading - 5,212 cubic yards to be exported

Vehicle Trips - Trip rates based on information presented in the traffic report prepared for the project (David Evans and Associates 2018)

Construction Off-road Equipment Mitigation - Compliance with SCAQMD Rule 403

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	6.00	15.00
tblGrading	MaterialExported	0.00	5,212.00
tblLandUse	LandUseSquareFeet	20,050.00	20,047.00
tblLandUse	LandUseSquareFeet	1,129.40	4,463.00
tblLandUse	LotAcreage	0.03	0.10
tblProjectCharacteristics	CO2IntensityFactor	702.44	534.36
tblVehicleTrips	ST_TR	1,448.33	0.00
tblVehicleTrips	ST_TR	722.03	554.51
tblVehicleTrips	ST_TR	168.56	369.65
tblVehicleTrips	ST_TR	42.04	41.51
tblVehicleTrips	SU_TR	1,182.08	0.00
tblVehicleTrips	SU_TR	542.72	425.32
tblVehicleTrips	SU_TR	168.56	369.65
tblVehicleTrips	SU_TR	20.43	18.99
tblVehicleTrips	WD_TR	845.60	0.00
tblVehicleTrips	WD_TR	496.12	423.86
tblVehicleTrips	WD_TR	168.56	369.65
tblVehicleTrips	WD_TR	44.32	33.98

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	5.1684	54.8662	29.3700	0.0894	8.0357	2.2215	10.2572	3.7651	2.0878	5.8529	0.0000	8,951.7943	8,951.7943	1.4012	0.0000	8,986.8232
2020	19.1974	19.3062	16.8704	0.0340	0.5671	0.9609	1.5281	0.1529	0.9210	1.0738	0.0000	3,208.7061	3,208.7061	0.5459	0.0000	3,221.4870
Maximum	**19.1974**	**54.8662**	**29.3700**	**0.0894**	**8.0357**	**2.2215**	**10.2572**	**3.7651**	**2.0878**	**5.8529**	**0.0000**	**8,951.7943**	**8,951.7943**	**1.4012**	**0.0000**	**8,986.8232**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	5.1684	54.8662	29.3700	0.0894	4.0120	2.2215	6.2334	1.7069	2.0878	3.7947	0.0000	8,951.7943	8,951.7943	1.4012	0.0000	8,986.8232
2020	19.1974	19.3062	16.8704	0.0340	0.5671	0.9609	1.5281	0.1529	0.9210	1.0738	0.0000	3,208.7061	3,208.7061	0.5459	0.0000	3,221.4870
Maximum	**19.1974**	**54.8662**	**29.3700**	**0.0894**	**4.0120**	**2.2215**	**6.2334**	**1.7069**	**2.0878**	**3.7947**	**0.0000**	**8,951.7943**	**8,951.7943**	**1.4012**	**0.0000**	**8,986.8232**

	ROG	NOx	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**	**46.77**	**0.00**	**34.14**	**52.53**	**0.00**	**29.71**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.4371	1.2000e-004	0.0125	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0265	0.0265	7.0000e-005		0.0283
Energy	0.0348	0.3165	0.2659	1.9000e-003		0.0241	0.0241		0.0241	0.0241		379.8150	379.8150	7.2800e-003	6.9600e-003	382.0720
Mobile	8.6545	53.3392	51.9525	0.1824	9.7376	0.1511	9.8887	2.6057	0.1422	2.7479		18,697.0804	18,697.0804	1.6804		18,739.0904
Total	**9.1263**	**53.6558**	**52.2308**	**0.1843**	**9.7376**	**0.1752**	**9.9128**	**2.6057**	**0.1663**	**2.7720**		**19,076.9219**	**19,076.9219**	**1.6878**	**6.9600e-003**	**19,121.1907**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.4371	1.2000e-004	0.0125	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0265	0.0265	7.0000e-005		0.0283
Energy	0.0348	0.3165	0.2659	1.9000e-003		0.0241	0.0241		0.0241	0.0241		379.8150	379.8150	7.2800e-003	6.9600e-003	382.0720
Mobile	8.6545	53.3392	51.9525	0.1824	9.7376	0.1511	9.8887	2.6057	0.1422	2.7479		18,697.0804	18,697.0804	1.6804		18,739.0904
Total	**9.1263**	**53.6558**	**52.2308**	**0.1843**	**9.7376**	**0.1752**	**9.9128**	**2.6057**	**0.1663**	**2.7720**		**19,076.9219**	**19,076.9219**	**1.6878**	**6.9600e-003**	**19,121.1907**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	4/1/2019	4/3/2019	5	3	
2	Grading	Grading	4/4/2019	4/24/2019	5	15	
3	Building Construction	Building Construction	4/12/2019	2/13/2020	5	220	
4	Paving	Paving	2/14/2020	2/27/2020	5	10	
5	Architectural Coating	Architectural Coating	2/28/2020	3/12/2020	5	10	

Acres of Grading (Site Preparation Phase): 4.5

Acres of Grading (Grading Phase): 7.5

Acres of Paving: 1.89

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 26,870; Non-Residential Outdoor: 8,957; Striped Parking Area:

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Scrapers	1	8.00	367	0.48
Site Preparation	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Building Construction	Cranes	1	8.00	231	0.29
Building Construction	Forklifts	2	7.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	652.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	41.00	17.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

3.2 Site Preparation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.5908	0.0000	1.5908	0.1718	0.0000	0.1718			0.0000			0.0000
Off-Road	1.7557	21.5386	11.9143	0.0245		0.8537	0.8537		0.7854	0.7854		2,426.5408	2,426.5408	0.7677		2,445.7341
Total	**1.7557**	**21.5386**	**11.9143**	**0.0245**	**1.5908**	**0.8537**	**2.4445**	**0.1718**	**0.7854**	**0.9572**		**2,426.5408**	**2,426.5408**	**0.7677**		**2,445.7341**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0441	0.0270	0.3554	9.1000e-004	0.0894	5.5000e-004	0.0900	0.0237	5.1000e-004	0.0242		91.0018	91.0018	2.5500e-003		91.0655
Total	**0.0441**	**0.0270**	**0.3554**	**9.1000e-004**	**0.0894**	**5.5000e-004**	**0.0900**	**0.0237**	**5.1000e-004**	**0.0242**		**91.0018**	**91.0018**	**2.5500e-003**		**91.0655**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.6204	0.0000	0.6204	0.0670	0.0000	0.0670			0.0000			0.0000
Off-Road	1.7557	21.5386	11.9143	0.0245		0.8537	0.8537		0.7854	0.7854	0.0000	2,426.5408	2,426.5408	0.7677		2,445.7341
Total	**1.7557**	**21.5386**	**11.9143**	**0.0245**	**0.6204**	**0.8537**	**1.4741**	**0.0670**	**0.7854**	**0.8524**	**0.0000**	**2,426.5408**	**2,426.5408**	**0.7677**		**2,445.7341**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0441	0.0270	0.3554	9.1000e-004	0.0894	5.5000e-004	0.0900	0.0237	5.1000e-004	0.0242		91.0018	91.0018	2.5500e-003		91.0655
Total	**0.0441**	**0.0270**	**0.3554**	**9.1000e-004**	**0.0894**	**5.5000e-004**	**0.0900**	**0.0237**	**5.1000e-004**	**0.0242**		**91.0018**	**91.0018**	**2.5500e-003**		**91.0655**

3.3 Grading - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5963	0.0000	6.5963	3.3741	0.0000	3.3741			0.0000			0.0000
Off-Road	2.0287	22.7444	10.1518	0.0206		1.0730	1.0730		0.9871	0.9871		2,041.2539	2,041.2539	0.6458		2,057.3997
Total	**2.0287**	**22.7444**	**10.1518**	**0.0206**	**6.5963**	**1.0730**	**7.6693**	**3.3741**	**0.9871**	**4.3613**		**2,041.2539**	**2,041.2539**	**0.6458**		**2,057.3997**

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	0.2442	11.1040	1.3353	0.0335	0.7605	0.0401	0.8006	0.2085	0.0384	0.2469		3,546.8441	3,546.8441	0.2204		3,552.3532
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0551	0.0338	0.4443	1.1400e-003	0.1118	6.9000e-004	0.1125	0.0296	6.4000e-004	0.0303		113.7522	113.7522	3.1800e-003		113.8319
Total	**0.2992**	**11.1378**	**1.7796**	**0.0346**	**0.8722**	**0.0408**	**0.9131**	**0.2381**	**0.0390**	**0.2771**		**3,660.5964**	**3,660.5964**	**0.2235**		**3,666.1851**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.5726	0.0000	2.5726	1.3159	0.0000	1.3159			0.0000			0.0000
Off-Road	2.0287	22.7444	10.1518	0.0206		1.0730	1.0730		0.9871	0.9871	0.0000	2,041.2539	2,041.2539	0.6458		2,057.3997
Total	**2.0287**	**22.7444**	**10.1518**	**0.0206**	**2.5726**	**1.0730**	**3.6455**	**1.3159**	**0.9871**	**2.3031**	**0.0000**	**2,041.2539**	**2,041.2539**	**0.6458**		**2,057.3997**

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	0.2442	11.1040	1.3353	0.0335	0.7605	0.0401	0.8006	0.2085	0.0384	0.2469		3,546.8441	3,546.8441	0.2204		3,552.3532
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0551	0.0338	0.4443	1.1400e-003	0.1118	6.9000e-004	0.1125	0.0296	6.4000e-004	0.0303		113.7522	113.7522	3.1800e-003		113.8319
Total	**0.2992**	**11.1378**	**1.7796**	**0.0346**	**0.8722**	**0.0408**	**0.9131**	**0.2381**	**0.0390**	**0.2771**		**3,660.5964**	**3,660.5964**	**0.2235**		**3,666.1851**

3.4 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.5581	18.9103	15.2545	0.0250		1.0901	1.0901		1.0449	1.0449		2,312.1454	2,312.1454	0.4810		2,324.1705
Total	**2.5581**	**18.9103**	**15.2545**	**0.0250**		**1.0901**	**1.0901**		**1.0449**	**1.0449**		**2,312.1454**	**2,312.1454**	**0.4810**		**2,324.1705**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0566	1.9352	0.3627	4.4700e-003	0.1089	0.0147	0.1236	0.0313	0.0141	0.0454		471.4144	471.4144	0.0377		472.3574
Worker	0.2257	0.1385	1.8215	4.6800e-003	0.4583	2.8300e-003	0.4611	0.1215	2.6100e-003	0.1241		466.3842	466.3842	0.0131		466.7106
Total	**0.2824**	**2.0737**	**2.1841**	**9.1500e-003**	**0.5672**	**0.0175**	**0.5847**	**0.1529**	**0.0167**	**0.1696**		**937.7986**	**937.7986**	**0.0508**		**939.0680**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.5581	18.9103	15.2545	0.0250		1.0901	1.0901		1.0449	1.0449	0.0000	2,312.1454	2,312.1454	0.4810		2,324.1705
Total	**2.5581**	**18.9103**	**15.2545**	**0.0250**		**1.0901**	**1.0901**		**1.0449**	**1.0449**	**0.0000**	**2,312.1454**	**2,312.1454**	**0.4810**		**2,324.1705**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0566	1.9352	0.3627	4.4700e-003	0.1089	0.0147	0.1236	0.0313	0.0141	0.0454		471.4144	471.4144	0.0377		472.3574
Worker	0.2257	0.1385	1.8215	4.6800e-003	0.4583	2.8300e-003	0.4611	0.1215	2.6100e-003	0.1241		466.3842	466.3842	0.0131		466.7106
Total	**0.2824**	**2.0737**	**2.1841**	**9.1500e-003**	**0.5672**	**0.0175**	**0.5847**	**0.1529**	**0.0167**	**0.1696**		**937.7986**	**937.7986**	**0.0508**		**939.0680**

3.4 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.2879	17.4336	14.8972	0.0250		0.9482	0.9482		0.9089	0.9089		2,288.8877	2,288.8877	0.4646		2,300.5014
Total	**2.2879**	**17.4336**	**14.8972**	**0.0250**		**0.9482**	**0.9482**		**0.9089**	**0.9089**		**2,288.8877**	**2,288.8877**	**0.4646**		**2,300.5014**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0474	1.7492	0.3200	4.4400e-003	0.1089	9.9500e-003	0.1188	0.0313	9.5200e-003	0.0409		468.1646	468.1646	0.0351		469.0424
Worker	0.2086	0.1234	1.6532	4.5300e-003	0.4583	2.7800e-003	0.4611	0.1215	2.5600e-003	0.1241		451.6538	451.6538	0.0116		451.9432
Total	**0.2560**	**1.8726**	**1.9732**	**8.9700e-003**	**0.5671**	**0.0127**	**0.5799**	**0.1529**	**0.0121**	**0.1650**		**919.8183**	**919.8183**	**0.0467**		**920.9856**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.2879	17.4336	14.8972	0.0250		0.9482	0.9482		0.9089	0.9089	0.0000	2,288.8877	2,288.8877	0.4646		2,300.5014
Total	**2.2879**	**17.4336**	**14.8972**	**0.0250**		**0.9482**	**0.9482**		**0.9089**	**0.9089**	**0.0000**	**2,288.8877**	**2,288.8877**	**0.4646**		**2,300.5014**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0474	1.7492	0.3200	4.4400e-003	0.1089	9.9500e-003	0.1188	0.0313	9.5200e-003	0.0409		468.1646	468.1646	0.0351		469.0424
Worker	0.2086	0.1234	1.6532	4.5300e-003	0.4583	2.7800e-003	0.4611	0.1215	2.5600e-003	0.1241		451.6538	451.6538	0.0116		451.9432
Total	**0.2560**	**1.8726**	**1.9732**	**8.9700e-003**	**0.5671**	**0.0127**	**0.5799**	**0.1529**	**0.0121**	**0.1650**		**919.8183**	**919.8183**	**0.0467**		**920.9856**

3.5 Paving - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1547	11.5873	11.8076	0.0178		0.6565	0.6565		0.6051	0.6051		1,709.2180	1,709.2180	0.5417		1,722.7605
Paving	0.3747					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.5293**	**11.5873**	**11.8076**	**0.0178**		**0.6565**	**0.6565**		**0.6051**	**0.6051**		**1,709.2180**	**1,709.2180**	**0.5417**		**1,722.7605**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0763	0.0451	0.6048	1.6600e-003	0.1677	1.0200e-003	0.1687	0.0445	9.3000e-004	0.0454		165.2392	165.2392	4.2400e-003		165.3451
Total	**0.0763**	**0.0451**	**0.6048**	**1.6600e-003**	**0.1677**	**1.0200e-003**	**0.1687**	**0.0445**	**9.3000e-004**	**0.0454**		**165.2392**	**165.2392**	**4.2400e-003**		**165.3451**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1547	11.5873	11.8076	0.0178		0.6565	0.6565		0.6051	0.6051	0.0000	1,709.2180	1,709.2180	0.5417		1,722.7605
Paving	0.3747					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.5293**	**11.5873**	**11.8076**	**0.0178**		**0.6565**	**0.6565**		**0.6051**	**0.6051**	**0.0000**	**1,709.2180**	**1,709.2180**	**0.5417**		**1,722.7605**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0763	0.0451	0.6048	1.6600e-003	0.1677	1.0200e-003	0.1687	0.0445	9.3000e-004	0.0454		165.2392	165.2392	4.2400e-003		165.3451
Total	**0.0763**	**0.0451**	**0.6048**	**1.6600e-003**	**0.1677**	**1.0200e-003**	**0.1687**	**0.0445**	**9.3000e-004**	**0.0454**		**165.2392**	**165.2392**	**4.2400e-003**		**165.3451**

3.6 Architectural Coating - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	18.9145					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109		281.4481	281.4481	0.0218		281.9928
Total	**19.1567**	**1.6838**	**1.8314**	**2.9700e-003**		**0.1109**	**0.1109**		**0.1109**	**0.1109**		**281.4481**	**281.4481**	**0.0218**		**281.9928**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0407	0.0241	0.3226	8.8000e-004	0.0894	5.4000e-004	0.0900	0.0237	5.0000e-004	0.0242		88.1276	88.1276	2.2600e-003		88.1840
Total	**0.0407**	**0.0241**	**0.3226**	**8.8000e-004**	**0.0894**	**5.4000e-004**	**0.0900**	**0.0237**	**5.0000e-004**	**0.0242**		**88.1276**	**88.1276**	**2.2600e-003**		**88.1840**

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	18.9145					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109	0.0000	281.4481	281.4481	0.0218		281.9928
Total	**19.1567**	**1.6838**	**1.8314**	**2.9700e-003**		**0.1109**	**0.1109**		**0.1109**	**0.1109**	**0.0000**	**281.4481**	**281.4481**	**0.0218**		**281.9928**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0407	0.0241	0.3226	8.8000e-004	0.0894	5.4000e-004	0.0900	0.0237	5.0000e-004	0.0242		88.1276	88.1276	2.2600e-003		88.1840
Total	**0.0407**	**0.0241**	**0.3226**	**8.8000e-004**	**0.0894**	**5.4000e-004**	**0.0900**	**0.0237**	**5.0000e-004**	**0.0242**		**88.1276**	**88.1276**	**2.2600e-003**		**88.1840**

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	8.6545	53.3392	51.9525	0.1824	9.7376	0.1511	9.8887	2.6057	0.1422	2.7479		18,697.0804	18,697.0804	1.6804		18,739.0904
Unmitigated	8.6545	53.3392	51.9525	0.1824	9.7376	0.1511	9.8887	2.6057	0.1422	2.7479		18,697.0804	18,697.0804	1.6804		18,739.0904

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Convenience Market With Gas Pumps	0.00	0.00	0.00		
Fast Food Restaurant with Drive Thru	720.56	942.67	723.04	792,075	792,075
Fast Food Restaurant with Drive Thru	847.72	1,109.02	850.64	931,853	931,853
Gasoline/Service Station	2,957.20	2,957.20	2957.20	1,912,684	1,912,684
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Strip Mall	212.38	259.44	118.69	391,391	391,391
Total	4,737.86	5,268.32	4,649.57	4,028,003	4,028,003

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
Convenience Market With Gas Pumps	16.60	8.40	6.90	0.80	80.20	19.00	14	21	65
Fast Food Restaurant with Drive Thru	16.60	8.40	6.90	2.20	78.80	19.00	29	21	50
Fast Food Restaurant with Drive Thru	16.60	8.40	6.90	2.20	78.80	19.00	29	21	50
Gasoline/Service Station	16.60	8.40	6.90	2.00	79.00	19.00	14	27	59
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Strip Mall	16.60	8.40	6.90	16.60	64.40	19.00	45	40	15

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Convenience Market With Gas Pumps	0.538064	0.038449	0.184390	0.122109	0.017402	0.005339	0.017250	0.067711	0.001365	0.001213	0.004629	0.000959	0.001120
Fast Food Restaurant with Drive Thru	0.538064	0.038449	0.184390	0.122109	0.017402	0.005339	0.017250	0.067711	0.001365	0.001213	0.004629	0.000959	0.001120
Gasoline/Service Station	0.538064	0.038449	0.184390	0.122109	0.017402	0.005339	0.017250	0.067711	0.001365	0.001213	0.004629	0.000959	0.001120
Other Asphalt Surfaces	0.538064	0.038449	0.184390	0.122109	0.017402	0.005339	0.017250	0.067711	0.001365	0.001213	0.004629	0.000959	0.001120
Other Non-Asphalt Surfaces	0.538064	0.038449	0.184390	0.122109	0.017402	0.005339	0.017250	0.067711	0.001365	0.001213	0.004629	0.000959	0.001120
Parking Lot	0.538064	0.038449	0.184390	0.122109	0.017402	0.005339	0.017250	0.067711	0.001365	0.001213	0.004629	0.000959	0.001120
Strip Mall	0.538064	0.038449	0.184390	0.122109	0.017402	0.005339	0.017250	0.067711	0.001365	0.001213	0.004629	0.000959	0.001120

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0348	0.3165	0.2659	1.9000e-003		0.0241	0.0241		0.0241	0.0241		379.8150	379.8150	7.2800e-003	6.9600e-003	382.0720
NaturalGas Unmitigated	0.0348	0.3165	0.2659	1.9000e-003		0.0241	0.0241		0.0241	0.0241		379.8150	379.8150	7.2800e-003	6.9600e-003	382.0720

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					
Convenience Market With Gas Pumps	21.2877	2.3000e-004	2.0900e-003	1.7500e-003	1.0000e-005		1.6000e-004	1.6000e-004		1.6000e-004	1.6000e-004		2.5044	2.5044	5.0000e-005	5.0000e-005	2.5193
Fast Food Restaurant with Drive Thru	1273.56	0.0137	0.1249	0.1049	7.5000e-004		9.4900e-003	9.4900e-003		9.4900e-003	9.4900e-003		149.8301	149.8301	2.8700e-003	2.7500e-003	150.7205
Fast Food Restaurant with Drive Thru	1498.3	0.0162	0.1469	0.1234	8.8000e-004		0.0112	0.0112		0.0112	0.0112		176.2708	176.2708	3.3800e-003	3.2300e-003	177.3182
Gasoline/Service Station	397.268	4.2800e-003	0.0390	0.0327	2.3000e-004		2.9600e-003	2.9600e-003		2.9600e-003	2.9600e-003		46.7374	46.7374	9.0000e-004	8.6000e-004	47.0152
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Strip Mall	38.0137	4.1000e-004	3.7300e-003	3.1300e-003	2.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004		4.4722	4.4722	9.0000e-005	8.0000e-005	4.4988
Total		**0.0348**	**0.3165**	**0.2659**	**1.8900e-003**		**0.0241**	**0.0241**		**0.0241**	**0.0241**		**379.8150**	**379.8150**	**7.2900e-003**	**6.9700e-003**	**382.0720**

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					
Convenience Market With Gas Pumps	0.0212877	2.3000e-004	2.0900e-003	1.7500e-003	1.0000e-005		1.6000e-004	1.6000e-004		1.6000e-004	1.6000e-004		2.5044	2.5044	5.0000e-005	5.0000e-005	2.5193
Fast Food Restaurant with Drive Thru	1.27356	0.0137	0.1249	0.1049	7.5000e-004		9.4900e-003	9.4900e-003		9.4900e-003	9.4900e-003		149.8301	149.8301	2.8700e-003	2.7500e-003	150.7205
Fast Food Restaurant with Drive Thru	1.4983	0.0162	0.1469	0.1234	8.8000e-004		0.0112	0.0112		0.0112	0.0112		176.2708	176.2708	3.3800e-003	3.2300e-003	177.3182
Gasoline/Service Station	0.397268	4.2800e-003	0.0390	0.0327	2.3000e-004		2.9600e-003	2.9600e-003		2.9600e-003	2.9600e-003		46.7374	46.7374	9.0000e-004	8.6000e-004	47.0152
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Strip Mall	0.0380137	4.1000e-004	3.7300e-003	3.1300e-003	2.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004		4.4722	4.4722	9.0000e-005	8.0000e-005	4.4988
Total		**0.0348**	**0.3165**	**0.2659**	**1.8900e-003**		**0.0241**	**0.0241**		**0.0241**	**0.0241**		**379.8150**	**379.8150**	**7.2900e-003**	**6.9700e-003**	**382.0720**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.4371	1.2000e-004	0.0125	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0265	0.0265	7.0000e-005		0.0283
Unmitigated	0.4371	1.2000e-004	0.0125	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0265	0.0265	7.0000e-005		0.0283

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0518					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.3841					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.1700e-003	1.2000e-004	0.0125	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0265	0.0265	7.0000e-005		0.0283
Total	**0.4371**	**1.2000e-004**	**0.0125**	**0.0000**		**4.0000e-005**	**4.0000e-005**		**4.0000e-005**	**4.0000e-005**		**0.0265**	**0.0265**	**7.0000e-005**		**0.0283**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0518					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.3841					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.1700e-003	1.2000e-004	0.0125	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0265	0.0265	7.0000e-005		0.0283
Total	**0.4371**	**1.2000e-004**	**0.0125**	**0.0000**		**4.0000e-005**	**4.0000e-005**		**4.0000e-005**	**4.0000e-005**		**0.0265**	**0.0265**	**7.0000e-005**		**0.0283**

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

Beaumont Commercial Development Project

Riverside-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	0.72	Acre	0.72	31,363.20	0
Other Non-Asphalt Surfaces	20.05	1000sqft	0.46	20,047.00	0
Parking Lot	79.00	Space	0.71	31,600.00	0
Fast Food Restaurant with Drive Thru	1.70	1000sqft	0.04	1,700.00	0
Fast Food Restaurant with Drive Thru	2.00	1000sqft	0.05	2,000.00	0
Convenience Market With Gas Pumps	3.50	1000sqft	0.08	3,500.00	0
Gasoline/Service Station	8.00	Pump	0.10	4,463.00	0
Strip Mall	6.25	1000sqft	0.14	6,250.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.4	**Precipitation Freq (Days)**	28
Climate Zone	10			**Operational Year**	2020
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	534.36	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Beaumont Commercial Development Project - Construction and Operations
CO2 intensity factor adjusted based on Renewable Portfolio Standard

Land Use - Based on site plan and project description

Construction Phase - Grading period extended from 6 days to 15 days

Grading - 5,212 cubic yards to be exported

Vehicle Trips - Trip rates based on information presented in the traffic report prepared for the project (David Evans and Associates 2018)

Construction Off-road Equipment Mitigation - Compliance with SCAQMD Rule 403

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	6.00	15.00
tblGrading	MaterialExported	0.00	5,212.00
tblLandUse	LandUseSquareFeet	20,050.00	20,047.00
tblLandUse	LandUseSquareFeet	1,129.40	4,463.00
tblLandUse	LotAcreage	0.03	0.10
tblProjectCharacteristics	CO2IntensityFactor	702.44	534.36
tblVehicleTrips	ST_TR	1,448.33	0.00
tblVehicleTrips	ST_TR	722.03	554.51
tblVehicleTrips	ST_TR	168.56	369.65
tblVehicleTrips	ST_TR	42.04	41.51
tblVehicleTrips	SU_TR	1,182.08	0.00
tblVehicleTrips	SU_TR	542.72	425.32
tblVehicleTrips	SU_TR	168.56	369.65
tblVehicleTrips	SU_TR	20.43	18.99
tblVehicleTrips	WD_TR	845.60	0.00
tblVehicleTrips	WD_TR	496.12	423.86
tblVehicleTrips	WD_TR	168.56	369.65
tblVehicleTrips	WD_TR	44.32	33.98

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	5.1773	54.9797	29.2341	0.0878	8.0357	2.2224	10.2581	3.7651	2.0886	5.8537	0.0000	8,786.5457	8,786.5457	1.4241	0.0000	8,822.1492
2020	19.1966	19.3013	16.6092	0.0334	0.5671	0.9610	1.5282	0.1529	0.9211	1.0739	0.0000	3,144.6371	3,144.6371	0.5454	0.0000	3,157.4792
Maximum	**19.1966**	**54.9797**	**29.2341**	**0.0878**	**8.0357**	**2.2224**	**10.2581**	**3.7651**	**2.0886**	**5.8537**	**0.0000**	**8,786.5457**	**8,786.5457**	**1.4241**	**0.0000**	**8,822.1492**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2019	5.1773	54.9797	29.2341	0.0878	4.0120	2.2224	6.2343	1.7069	2.0886	3.7955	0.0000	8,786.5457	8,786.5457	1.4241	0.0000	8,822.1492
2020	19.1966	19.3013	16.6092	0.0334	0.5671	0.9610	1.5282	0.1529	0.9211	1.0739	0.0000	3,144.6371	3,144.6371	0.5454	0.0000	3,157.4792
Maximum	**19.1966**	**54.9797**	**29.2341**	**0.0878**	**4.0120**	**2.2224**	**6.2343**	**1.7069**	**2.0886**	**3.7955**	**0.0000**	**8,786.5457**	**8,786.5457**	**1.4241**	**0.0000**	**8,822.1492**

	ROG	NOx	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**	**46.77**	**0.00**	**34.14**	**52.53**	**0.00**	**29.71**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.4371	1.2000e-004	0.0125	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0265	0.0265	7.0000e-005		0.0283
Energy	0.0348	0.3165	0.2659	1.9000e-003		0.0241	0.0241		0.0241	0.0241		379.8150	379.8150	7.2800e-003	6.9600e-003	382.0720
Mobile	7.1292	52.2221	50.6105	0.1666	9.7376	0.1553	9.8929	2.6057	0.1461	2.7519		17,077.6405	17,077.6405	1.8333		17,123.4729
Total	**7.6011**	**52.5387**	**50.8888**	**0.1685**	**9.7376**	**0.1794**	**9.9170**	**2.6057**	**0.1702**	**2.7759**		**17,457.4820**	**17,457.4820**	**1.8407**	**6.9600e-003**	**17,505.5732**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.4371	1.2000e-004	0.0125	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0265	0.0265	7.0000e-005		0.0283
Energy	0.0348	0.3165	0.2659	1.9000e-003		0.0241	0.0241		0.0241	0.0241		379.8150	379.8150	7.2800e-003	6.9600e-003	382.0720
Mobile	7.1292	52.2221	50.6105	0.1666	9.7376	0.1553	9.8929	2.6057	0.1461	2.7519		17,077.6405	17,077.6405	1.8333		17,123.4729
Total	**7.6011**	**52.5387**	**50.8888**	**0.1685**	**9.7376**	**0.1794**	**9.9170**	**2.6057**	**0.1702**	**2.7759**		**17,457.4820**	**17,457.4820**	**1.8407**	**6.9600e-003**	**17,505.5732**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	4/1/2019	4/3/2019	5	3	
2	Grading	Grading	4/4/2019	4/24/2019	5	15	
3	Building Construction	Building Construction	4/12/2019	2/13/2020	5	220	
4	Paving	Paving	2/14/2020	2/27/2020	5	10	
5	Architectural Coating	Architectural Coating	2/28/2020	3/12/2020	5	10	

Acres of Grading (Site Preparation Phase): 4.5

Acres of Grading (Grading Phase): 7.5

Acres of Paving: 1.89

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 26,870; Non-Residential Outdoor: 8,957; Striped Parking Area:

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Scrapers	1	8.00	367	0.48
Site Preparation	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Building Construction	Cranes	1	8.00	231	0.29
Building Construction	Forklifts	2	7.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	652.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	41.00	17.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

3.2 Site Preparation - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.5908	0.0000	1.5908	0.1718	0.0000	0.1718			0.0000			0.0000
Off-Road	1.7557	21.5386	11.9143	0.0245		0.8537	0.8537		0.7854	0.7854		2,426.5408	2,426.5408	0.7677		2,445.7341
Total	**1.7557**	**21.5386**	**11.9143**	**0.0245**	**1.5908**	**0.8537**	**2.4445**	**0.1718**	**0.7854**	**0.9572**		**2,426.5408**	**2,426.5408**	**0.7677**		**2,445.7341**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0430	0.0280	0.2880	8.2000e-004	0.0894	5.5000e-004	0.0900	0.0237	5.1000e-004	0.0242		81.6414	81.6414	2.2200e-003		81.6968
Total	**0.0430**	**0.0280**	**0.2880**	**8.2000e-004**	**0.0894**	**5.5000e-004**	**0.0900**	**0.0237**	**5.1000e-004**	**0.0242**		**81.6414**	**81.6414**	**2.2200e-003**		**81.6968**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.6204	0.0000	0.6204	0.0670	0.0000	0.0670			0.0000			0.0000
Off-Road	1.7557	21.5386	11.9143	0.0245		0.8537	0.8537		0.7854	0.7854	0.0000	2,426.5408	2,426.5408	0.7677		2,445.7341
Total	**1.7557**	**21.5386**	**11.9143**	**0.0245**	**0.6204**	**0.8537**	**1.4741**	**0.0670**	**0.7854**	**0.8524**	**0.0000**	**2,426.5408**	**2,426.5408**	**0.7677**		**2,445.7341**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0430	0.0280	0.2880	8.2000e-004	0.0894	5.5000e-004	0.0900	0.0237	5.1000e-004	0.0242		81.6414	81.6414	2.2200e-003		81.6968
Total	**0.0430**	**0.0280**	**0.2880**	**8.2000e-004**	**0.0894**	**5.5000e-004**	**0.0900**	**0.0237**	**5.1000e-004**	**0.0242**		**81.6414**	**81.6414**	**2.2200e-003**		**81.6968**

3.3 Grading - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					6.5963	0.0000	6.5963	3.3741	0.0000	3.3741			0.0000			0.0000
Off-Road	2.0287	22.7444	10.1518	0.0206		1.0730	1.0730		0.9871	0.9871		2,041.2539	2,041.2539	0.6458		2,057.3997
Total	**2.0287**	**22.7444**	**10.1518**	**0.0206**	**6.5963**	**1.0730**	**7.6693**	**3.3741**	**0.9871**	**4.3613**		**2,041.2539**	**2,041.2539**	**0.6458**		**2,057.3997**

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	0.2567	11.2159	1.5698	0.0326	0.7605	0.0408	0.8013	0.2085	0.0391	0.2476		3,458.8870	3,458.8870	0.2413		3,464.9190
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0538	0.0350	0.3601	1.0200e-003	0.1118	6.9000e-004	0.1125	0.0296	6.4000e-004	0.0303		102.0517	102.0517	2.7700e-003		102.1209
Total	**0.3105**	**11.2508**	**1.9299**	**0.0336**	**0.8722**	**0.0415**	**0.9138**	**0.2381**	**0.0397**	**0.2778**		**3,560.9387**	**3,560.9387**	**0.2441**		**3,567.0400**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.5726	0.0000	2.5726	1.3159	0.0000	1.3159			0.0000			0.0000
Off-Road	2.0287	22.7444	10.1518	0.0206		1.0730	1.0730		0.9871	0.9871	0.0000	2,041.2539	2,041.2539	0.6458		2,057.3997
Total	**2.0287**	**22.7444**	**10.1518**	**0.0206**	**2.5726**	**1.0730**	**3.6455**	**1.3159**	**0.9871**	**2.3031**	**0.0000**	**2,041.2539**	**2,041.2539**	**0.6458**		**2,057.3997**

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	0.2567	11.2159	1.5698	0.0326	0.7605	0.0408	0.8013	0.2085	0.0391	0.2476		3,458.8870	3,458.8870	0.2413		3,464.9190
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0538	0.0350	0.3601	1.0200e-003	0.1118	6.9000e-004	0.1125	0.0296	6.4000e-004	0.0303		102.0517	102.0517	2.7700e-003		102.1209
Total	**0.3105**	**11.2508**	**1.9299**	**0.0336**	**0.8722**	**0.0415**	**0.9138**	**0.2381**	**0.0397**	**0.2778**		**3,560.9387**	**3,560.9387**	**0.2441**		**3,567.0400**

3.4 Building Construction - 2019

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.5581	18.9103	15.2545	0.0250		1.0901	1.0901		1.0449	1.0449		2,312.1454	2,312.1454	0.4810		2,324.1705
Total	**2.5581**	**18.9103**	**15.2545**	**0.0250**		**1.0901**	**1.0901**		**1.0449**	**1.0449**		**2,312.1454**	**2,312.1454**	**0.4810**		**2,324.1705**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0594	1.9308	0.4216	4.3100e-003	0.1089	0.0149	0.1238	0.0313	0.0142	0.0456		453.7957	453.7957	0.0419		454.8433
Worker	0.2206	0.1434	1.4762	4.2000e-003	0.4583	2.8300e-003	0.4611	0.1215	2.6100e-003	0.1241		418.4120	418.4120	0.0114		418.6959
Total	**0.2800**	**2.0742**	**1.8979**	**8.5100e-003**	**0.5672**	**0.0177**	**0.5849**	**0.1529**	**0.0169**	**0.1697**		**872.2077**	**872.2077**	**0.0533**		**873.5391**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.5581	18.9103	15.2545	0.0250		1.0901	1.0901		1.0449	1.0449	0.0000	2,312.1454	2,312.1454	0.4810		2,324.1705
Total	**2.5581**	**18.9103**	**15.2545**	**0.0250**		**1.0901**	**1.0901**		**1.0449**	**1.0449**	**0.0000**	**2,312.1454**	**2,312.1454**	**0.4810**		**2,324.1705**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0594	1.9308	0.4216	4.3100e-003	0.1089	0.0149	0.1238	0.0313	0.0142	0.0456		453.7957	453.7957	0.0419		454.8433
Worker	0.2206	0.1434	1.4762	4.2000e-003	0.4583	2.8300e-003	0.4611	0.1215	2.6100e-003	0.1241		418.4120	418.4120	0.0114		418.6959
Total	**0.2800**	**2.0742**	**1.8979**	**8.5100e-003**	**0.5672**	**0.0177**	**0.5849**	**0.1529**	**0.0169**	**0.1697**		**872.2077**	**872.2077**	**0.0533**		**873.5391**

3.4 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.2879	17.4336	14.8972	0.0250		0.9482	0.9482		0.9089	0.9089		2,288.8877	2,288.8877	0.4646		2,300.5014
Total	**2.2879**	**17.4336**	**14.8972**	**0.0250**		**0.9482**	**0.9482**		**0.9089**	**0.9089**		**2,288.8877**	**2,288.8877**	**0.4646**		**2,300.5014**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0500	1.7400	0.3747	4.2700e-003	0.1089	0.0101	0.1189	0.0313	9.6300e-003	0.0410		450.5727	450.5727	0.0391		451.5496
Worker	0.2043	0.1277	1.3373	4.0700e-003	0.4583	2.7800e-003	0.4611	0.1215	2.5600e-003	0.1241		405.1767	405.1767	0.0101		405.4283
Total	**0.2543**	**1.8677**	**1.7120**	**8.3400e-003**	**0.5671**	**0.0129**	**0.5800**	**0.1529**	**0.0122**	**0.1651**		**855.7494**	**855.7494**	**0.0491**		**856.9778**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.2879	17.4336	14.8972	0.0250		0.9482	0.9482		0.9089	0.9089	0.0000	2,288.8877	2,288.8877	0.4646		2,300.5014
Total	**2.2879**	**17.4336**	**14.8972**	**0.0250**		**0.9482**	**0.9482**		**0.9089**	**0.9089**	**0.0000**	**2,288.8877**	**2,288.8877**	**0.4646**		**2,300.5014**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0500	1.7400	0.3747	4.2700e-003	0.1089	0.0101	0.1189	0.0313	9.6300e-003	0.0410		450.5727	450.5727	0.0391		451.5496
Worker	0.2043	0.1277	1.3373	4.0700e-003	0.4583	2.7800e-003	0.4611	0.1215	2.5600e-003	0.1241		405.1767	405.1767	0.0101		405.4283
Total	**0.2543**	**1.8677**	**1.7120**	**8.3400e-003**	**0.5671**	**0.0129**	**0.5800**	**0.1529**	**0.0122**	**0.1651**		**855.7494**	**855.7494**	**0.0491**		**856.9778**

3.5 Paving - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1547	11.5873	11.8076	0.0178		0.6565	0.6565		0.6051	0.6051		1,709.2180	1,709.2180	0.5417		1,722.7605
Paving	0.3747					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.5293**	**11.5873**	**11.8076**	**0.0178**		**0.6565**	**0.6565**		**0.6051**	**0.6051**		**1,709.2180**	**1,709.2180**	**0.5417**		**1,722.7605**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0748	0.0467	0.4893	1.4900e-003	0.1677	1.0200e-003	0.1687	0.0445	9.3000e-004	0.0454		148.2354	148.2354	3.6800e-003		148.3274
Total	**0.0748**	**0.0467**	**0.4893**	**1.4900e-003**	**0.1677**	**1.0200e-003**	**0.1687**	**0.0445**	**9.3000e-004**	**0.0454**		**148.2354**	**148.2354**	**3.6800e-003**		**148.3274**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1547	11.5873	11.8076	0.0178		0.6565	0.6565		0.6051	0.6051	0.0000	1,709.2180	1,709.2180	0.5417		1,722.7605
Paving	0.3747					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.5293**	**11.5873**	**11.8076**	**0.0178**		**0.6565**	**0.6565**		**0.6051**	**0.6051**	**0.0000**	**1,709.2180**	**1,709.2180**	**0.5417**		**1,722.7605**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0748	0.0467	0.4893	1.4900e-003	0.1677	1.0200e-003	0.1687	0.0445	9.3000e-004	0.0454		148.2354	148.2354	3.6800e-003		148.3274
Total	**0.0748**	**0.0467**	**0.4893**	**1.4900e-003**	**0.1677**	**1.0200e-003**	**0.1687**	**0.0445**	**9.3000e-004**	**0.0454**		**148.2354**	**148.2354**	**3.6800e-003**		**148.3274**

3.6 Architectural Coating - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	18.9145					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109		281.4481	281.4481	0.0218		281.9928
Total	**19.1567**	**1.6838**	**1.8314**	**2.9700e-003**		**0.1109**	**0.1109**		**0.1109**	**0.1109**		**281.4481**	**281.4481**	**0.0218**		**281.9928**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0399	0.0249	0.2609	7.9000e-004	0.0894	5.4000e-004	0.0900	0.0237	5.0000e-004	0.0242		79.0589	79.0589	1.9600e-003		79.1080
Total	**0.0399**	**0.0249**	**0.2609**	**7.9000e-004**	**0.0894**	**5.4000e-004**	**0.0900**	**0.0237**	**5.0000e-004**	**0.0242**		**79.0589**	**79.0589**	**1.9600e-003**		**79.1080**

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	18.9145					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2422	1.6838	1.8314	2.9700e-003		0.1109	0.1109		0.1109	0.1109	0.0000	281.4481	281.4481	0.0218		281.9928
Total	**19.1567**	**1.6838**	**1.8314**	**2.9700e-003**		**0.1109**	**0.1109**		**0.1109**	**0.1109**	**0.0000**	**281.4481**	**281.4481**	**0.0218**		**281.9928**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0399	0.0249	0.2609	7.9000e-004	0.0894	5.4000e-004	0.0900	0.0237	5.0000e-004	0.0242		79.0589	79.0589	1.9600e-003		79.1080
Total	**0.0399**	**0.0249**	**0.2609**	**7.9000e-004**	**0.0894**	**5.4000e-004**	**0.0900**	**0.0237**	**5.0000e-004**	**0.0242**		**79.0589**	**79.0589**	**1.9600e-003**		**79.1080**

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	7.1292	52.2221	50.6105	0.1666	9.7376	0.1553	9.8929	2.6057	0.1461	2.7519		17,077.6405	17,077.6405	1.8333		17,123.4729
Unmitigated	7.1292	52.2221	50.6105	0.1666	9.7376	0.1553	9.8929	2.6057	0.1461	2.7519		17,077.6405	17,077.6405	1.8333		17,123.4729

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Convenience Market With Gas Pumps	0.00	0.00	0.00		
Fast Food Restaurant with Drive Thru	720.56	942.67	723.04	792,075	792,075
Fast Food Restaurant with Drive Thru	847.72	1,109.02	850.64	931,853	931,853
Gasoline/Service Station	2,957.20	2,957.20	2957.20	1,912,684	1,912,684
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Strip Mall	212.38	259.44	118.69	391,391	391,391
Total	4,737.86	5,268.32	4,649.57	4,028,003	4,028,003

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
Convenience Market With Gas Pumps	16.60	8.40	6.90	0.80	80.20	19.00	14	21	65
Fast Food Restaurant with Drive Thru	16.60	8.40	6.90	2.20	78.80	19.00	29	21	50
Fast Food Restaurant with Drive Thru	16.60	8.40	6.90	2.20	78.80	19.00	29	21	50
Gasoline/Service Station	16.60	8.40	6.90	2.00	79.00	19.00	14	27	59
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Strip Mall	16.60	8.40	6.90	16.60	64.40	19.00	45	40	15

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Convenience Market With Gas Pumps	0.538064	0.038449	0.184390	0.122109	0.017402	0.005339	0.017250	0.067711	0.001365	0.001213	0.004629	0.000959	0.001120
Fast Food Restaurant with Drive Thru	0.538064	0.038449	0.184390	0.122109	0.017402	0.005339	0.017250	0.067711	0.001365	0.001213	0.004629	0.000959	0.001120
Gasoline/Service Station	0.538064	0.038449	0.184390	0.122109	0.017402	0.005339	0.017250	0.067711	0.001365	0.001213	0.004629	0.000959	0.001120
Other Asphalt Surfaces	0.538064	0.038449	0.184390	0.122109	0.017402	0.005339	0.017250	0.067711	0.001365	0.001213	0.004629	0.000959	0.001120
Other Non-Asphalt Surfaces	0.538064	0.038449	0.184390	0.122109	0.017402	0.005339	0.017250	0.067711	0.001365	0.001213	0.004629	0.000959	0.001120
Parking Lot	0.538064	0.038449	0.184390	0.122109	0.017402	0.005339	0.017250	0.067711	0.001365	0.001213	0.004629	0.000959	0.001120
Strip Mall	0.538064	0.038449	0.184390	0.122109	0.017402	0.005339	0.017250	0.067711	0.001365	0.001213	0.004629	0.000959	0.001120

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0348	0.3165	0.2659	1.9000e-003		0.0241	0.0241		0.0241	0.0241		379.8150	379.8150	7.2800e-003	6.9600e-003	382.0720
NaturalGas Unmitigated	0.0348	0.3165	0.2659	1.9000e-003		0.0241	0.0241		0.0241	0.0241		379.8150	379.8150	7.2800e-003	6.9600e-003	382.0720

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					
Convenience Market With Gas Pumps	21.2877	2.3000e-004	2.0900e-003	1.7500e-003	1.0000e-005		1.6000e-004	1.6000e-004		1.6000e-004	1.6000e-004		2.5044	2.5044	5.0000e-005	5.0000e-005	2.5193
Fast Food Restaurant with Drive Thru	1273.56	0.0137	0.1249	0.1049	7.5000e-004		9.4900e-003	9.4900e-003		9.4900e-003	9.4900e-003		149.8301	149.8301	2.8700e-003	2.7500e-003	150.7205
Fast Food Restaurant with Drive Thru	1498.3	0.0162	0.1469	0.1234	8.8000e-004		0.0112	0.0112		0.0112	0.0112		176.2708	176.2708	3.3800e-003	3.2300e-003	177.3182
Gasoline/Service Station	397.268	4.2800e-003	0.0390	0.0327	2.3000e-004		2.9600e-003	2.9600e-003		2.9600e-003	2.9600e-003		46.7374	46.7374	9.0000e-004	8.6000e-004	47.0152
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Strip Mall	38.0137	4.1000e-004	3.7300e-003	3.1300e-003	2.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004		4.4722	4.4722	9.0000e-005	8.0000e-005	4.4988
Total		**0.0348**	**0.3165**	**0.2659**	**1.8900e-003**		**0.0241**	**0.0241**		**0.0241**	**0.0241**		**379.8150**	**379.8150**	**7.2900e-003**	**6.9700e-003**	**382.0720**

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					
Convenience Market With Gas Pumps	0.0212877	2.3000e-004	2.0900e-003	1.7500e-003	1.0000e-005		1.6000e-004	1.6000e-004		1.6000e-004	1.6000e-004		2.5044	2.5044	5.0000e-005	5.0000e-005	2.5193
Fast Food Restaurant with Drive Thru	1.4983	0.0162	0.1469	0.1234	8.8000e-004		0.0112	0.0112		0.0112	0.0112		176.2708	176.2708	3.3800e-003	3.2300e-003	177.3182
Fast Food Restaurant with Drive Thru	1.27356	0.0137	0.1249	0.1049	7.5000e-004		9.4900e-003	9.4900e-003		9.4900e-003	9.4900e-003		149.8301	149.8301	2.8700e-003	2.7500e-003	150.7205
Gasoline/Service Station	0.397268	4.2800e-003	0.0390	0.0327	2.3000e-004		2.9600e-003	2.9600e-003		2.9600e-003	2.9600e-003		46.7374	46.7374	9.0000e-004	8.6000e-004	47.0152
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Strip Mall	0.0380137	4.1000e-004	3.7300e-003	3.1300e-003	2.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004		4.4722	4.4722	9.0000e-005	8.0000e-005	4.4988
Total		**0.0348**	**0.3165**	**0.2659**	**1.8900e-003**		**0.0241**	**0.0241**		**0.0241**	**0.0241**		**379.8150**	**379.8150**	**7.2900e-003**	**6.9700e-003**	**382.0720**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.4371	1.2000e-004	0.0125	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0265	0.0265	7.0000e-005		0.0283
Unmitigated	0.4371	1.2000e-004	0.0125	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0265	0.0265	7.0000e-005		0.0283

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0518					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.3841					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.1700e-003	1.2000e-004	0.0125	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0265	0.0265	7.0000e-005		0.0283
Total	**0.4371**	**1.2000e-004**	**0.0125**	**0.0000**		**4.0000e-005**	**4.0000e-005**		**4.0000e-005**	**4.0000e-005**		**0.0265**	**0.0265**	**7.0000e-005**		**0.0283**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0518					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.3841					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.1700e-003	1.2000e-004	0.0125	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0265	0.0265	7.0000e-005		0.0283
Total	**0.4371**	**1.2000e-004**	**0.0125**	**0.0000**		**4.0000e-005**	**4.0000e-005**		**4.0000e-005**	**4.0000e-005**		**0.0265**	**0.0265**	**7.0000e-005**		**0.0283**

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

Beaumont Commercial Development Project - Operational LST Analysis

Riverside-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	0.72	Acre	0.72	31,363.20	0
Other Non-Asphalt Surfaces	20.05	1000sqft	0.46	20,047.00	0
Parking Lot	79.00	Space	0.71	31,600.00	0
Fast Food Restaurant with Drive Thru	1.70	1000sqft	0.04	1,700.00	0
Fast Food Restaurant with Drive Thru	2.00	1000sqft	0.05	2,000.00	0
Convenience Market With Gas Pumps	3.50	1000sqft	0.08	3,500.00	0
Gasoline/Service Station	8.00	Pump	0.10	4,463.00	0
Strip Mall	6.25	1000sqft	0.14	6,250.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.4	**Precipitation Freq (Days)**	28
Climate Zone	10			**Operational Year**	2020
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	534.36	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Beaumont Commercial Development Project - Construction and Operations
CO2 intensity factor adjusted based on Renewable Portfolio Standard
Operational on-site emissions for comparison to Localized Significant Thresholds (LSTs)

Land Use - Based on site plan and project description

Construction Phase - Operational run only

Off-road Equipment - Zeroed out construction equipment

Vehicle Trips - Trip rates based on information presented in the traffic report prepared for the project (David Evans and Associates 2018). Trip lengths updated to 0.1 mile to account for on-site emissions from mobile sources.

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	10.00	1.00
tblLandUse	LandUseSquareFeet	20,050.00	20,047.00
tblLandUse	LandUseSquareFeet	1,129.40	4,463.00
tblLandUse	LotAcreage	0.03	0.10
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblProjectCharacteristics	CO2IntensityFactor	702.44	534.36
tblVehicleTrips	CC_TL	8.40	0.10
tblVehicleTrips	CC_TL	8.40	0.10
tblVehicleTrips	CC_TL	8.40	0.10
tblVehicleTrips	CNW_TL	6.90	0.10
tblVehicleTrips	CNW_TL	6.90	0.10
tblVehicleTrips	CNW_TL	6.90	0.10
tblVehicleTrips	CW_TL	16.60	0.10
tblVehicleTrips	CW_TL	16.60	0.10
tblVehicleTrips	CW_TL	16.60	0.10
tblVehicleTrips	DV_TP	21.00	0.00
tblVehicleTrips	DV_TP	27.00	0.00
tblVehicleTrips	DV_TP	40.00	0.00
tblVehicleTrips	PB_TP	50.00	0.00
tblVehicleTrips	PB_TP	59.00	0.00
tblVehicleTrips	PB_TP	15.00	0.00
tblVehicleTrips	PR_TP	29.00	100.00

tblVehicleTrips	PR_TP	14.00	100.00
tblVehicleTrips	PR_TP	45.00	100.00
tblVehicleTrips	ST_TR	1,448.33	0.00
tblVehicleTrips	ST_TR	722.03	554.51
tblVehicleTrips	ST_TR	168.56	369.65
tblVehicleTrips	ST_TR	42.04	41.51
tblVehicleTrips	SU_TR	1,182.08	0.00
tblVehicleTrips	SU_TR	542.72	425.32
tblVehicleTrips	SU_TR	168.56	369.65
tblVehicleTrips	SU_TR	20.43	18.99
tblVehicleTrips	WD_TR	845.60	0.00
tblVehicleTrips	WD_TR	496.12	423.86
tblVehicleTrips	WD_TR	168.56	369.65
tblVehicleTrips	WD_TR	44.32	33.98

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.4371	1.2000e-004	0.0125	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0265	0.0265	7.0000e-005		0.0283
Energy	0.0348	0.3165	0.2659	1.9000e-003		0.0241	0.0241		0.0241	0.0241		379.8150	379.8150	7.2800e-003	6.9600e-003	382.0720
Mobile	7.7128	43.7906	23.4865	0.0654	0.4090	0.0431	0.4521	0.1095	0.0403	0.1497		6,812.6599	6,812.6599	1.3387		6,846.1285
Total	**8.1847**	**44.1072**	**23.7648**	**0.0673**	**0.4090**	**0.0672**	**0.4762**	**0.1095**	**0.0644**	**0.1738**		**7,192.5014**	**7,192.5014**	**1.3461**	**6.9600e-003**	**7,228.2288**

Mitigated Operational

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

Category	lb/day											lb/day				
Area	0.4371	1.2000e-004	0.0125	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0265	0.0265	7.0000e-005		0.0283
Energy	0.0348	0.3165	0.2659	1.9000e-003		0.0241	0.0241		0.0241	0.0241		379.8150	379.8150	7.2800e-003	6.9600e-003	382.0720
Mobile	7.7128	43.7906	23.4865	0.0654	0.4090	0.0431	0.4521	0.1095	0.0403	0.1497		6,812.6599	6,812.6599	1.3387		6,846.1285
Total	**8.1847**	**44.1072**	**23.7648**	**0.0673**	**0.4090**	**0.0672**	**0.4762**	**0.1095**	**0.0644**	**0.1738**		**7,192.5014**	**7,192.5014**	**1.3461**	**6.9600e-003**	**7,228.2288**

	ROG	NOx	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**

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	7.7128	43.7906	23.4865	0.0654	0.4090	0.0431	0.4521	0.1095	0.0403	0.1497		6,812.6599	6,812.6599	1.3387		6,846.1285
Unmitigated	7.7128	43.7906	23.4865	0.0654	0.4090	0.0431	0.4521	0.1095	0.0403	0.1497		6,812.6599	6,812.6599	1.3387		6,846.1285

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Convenience Market With Gas Pumps	0.00	0.00	0.00		
Fast Food Restaurant with Drive Thru	720.56	942.67	723.04	27,396	27,396
Fast Food Restaurant with Drive Thru	847.72	1,109.02	850.64	32,231	32,231
Gasoline/Service Station	2,957.20	2,957.20	2957.20	107,642	107,642
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Strip Mall	212.38	259.44	118.69	7,488	7,488
Total	4,737.86	5,268.32	4,649.57	174,757	174,757

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
Convenience Market With Gas Pumps	16.60	8.40	6.90	0.80	80.20	19.00	14	21	65
Fast Food Restaurant with Drive Thru	0.10	0.10	0.10	2.20	78.80	19.00	100	0	0
Fast Food Restaurant with Drive Thru	0.10	0.10	0.10	2.20	78.80	19.00	100	0	0
Gasoline/Service Station	0.10	0.10	0.10	2.00	79.00	19.00	100	0	0
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Strip Mall	0.10	0.10	0.10	16.60	64.40	19.00	100	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Convenience Market With Gas Pumps	0.538064	0.038449	0.184390	0.122109	0.017402	0.005339	0.017250	0.067711	0.001365	0.001213	0.004629	0.000959	0.001120
Fast Food Restaurant with Drive Thru	0.538064	0.038449	0.184390	0.122109	0.017402	0.005339	0.017250	0.067711	0.001365	0.001213	0.004629	0.000959	0.001120
Gasoline/Service Station	0.538064	0.038449	0.184390	0.122109	0.017402	0.005339	0.017250	0.067711	0.001365	0.001213	0.004629	0.000959	0.001120
Other Asphalt Surfaces	0.538064	0.038449	0.184390	0.122109	0.017402	0.005339	0.017250	0.067711	0.001365	0.001213	0.004629	0.000959	0.001120
Other Non-Asphalt Surfaces	0.538064	0.038449	0.184390	0.122109	0.017402	0.005339	0.017250	0.067711	0.001365	0.001213	0.004629	0.000959	0.001120
Parking Lot	0.538064	0.038449	0.184390	0.122109	0.017402	0.005339	0.017250	0.067711	0.001365	0.001213	0.004629	0.000959	0.001120
Strip Mall	0.538064	0.038449	0.184390	0.122109	0.017402	0.005339	0.017250	0.067711	0.001365	0.001213	0.004629	0.000959	0.001120

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0348	0.3165	0.2659	1.9000e-003		0.0241	0.0241		0.0241	0.0241		379.8150	379.8150	7.2800e-003	6.9600e-003	382.0720
NaturalGas Unmitigated	0.0348	0.3165	0.2659	1.9000e-003		0.0241	0.0241		0.0241	0.0241		379.8150	379.8150	7.2800e-003	6.9600e-003	382.0720

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					
Convenience Market With Gas Pumps	21.2877	2.3000e-004	2.0900e-003	1.7500e-003	1.0000e-005		1.6000e-004	1.6000e-004		1.6000e-004	1.6000e-004		2.5044	2.5044	5.0000e-005	5.0000e-005	2.5193
Fast Food Restaurant with Drive Thru	1273.56	0.0137	0.1249	0.1049	7.5000e-004		9.4900e-003	9.4900e-003		9.4900e-003	9.4900e-003		149.8301	149.8301	2.8700e-003	2.7500e-003	150.7205
Fast Food Restaurant with Drive Thru	1498.3	0.0162	0.1469	0.1234	8.8000e-004		0.0112	0.0112		0.0112	0.0112		176.2708	176.2708	3.3800e-003	3.2300e-003	177.3182
Gasoline/Service Station	397.268	4.2800e-003	0.0390	0.0327	2.3000e-004		2.9600e-003	2.9600e-003		2.9600e-003	2.9600e-003		46.7374	46.7374	9.0000e-004	8.6000e-004	47.0152
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Strip Mall	38.0137	4.1000e-004	3.7300e-003	3.1300e-003	2.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004		4.4722	4.4722	9.0000e-005	8.0000e-005	4.4988
Total		**0.0348**	**0.3165**	**0.2659**	**1.8900e-003**		**0.0241**	**0.0241**		**0.0241**	**0.0241**		**379.8150**	**379.8150**	**7.2900e-003**	**6.9700e-003**	**382.0720**

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					
Convenience Market With Gas Pumps	0.0212877	2.3000e-004	2.0900e-003	1.7500e-003	1.0000e-005		1.6000e-004	1.6000e-004		1.6000e-004	1.6000e-004		2.5044	2.5044	5.0000e-005	5.0000e-005	2.5193
Fast Food Restaurant with Drive Thru	1.27356	0.0137	0.1249	0.1049	7.5000e-004		9.4900e-003	9.4900e-003		9.4900e-003	9.4900e-003		149.8301	149.8301	2.8700e-003	2.7500e-003	150.7205
Fast Food Restaurant with Drive Thru	1.4983	0.0162	0.1469	0.1234	8.8000e-004		0.0112	0.0112		0.0112	0.0112		176.2708	176.2708	3.3800e-003	3.2300e-003	177.3182
Gasoline/Service Station	0.397268	4.2800e-003	0.0390	0.0327	2.3000e-004		2.9600e-003	2.9600e-003		2.9600e-003	2.9600e-003		46.7374	46.7374	9.0000e-004	8.6000e-004	47.0152
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Strip Mall	0.0380137	4.1000e-004	3.7300e-003	3.1300e-003	2.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004		4.4722	4.4722	9.0000e-005	8.0000e-005	4.4988

Total		**0.0348**	**0.3165**	**0.2659**	**1.8900e-003**		**0.0241**	**0.0241**		**0.0241**	**0.0241**		**379.8150**	**379.8150**	**7.2900e-003**	**6.9700e-003**	**382.0720**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.4371	1.2000e-004	0.0125	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0265	0.0265	7.0000e-005		0.0283
Unmitigated	0.4371	1.2000e-004	0.0125	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0265	0.0265	7.0000e-005		0.0283

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0518					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.3841					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.1700e-003	1.2000e-004	0.0125	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0265	0.0265	7.0000e-005		0.0283
Total	**0.4371**	**1.2000e-004**	**0.0125**	**0.0000**		**4.0000e-005**	**4.0000e-005**		**4.0000e-005**	**4.0000e-005**		**0.0265**	**0.0265**	**7.0000e-005**		**0.0283**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0518					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.3841					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.1700e-003	1.2000e-004	0.0125	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0265	0.0265	7.0000e-005		0.0283

Total	**0.4371**	**1.2000e-004**	**0.0125**	**0.0000**		**4.0000e-005**	**4.0000e-005**		**4.0000e-005**	**4.0000e-005**		**0.0265**	**0.0265**	**7.0000e-005**		**0.0283**

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

Beaumont Commercial Development Project - Operational LST Analysis

Riverside-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Other Asphalt Surfaces	0.72	Acre	0.72	31,363.20	0
Other Non-Asphalt Surfaces	20.05	1000sqft	0.46	20,047.00	0
Parking Lot	79.00	Space	0.71	31,600.00	0
Fast Food Restaurant with Drive Thru	1.70	1000sqft	0.04	1,700.00	0
Fast Food Restaurant with Drive Thru	2.00	1000sqft	0.05	2,000.00	0
Convenience Market With Gas Pumps	3.50	1000sqft	0.08	3,500.00	0
Gasoline/Service Station	8.00	Pump	0.10	4,463.00	0
Strip Mall	6.25	1000sqft	0.14	6,250.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.4	**Precipitation Freq (Days)**	28
Climate Zone	10			**Operational Year**	2020
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	534.36	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Beaumont Commercial Development Project - Construction and Operations
CO2 intensity factor adjusted based on Renewable Portfolio Standard
Operational on-site emissions for comparison to Localized Significant Thresholds (LSTs)

Land Use - Based on site plan and project description

Construction Phase - Operational run only

Off-road Equipment - Zeroed out construction equipment

Vehicle Trips - Trip rates based on information presented in the traffic report prepared for the project (David Evans and Associates 2018). Trip lengths updated to 0.1 mile to account for on-site emissions from mobile sources.

Construction Off-road Equipment Mitigation - Compliance with SCAQMD Rule 403

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstructionPhase	NumDays	10.00	1.00
tblLandUse	LandUseSquareFeet	20,050.00	20,047.00
tblLandUse	LandUseSquareFeet	1,129.40	4,463.00
tblLandUse	LotAcreage	0.03	0.10
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblProjectCharacteristics	CO2IntensityFactor	702.44	534.36
tblVehicleTrips	CC_TL	8.40	0.10
tblVehicleTrips	CC_TL	8.40	0.10
tblVehicleTrips	CC_TL	8.40	0.10
tblVehicleTrips	CNW_TL	6.90	0.10
tblVehicleTrips	CNW_TL	6.90	0.10
tblVehicleTrips	CNW_TL	6.90	0.10
tblVehicleTrips	CW_TL	16.60	0.10
tblVehicleTrips	CW_TL	16.60	0.10
tblVehicleTrips	CW_TL	16.60	0.10
tblVehicleTrips	DV_TP	21.00	0.00
tblVehicleTrips	DV_TP	27.00	0.00
tblVehicleTrips	DV_TP	40.00	0.00
tblVehicleTrips	PB_TP	50.00	0.00
tblVehicleTrips	PB_TP	59.00	0.00
tblVehicleTrips	PB_TP	15.00	0.00
tblVehicleTrips	PR_TP	29.00	100.00

tblVehicleTrips	PR_TP	14.00	100.00
tblVehicleTrips	PR_TP	45.00	100.00
tblVehicleTrips	ST_TR	1,448.33	0.00
tblVehicleTrips	ST_TR	722.03	554.51
tblVehicleTrips	ST_TR	168.56	369.65
tblVehicleTrips	ST_TR	42.04	41.51
tblVehicleTrips	SU_TR	1,182.08	0.00
tblVehicleTrips	SU_TR	542.72	425.32
tblVehicleTrips	SU_TR	168.56	369.65
tblVehicleTrips	SU_TR	20.43	18.99
tblVehicleTrips	WD_TR	845.60	0.00
tblVehicleTrips	WD_TR	496.12	423.86
tblVehicleTrips	WD_TR	168.56	369.65
tblVehicleTrips	WD_TR	44.32	33.98

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.4371	1.2000e-004	0.0125	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0265	0.0265	7.0000e-005		0.0283
Energy	0.0348	0.3165	0.2659	1.9000e-003		0.0241	0.0241		0.0241	0.0241		379.8150	379.8150	7.2800e-003	6.9600e-003	382.0720
Mobile	6.2507	42.1996	27.8326	0.0582	0.4090	0.0473	0.4563	0.1095	0.0443	0.1537		6,048.2912	6,048.2912	1.5177		6,086.2331
Total	**6.7226**	**42.5162**	**28.1109**	**0.0601**	**0.4090**	**0.0714**	**0.4804**	**0.1095**	**0.0683**	**0.1778**		**6,428.1327**	**6,428.1327**	**1.5250**	**6.9600e-003**	**6,468.3334**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.4371	1.2000e-004	0.0125	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0265	0.0265	7.0000e-005		0.0283
Energy	0.0348	0.3165	0.2659	1.9000e-003		0.0241	0.0241		0.0241	0.0241		379.8150	379.8150	7.2800e-003	6.9600e-003	382.0720
Mobile	6.2507	42.1996	27.8326	0.0582	0.4090	0.0473	0.4563	0.1095	0.0443	0.1537		6,048.2912	6,048.2912	1.5177		6,086.2331
Total	**6.7226**	**42.5162**	**28.1109**	**0.0601**	**0.4090**	**0.0714**	**0.4804**	**0.1095**	**0.0683**	**0.1778**		**6,428.1327**	**6,428.1327**	**1.5250**	**6.9600e-003**	**6,468.3334**

	ROG	NOx	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**

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	6.2507	42.1996	27.8326	0.0582	0.4090	0.0473	0.4563	0.1095	0.0443	0.1537		6,048.2912	6,048.2912	1.5177		6,086.2331
Unmitigated	6.2507	42.1996	27.8326	0.0582	0.4090	0.0473	0.4563	0.1095	0.0443	0.1537		6,048.2912	6,048.2912	1.5177		6,086.2331

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Convenience Market With Gas Pumps	0.00	0.00	0.00		
Fast Food Restaurant with Drive Thru	720.56	942.67	723.04	27,396	27,396
Fast Food Restaurant with Drive Thru	847.72	1,109.02	850.64	32,231	32,231
Gasoline/Service Station	2,957.20	2,957.20	2957.20	107,642	107,642
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Parking Lot	0.00	0.00	0.00		
Strip Mall	212.38	259.44	118.69	7,488	7,488
Total	4,737.86	5,268.32	4,649.57	174,757	174,757

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
Convenience Market With Gas Pumps	16.60	8.40	6.90	0.80	80.20	19.00	14	21	65
Fast Food Restaurant with Drive Thru	0.10	0.10	0.10	2.20	78.80	19.00	100	0	0
Fast Food Restaurant with Drive Thru	0.10	0.10	0.10	2.20	78.80	19.00	100	0	0
Gasoline/Service Station	0.10	0.10	0.10	2.00	79.00	19.00	100	0	0
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Strip Mall	0.10	0.10	0.10	16.60	64.40	19.00	100	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Convenience Market With Gas Pumps	0.538064	0.038449	0.184390	0.122109	0.017402	0.005339	0.017250	0.067711	0.001365	0.001213	0.004629	0.000959	0.001120
Fast Food Restaurant with Drive Thru	0.538064	0.038449	0.184390	0.122109	0.017402	0.005339	0.017250	0.067711	0.001365	0.001213	0.004629	0.000959	0.001120
Gasoline/Service Station	0.538064	0.038449	0.184390	0.122109	0.017402	0.005339	0.017250	0.067711	0.001365	0.001213	0.004629	0.000959	0.001120
Other Asphalt Surfaces	0.538064	0.038449	0.184390	0.122109	0.017402	0.005339	0.017250	0.067711	0.001365	0.001213	0.004629	0.000959	0.001120
Other Non-Asphalt Surfaces	0.538064	0.038449	0.184390	0.122109	0.017402	0.005339	0.017250	0.067711	0.001365	0.001213	0.004629	0.000959	0.001120
Parking Lot	0.538064	0.038449	0.184390	0.122109	0.017402	0.005339	0.017250	0.067711	0.001365	0.001213	0.004629	0.000959	0.001120
Strip Mall	0.538064	0.038449	0.184390	0.122109	0.017402	0.005339	0.017250	0.067711	0.001365	0.001213	0.004629	0.000959	0.001120

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0348	0.3165	0.2659	1.9000e-003		0.0241	0.0241		0.0241	0.0241		379.8150	379.8150	7.2800e-003	6.9600e-003	382.0720
NaturalGas Unmitigated	0.0348	0.3165	0.2659	1.9000e-003		0.0241	0.0241		0.0241	0.0241		379.8150	379.8150	7.2800e-003	6.9600e-003	382.0720

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					
Convenience Market With Gas Pumps	21.2877	2.3000e-004	2.0900e-003	1.7500e-003	1.0000e-005		1.6000e-004	1.6000e-004		1.6000e-004	1.6000e-004		2.5044	2.5044	5.0000e-005	5.0000e-005	2.5193
Fast Food Restaurant with Drive Thru	1273.56	0.0137	0.1249	0.1049	7.5000e-004		9.4900e-003	9.4900e-003		9.4900e-003	9.4900e-003		149.8301	149.8301	2.8700e-003	2.7500e-003	150.7205
Fast Food Restaurant with Drive Thru	1498.3	0.0162	0.1469	0.1234	8.8000e-004		0.0112	0.0112		0.0112	0.0112		176.2708	176.2708	3.3800e-003	3.2300e-003	177.3182
Gasoline/Service Station	397.268	4.2800e-003	0.0390	0.0327	2.3000e-004		2.9600e-003	2.9600e-003		2.9600e-003	2.9600e-003		46.7374	46.7374	9.0000e-004	8.6000e-004	47.0152
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Strip Mall	38.0137	4.1000e-004	3.7300e-003	3.1300e-003	2.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004		4.4722	4.4722	9.0000e-005	8.0000e-005	4.4988
Total		**0.0348**	**0.3165**	**0.2659**	**1.8900e-003**		**0.0241**	**0.0241**		**0.0241**	**0.0241**		**379.8150**	**379.8150**	**7.2900e-003**	**6.9700e-003**	**382.0720**

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					
Convenience Market With Gas Pumps	0.0212877	2.3000e-004	2.0900e-003	1.7500e-003	1.0000e-005		1.6000e-004	1.6000e-004		1.6000e-004	1.6000e-004		2.5044	2.5044	5.0000e-005	5.0000e-005	2.5193
Fast Food Restaurant with Drive Thru	1.27356	0.0137	0.1249	0.1049	7.5000e-004		9.4900e-003	9.4900e-003		9.4900e-003	9.4900e-003		149.8301	149.8301	2.8700e-003	2.7500e-003	150.7205
Fast Food Restaurant with Drive Thru	1.4983	0.0162	0.1469	0.1234	8.8000e-004		0.0112	0.0112		0.0112	0.0112		176.2708	176.2708	3.3800e-003	3.2300e-003	177.3182
Gasoline/Service Station	0.397268	4.2800e-003	0.0390	0.0327	2.3000e-004		2.9600e-003	2.9600e-003		2.9600e-003	2.9600e-003		46.7374	46.7374	9.0000e-004	8.6000e-004	47.0152
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Strip Mall	0.0380137	4.1000e-004	3.7300e-003	3.1300e-003	2.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004		4.4722	4.4722	9.0000e-005	8.0000e-005	4.4988
Total		**0.0348**	**0.3165**	**0.2659**	**1.8900e-003**		**0.0241**	**0.0241**		**0.0241**	**0.0241**		**379.8150**	**379.8150**	**7.2900e-003**	**6.9700e-003**	**382.0720**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.4371	1.2000e-004	0.0125	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0265	0.0265	7.0000e-005		0.0283
Unmitigated	0.4371	1.2000e-004	0.0125	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0265	0.0265	7.0000e-005		0.0283

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0518					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.3841					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.1700e-003	1.2000e-004	0.0125	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0265	0.0265	7.0000e-005		0.0283
Total	**0.4371**	**1.2000e-004**	**0.0125**	**0.0000**		**4.0000e-005**	**4.0000e-005**		**4.0000e-005**	**4.0000e-005**		**0.0265**	**0.0265**	**7.0000e-005**		**0.0283**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0518					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.3841					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.1700e-003	1.2000e-004	0.0125	0.0000		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005		0.0265	0.0265	7.0000e-005		0.0283
Total	**0.4371**	**1.2000e-004**	**0.0125**	**0.0000**		**4.0000e-005**	**4.0000e-005**		**4.0000e-005**	**4.0000e-005**		**0.0265**	**0.0265**	**7.0000e-005**		**0.0283**

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

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