6th STREET AND SPEAR AVENUE AFFORDABLE HOUSING PROJECT

AIR QUALITY and GREENHOUSE GAS STUDY

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EL CENTRO, CALIFORNIA

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6TH STREET AND SPEAR AVENUE AFFORDABLE HOUSING PROJECT, EL CENTRO, CALIFORNIA

AIR QUALITY and GREENHOUSE GAS STUDY

This report is an analysis of the potential air quality and greenhouse gas impacts associated with the proposed 6th Street and Spear Avenue Affordable Housing Project in the City of El Centro, Imperial County, California. This report has been prepared by Birdseye Planning Group (BPG) under contract to Chelsea Investment Corporation, Inc., to support preparation of the environmental documentation pursuant to the California Environmental Quality Act (CEQA).

PROJECT DESCRIPTION

The applicant, Chelsea Investment Corporation, proposes to develop a 288-unit affordable housing project on a 12.90-acre parcel (APN 053- 740-040). The parcel is zoned CT-Tourist Commercial and will require a rezone to R3 - Multiple Family Residential to accommodate the project. A General Plan Amendment from Tourist Commercial to High Density Residential is also necessary to achieve consistency with the General Plan. A tentative subdivision map is also proposed to create a total of 5 parcels. Parcel 1 would be 2,65 acres; Parcel 2 would 2.69 acres, Parcel 3 would be 2.91 acres and Parcel 4 would be 2.88 acres. These parcels would accommodate the four proposed project phases. Parcel 5 would be 1.13 acres and accommodate the stormwater detention basin.

The project would be constructed in four phases on Parcels 1-4. Each phase would provide 72 units in three buildings (24 units per building). Each building would provide seven one-bedroom/one bathroom, eleven two-bedroom/one bathroom and six three bedroom/two bathroom units in three stories with eight units per floor. A total of 520 parking spaces would be provided for the entire project. A 2,133 square foot community building and 193 square foot laundry facility would be constructed for each phase. A stormwater retention basin would be located within Parcel 5 along the western site boundary. Each phase would include development of community amenities including a sport court, barbeque area, open space/turf area and tot lot.

The primary site access would be provided via an extension of Spears Avenue east along the southern project frontage from the intersection with 6th Street. The two-lane access driveway would extend north from Spears Avenue into a cul-de-sac that would provide access to each of the four parking areas. A secondary emergency vehicle access would be provided to/from 6th Street at the northwest corner of the site

Construction of Phase 1 is expected to begin in early 2024 and be completed by late 2025 (approximately 18 months). Construction will likely be phased based on demand; however, for the purpose of this evaluation, construction of the entire project is expected to occur at the same time. The project site is shown in Figure 1. The site plan is shown in Figure 2.

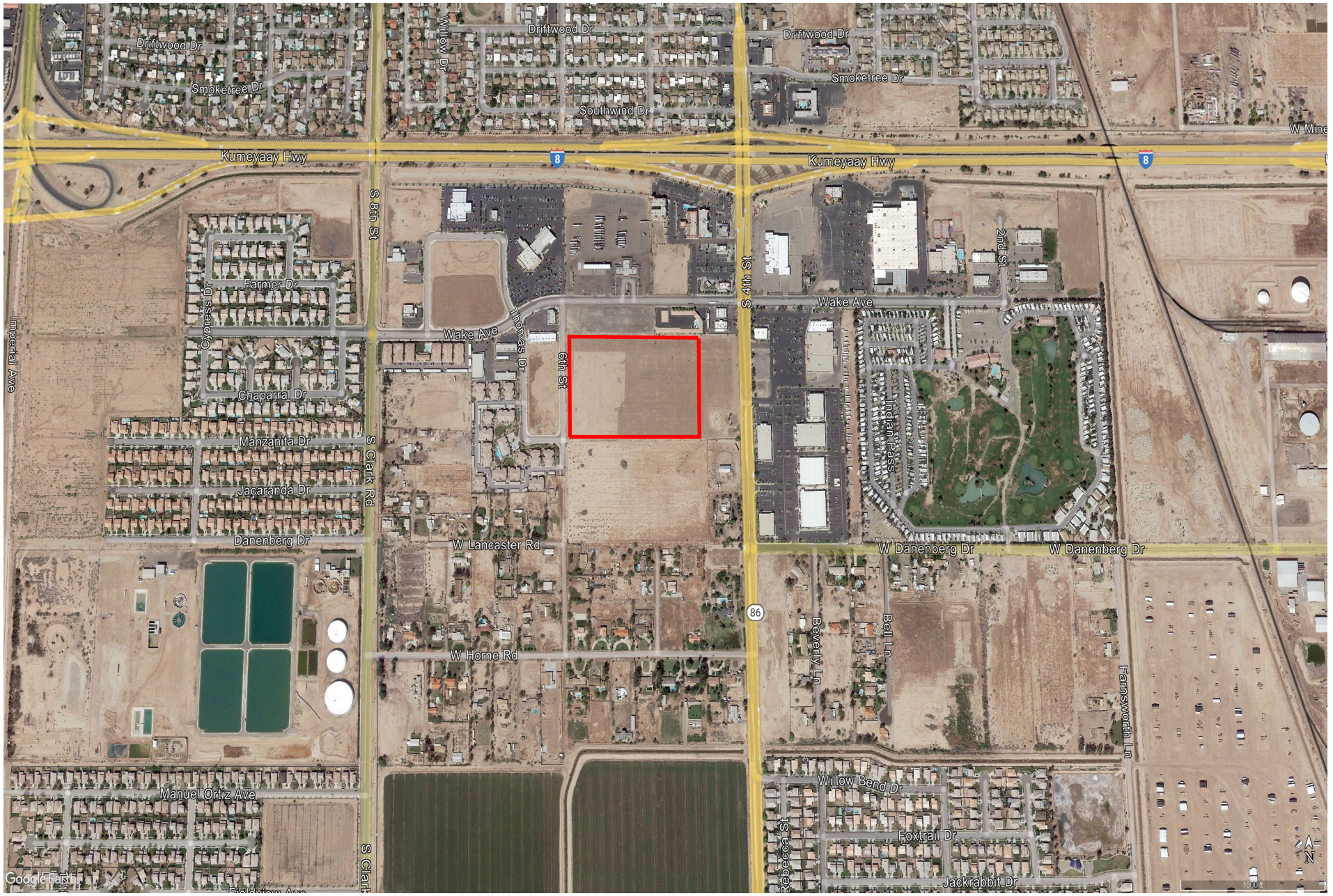

Figure 1 — Vicinity Map ▭ **- Project Site**

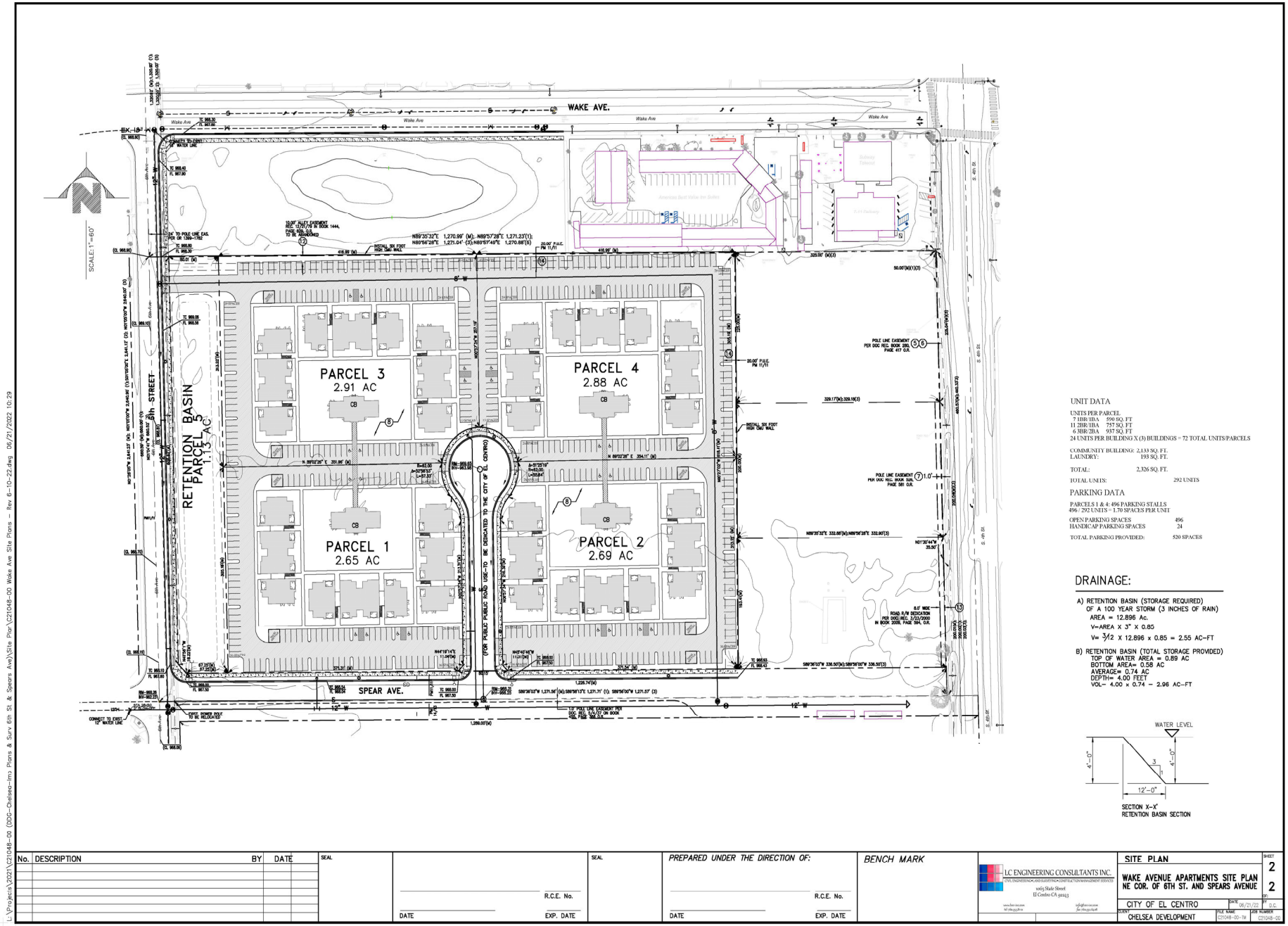

Figure 2—Site Plan

SETTING

Air Pollution Regulation

The federal and state governments have been empowered by the federal and state Clean Air Acts to regulate emissions of airborne pollutants and have established ambient air quality standards for the protection of public health. The EPA is the federal agency designated to administer air quality regulation, while the California Air Resources Board (ARB) is the state equivalent in California. Federal and state standards have been established for six criteria pollutants, including ozone (O_3), carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), particulates less than 10 and 2.5 microns in diameter (PM_{10} and $PM_{2.5}$), and lead (Pb). California has also set standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles. Table 1 lists the current federal and state standards for each of these pollutants. Standards have been set at levels intended to be protective of public health. California standards are generally more restrictive than federal standards for each of these pollutants except lead and the eight-hour average for CO.

Table 1
State and Federal Ambient Air Quality Standards

POLLUTANT	AVERAGE TIME	CALIFORNIA STANDARDS[1]		NATIONAL STANDARDS[2]		
		Concentration[3]	Method[4]	Primary[3, 5]	Secondary[3, 6]	Method[7]
Ozone[8] (O_3)	1 hour	0.09 ppm (180 µg/m³)	Ultraviolet Photometry	—	Same as Primary Standard	Ultraviolet Photometry
	8 hours	0.070 ppm (137µg/m³)		0.070 ppm (137 µg/m³)		
Carbon Monoxide (CO)	8 hours	9.0 ppm (10 mg/m³)	Non-Dispersive Infrared Spectroscopy (NDIR)	9 ppm (10 mg/m³)	--	Non-Dispersive Infrared Spectroscopy (NDIR)
	1 hour	20 ppm (23 mg/m³)		35 ppm (40 mg/m³)		
Nitrogen Dioxide (NO_2)[10]	Annual Average	0.030 ppm (57 µg/m³)	Gas Phase Chemiluminescence	0.053 ppm (100 µg/m³)	Same as Primary Standard	Gas Phase Chemiluminescence
	1 hour	0.18 ppm (339 µg/m³)		100 ppb (188 µg/m³)	--	
Sulfur Dioxide (SO_2)[11]	Annual Average	--	Ultraviolet Fluorescence	0.03 ppm (80 µg/m³)	--	Pararosaniline
	24 hours	0.04 ppm (105 µg/m³)		0.14 ppm (365 µg/m³)	--	
	3 hours	--		--	0.5 ppm (1300 µg/m³)	
	1 hour	0.25 ppm (655 µg/m³)		75 ppb (196 µg/m³)	--	

POLLUTANT	AVERAGE TIME	CALIFORNIA STANDARDS[1]		NATIONAL STANDARDS[2]		
		Concentration[3]	Method[4]	Primary[3, 5]	Secondary[3, 6]	Method[7]
Respirable Particulate Matter (PM_{10})[9]	24 hours	50 µg/m³	Gravimetric or Beta Attenuation	150 µg/m³	150 µg/m³	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m³		--	--	
Fine Particulate Matter ($PM_{2.5}$)[9]	Annual Arithmetic Mean	12 µg/m³	Gravimetric or Beta Attenuation	12 µg/m³	15 µg/m³	Inertial Separation and Gravimetric Analysis
	24 hours	--		35 µg/m³	Same as Primary Standard	
Sulfates	24 hours	25 µg/m³	Ion Chromatography	--	--	--
Lead[12, 13] (Pb)	30-day Average	1.5 µg/m³	Atomic Absorption	--	--	High Volume Sampler and Atomic Absorption
	Calendar Quarter	--		1.5 µg/m³	Same as Primary Standard	
	3-month Rolling Average	--		0.15 µg/m³		
Hydrogen Sulfide (H_2S)	1 hour	0.03 ppm (42 µg/m³)	Ultraviolet Fluorescence	--	--	--
Vinyl Chloride[12]	24 hours	0.010 ppm (26 µg/m³)	Gas Chromatography	--	--	--

Notes:

ppm = parts per million
µg/m³ = micrograms per cubic meter
mg/m³ = milligrams per cubic meter
Source: California Air Resources Board 2017

1. California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, and particulate matter (PM_{10}, $PM_{2.5}$, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.
2. National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM_{10}, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m³ is equal to or less than one. For $PM_{2.5}$, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact the U.S. EPA for further clarification and current national policies.
3. Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air

quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.

4. Any equivalent measurement method which can be shown to the satisfaction of the CARB to give equivalent results at or near the level of the air quality standard may be used.
5. National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.
6. National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.
7. Reference method as described by the U.S. EPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the U.S. EPA.
8. On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.
9. On December 14, 2012, the national annual $PM_{2.5}$ primary standard was lowered from 15 μg/ m^3 to 12.0 μg/ m^3. The existing national 24-hour $PM_{2.5}$ standards (primary and secondary) were retained at 35 μg/ m^3, as was the annual secondary standard of 15 μg/ m^3. The existing 24-hour PM_{10} standards (primary and secondary) of 150 μg/ m^3 also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.
10. To attain the 1-hour 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 ppb. Note that the national 1-hour standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national 1-hour standard to the California standards the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.
11. 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.

    Note that the 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.
12. The CARB 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.
13. The national standard for lead was revised on October 15, 2008 to a rolling 3-month average. The 1978 lead standard (1.5 μg/ m^3 as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.
14. In 1989, the CARB 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.

Local control in air quality management is provided by the ARB through county-level or regional (multi-county) APCDs. The ARB establishes air quality standards and is responsible for control of mobile emission sources, while the local APCDs are responsible for enforcing standards and regulating stationary sources. The ARB has established 14 air basins statewide.

The project site is located within the Salton Sea Air Basin (Basin), which includes all of Imperial County and a portion of central Riverside County. Air quality conditions in the Imperial County portion of the Basin are under the jurisdiction of the Imperial County APCD (ICAPCD). The remainder in Riverside County is managed by the South Coast Air Quality Management District. The ICAPCD is required to monitor air pollutant levels to ensure that air quality standards are met and, if they are not met, to develop strategies to meet the standards. Depending on whether the standards are met or exceeded, the local air basin is classified as being in "attainment" or "non-attainment." Table 2 shows the attainment status for the Salton Sea Air Basin.

Table 2
Imperial County Air Quality Standard Attainment Status

Pollutant	CAAQS	NAAQS
Ozone (O_3)	Nonattainment	Nonattainment - Moderate
Carbon Monoxide (CO)	Attainment	Unclassified/Attainment
Respirable Particulate Matter (PM_{10})	Nonattainment	Nonattainment - Serious
Fine Particulate Matter ($PM_{2.5}$)(1)	Unclassified(2)	Unclassified/Attainment
Nitrogen Dioxide (NO_2)	Attainment	Unclassified/Attainment
Lead (Pb)	Attainment	Attainment
Sulfur Dioxide (SO_2)	Attainment	Attainment
Sulfates	Attainment	No Federal Standards
Vinyl Chloride	Unclassified	
Hydrogen Sulfide (H_2S)	Attainment	
Visibility Reducing Particles	Unclassified	

Source: County of Imperial, September, 2013
[1] Part of Imperial County is designated nonattainment for the NAAQS; however, the nonattainment area does not include the project location
[2] Insufficient data to designate area or designations have yet to be made

The Basin in which the project area is located, is designated non-attainment area for the federal and state standards for ozone and PM_{10}. The Basin is in attainment or unclassified for the remaining pollutants. Characteristics of the pollutants referenced above are described below.

Ozone. Ozone is produced by a photochemical reaction (triggered by sunlight) between nitrogen oxides (NO_X) and reactive organic gases (ROG)[1]. Nitrogen oxides are formed during the combustion of fuels, while reactive organic compounds are formed during combustion and evaporation of organic solvents. Because ozone requires sunlight to form, it mostly occurs in concentrations considered serious between the months of April and October. Ozone is a pungent, colorless, toxic gas with direct health effects on humans including respiratory and eye irritation and possible changes in lung functions. Groups most sensitive to ozone include children, the elderly, people with respiratory disorders, and people who exercise strenuously outdoors.

[1] Organic compound precursors of ozone are routinely described by a number of variations of three terms: hydrocarbons (HC), organic gases (OG), and organic compounds (OC). These terms are often modified by adjectives such as total, reactive, or volatile, and result in a rather confusing array of acronyms: HC, THC (total hydrocarbons), RHC (reactive hydrocarbons), TOG (total organic gases), ROG (reactive organic gases), TOC (total organic compounds), ROC (reactive organic compounds), and VOC (volatile organic compounds). While most of these differ in some significant way from a chemical perspective, from an air quality perspective two groups are important: non-photochemically reactive in the lower atmosphere, or photochemically reactive in the lower atmosphere (HC, RHC, ROG, ROC, and VOC).

Carbon Monoxide. Carbon monoxide is a local pollutant that is found in high concentrations only near the source. The major source of carbon monoxide, a colorless, odorless, poisonous gas, is automobile traffic. Elevated concentrations, therefore, are usually only found near areas of high traffic volumes. Carbon monoxide's health effects are related to its affinity for hemoglobin in the blood. At high concentrations, carbon monoxide reduces the amount of oxygen in the blood, causing heart difficulties in people with chronic diseases, reduced lung capacity and impaired mental abilities.

Nitrogen Dioxide. Nitrogen dioxide (NO_2) is a by-product of fuel combustion, with the primary source being motor vehicles and industrial boilers and furnaces. The principal form of nitrogen oxide produced by combustion is nitric oxide (NO), but NO reacts rapidly to form NO_2, creating the mixture of NO and NO_2 commonly called NO_X. Nitrogen dioxide is an acute irritant. A relationship between NO_2 and chronic pulmonary fibrosis may exist, and an increase in bronchitis in young children at concentrations below 0.3 parts per million (ppm) may occur. Nitrogen dioxide absorbs blue light and causes a reddish brown cast to the atmosphere and reduced visibility. It can also contribute to the formation of PM_{10} and acid rain.

Suspended Particulates. PM_{10} is particulate matter measuring no more than 10 microns in diameter, while $PM_{2.5}$ is fine particulate matter measuring no more than 2.5 microns in diameter. Suspended particulates are mostly dust particles, nitrates and sulfates. Both PM_{10} and $PM_{2.5}$ are by-products of fuel combustion and wind erosion of soil and unpaved roads, and are directly emitted into the atmosphere through these processes. Suspended particulates are also created in the atmosphere through chemical reactions. The characteristics, sources, and potential health effects associated with the small particulates (those between 2.5 and 10 microns in diameter) and fine particulates ($PM_{2.5}$) can be very different. The small particulates generally come from windblown dust and dust kicked up from mobile sources. The fine particulates are generally associated with combustion processes as well as being formed in the atmosphere as a secondary pollutant through chemical reactions. Fine particulate matter is more likely to penetrate deeply into the lungs and poses a health threat to all groups, but particularly to the elderly, children, and those with respiratory problems. More than half of the small and fine particulate matter that is inhaled into the lungs remains there. These materials can damage health by interfering with the body's mechanisms for clearing the respiratory tract or by acting as carriers of an absorbed toxic substance.

Lead (Pb). Lead is a naturally occurring metal used in a variety of industrial and commercial applications. Historically, the majority of lead emissions were attributed to automobiles using leaded gasoline. As leaded gasoline has been phased out of use, lead emissions have dropped dramatically, and current primary sources are ore processing and aircraft that use leaded aircraft fuel. Lead exposure has been associated with learning disabilities and behavioral problems in children, kidney damage, and negative effects on the nervous and cardiovascular systems.

Sulfur Dioxide (SO_2). SO_2 is one of several highly reactive gasses known as oxides of sulfur (SOx) and is formed by burning fuel containing sulfur. Typical sources include emissions from

burning coal or oil at power plants and factories. Typical health effects associated with exposure to sulfur dioxide include respiratory illness and exacerbation of respiratory symptoms in people with asthma.

Sulfates. Sulfates are the fully oxidized ionic form of sulfur produced when sulfur dioxide is fully oxidized in the atmosphere. Sulfates are produced by emissions from automobiles, power plants, and industrial activity, and contribute to general atmospheric haziness. Typical health effects associated with exposure to sulfates include respiratory illness and an increased risk of cardio-pulmonary disease.

Vinyl Chloride. Vinyl chloride is an artificially created colorless gas with a mild, slightly sweet odor. The gas is used in the manufacture of vinyl products, including polyvinyl chloride (PVC) plastic. Vinyl chloride emissions are produced from the vinyl manufacturing process as well as from the breakdown of vinyl products in landfills and hazardous waste sites. The health effects associated with vinyl chloride include dizziness, headaches, and drowsiness from shortterm exposure, and liver damage and cancer resulting from long-term exposure. In 1990, the California Air Resources Board (CARB) designated vinyl chloride as a toxic air contaminant.

Hydrogen Sulfide (H_2S). H_2S is a naturally occurring, colorless gas that, at low concentrations, produces a distinctive rotten egg odor. At higher concentrations, the gas produces a sweet odor. The gas is produced through the bacteriological breakdown of organic materials as well as some types of geothermal activity. Health effects associated with H2S include exposure to a disagreeable odor, coughing, irritation to eyes, and impairment of the respiratory system.

Visibility Reducing Particles. Visibility reducing particles are particulate matter composed of many different substances that are suspended in the atmosphere and contribute to haze and diminished visibility.

Toxic Air Contaminants/Hazardous Air Pollutants. Toxic air contaminants (TACs), also known as hazardous air pollutants (HAPs), are a wide range of pollutants that may cause or contribute to an increase in deaths or in serious illness, or which may pose a present or potential hazards to human health (CARB 2010). Health effects associated with TACs, including cancer, are typically the result of acute or repeated exposure to these pollutants.

TACs are emitted from a number of different sources, including industrial sources (e.g., refining, manufacturing, utilities, and mining) commercial sources (e.g., gas stations and dry cleaners) and diesel-fueled vehicles. Currently, both the EPA and the State of California have recognized nearly 200 different contaminants as TACs/HAPs. CARB has identified 10 specific pollutants as posing the greatest risk to human health based on ambient background levels in the state. These pollutants include: acetaldehyde (CH3CHO), benzene (C6H6), 1,3-butadiene (C4H6), carbon tetrachloride (CCl4), hexavalent chromium, para-dichlorobenzene (C6H4Cl2), formaldehyde (CH2O), methylene chloride (CH2Cl2), perchloroethylene (C2Cl4), and diesel particulate matter (DPM). The potential TACs of most concern that are associated with the proposed project are benzene (C6H6) and diesel particulate matter (DPM).

Benzene (C6H6). Benzene is a colorless, flammable liquid with a pleasant, sweet odor that evaporates quickly when exposed to air. Benzene is produced naturally through geothermal processes, as a component of petroleum and natural gas, and as a byproduct of burning wood and other plant matter. Anthropomorphic sources of benzene include use as an ingredient in solvents and as an additive to gasoline.

Diesel Particulate Matter (DPM**).** DPM is produced by the combustion of diesel fuel and is composed of a mixture of various gases and fine particulate matter (i.e., soot). CARB recognized the particulate matter in DPM as a TAC in 1998 based on its potential to cause cancer and contribute to other adverse health effects (CARB 2011). This TAC is the most prevalent of the 10 specific pollutants identified by CARB and poses the greatest health risk.

Odors. Odors are generally considered a nuisance rather than a health hazard, and can lead to discomfort and distress among the general public. However, as the human nose is the only means by which odors can be detected, the ability to identify and qualify odors is highly subjective. Some people have a greater ability to detect odors from minute emissions of odor causing substances and may take offense at certain odors that are unnoticeable or considered pleasant by others. In addition, regular exposure to odor may cause desensitization, resulting in "odor fatigue," whereby once recognized odors go unnoticed unless there is a change in the odor's intensity. Odors produced as a result of geothermal energy production can include the sulfurous, rotten egg smell characteristic of emissions of hydrogen sulfide (H2S). Ammonia (NH3) is also produced and has a sharp and irritating odor. The combustion of diesel fuel to power construction or operations related equipment can produce odors due to the sulfur content of diesel fuel.

Regional Climate and Local Air Quality

The proposed project is located in Imperial County, the southeastern most county in California. Imperial County is one of the hottest and driest parts of California and is located in a low latitude desert characterized by hot, dry summers and relatively mild winters. Average annual precipitation within Imperial County is less than 3 inches. The normal maximum temperature in January is approximately 70 degrees Fahrenheit (°F), and the normal minimum temperature is approximately 41°F. In July, the normal maximum temperature can exceed 107°F, while the normal minimum temperature is approximately 75°F. Relative humidity in the summer is low, averaging 30 to 50 percent in the early morning and 10 to 20 percent in the afternoon. During the hottest part of the day, the relative humidity can drop below 10 percent. However, the effect of extensive agricultural operations in the widely-irrigated Imperial Valley tends to increase local humidity. The prevailing weather conditions promote intense heating during the day in summer with cooling at night. During the fall, winter, and spring, regional winds tend to come from the northwest. During the summer, winds tend to come from the southeast.

The ICAPCD operates a network of 5 ambient air monitoring stations throughout Imperial County. The purpose of the monitoring stations is to measure ambient concentrations of the pollutants to determine whether the ambient air quality meets the California and federal

standards. The air quality monitoring station located nearest to the project site is located at 150 9th Street in El Centro, approximately 2.0 miles northwest of the project site. Table 3 provides a summary of monitoring data at the El Centro for ozone and PM_{10}. As referenced, the Salton Sea Basin is a nonattainment area for these two pollutants. $PM_{2.5}$ data are also provided for reference purposes.

Both CARB and USEPA use this type of monitoring data to designate areas according to their attainment status for criteria air pollutants. The purpose of these designations is to identify the areas with air quality problems and thereby initiate planning efforts for improvement. The three basic designation categories are nonattainment, attainment, and unclassified. Unclassified is used in an area that cannot be classified on the basis of available information as meeting or not meeting the standards. If an area is redesignated from nonattainment to attainment, the CAA requires a revision to the SIP, called a maintenance plan, to demonstrate how the air quality standard will be maintained for 10 years.

Table 3
Ambient Air Quality Data

Pollutant	2019	2020	2021
Ozone, ppm - Worst Hour	0.071	0.077	0.083
Number of days of Federal exceedances (>0.070 ppm)*	1	2	6
Particulate Matter <10 microns, μg/m3 Worst 24 Hours	130	197.7	186.9
Number of samples of State exceedances (>50 μg/m3)	53	92	88
Number of samples of Federal exceedances (>150 μg/m3)	0	2	1
Particulate Matter <2.5 microns, μg/m3 Worst 24 Hours	21.4	28.5	19.1
Number of samples of State exceedances (>50 μg/m3)	*	*	*
Number of samples of Federal exceedances (>150 μg/m3)	0	0	0

Data obtained from the monitoring site located at 150 North 9th Street, El Centro, CA.
Source: California Air Resources Board, 2019, 2020, 2021 Annual Air Quality Data Summaries available at https://www.arb.ca.gov/adam/topfour/topfour2.php

As shown, the state ozone standard was exceeded at the El Centro monitoring station during each of the last three years. The state PM_{10} standard was exceeded 92 times during 2020. This was the highest number of annual exceedances during the three years reports. The federal PM_{10} standard was exceeded twice in 2020 and one time in 2021. No $PM_{2.5}$ exceedances were reported.

Air Quality Management Plan

ICAPCD is the local air pollution control agency for Imperial County and the southern portion of the Salton Sea Air Basin. The ICAPCD has primary responsibility for ensuring that state and federal air quality standards are attained and maintained within the ICAPCD's jurisdiction. Thus, the ICAPCD is responsible for preparing clean air plans, issuing construction and operation permits, monitoring ambient air quality, as well as developing and implementing

rules and regulations that govern air quality within Imperial County. The ICAPCD meets its regulatory responsibilities through the State of California State Implementation Plan (SIP). The ICAPCD adopted its first SIP in 1971 and has prepared updates to the SIP over the years. SIPs for controlling PM_{10}, ozone, and a reasonably available control technology SIP are in place for Imperial County and constitute the Air Quality Attainment Plan (AQAP) for Imperial County.

A SIP revision for revised rules under ICAPCD Regulation VIII for fugitive dust PM_{10} was reviewed by EPA and the final rule was signed on March 27, 2013 and published in the Federal Register (Federal Register 2013). The ICAPCD adopted the rules on October 16, 2012 to regulate PM_{10} emissions from sources of fugitive dust (e.g., unpaved roads and disturbed soils in open and agricultural areas). CARB submitted these rules to EPA for approval on November 7, 2012; EPA proposed approval of these revisions to the ICAPCD portion of the California SIP on January 7, 2013. Rules and regulations promulgated by the ICAPCD and in the SIP revision applicable to the proposed project include the following:

- ICAPCD Rule 207.C.1, New and Modified Stationary Source Review (best available control technologies [BACT]), requires that any new or modified emissions unit that has a potential to emit 25 pounds per day or more of any nonattainment pollutant or its precursors, or 55 pounds per day of H_2S, must include BACT as a part of the project.

- ICAPCD Rule 400, Nuisances, forbids the emission of air contaminants or other materials that would cause a nuisance to the public, including non-agricultural related odors.
- ICAPCD Rule 800 General Requirements for Control of Fine Particulate Matter (PM-10), requires actions to prevent, reduce, or mitigate PM-10 emissions from anthropogenic (man-made) Fugitive Dust (PM-10) sources generated within Imperial County.

- ICAPCD Regulation VIII, Rule 801 (Construction and Earthmoving Activities) establishes a 20 percent opacity limit, requires the implementation of a dust management control plan for all nonresidential projects of 5 acres or more, and requires compliance with other portions of Regulation VIII regarding bulk materials (Rule 802), carry-out and track-out (Rule 803), and paved and unpaved roads (Rule 805). The rule exempts single-family homes and waives the 20 percent opacity limit in winds over 25 miles per hour (mph) under certain conditions. To comply with this reguation, the applicant would implement Mitigation Measure AQ-1 which requires preparation of a Fugitive Dust Suppression Plan to minimize dust generated during construction and ground disturbing activities.

- ICAPCD Rule 804 Open Areas, requires actions to prevent, reduce or mitigate the amount of fine Particulate Matter (PM-10) emissions generated from Open Areas. Open areas are defined as any open area having 0.5 acres or more within urban areas, or 3.0

acres or more within rural areas; and contains at least 1,000 square feet of disturbed surface area.

ICAPCD adopted the 2013 $PM_{2.5}$ plan on December 2, 2014. The plan was transmitted to CARB on December 9, 2014. CARB reviewed and approved the plan on December 18, 2015, as a revision to the California State Implementation Plan for Imperial County. The plan was submitted to the U.S. EPA on January 9, 2015, and is pending approval.

Sensitive Receptors

Ambient air quality standards have been established to represent the levels of air quality considered sufficient, with an adequate margin of safety, to protect public health and welfare. They are designed to protect that segment of the public most susceptible to respiratory distress, such as children under 14; the elderly over 65; persons engaged in strenuous work or exercise; and people with cardiovascular and chronic respiratory diseases. The nearest receptors are multifamily residences located approximately 400 feet west of 6th Street on the west side of Thomas Drive, west of the project site.

AIR QUALITY IMPACT ANALYSIS

Methodology and Significance Thresholds

This air quality analysis conforms to the methodologies recommended in the ICAPCDs *CEQA Air Quality Handbook* (amended November 2007). The handbook includes thresholds for emissions associated with both construction and operation of proposed projects. All emissions associated with construction vehicle and equipment operations were calculated using the California Emissions Estimator Model (CalEEMod) software version 2020.4.0. As referenced, construction emissions would be associated with clearing, grading, excavation and construction of the buildings, paving and application of architectural coatings (i.e., paint). These emissions would consist of diesel exhaust and dust emissions. Construction equipment that would generate criteria air pollutants includes excavators, graders, dump trucks, and loaders. It was assumed that all construction equipment used would be diesel-powered. Construction emissions associated with development of the proposed project by estimating the types of equipment (including the number) that would be used on-site during each of the construction phases and scope of improvements required to implement the project as defined herein.

To determine whether construction of the project would cause a regional air quality impact. The increase in emissions would be compared with the ICAPCD's recommended regional thresholds for operational emissions.

Regional Thresholds. Based on Appendix G of the *CEQA Guidelines*, a project would have a significant air quality impact if it would:

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

b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?

c) Expose sensitive receptors to substantial pollutant concentrations; or

d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

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

A project may be inconsistent with the SIP or related AQAP if it would generate population, housing, or employment growth exceeding forecasts used in the development of the AQAP. As referenced, the ICAPCD meets its regulatory responsibilities through the State of California SIP. The ICAPCD adopted its first SIP in 1971 and has prepared updates to the SIP over the years. SIPs for controlling PM_{10}, ozone, and a reasonably available control technology SIP are in place for Imperial County and constitute the AQAP for Imperial County.

The ICAPCD air quality plans aim to reduce emissions of criteria pollutants for which the region is in nonattainment by establishing a program of rules and regulations directed at reducing air pollutant emissions and achieving state and national air quality standards. The project proposal to amend the General Plan land use designation from Tourist Commercial to High-Medium Density Residential is consistent with this strategy.

The project is considered infill development, as it proposes to develop a residential property in a rapidly urbanizing area with proximal residential uses and commercial businesses and services along Wake Avenue, South 6th Street and South 4th Street. Thus, the project would be consistent with the definition of locational efficiency. Location efficiency describes the location of the project relative to the type of urban landscape within which it is developed. Therefore, the proposal to amend the project site General Plan land use designation from Tourist Commercial to High-Medium Density Residential would be consistent with ICAPCD strategies for integrating land use and transportation in a manner that reduces regional air emissions. Because the proposed project is required to comply with applicable ICAPCD rules, regulations, and requirements for controlling emissions and because maximum daily pollutant emissions projected to result from the project would be below ICAPCD significance thresholds, the project would not conflict with or obstruct implementation of any air quality plans. Impacts would be less than significant.

b. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?

New development with a potential to emit criteria pollutants below significance levels defined by the ICAPCD is referred to as a "Tier I project," and is considered by the Imperial County APCD to have less than significant potential adverse impacts on local air quality. For Tier I

projects, the project proponent should implement a set of feasible "standard" mitigation measures (determined by the Imperial County APCD) to reduce the air quality impacts to less than significant. A "Tier II project" is one whose emissions exceed any of the thresholds. Its impact is significant and the project proponent should select and implement all feasible "discretionary" mitigation measures (as determined by the Imperial County APCD) in addition to the standard measures. Tier I and Tier II thresholds are shown in Table 4.

Table 4
ICAPCD Tier I and Tier II Daily Operational Thresholds

Pollutant	Tier I	Tier II
NOx and ROG	Less than 137 lbs/day	Greater than 137 lbs/day
PM_{10} and SOx	Less than 150 lbs/day	Greater than 150 lbs/day
CO and $PM_{2.5}$	Less than 550 lbs/day	Greater than 550 lbs/day
ROG = reactive organic gas; NOX = oxides of nitrogen; CO = carbon monoxide; PM10 = particulate matter with an aerodynamic diameter 10 microns or less; lbs/day = pounds per day SOURCE: Imperial County APCD 2017		

The ICAPCD has developed specific quantitative thresholds that apply to short-term construction activities and project operation. The thresholds are shown in Table 5.

Table 5
ICAPCD Daily Emission Thresholds

Pollutant	Construction (pounds/day)	Operation (pounds/day)
Reactive Organic Gases	75	55
Nitrogen Oxide	100	55
Carbon Monoxide	550	550
Particulate Matter 10	150	150
Particulate Matter 2.5	N/A	55*
Sulfur Oxides	N/A	150

Source: ICAPCD CEQA Handbook, 2007
Note: The ICAPCD has not adopted a significance threshold for operational or construction related emission of PM2.5 or construction related emissions of SOx. Recent projects in the ICAPCD have used a PM2.5 threshold for operation emissions of 55 pounds per day based on the SCAQMD's Final Methodology to Calculate PM2.5 and PM2.5 Significance Thresholds (SCAQMD 2006).
NA = Construction thresholds for PM2.5 and SOx are not applicable.

Construction Emissions

Project construction would generate temporary air pollutant emissions. These impacts are associated with fugitive dust (PM_{10} and $PM_{2.5}$) and exhaust emissions from heavy construction vehicles. Construction would generally consist of site preparation, grading, construction of the building pads and internal parking areas. As described, the applicant is intending to construct Phase I first with future phases developed based on market demand. To conservatively estimate grading emissions and for fugitive dust control purposes, it was assumed that the entire site is graded and that all 288 units are constructed. For modeling purposes, it was assumed that all

spoils would be stored on-site and used for cover material; thus, no off-site haul trips would occur. Construction emission estimates are shown in Table 6.

Table 6
Estimated Maximum Daily Construction Emissions

Construction Phase	Maximum Emissions (lbs/day)					
	ROG	NO_x	CO	SOx	PM_{10}	$PM_{2.5}$
Project Construction – 2024	3.2	32.4	16.2	0.06	20.9	11.2
Project Construction - 2025	68.9	16.5	28.5	0.06	3.1	1.2
ICAPCD Regional Thresholds	*75*	*100*	*No Standard*	*550*	*150*	*No Standard*
Threshold Exceeded	**No**	**No**	**No**	**No**	**No**	**No**

The emissions shown in Table 6 are assume exposed soil areas would be watered twice daily to control fugitive dust emissions. To minimize fugitive dust and general construction emissions, the applicant would be required to implement fugitive dust control measures per ICAPCD Rules 801 and 804 as referenced herein. The fugitive dust control plan and related requirements to control fugitive dust emissions during construction are addressed as follows and assumed to be conditions of approval for the project:

> **AQ-1a:** Prior to commencing construction, the project applicant will be required to submit a Dust Control Plan to the ICAPCD for approval. The Dust Control Plan will identify all sources of PM_{10} emissions and associated mitigation measures during the construction and operational phases (see Rule 801 F.2). The applicant shall submit a "Construction Notification Form" to the ICAPCD 10 days prior to the commencement of any earthmoving activity. The Dust Control Plan submitted to the ICAPCD shall meet all applicable requirements for control of fugitive dust emissions, including the following measures designed to achieve the no greater than 20-percent opacity performance standard for dust control and address the following parameters:
>
> - All disturbed areas, including bulk material storage that is not being actively used, shall be effectively stabilized; and visible emissions shall be limited to no greater than 20-percent opacity for dust emissions by using water, chemical stabilizers, dust suppressants, tarps or other suitable material, such as vegetative groundcover. Bulk material is defined as earth, rock, silt, sediment, and other organic and/or inorganic material consisting of or containing particulate matter with 5 percent or greater silt content. For modeling purposes, it was assumed that watering would occur twice daily.
>
> - All on-site unpaved roads segments or areas used for hauling materials shall be effectively stabilized. Visible emissions shall be limited to no greater than 20 percent

opacity for dust emissions by restricting vehicle access, paving, application of chemical stabilizers, dust suppressants and/or watering.

- The transport of bulk materials on public roads shall be completely covered, unless 6 inches of freeboard space from the top of the container is maintained with no spillage and loss of bulk material. In addition, the cargo compartment of all haul trucks shall be cleaned and/or washed at the delivery site after removal of bulk material, prior to using the trucks to haul material on public roadways.

- All track-out or carry-out on paved public roads, which includes bulk materials that adhere to the exterior surfaces of motor vehicles and/or equipment (including tires) that may then fall onto the pavement, shall be cleaned at the end of each workday or immediately when mud or dirt extends a cumulative distance of 50 linear feet or more onto a paved road within an urban area.

- Movement of bulk material handling or transfer shall be stabilized prior to handling or at points of transfer with application of sufficient water, chemical stabilizers, or by sheltering or enclosing the operation and transfer line except where such material or activity is exempted from stabilization by the rules of ICAPCD.

AQ-1b: Each project proponent shall implement all applicable standard measures for construction combustion equipment for the reduction of excess NO_x emissions as contained in the Imperial County CEQA Air Quality Handbook and associated regulations. These measures include:

- Use alternative-fueled or catalyst-equipped diesel construction equipment, including all off-road and portable diesel-powered equipment.

- Minimize idling time, either by shutting equipment off when not in use or reducing the time of idling to five minutes at a maximum.

- Limit the hours of operation of heavy-duty equipment and/or the amount of equipment in use. Replace fossil-fueled equipment with electrically driven equivalents (assuming powered by a portable generator set and are available, cost effective, and capable of performing the task in an effective, timely manner).

- Curtail construction during periods of high ambient pollutant concentrations; this may include ceasing construction activity during the peak hour of vehicular traffic on adjacent roadways.

- Implement activity management (e.g., rescheduling activities to avoid overlap of construction phases, which would reduce short-term impacts).

With implementation of standard conditions AQ1a and AQ1b, construction related impacts would be less than significant. No mitigation would be required.

Long-Term Regional Impacts

Regional Pollutant Emissions

Table 7 summarizes emissions associated with operation of the 288-unit affordable housing project. The ICAPCD thresholds for ROG, NO_X, CO, SO_X, PM_{10} or $PM_{2.5}$ would not be exceeded. Therefore, the project's regional air quality impacts (including impacts related to criteria pollutants, sensitive receptors and violations of air quality standards) would be **less than significant**.

Table 7
Estimated Operational Emissions

*Full Build out (**288** units)*	**Estimated Emissions (lbs/day)**					
	ROG	**NO_X**	**CO**	**SO_X**	**PM_{10}**	**$PM_{2.5}$**
Area	7.9	0.3	23.7	0.01	0.13	0.13
Energy	0.12	1.1	0.4	0.01	0.08	0.08
Mobile	4.5	3.1	26.0	0.4	5.0	1.3
Total Daily Emissions	12.6	4.3	50.2	0.05	5.2	1.5
ICAPCD Thresholds	**55**	**55**	**550**	**150**	**150**	**55**
Threshold Exceeded?	**No**	**No**	**No**	**No**	**No**	**No**

Summer emissions shown.

c. Expose sensitive receptors to substantial pollutant concentrations

Carbon Monoxide Hotspot. The nearest receptors are multifamily residences located approximately 400 feet west of 6th Street on the west side of Thomas Drive, west of the project site. As shown in Tables 4 and 5, project construction and operation would not exceed ICAPCD pollutant thresholds. Pollutants generated during operation would be negligible.

A CO hotspot analysis is performed if an intersection meets one of the following criteria: 1) the intersection is at Level of Service (LOS) D or worse and where the project increases the volume to capacity ratio by 2 percent, or 2) the project decreases LOS at an intersection to D or worse. A CO hotspot is a localized concentration of CO that is above the state or national 1-hour or 8-hour CO ambient air standards. Localized CO "hotspots" can occur at intersections with heavy peak hour traffic. Specifically, hotspots can be created at intersections where traffic levels are sufficiently high such that the local CO concentration exceeds the federal AAQS of 35.0 parts per million (ppm) or the state AAQS of 20.0 ppm.

As discussed in the Traffic Impact Analysis (Linscott, Law and Greenspan Engineers, Inc., February 2022), the project would add 1,224 daily trips to cumulative conditions. The traffic analysis shows that with operation of the project in the cumulative condition, none of the intersections studied would be adversely affected. No adverse impact associated with CO hotspots would occur.

Construction-Related Toxic Air Contaminant Impacts. The greatest potential for toxic air contaminant emissions would be related to diesel particulate emissions associated with heavy equipment operations during construction of the proposed project. According to SCAQMD methodology, health effects from carcinogenic air toxics are usually described in terms of "individual cancer risk". The California Office of Environmental Health Hazard Assessment (OEHHA) health risk guidance states that a residential receptor should be evaluated based on a 30-year exposure period. "Individual Cancer Risk" is the likelihood that a person exposed to concentrations of toxic air contaminants over a 70-year lifetime will contract cancer, based on the use of standard risk-assessment methodology. Given the short-term construction schedule, the proposed project would not result in a long-term (i.e., 30 or 70 year) exposure to a substantial source of toxic air contaminant emissions; and thus, would not be exposed to the related individual cancer risk. Therefore, no significant short-term toxic air contaminant impacts would occur during construction of the proposed project. A **less than significant** impact would occur under this threshold.

d. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

Objectionable Odors. Potential sources of odor during construction activities include equipment exhaust and activities such as paving. The objectionable odors that may be produced during the construction process would occur periodically and end when construction is completed. The project would provide 288 new multifamily residences. The project would not develop new uses such as agricultural processing or manufacturing, that have the potential to generate odor. Operational emissions may be associated with periodic use of landscape equipment; however, these emissions would be short-term and not confined to one specific location. Odors would be **less than significant** per this threshold.

GREENHOUSE GAS EMISSIONS

Gases that absorb and re-emit infrared radiation in the atmosphere are called greenhouse gases (GHGs). GHGs are present in the atmosphere naturally, are released by natural sources, or are formed from secondary reactions taking place in the atmosphere. The gases that are widely seen as the principal contributors to human-induced climate change include carbon dioxide (CO_2), methane (CH_4), nitrous oxides (N_2O), fluorinated gases such as hydrofluorocarbons (HFCs) and perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6). Water vapor is excluded from the list of

GHGs because it is short-lived in the atmosphere and its atmospheric concentrations are largely determined by natural processes, such as oceanic evaporation.

GHGs are emitted by both natural processes and human activities. Of these gases, CO_2 and CH_4 are emitted in the greatest quantities from human activities. Emissions of CO_2 are largely by-products of fossil fuel combustion, whereas CH_4 results from off-gassing associated with agricultural practices and landfills. Man-made GHGs, many of which have greater heat-absorption potential than CO_2, include fluorinated gases and sulfur hexafluoride (SF_6) (California Environmental Protection Agency [CalEPA], 2006). Different types of GHGs have varying global warming potentials (GWPs). The GWP of a GHG is the potential of a gas or aerosol to trap heat in the atmosphere over a specified timescale (generally, 100 years). Because GHGs absorb different amounts of heat, a common reference gas (CO_2) is used to relate the amount of heat absorbed to the amount of the gas emissions, referred to as "carbon dioxide equivalent" (CO_2E), and is the amount of a GHG emitted multiplied by its GWP. Carbon dioxide has a GWP of one. By contrast, methane (CH_4) has a GWP of 28, meaning its global warming effect is 28 times greater than carbon dioxide on a molecule per molecule basis (IPCC, 2014).

The largest source of GHG in California is transportation, contributing 39.9 percent of the state's total GHG emissions. The industrial sector is the second largest source, contributing 21 percent of the state's GHG emissions. California emissions result in part to its geographic size and large population compared to other states. However, a factor that reduces California's per capita fuel use and GHG emissions, as compared to other states, is its relatively mild climate. In July 2017, California's state legislature passed Assembly Bill (AB) 398 to reauthorize and extend until 2030 the state's economy-wide greenhouse gas (GHG) reduction program. California has established a GHG target of at least 40% below the 1990 level of emissions by 2030.

California Regulations

In 2005, former Governor Schwarzenegger issued Executive Order (EO) S-3-05, establishing statewide GHG emissions reduction targets. EO S-3-05 states that by 2020, emissions shall be reduced to 1990 levels; and by 2050, emissions shall be reduced to 80 percent of 1990 levels (CalEPA, 2006). In response to EO S-3-05, CalEPA created the Climate Action Team (CAT), which in March 2006 published the Climate Action Team Report (the "2006 CAT Report") (CalEPA, 2006). The 2006 CAT Report recommended various strategies that the state could pursue to reduce GHG emissions. These strategies could be implemented by various state agencies to ensure that the emission reduction targets in EO S-3-05 are met and can be met with existing authority of the state agencies. The strategies include the reduction of passenger and light duty truck emissions, the reduction of idling times for diesel trucks, an overhaul of shipping technology/infrastructure, increased use of alternative fuels, increased recycling, and landfill methane capture.

Assembly Bill 32 and CARB's Scoping Plan

To further the goals established in EO S-3-05, the Legislature passed Assembly Bill (AB) 32, the California Global Warming Solutions Act of 2006. AB 32 requires California to reduce its GHG

emissions to 1990 levels by 2020. Under AB 32, CARB is responsible for and is recognized as having the expertise to carry out and develop the programs and requirements necessary to achieve the GHG emissions reduction mandate of AB 32. Under AB 32, CARB must adopt regulations requiring the reporting and verification of statewide GHG emissions from specified sources. This program is used to monitor and enforce compliance with established standards. CARB also is required to adopt rules and regulations to achieve the maximum technologically feasible and cost-effective GHG emission reductions. AB 32 authorized CARB to adopt market-based compliance mechanisms to meet the specified requirements. Finally, CARB is ultimately responsible for monitoring compliance and enforcing any rule, regulation, order, emission limitation, emission reduction measure, or market-based compliance mechanism adopted.

In 2007, CARB approved a limit on the statewide GHG emissions level for year 2020 consistent with the determined 1990 baseline (427 MMT CO_2E). CARB's adoption of this limit is in accordance with Health and Safety Code, Section 38550.

Further, in 2008, CARB adopted the Scoping Plan in accordance with Health and Safety Code, Section 38561. The Scoping Plan establishes an overall framework for the measures that will be adopted to reduce California's GHG emissions for various emission sources/sectors to 1990 levels by 2020. The Scoping Plan evaluates opportunities for sector-specific reductions, integrates all CARB and Climate Action Team early actions and additional GHG reduction features by both entities, identifies additional measures to be pursued as regulations, and outlines the role of a cap-and-trade program. The key elements of the Scoping Plan include the following (CARB 2008):

1. Expanding and strengthening existing energy efficiency programs, as well as building and appliance standards;
2. Achieving a statewide renewable energy mix of 33%;
3. Developing a California cap-and-trade program that links with other Western Climate Initiative partner programs to create a regional market system and caps sources contributing 85% of California's GHG emissions;
2. Establishing targets for transportation-related GHG emissions for regions throughout California, and pursuing policies and incentives to achieve those targets;
3. 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
4. Creating targeted fees, including a public goods charge on water use, fees on high GWP gases, and a fee to fund the administrative costs of the State of California's long-term commitment to AB 32 implementation.

In the Scoping Plan (CARB 2008), CARB determined that achieving the 1990 emissions level in 2020 would require a reduction in GHG emissions of approximately 28.5% from the otherwise projected 2020 emissions level (i.e., those emissions that would occur in 2020) absent GHG reducing laws and regulations (referred to as Business-As-Usual (BAU)). To calculate this percentage reduction, CARB assumed that all new electricity generation would be supplied by

natural gas plants, no further regulatory action would impact vehicle fuel efficiency, and building energy efficiency codes would be held at 2005 standards.

In the 2011 Final Supplement to the AB 32 Scoping Plan Functional Equivalent Document (CARB 2011), CARB revised its estimates of the projected 2020 emissions level in light of the economic recession and the availability of updated information about GHG reduction regulations. Based on the new economic data, CARB determined that achieving the 1990 emissions level by 2020 would require a reduction in GHG emissions of 21.7% (down from 28.5%) from the BAU conditions. When the 2020 emissions level projection was updated to account for newly implemented regulatory measures, including Pavley I (model years 2009–2016) and the Renewables Portfolio Standard (RPS) (12% to 20%), CARB determined that achieving the 1990 emissions level in 2020 would require a reduction in GHG emissions of 16% (down from 28.5%) from the BAU conditions.

In 2014, CARB adopted the First Update to the Climate Change Scoping Plan: Building on the Framework (First Update; CARB 2014). The stated purpose of the First Update is to "highlight California's success to date in reducing its GHG emissions and lay the foundation for establishing a broad framework for continued emission reductions beyond 2020, on the path to 80% below 1990 levels by 2050" (CARB 2014). The First Update found that California is on track to meet the 2020 emissions reduction mandate established by AB 32 and noted that California could reduce emissions further by 2030 to levels needed to stay on track to reduce emissions to 80% below 1990 levels by 2050 if the state realizes the expected benefits of existing policy goals.

In conjunction with the First Update, CARB identified "six key focus areas comprising major components of the state's economy to evaluate and describe the larger transformative actions that will be needed to meet the state's more expansive emission reduction needs by 2050" (CARB 2014). Those six areas are (1) energy, (2) transportation (vehicles/equipment, sustainable communities, housing, fuels, and infrastructure), (3) agriculture, (4) water, (5) waste management, and (6) natural and working lands. The First Update identifies key recommended actions for each sector that will facilitate achievement of EO S-3-05's 2050 reduction goal (CARB 2014).

Based on CARB's research efforts presented in the First Update, it has a "strong sense of the mix of technologies needed to reduce emissions through 2050" (CARB 2014). Those technologies include energy demand reduction through efficiency and activity changes; large-scale electrification of on-road vehicles, buildings, and industrial machinery; decarbonizing electricity and fuel supplies; and the rapid market penetration of efficient and clean energy technologies. As part of the First Update, CARB recalculated the state's 1990 emissions level using more recent GWPs identified by the IPCC. Using the recalculated 1990 emissions level (431 MMT CO_2E) and the revised 2020-emissions-level projection identified in the 2011 Final Supplement, CARB determined that achieving the 1990 emissions level by 2020 would require a reduction in GHG emissions of approximately 15% (instead of 28.5% or 16%) from the BAU conditions (CARB 2014).

In January 2017, CARB released, *The 2017 Climate Change Scoping Plan Update (*Second Update; CARB 2017), for public review and comment. This update proposes CARB's strategy for achieving the state's 2030 GHG target as established in Senate Bill (SB) 32 (discussed below), including continuing the Cap-and-Trade Program through 2030, and includes a new approach to reduce GHGs from refineries by 20%. The Second Update incorporates approaches to cutting short-lived climate pollutants (SLCPs) under the Short-Lived Climate Pollutant Reduction Strategy (a planning document that was adopted by CARB in March 2017), acknowledges the need for reducing emissions in agriculture, and highlights the work underway to ensure that California's natural and working lands increasingly sequester carbon. During development of the Second Update, CARB held a number of public workshops in the Natural and Working Lands, Agriculture, Energy, and Transportation sectors to inform development of the 2030 Scoping Plan Update (CARB 2016). The Second Update has not been considered by CARB's Governing Board at the time this analysis was prepared.

Executive Order S-01-07 was enacted on January 18, 2007. The order mandates that a Low Carbon Fuel Standard ("LCFS") for transportation fuels be established for California to reduce the carbon intensity of California's transportation fuels by at least 10 percent by 2020.

Other regulations affecting state and local GHG planning and policy development are summarized as follows:

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

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

Senate Bill 97
Senate Bill 97 (SB 97) was adopted August 2007 and acknowledges that climate change is an environmental issue that requires analysis under CEQA. SB 97 directed the Governor's Office of Planning and Research (OPR), which is part of the State Natural Resources Agency, to prepare, develop, and transmit to CARB guidelines for the feasible mitigation of GHG emissions or the

effects of GHG emissions, as required by CEQA, by July 1, 2009. The Natural Resources Agency was required to certify and adopt those guidelines by January 1, 2010. Pursuant to the requirements of SB 97 as stated above, on December 30, 2009 the Natural Resources Agency adopted amendments to the state CEQA guidelines that address GHG emissions. The CEQA Guidelines Amendments changed sections of the CEQA Guidelines and incorporated GHG language throughout the Guidelines. However, no GHG emissions thresholds of significance were provided and no specific mitigation measures were identified. The GHG emission reduction amendments went into effect on March 18, 2010 and are summarized below:

1. Climate action plans and other greenhouse gas reduction plans can be used to determine whether a project has significant impacts, based upon its compliance with the plan.

2. Local governments are encouraged to quantify the greenhouse gas emissions of proposed projects, noting that they have the freedom to select the models and methodologies that best meet their needs and circumstances. The section also recommends consideration of several qualitative factors that may be used in the determination of significance, such as the extent to which the given project complies with state, regional, or local GHG reduction plans and policies. OPR does not set or dictate specific thresholds of significance. Consistent with existing CEQA Guidelines, OPR encourages local governments to develop and publish their own thresholds of significance for GHG impacts assessment.

3. When creating their own thresholds of significance, local governments may consider the thresholds of significance adopted or recommended by other public agencies, or recommended by experts.

4. New amendments include guidelines for determining methods to mitigate the effects of greenhouse gas emissions in Appendix F of the CEQA Guidelines.

5. OPR is clear to state that "to qualify as mitigation, specific measures from an existing plan must be identified and incorporated into the project; general compliance with a plan, by itself, is not mitigation."

6. OPR's emphasizes the advantages of analyzing GHG impacts on an institutional, programmatic level. OPR therefore approves tiering of environmental analyses and highlights some benefits of such an approach.

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

Senate Bills 1078, 107, and X1-2 and Executive Orders S-14-08 and S-21-09
Senate Bill 1078 (SB 1078) requires retail sellers of electricity, including investor-owned utilities and community choice aggregators, to provide at least 20 percent of their supply from renewable sources by 2017. Senate Bill 107 (SB 107) changed the target date to 2010. Executive

Order S-14-08 was signed on November 2008 and expands the State's Renewable Energy Standard to 33 percent renewable energy by 2020. Executive Order S-21-09 directed CARB to adopt regulations by July 31, 2010 to enforce S-14-08. Senate Bill X1-2 codifies the 33 percent renewable energy requirement by 2020.

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

CCR Title 24, Part 6: California's Energy Efficiency Standards for Residential and Nonresidential Buildings (Title 24) were first established in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficiency technologies and methods. Although it was not originally intended to reduce GHG emissions, electricity production by fossil fuels results in GHG emissions and energy efficient buildings require less electricity. Therefore, increased energy efficiency results in decreased GHG emissions.

The Energy Commission adopted 2008 Standards on April 23, 2008 and Building Standards Commission approved them for publication on September 11, 2008. These updates became effective on August 1, 2009. All buildings for which an application for a building permit is submitted on or after July 1, 2014 must follow the 2013 standards. The 2013 commercial standards are estimated to be 30 percent more efficient than the 2008 standards; 2013 residential standards are at least 25 percent more efficient. Energy efficient buildings require less electricity; therefore, increased energy efficiency reduces fossil fuel consumption and decreases greenhouse gas emissions.

Senate Bill 375

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

The proposed project is located within the Southern California Association of Governments (SCAG) jurisdiction, which has authority to develop the SCS or APS. For the SCAG region, beginning October 2018, the targets set by CARB are at eight percent below 2005 per capita GHG emissions levels by 2020 and 19 percent below 2005 per capita GHG emissions levels by 2035. On September 3, 2020, SCAG adopted the 2020-2045 Regional Transportation Plan / Sustainable Communities Strategy (RTP/SCS), Connect SoCal which meets the CARB emission reduction requirements. The Housing Element Update is required by the State to be completed within 18 months after RTP/SCS adoption. The City of El Centro Housing Element 2021-2029

(6th Cycle) was adopted in January 2022 and includes housing-related goals, policies, and programs to address the existing and projected future housing needs of the unincorporated County.

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

Senate Bill X7-7

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

California Green Building Standards

Title 24, Part 6. Title 24 of the California Code of Regulations was established in 1978 and serves to enhance and regulate California's building standards. While not initially promulgated to reduce GHG emissions, Part 6 of Title 24 specifically establishes Building Energy Efficiency Standards that are designed to ensure new and existing buildings in California achieve energy efficiency and preserve outdoor and indoor environmental quality. These energy efficiency standards are reviewed every few years by the Building Standards Commission and the California Energy Commission (CEC) (and revised if necessary) (California Public Resources Code, Section 25402(b)(1)). The regulations receive input from members of industry, as well as the public, with the goal of "reducing of wasteful, uneconomic, inefficient, or unnecessary consumption of energy" (California Public Resources Code, Section 25402). These regulations are carefully scrutinized and analyzed for technological and economic feasibility (California Public Resources Code, Section 25402(d)) and cost effectiveness (California Public Resources Code, Sections 25402(b)(2) and (b)(3)). These standards are updated to consider and incorporate new energy efficient technologies and construction methods. As a result, these standards save energy, increase electricity supply reliability, increase indoor comfort, avoid the need to construct new power plants, and help preserve the environment.

The 2019 Title 24 building energy efficiency standards and became effective on January 1, 2020. In general, single-family homes built to the 2019 standards are anticipated to use approximately 7% less energy for lighting, heating, cooling, ventilation, and water heating than those built to the 2016 standards, and nonresidential buildings built to the 2019 standards will use an estimated 30% less energy than those built to the 2016 standards (CEC 2015a).

Title 24, Part 11. In addition to the CEC's efforts, in 2008, the California Building Standards Commission adopted the nation's first green building standards. The California Green Building Standards Code (Part 11 of Title 24) is commonly referred to as "CALGreen," and establishes

minimum mandatory standards and voluntary standards pertaining to the planning and design of sustainable site development, energy efficiency (in excess of the California Energy Code requirements), water conservation, material conservation, and interior air quality. The CALGreen standards took effect in January 2011 and instituted mandatory minimum environmental performance standards for all ground-up, new construction of commercial, low-rise residential, and state-owned buildings and schools and hospitals. The CALGreen 2019 standards became effective on January 1, 2020. The mandatory standards require the following (24 CCR Part 11):

- Mandatory reduction in indoor water use through compliance with specified flow rates for plumbing fixtures and fittings;
- Mandatory reduction in outdoor water use through compliance with a local water efficient landscaping ordinance or the California Department of Water Resources' Model Water
- Efficient Landscape Ordinance;
- Diversion of 65% of construction and demolition waste from landfills;
- Mandatory inspections of energy systems to ensure optimal working efficiency;
- Inclusion of electric vehicle charging stations or designated spaces capable of supporting future charging stations; and
- Low-pollutant-emitting exterior and interior finish materials, such as paints, carpets, vinyl flooring, and particle board.

The CALGreen standards also include voluntary efficiency measures that are provided at two separate tiers and implemented at the discretion of local agencies and applicants. CALGreen's Tier 1 standards call for a 15% improvement in energy requirements, stricter water conservation, 65% diversion of construction and demolition waste, 10% recycled content in building materials, 20% permeable paving, 20% cement reduction, and cool/solar-reflective roofs. CALGreen's more rigorous Tier 2 standards call for a 30% improvement in energy requirements, stricter water conservation, 75% diversion of construction and demolition waste, 15% recycled content in building materials, 30% permeable paving, 25% cement reduction, and cool/solar-reflective roofs (24 CCR Part 11).

The California Public Utilities Commission, CEC, and CARB also have a shared, established goal of achieving zero net energy (ZNE) for new construction in California. The key policy timelines include the following: (1) all new residential construction in California will be ZNE by 2020, and (2) all new commercial construction in California will be ZNE by 2030 (CPUC 2013).[2] As most recently defined by the CEC in its 2015 Integrated Energy Policy Report (CEC 2015b), a ZNE code building is "one where the value of the energy produced by on-site renewable energy resources is equal to the value of the energy consumed annually by the building" using the CEC's Time Dependent Valuation metric.

[2] It is expected that achievement of the ZNE goal will occur through revisions to the Title 24 standards.

Title 20

Title 20 of the California Code of Regulations requires manufacturers of appliances to meet state and federal standards for energy and water efficiency. Performance of appliances must be certified through the CEC to demonstrate compliance with standards. New appliances regulated under Title 20 include refrigerators, refrigerator-freezers, and freezers; room air conditioners and room air-conditioning heat pumps; central air conditioners; spot air conditioners; vented gas space heaters; gas pool heaters; plumbing fittings and plumbing fixtures; fluorescent lamp ballasts; lamps; emergency lighting; traffic signal modules; dishwaters; clothes washers and dryers; cooking products; electric motors; low voltage dry-type distribution transformers; power supplies; televisions and consumer audio and video equipment; and battery charger systems. Title 20 presents protocols for testing for each type of appliance covered under the regulations and appliances must meet the standards for energy performance, energy design, water performance, and water design. Title 20 contains three types of standards for appliances: federal and state standards for federally regulated appliances, state standards for federally regulated appliances, and state standards for non-federally regulated appliances.

Executive Order B-30-15

EO B-30-15 (April 2015) identified an interim GHG reduction target in support of targets previously identified under S-3-05 and AB 32. EO B-30-15 set an interim target goal of reducing statewide GHG emissions to 40% below 1990 levels by 2030 to keep California on its trajectory toward meeting or exceeding the long-term goal of reducing statewide GHG emissions to 80% below 1990 levels by 2050 as set forth in EO S-3-05. To facilitate achievement of this goal, EO B-30-15 calls for an update to CARB's Scoping Plan to express the 2030 target in terms of MMT CO2E. EO B-30-15 also calls for state agencies to continue to develop and implement GHG emission reduction programs in support of the reduction targets. EO B-30-15 does not require local agencies to take any action to meet the new interim GHG reduction target.

Senate Bill 32 and Assembly Bill 197

SB 32 and AB 197 (enacted in 2016) are companion bills that set new statewide GHG reduction targets, make changes to CARB's membership, increase legislative oversight of CARB's climate change–based activities, and expand dissemination of GHG and other air quality–related emissions data to enhance transparency and accountability. More specifically, SB 32 codified the 2030 emissions reduction goal of EO B-30-15 by requiring CARB to ensure that statewide GHG emissions are reduced to 40% below 1990 levels by 2030. AB 197 established the Joint Legislative Committee on Climate Change Policies, consisting of at least three members of the Senate and three members of the Assembly, in order to provide ongoing oversight over implementation of the state's climate policies. AB 197 added two members of the Legislature to CARB as nonvoting members; requires CARB to make available and update (at least annually via its website) emissions data for GHGs, criteria air pollutants, and toxic air contaminants from reporting facilities; and requires CARB to identify specific information for GHG emissions reduction measures when updating the Scoping Plan.

SB 350— Clean Energy and Pollution Reduction Act of 2015

In October 2015, the legislature 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 because of opposition and concern that it would prevent the Bill's passage. Specifically, SB 350 requires the following to reduce statewide GHG emissions:

1. 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.

2. 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.

3. 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).

SB 100

On September 10, 2018, Governor Brown signed SB 100, which raises California's RPS requirements to 60 percent by 2030, with interim targets, and 100 percent by 2045. The bill also establishes a state policy that eligible renewable energy resources and zero-carbon resources supply 100 percent of all retail sales of electricity to California end-use customers and 100 percent of electricity procured to serve all state agencies by December 31, 2045. Under the bill, the state cannot increase carbon emissions elsewhere in the western grid or allow resource shuffling to achieve the 100 percent carbon-free electricity target.

Executive Order B-55-18

On September 10, 2018, Governor Brown signed Executive Order B-55-2018 which established a new statewide goal to achieve carbon neutrality as soon as possible and no later than 2045. The executive order also states that California will achieve and maintain net negative emissions thereafter.

AB 2127

AB 2127 promotes better planning for EV infrastructure build-out across all vehicle classes. AB 2127 would help the state meet the goal of 5 million zero-emission vehicles (ZEV) on the road by 2030.

Local Regulations and CEQA Requirements

As referenced, pursuant to the requirements of SB 97, the Resources Agency has adopted amendments to the State CEQA Guidelines for the feasible mitigation of GHG emissions or the effects of GHG emissions. The adopted CEQA Guidelines provide general regulatory guidance on the analysis and mitigation of GHG emissions in CEQA documents, but contain no suggested thresholds of significance for GHG emissions. Instead, lead agencies are given the discretion to set quantitative or qualitative thresholds for the assessment and mitigation of GHGs and climate change impacts. The general approach to developing a Threshold of Significance for GHG emissions is to identify the emissions level for which a project would not be expected to substantially conflict with existing California legislation adopted to reduce statewide GHG emissions needed to move the state towards climate stabilization. If a project would generate GHG emissions above the threshold level, its contribution to cumulative impacts would be considered significant.

The California Supreme Court addressed the issue of GHG emissions and the evaluation of potential impacts in CEQA documents, in the Center for Biological Diversity v. California Department of Fish and Wildlife and Newhall Land and Farming case, (2015) 224 Cal.App.4th 1105 (CBD vs. CDFW), also known as the "Newhall Ranch" case. The justices examined one of the most common approaches to GHG analyses for development projects which was evaluating the efficiency of a project's emissions reduction in the context of the AB 32's 2020 reduction goal, as presented in the statewide CARB Scoping Plan, using a comparison to an unregulated, "business as usual (BAU)" emissions scenario. As discussed in the Newhall Ranch decision, determining consistency with local GHG reduction plans or Climate Action Plans that qualify under Section 15183.5 of the CEQA Guidelines may be the most effective strategy for local governments to assess the significance of GHG emissions from proposed land use developments. Qualified CAPs also provide a workable option for addressing post-2020 GHG emissions and resolving issues that arise out of project-level GHG analyses raised in the Court's decision.

To date, neither the ICAPCD nor the City of El Centro have adopted GHG significance thresholds applicable to potential development projects. As stated in Section 15064.7(c) of the CEQA Guidelines, a lead agency may consider thresholds of significance previously adopted or recommended by other public agencies, or recommended by experts, provided the lead agency's decision is supported by substantial evidence. Thus, in the absence of any GHG emissions significance thresholds, the projected emissions are compared to the South Coast Air Quality Management (SCAQMD) numeric threshold of 3,000 metric tons of CO2e (carbon dioxide equivalent) annually. This threshold is also appropriate as the SCAQMD GHG thresholds were formulated based on similar geography and climate patterns as found in Imperial County and are used for determining the significance of GHG emissions in the Riverside County portion of the Salton Sea Air Basin, the air basin where the project is located.

Therefore, the 3,000 metric ton of CO2e threshold is appropriate for analysis of the proposed project. The project was also evaluated for consistency with regulations or requirements adopted by the 2017 CARB Climate Change Scoping Plan. GHG emission were modeled using

CalEEMod 2020.4.0, the statewide land use emissions computer model designed to estimate air and GHG emissions associated with both construction and operations from land development projects.

CLIMATE CHANGE IMPACT ANALYSIS

Thresholds of Significance

Pursuant to the requirements of SB 97, the Resources Agency adopted amendments to the State CEQA Guidelines for the feasible mitigation of GHG emissions or the effects of GHG emissions in March 2010. These guidelines are used in evaluating the cumulative significance of GHG emissions from the proposed project. According to the adopted CEQA Guidelines, impacts related to GHG emissions from the proposed project would be significant if the project would:

a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment; and/or

b. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

The vast majority of individual projects do not generate sufficient GHG emissions to create a project-specific impact through a direct influence to climate change; therefore, the issue of climate change typically involves an analysis of whether a project's contribution towards an impact is cumulatively considerable. "Cumulatively considerable" means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, other current projects, and probable future projects (CEQA Guidelines, Section 15355).

Methodology

GHG emissions associated with construction and operation of the proposed project and existing development have been estimated using California Emissions Estimator Model (CalEEMod) version 2020.4.0.

Construction Emissions

Construction of the proposed project would generate temporary GHG emissions primarily associated with the operation of construction equipment, worker trips and truck trips required for hauling excavation spoils, materials and equipment. Site preparation and grading typically generate the greatest emission quantities because the use of heavy equipment is greatest during this phase of construction. Emissions associated with the construction period were estimated based on the projected maximum amount of equipment that would be used on-site at one time. Air districts such as the SDAPCD have recommended amortizing construction-related emissions over a 30-year period to calculate annual emissions. Complete CalEEMod results and assumptions can be viewed in the Appendix.

Operational Emissions

Default values used in CalEEMod version 2020.4.0 are based on the California Energy Commission (CEC) sponsored California Commercial End Use Survey (CEUS) and Residential Appliance Saturation Survey (RASS) studies. CalEEMod provides operational emissions of CO_2, N_2O and CH_4. This methodology has been subjected to peer review by numerous public and private stakeholders, and in particular by the CEC; and therefore, is considered reasonable and reliable for use in GHG impact analysis pursuant to CEQA. It is also recommended by CAPCOA (January 2008).

Emissions associated with area sources (i.e., consumer products, landscape maintenance, and architectural coating) were calculated in CalEEMod based on standard emission rates from CARB, USEPA, and district supplied emission factor values (CalEEMod User Guide, 2021). Emissions from waste generation were also calculated in CalEEMod and are based on the IPCC's methods for quantifying GHG emissions from solid waste using the degradable organic content of waste (CalEEMod User Guide, 2021). Waste disposal rates by land use and overall composition of municipal solid waste in California was primarily based on data provided by the California Department of Resources Recycling and Recovery (CalRecycle).

Emissions from water and wastewater usage calculated in CalEEMod were based on the default electricity intensity from the CEC's 2006 Refining Estimates of Water-Related Energy Use in California using the average values for Northern and Southern California. Emissions from mobile sources were quantified based on trip generation rates in the Local Transportation Analysis (March 2022).

a. Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Construction Emissions

Construction activity analysis is based on the anticipated construction period of approximately 18 months beginning in January 2024 and concluding in June 2025. Based on CalEEMod results, construction activity for the project would generate an estimated 925 metric tons of carbon dioxide equivalent (CO_2E), as shown in Table 8. Amortized over a 30-year period (the assumed life of the project), construction of the proposed project would generate 31 metric tons of CO_2E per year.

Table 8
Estimated Construction Related Greenhouse Gas Emissions

Year	Annual Emissions (metric tons CO_2E)
2024	644

2025	281
Total	**925**
Amortized over 30 years	**31**

See Appendix for CalEEMod software program output

Operational Indirect and Stationary Direct Emissions

Long-term emissions relate to energy use, solid waste, water use, and transportation. Each source is discussed below and includes the emissions associated with existing development and the anticipated emissions that would result from the proposed project.

Energy Use. Operation of onsite development would consume both electricity and natural gas (see Appendix for CalEEMod results). The generation of electricity through combustion of fossil fuels typically yields CO_2, and to a smaller extent, N_2O and CH_4. Natural gas emissions can be calculated using default values from the CEC sponsored CEUS and RASS studies which are built into CalEEMod. As shown in Table 9, the overall net increase in energy use at the project site would result in approximately 328 metric tons of CO_2E per year.

Water Use Emissions**.** The CalEEMod results indicate that the project would use approximately 24.4 million gallons of water per year. Based on the amount of electricity generated to supply and convey this amount of water, as shown in Table 10, unmitigated, project would generate approximately 58 metric tons of CO_2E per year. Emissions related to water consumption would be reduced by 20% per Senate Bill X7-7, by implementing measures that include the installation of low flow plumbing fixtures (i.e., faucets, toilets, show heads) and water efficient irrigation systems. This would reduce emissions to 46 metric tons of CO_2E per year.

Solid Waste Emissions. Implementation of a municipal recycling program that would achieve a 75% diversion rate statewide is required for residential uses per the California Integrated Waste Management Act of 1989 (AB 939). The unmitigated CalEEMod results indicate that the project would result in approximately 67 metric tons of CO_2E per year associated with solid waste disposed within landfills. This would be reduced to 17 metric tons of CO_2E provided 75% of solid waste is recycled.

Table 9
Estimated Annual Energy-Related Greenhouse Gas Emissions

Emission Source	Annual Emissions (CO_2E)
Proposed Project	
Electricity	106 metric tons
Natural Gas	222 metric tons
Total	**328 metric tons**

See Appendix for CalEEMod software program output.

Table 10
Estimated Annual
Solid Waste and Water Use Greenhouse Gas Emissions

Emission Source	Annual Emissions (CO_2E)
Water	58 metric tons
Solid Waste	67 metric tons
Total Water and Solid Waste	**125 metric tons**

See Appendix for CalEEMod software program output.

Transportation Emissions. Mobile source GHG emissions were estimated using the default trip rates provided in CalEEMOd 2020.4.0 which are based on trip generation rates in the *Institute of Transportation Engineers (ITE) Trip Generation Manual, 11th Edition.* Table 11 shows the estimated mobile emissions of GHGs for the project based on the estimated annual VMT of 2,069,033. As shown in Table 11, the project would generate approximately 672 metric tons of CO_2E associated with new vehicle trips.

Table 11
Estimated Annual Mobile Emissions of Greenhouse Gases

Emission Source	Annual Emissions (CO_2E)
Proposed Project	
Mobile Emissions (CO_2 & CH_4)	672 metric tons
Total	**672 metric tons**

See Appendix for CalEEMod software program output.

Combined Construction, Stationary and Mobile Source Emissions

Table 12 combines the net unmitigated construction, operational, and mobile GHG emissions associated with the proposed project. As discussed above, temporary emissions associated with construction activity (approximately 925 metric tons CO_2E) are amortized over 30 years (the anticipated life of the project).

For the proposed project, the combined annual unmitigated emissions would total approximately 1,156 metric tons per year in CO_2E. The proposed project is evaluated based on the threshold of 3,000 MT CO_2E annually. Project-related annual GHG emissions would not exceed the 3,000 metric ton screening threshold; thus, the project will not generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the

environment. Construction and operational project impacts from GHG emissions would be **less than significant** per threshold a.

Table 12
Combined Annual Greenhouse Gas Emissions

Emission Source	Annual Emissions (CO_2E)
Construction	31 metric tons
Operational	
Energy	328 metric tons
Solid Waste	67 metric tons
Water	58 metric tons
Mobile	672 metric tons
Total	**1,156 metric tons**

See Appendix for CalEEMod software program output.

b. Would the project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

As stated, the City of El Centro does not have a Climate Action Plan. However, the applicant would be required to implement California Energy Code Title 24 requirements that would address energy and water use reduction, promotion of green building measures, waste reduction and reduction in vehicle miles traveled. Further, the proposed project would be required to implement all mandatory green building measures for new residential development under the CALGreen Code. This would require the project be designed to minimize water consumption, increase building system efficiencies, divert construction waste from landfills, and install low pollutant emitting finish materials. Implementation of these building and appliance standards would result in the efficient use of water and energy and reduce the volume of landfilled solid waste during both construction and operation.

There are numerous State plans, policies, and regulations adopted for the purpose of reducing GHG emissions. The principal overall State plan and policy is AB 32, the California Global Warming Solutions Act of 2006. The quantitative goal of AB 32 is to reduce GHG emissions to 1990 levels by 2020. SB 32 would require further reductions of 40 percent below 1990 levels by 2030. Because the Project's operational year is post-2020, the Project is being designed to reach the quantitative goals set by SB 32. Statewide plans and regulations such as GHG emissions standards for vehicles (AB 1493), the Low Carbon Fuel Standard, and regulations requiring an increasing fraction of electricity to be generated from renewable sources, are being implemented at the statewide level; as such, compliance at the Project level is not addressed. The proposed project would not conflict with statewide plans and regulations. The following summarizes project consistency with Connect SoCal, the 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy and the 2017 CARB scoping plan.

Connect SoCal 2020-2045 RTP/SCS Consistency. On September 3, 2020, SCAG's Regional Council unanimously voted to approve and fully adopt Connect SoCal (2020–2045 Regional Transportation Plan/Sustainable Communities Strategy), and the addendum to the Connect SoCal Program Environmental Impact Report. Connect SoCal is a long-range visioning plan that builds upon and expands land use and transportation strategies established over several planning cycles to increase mobility options and achieve a more sustainable growth pattern. It charts a path toward a more mobile, sustainable and prosperous region by making connections between transportation networks, between planning strategies and between the people whose collaboration can improve the quality of life for Southern California residents within the counties of Imperial, Los Angeles, Orange, Riverside, San Bernardino and Ventura.

Further, *Connect SoCal* is supported by a combination of transportation and land use strategies that outline how the region can achieve California's GHG emission reduction goals and federal CAA requirements. The project would utilize the existing street network and extend a segment of Spears Avenue to provide primary access to the project site. The project would not conflict with plans to integrate the transportation network and related strategies with an overall land use pattern that responds to projected growth, housing needs, changing demographics, and transportation demands. The project does not involve any improvements to the regional transportation system. The project would be consistent with or would not conflict with any of the goals identified in Connect SoCal.

SB 32/2017 Scoping Plan Consistency. The 2017 Scoping Plan Update reflects the statewide 2030 target of a 40% reduction in GHG emissions below 1990 levels, set by EP B-30-15 and codified by SB 32. Table 13 summarizes the Project's consistency with applicable action elements of the 2017 Scoping Plan.

Table 13
2017 Scoping Plan Consistency Summary

ACTION	RESPONSIBLE PARTIES	CONSISTENCY
Implement SB 350 by 2030		
Increase the Renewables Portfolio Standard to 50% of retail sales by 2030 and ensure grid reliability.	California Public Utility Commission (CPUC), California Energy Commission (CEC) and California Air Resources Board (CARB)	**No Conflict**. The Project would use energy from the Imperial Irrigation District (IID). IID has met or exceed the renewable portfolio standard of 33% by 2020. The Project would not interfere with or obstruct IID's energy source diversification efforts.
Establish annual targets for statewide energy efficiency savings and demand reduction that will achieve a cumulative		**No Conflict.** The Project would be constructed in compliance with current CBC requirements including the 2019 Building and

ACTION	RESPONSIBLE PARTIES	CONSISTENCY
doubling of statewide energy efficiency savings in electricity and natural gas end uses by 2030.		Energy Efficiency Standards and the 2022 California Green Building Standard requirements.
Reduce GHG emissions in the electricity sector through the implementation of the above measures and other actions as modeled in Integrated Resource Planning (IRP) to meet GHG emissions reductions planning targets in the IRP process. Load-serving entities and publicly-owned utilities meet GHG emissions reductions planning targets through a combination of measures as described in IRPs.		
Implement Mobile Source Strategy (Cleaner Technology and Fuels)		
At least 1.5 million zero emission and plugin hybrid light-duty EVs by 2025.	CARB, California State Transportation Agency (CalSTA), Strategic Growth Council (SGC), California Department of Transportation (Caltrans), CEC, Office of Planning and Research (OPR), Local Agencies	**No Conflict.** This is a CARB Mobile Source Strategy. The Project would not obstruct or interfere with CARB zero emission and plug-in hybrid light-duty EV 2025 targets. As this is a CARB enforced standard, vehicles that access the Project must comply with the standards as applicable; and thus, would comply with the strategy.
At least 4.2 million zero emission and plugin hybrid light-duty EVs by 2030.		**No Conflict.** This is a CARB Mobile Source Strategy. The Project would not obstruct or interfere with CARB zero emission and plug-in hybrid light-duty EV 2030 targets.
Further increase GHG stringency on all light-duty vehicles beyond existing Advanced Clean cars regulations.	CARB, California State Transportation Agency (CalSTA), Strategic Growth Council (SGC), California Department of Transportation (Caltrans), CEC, Office of Planning and	**No Conflict.** This is a CARB Mobile Source Strategy. The Project would not obstruct or interfere with CARB efforts to further increase GHG stringency on all light-duty vehicles beyond existing Advanced Clean cars regulations.

ACTION	RESPONSIBLE PARTIES	CONSISTENCY
Medium- and Heavy-Duty GHG Phase 2.	Research (OPR), Local Agencies	**No Conflict.** This is a CARB Mobile Source Strategy. The Project would not obstruct or interfere with CARB efforts to implement Medium- and Heavy-Duty GHG Phase 2.
Innovative Clean Transit: Transition to a suite of to-be-determined innovative clean transit options. Assumed 20% of new urban buses purchased beginning in 2018 will be zero emission buses with the penetration of zero-emission technology ramped up to 100% of new sales in 2030. Also, new natural gas buses, starting in 2018, and diesel buses, starting in 2020, meet the optional heavy-duty low-NOX standard.		**Not Applicable.** This measure is not related to the project scope.
Last Mile Delivery: New regulation that would result in the use of low NOX or cleaner engines and the deployment of increasing numbers of zero-emission trucks primarily for class 3-7 last mile delivery trucks in California. This measure assumes ZEVs comprise 2.5% of new Class 3–7 truck sales in local fleets starting in 2020, increasing to 10% in 2025 and remaining flat through 2030.		**No Conflict.** This is a CARB Mobile Source Strategy. The Project would not obstruct or interfere with CARB efforts to improve last mile delivery emissions.
Further reduce VMT through continued implementation of SB 375 and regional Sustainable Communities Strategies; statewide implementation of SB 743; and potential additional VMT reduction strategies not specified in the Mobile Source Strategy but included in the document "Potential VMT Reduction Strategies for Discussion."		**No Conflict.** As stated in Section XVII of this Initial Study, the project would be 100% affordable; and thus, VMT would be less than significant.

ACTION	RESPONSIBLE PARTIES	CONSISTENCY
Increase stringency of SB 375 Sustainable Communities Strategy (2035 targets).	CARB	**No Conflict.** The project would exceed SCAQMD GHG emission standards for residential sources; however, it would implement all applicable CAP goals and action items to reduce GHG emissions. The project would not conflict with GHG reduction efforts.
Harmonize project performance with emissions reductions and increase competitiveness of transit and active transportation modes (e.g., via guideline documents, funding programs, project selection, etc.).	CalSTA, SGC, OPR, CARB, Governor's Office of Business and Economic Development (GOBiz), California Infrastructure and Economic Development Bank (IBank), Department of Finance (DOF), California Transportation Commission (CTC), Caltrans	**No Conflict.** The project would not conflict with use of adjacent streets by pedestrians or bicycles. Further, transit service provided by Imperial Valley Transit.
By 2019, develop pricing policies to support low-GHG transportation (e.g., low emission vehicle zones for heavy duty, road user, parking pricing, transit discounts).	CalSTA, Caltrans, California Transportation Commission (CTC), OPR, SGC, CARB	**Not Applicable.** This measure is not related to the project scope.
Implement California Sustainable Freight Action Plan		
Improve freight system efficiency.	CalSTA, CalEPA, California Natural Resource Agency (CNRA), CARB, Caltrans, CEC, GO-Biz	**No Conflict.** This measure would apply to all trucks accessing the project site. It is presumed that these vehicles would be comprised of delivery vans operated as part of the statewide goods movement sector.
Deploy over 100,000 freight vehicles and equipment capable of zero emission operation and maximize both zero and near zero emission freight vehicles and equipment powered by renewable energy by 2030.		**Not applicable.** This measure is unrelated to the project scope.
Adopt a Low Carbon Fuel Standard with a Carbon Intensity reduction of 18%.	CARB	**No Conflict.** When adopted, this measure would apply to all fuel purchased for use in vehicles accessing the project site. The

ACTION	RESPONSIBLE PARTIES	CONSISTENCY
		Project would not obstruct or interfere with agency efforts to adopt a Low Carbon Fuel Standard with a Carbon Intensity reduction of 18%.
Implement the Short-Lived Climate Pollutant Strategy (SLPS) by 2030		
40% reduction in methane and hydrofluorocarbon emissions below 2013 levels.	CARB, CalRecycle, California Department of Food and Agriculture (CDFA), California State Water Resource Control Board (SWRCB), Local Air Districts	**No Conflict.** The Project would be required to comply with this measure and reduce any Project-source SLPS emissions accordingly. The Project would not obstruct or interfere with agency efforts to reduce SLPS emissions.
Implement the post-2020 Cap-and-Trade Program with declining annual caps.	CARB	**No Conflict.** The Project would be required to comply with applicable Cap-and-Trade Program provisions. The Project would not obstruct or interfere agency efforts to implement the post-2020 Cap-and-Trade Program.
By 2018, develop Integrated Natural and Working Lands Implementation Plan to secure California's land base as a net carbon sink:		
Protect land from conversion through conservation easements and other incentives.	CNRA, Departments Within CDFA, CalEPA, CARB	**Not applicable**. The Project site is not an identified property that needs to be conserved.
Increase the long-term resilience of carbon storage in the land base and enhance sequestration capacity.		**Not applicable**. The entire site is planned for development.
Utilize wood and agricultural products to increase the amount of carbon stored in the natural and built environments.		**No Conflict.** To the extent appropriate for the proposed commercial buildings, wood products would be used in construction, including roof structure. Additionally, the Project includes landscaping using native species.
Establish scenario projections to serve as the foundation for the Implementation Plan.		**Not applicable.** This measure is unrelated to the project scope.

ACTION	RESPONSIBLE PARTIES	CONSISTENCY
Implement Forest Carbon Plan.	CNRA, California Department of Forestry and Fire Protection (CAL FIRE), CalEPA and Departments Within	**Not applicable.** This measure is unrelated to the project scope.
Identify and expand funding and financing mechanisms to support GHG reductions across all sectors.	State Agencies & Local Agencies	**Not applicable.** This measure is unrelated to the project scope.

As discussed, the project would not exceed 3,000 MT of annual CO2e emissions and it would be consistent with Connect SoCal RTP/SCS and the 2017 CARB scoping plan goals intended to reduce overall regional GHG emissions. The project will not impede or delay local or statewide initiatives to reduce GHG emissions. Impacts would be **less than significant**.

As stated, the project would not generate enough GHG emissions to cumulatively contribute to global climate change. Measures implemented by the project to reduce overall GHG emissions would also contribute to GHG reduction goals mandated by AB 32 and further address in EO S-3-05 and SB 32. Thus, the project would not conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases and impacts would be less than significant.

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Appendix A

CalEEMod Air Quality and Greenhouse Gas Emissions Model Results – Summer/Annual Construction Emissions

Wake Avenue Affordable Housing Project - Imperial County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Wake Avenue Affordable Housing Project

Imperial County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Mid Rise	288.00	Dwelling Unit	7.58	288,000.00	930
Parking Lot	520.00	Space	4.68	208,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	3.4	**Precipitation Freq (Days)**	12
Climate Zone	15			**Operational Year**	2026
Utility Company	Imperial Irrigation District				
CO2 Intensity (lb/MWhr)	189.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Painting phase was modifed to overlap with building construction to reflect the anticipated construction scheudule.

On-road Fugitive Dust - Assumes all roads used during construction are 100% paved.

Vehicle Trips - Weekday trip generation rate modified to reflect Traffic Study (February 2022).

Road Dust - All construction would occur in an urban environment with paved streets.

Construction Off-road Equipment Mitigation -

Area Mitigation -

Water Mitigation -

Waste Mitigation -

Wake Avenue Affordable Housing Project - Imperial County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Table Name	Column Name	Default Value	New Value
tblAreaMitigation	UseLowVOCPaintParkingCheck	False	True
tblConstructionPhase	NumDays	20.00	56.00
tblConstructionPhase	PhaseEndDate	7/14/2025	5/19/2025
tblConstructionPhase	PhaseStartDate	6/17/2025	3/1/2025
tblOnRoadDust	HaulingPercentPave	50.00	100.00
tblOnRoadDust	HaulingPercentPave	50.00	100.00
tblOnRoadDust	HaulingPercentPave	50.00	100.00
tblOnRoadDust	HaulingPercentPave	50.00	100.00
tblOnRoadDust	HaulingPercentPave	50.00	100.00
tblOnRoadDust	HaulingPercentPave	50.00	100.00
tblOnRoadDust	VendorPercentPave	50.00	100.00
tblOnRoadDust	VendorPercentPave	50.00	100.00
tblOnRoadDust	VendorPercentPave	50.00	100.00
tblOnRoadDust	VendorPercentPave	50.00	100.00
tblOnRoadDust	VendorPercentPave	50.00	100.00
tblOnRoadDust	VendorPercentPave	50.00	100.00
tblOnRoadDust	WorkerPercentPave	50.00	100.00
tblOnRoadDust	WorkerPercentPave	50.00	100.00
tblOnRoadDust	WorkerPercentPave	50.00	100.00
tblOnRoadDust	WorkerPercentPave	50.00	100.00
tblOnRoadDust	WorkerPercentPave	50.00	100.00
tblOnRoadDust	WorkerPercentPave	50.00	100.00
tblRoadDust	RoadPercentPave	50	100
tblVehicleTrips	WD_TR	5.44	4.20

2.0 Emissions Summary

Wake Avenue Affordable Housing Project - Imperial County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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					
2024	3.2987	32.4093	28.2132	0.0631	19.7570	1.3360	20.9869	10.1290	1.2291	11.2604	0.0000	6,111.9947	6,111.9947	1.9473	0.2589	6,161.6282
2025	68.9034	16.5606	27.0730	0.0616	2.5038	0.6120	3.1158	0.6765	0.5790	1.2554	0.0000	6,100.6376	6,100.6376	0.7161	0.2595	6,194.9648
Maximum	**68.9034**	**32.4093**	**28.2132**	**0.0631**	**19.7570**	**1.3360**	**20.9869**	**10.1290**	**1.2291**	**11.2604**	**0.0000**	**6,111.9947**	**6,111.9947**	**1.9473**	**0.2595**	**6,194.9648**

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					
2024	3.2987	32.4093	28.2132	0.0631	19.7570	1.3360	20.9869	10.1290	1.2291	11.2604	0.0000	6,111.9947	6,111.9947	1.9473	0.2589	6,161.6282
2025	68.9034	16.5606	27.0730	0.0616	2.5038	0.6120	3.1158	0.6765	0.5790	1.2554	0.0000	6,100.6376	6,100.6376	0.7161	0.2595	6,194.9648
Maximum	**68.9034**	**32.4093**	**28.2132**	**0.0631**	**19.7570**	**1.3360**	**20.9869**	**10.1290**	**1.2291**	**11.2604**	**0.0000**	**6,111.9947**	**6,111.9947**	**1.9473**	**0.2595**	**6,194.9648**

Wake Avenue Affordable Housing Project - Imperial County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	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

Wake Avenue Affordable Housing Project - Imperial County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	8.2516	2.7176	24.8307	0.0169		0.3295	0.3295		0.3295	0.3295	0.0000	3,162.4451	3,162.4451	0.1011	0.0572	3,182.0147
Energy	0.1224	1.0458	0.4450	6.6800e-003		0.0846	0.0846		0.0846	0.0846		1,335.0733	1,335.0733	0.0256	0.0245	1,343.0070
Mobile	4.5174	3.0793	26.0036	0.0485	4.9961	0.0345	5.0305	1.3311	0.0322	1.3633		4,924.2999	4,924.2999	0.2760	0.2519	5,006.2580
Total	**12.8914**	**6.8426**	**51.2793**	**0.0720**	**4.9961**	**0.4485**	**5.4446**	**1.3311**	**0.4462**	**1.7773**	**0.0000**	**9,421.8183**	**9,421.8183**	**0.4027**	**0.3335**	**9,531.2796**

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	7.9657	0.2739	23.7908	1.2600e-003		0.1319	0.1319		0.1319	0.1319	0.0000	42.8969	42.8969	0.0413	0.0000	43.9285
Energy	0.1224	1.0458	0.4450	6.6800e-003		0.0846	0.0846		0.0846	0.0846		1,335.0733	1,335.0733	0.0256	0.0245	1,343.0070
Mobile	4.5174	3.0793	26.0036	0.0485	4.9961	0.0345	5.0305	1.3311	0.0322	1.3633		4,924.2999	4,924.2999	0.2760	0.2519	5,006.2580
Total	**12.6054**	**4.3990**	**50.2395**	**0.0564**	**4.9961**	**0.2509**	**5.2470**	**1.3311**	**0.2487**	**1.5798**	**0.0000**	**6,302.2701**	**6,302.2701**	**0.3429**	**0.2764**	**6,393.1935**

Wake Avenue Affordable Housing Project - Imperial County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	2.22	35.71	2.03	21.67	0.00	44.05	3.63	0.00	44.28	11.12	0.00	33.11	33.11	14.85	17.15	32.92

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/2/2024	1/29/2024	5	20	
2	Site Preparation	Site Preparation	1/30/2024	2/12/2024	5	10	
3	Grading	Grading	2/13/2024	3/25/2024	5	30	
4	Building Construction	Building Construction	3/26/2024	5/19/2025	5	300	
5	Architectural Coating	Architectural Coating	3/1/2025	5/19/2025	5	56	
6	Paving	Paving	5/20/2025	6/16/2025	5	20	

Acres of Grading (Site Preparation Phase): 15

Acres of Grading (Grading Phase): 90

Acres of Paving: 4.68

Residential Indoor: 583,200; Residential Outdoor: 194,400; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 12,480 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction	Cranes	1	7.00	231	0.29
Demolition	Excavators	3	8.00	158	0.38
Grading	Excavators	2	8.00	158	0.38

Wake Avenue Affordable Housing Project - Imperial County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Grading	Graders	1	8.00	187	0.41
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	0.00	7.30	8.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	7.30	8.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	7.30	8.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	295.00	65.00	0.00	7.30	8.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	7.30	8.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	59.00	0.00	0.00	7.30	8.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Wake Avenue Affordable Housing Project - Imperial County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Demolition - 2024

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	2.2437	20.8781	19.7073	0.0388		0.9602	0.9602		0.8922	0.8922		3,747.4228	3,747.4228	1.0485		3,773.6345
Total	**2.2437**	**20.8781**	**19.7073**	**0.0388**		**0.9602**	**0.9602**		**0.8922**	**0.8922**		**3,747.4228**	**3,747.4228**	**1.0485**		**3,773.6345**

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	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
Worker	0.0605	0.0243	0.3678	7.6000e-004	0.0833	4.1000e-004	0.0838	0.0221	3.8000e-004	0.0225		76.6845	76.6845	2.7000e-003	2.3900e-003	77.4658
Total	**0.0605**	**0.0243**	**0.3678**	**7.6000e-004**	**0.0833**	**4.1000e-004**	**0.0838**	**0.0221**	**3.8000e-004**	**0.0225**		**76.6845**	**76.6845**	**2.7000e-003**	**2.3900e-003**	**77.4658**

Wake Avenue Affordable Housing Project - Imperial County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Demolition - 2024

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	2.2437	20.8781	19.7073	0.0388		0.9602	0.9602		0.8922	0.8922	0.0000	3,747.4228	3,747.4228	1.0485		3,773.6345
Total	**2.2437**	**20.8781**	**19.7073**	**0.0388**		**0.9602**	**0.9602**		**0.8922**	**0.8922**	**0.0000**	**3,747.4228**	**3,747.4228**	**1.0485**		**3,773.6345**

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	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
Worker	0.0605	0.0243	0.3678	7.6000e-004	0.0833	4.1000e-004	0.0838	0.0221	3.8000e-004	0.0225		76.6845	76.6845	2.7000e-003	2.3900e-003	77.4658
Total	**0.0605**	**0.0243**	**0.3678**	**7.6000e-004**	**0.0833**	**4.1000e-004**	**0.0838**	**0.0221**	**3.8000e-004**	**0.0225**		**76.6845**	**76.6845**	**2.7000e-003**	**2.3900e-003**	**77.4658**

Wake Avenue Affordable Housing Project - Imperial County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Site Preparation - 2024

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					19.6570	0.0000	19.6570	10.1025	0.0000	10.1025			0.0000			0.0000
Off-Road	2.6609	27.1760	18.3356	0.0381		1.2294	1.2294		1.1310	1.1310		3,688.0100	3,688.0100	1.1928		3,717.8294
Total	**2.6609**	**27.1760**	**18.3356**	**0.0381**	**19.6570**	**1.2294**	**20.8864**	**10.1025**	**1.1310**	**11.2335**		**3,688.0100**	**3,688.0100**	**1.1928**		**3,717.8294**

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	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
Worker	0.0725	0.0291	0.4413	9.1000e-004	0.1000	4.9000e-004	0.1005	0.0265	4.5000e-004	0.0270		92.0215	92.0215	3.2400e-003	2.8700e-003	92.9589
Total	**0.0725**	**0.0291**	**0.4413**	**9.1000e-004**	**0.1000**	**4.9000e-004**	**0.1005**	**0.0265**	**4.5000e-004**	**0.0270**		**92.0215**	**92.0215**	**3.2400e-003**	**2.8700e-003**	**92.9589**

Wake Avenue Affordable Housing Project - Imperial County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Site Preparation - 2024

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					19.6570	0.0000	19.6570	10.1025	0.0000	10.1025			0.0000			0.0000
Off-Road	2.6609	27.1760	18.3356	0.0381		1.2294	1.2294		1.1310	1.1310	0.0000	3,688.0100	3,688.0100	1.1928		3,717.8294
Total	**2.6609**	**27.1760**	**18.3356**	**0.0381**	**19.6570**	**1.2294**	**20.8864**	**10.1025**	**1.1310**	**11.2335**	**0.0000**	**3,688.0100**	**3,688.0100**	**1.1928**		**3,717.8294**

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	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
Worker	0.0725	0.0291	0.4413	9.1000e-004	0.1000	4.9000e-004	0.1005	0.0265	4.5000e-004	0.0270		92.0215	92.0215	3.2400e-003	2.8700e-003	92.9589
Total	**0.0725**	**0.0291**	**0.4413**	**9.1000e-004**	**0.1000**	**4.9000e-004**	**0.1005**	**0.0265**	**4.5000e-004**	**0.0270**		**92.0215**	**92.0215**	**3.2400e-003**	**2.8700e-003**	**92.9589**

Wake Avenue Affordable Housing Project - Imperial County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Grading - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					9.2036	0.0000	9.2036	3.6538	0.0000	3.6538			0.0000			0.0000
Off-Road	3.2181	32.3770	27.7228	0.0621		1.3354	1.3354		1.2286	1.2286		6,009.7487	6,009.7487	1.9437		6,058.3405
Total	**3.2181**	**32.3770**	**27.7228**	**0.0621**	**9.2036**	**1.3354**	**10.5390**	**3.6538**	**1.2286**	**4.8823**		**6,009.7487**	**6,009.7487**	**1.9437**		**6,058.3405**

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	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
Worker	0.0806	0.0324	0.4904	1.0100e-003	0.1111	5.5000e-004	0.1117	0.0295	5.0000e-004	0.0300		102.2461	102.2461	3.6000e-003	3.1900e-003	103.2877
Total	**0.0806**	**0.0324**	**0.4904**	**1.0100e-003**	**0.1111**	**5.5000e-004**	**0.1117**	**0.0295**	**5.0000e-004**	**0.0300**		**102.2461**	**102.2461**	**3.6000e-003**	**3.1900e-003**	**103.2877**

Wake Avenue Affordable Housing Project - Imperial County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Grading - 2024

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					9.2036	0.0000	9.2036	3.6538	0.0000	3.6538			0.0000			0.0000
Off-Road	3.2181	32.3770	27.7228	0.0621		1.3354	1.3354		1.2286	1.2286	0.0000	6,009.7487	6,009.7487	1.9437		6,058.3405
Total	**3.2181**	**32.3770**	**27.7228**	**0.0621**	**9.2036**	**1.3354**	**10.5390**	**3.6538**	**1.2286**	**4.8823**	**0.0000**	**6,009.7487**	**6,009.7487**	**1.9437**		**6,058.3405**

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	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
Worker	0.0806	0.0324	0.4904	1.0100e-003	0.1111	5.5000e-004	0.1117	0.0295	5.0000e-004	0.0300		102.2461	102.2461	3.6000e-003	3.1900e-003	103.2877
Total	**0.0806**	**0.0324**	**0.4904**	**1.0100e-003**	**0.1111**	**5.5000e-004**	**0.1117**	**0.0295**	**5.0000e-004**	**0.0300**		**102.2461**	**102.2461**	**3.6000e-003**	**3.1900e-003**	**103.2877**

Wake Avenue Affordable Housing Project - Imperial County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 2024

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	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769		2,555.6989	2,555.6989	0.6044		2,570.8077
Total	**1.4716**	**13.4438**	**16.1668**	**0.0270**		**0.6133**	**0.6133**		**0.5769**	**0.5769**		**2,555.6989**	**2,555.6989**	**0.6044**		**2,570.8077**

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	0.0000
Vendor	0.1347	2.4664	1.2067	0.0147	0.5371	0.0240	0.5610	0.1546	0.0229	0.1775		1,541.8813	1,541.8813	6.9100e-003	0.2118	1,605.1775
Worker	1.1888	0.4775	7.2329	0.0149	1.6390	8.0800e-003	1.6470	0.4349	7.4400e-003	0.4423		1,508.1292	1,508.1292	0.0531	0.0471	1,523.4930
Total	**1.3235**	**2.9439**	**8.4396**	**0.0296**	**2.1760**	**0.0320**	**2.2081**	**0.5895**	**0.0304**	**0.6198**		**3,050.0106**	**3,050.0106**	**0.0600**	**0.2589**	**3,128.6706**

Wake Avenue Affordable Housing Project - Imperial County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 2024

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	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769	0.0000	2,555.6989	2,555.6989	0.6044		2,570.8077
Total	**1.4716**	**13.4438**	**16.1668**	**0.0270**		**0.6133**	**0.6133**		**0.5769**	**0.5769**	**0.0000**	**2,555.6989**	**2,555.6989**	**0.6044**		**2,570.8077**

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	0.0000
Vendor	0.1347	2.4664	1.2067	0.0147	0.5371	0.0240	0.5610	0.1546	0.0229	0.1775		1,541.8813	1,541.8813	6.9100e-003	0.2118	1,605.1775
Worker	1.1888	0.4775	7.2329	0.0149	1.6390	8.0800e-003	1.6470	0.4349	7.4400e-003	0.4423		1,508.1292	1,508.1292	0.0531	0.0471	1,523.4930
Total	**1.3235**	**2.9439**	**8.4396**	**0.0296**	**2.1760**	**0.0320**	**2.2081**	**0.5895**	**0.0304**	**0.6198**		**3,050.0106**	**3,050.0106**	**0.0600**	**0.2589**	**3,128.6706**

Wake Avenue Affordable Housing Project - Imperial County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 2025

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	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963		2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**		**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

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	0.0000
Vendor	0.1309	2.4326	1.1716	0.0144	0.5371	0.0238	0.5609	0.1546	0.0228	0.1774		1,515.1269	1,515.1269	6.7600e-003	0.2069	1,576.9384
Worker	1.1037	0.4274	6.6730	0.0144	1.6390	7.6100e-003	1.6466	0.4349	7.0100e-003	0.4419		1,456.3236	1,456.3236	0.0479	0.0438	1,470.5804
Total	**1.2347**	**2.8600**	**7.8446**	**0.0288**	**2.1760**	**0.0314**	**2.2075**	**0.5895**	**0.0298**	**0.6193**		**2,971.4505**	**2,971.4505**	**0.0546**	**0.2507**	**3,047.5188**

Wake Avenue Affordable Housing Project - Imperial County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 2025

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	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963	0.0000	2,556.4744	2,556.4744	0.6010		2,571.4981
Total	**1.3674**	**12.4697**	**16.0847**	**0.0270**		**0.5276**	**0.5276**		**0.4963**	**0.4963**	**0.0000**	**2,556.4744**	**2,556.4744**	**0.6010**		**2,571.4981**

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	0.0000
Vendor	0.1309	2.4326	1.1716	0.0144	0.5371	0.0238	0.5609	0.1546	0.0228	0.1774		1,515.1269	1,515.1269	6.7600e-003	0.2069	1,576.9384
Worker	1.1037	0.4274	6.6730	0.0144	1.6390	7.6100e-003	1.6466	0.4349	7.0100e-003	0.4419		1,456.3236	1,456.3236	0.0479	0.0438	1,470.5804
Total	**1.2347**	**2.8600**	**7.8446**	**0.0288**	**2.1760**	**0.0314**	**2.2075**	**0.5895**	**0.0298**	**0.6193**		**2,971.4505**	**2,971.4505**	**0.0546**	**0.2507**	**3,047.5188**

Wake Avenue Affordable Housing Project - Imperial County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Architectural Coating - 2025

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	65.9097					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515		281.4481	281.4481	0.0154		281.8319
Total	**66.0806**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**		**281.4481**	**281.4481**	**0.0154**		**281.8319**

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	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
Worker	0.2207	0.0855	1.3346	2.8800e-003	0.3278	1.5200e-003	0.3293	0.0870	1.4000e-003	0.0884		291.2647	291.2647	9.5700e-003	8.7700e-003	294.1161
Total	**0.2207**	**0.0855**	**1.3346**	**2.8800e-003**	**0.3278**	**1.5200e-003**	**0.3293**	**0.0870**	**1.4000e-003**	**0.0884**		**291.2647**	**291.2647**	**9.5700e-003**	**8.7700e-003**	**294.1161**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Architectural Coating - 2025

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	65.9097					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1709	1.1455	1.8091	2.9700e-003		0.0515	0.0515		0.0515	0.0515	0.0000	281.4481	281.4481	0.0154		281.8319
Total	**66.0806**	**1.1455**	**1.8091**	**2.9700e-003**		**0.0515**	**0.0515**		**0.0515**	**0.0515**	**0.0000**	**281.4481**	**281.4481**	**0.0154**		**281.8319**

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	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
Worker	0.2207	0.0855	1.3346	2.8800e-003	0.3278	1.5200e-003	0.3293	0.0870	1.4000e-003	0.0884		291.2647	291.2647	9.5700e-003	8.7700e-003	294.1161
Total	**0.2207**	**0.0855**	**1.3346**	**2.8800e-003**	**0.3278**	**1.5200e-003**	**0.3293**	**0.0870**	**1.4000e-003**	**0.0884**		**291.2647**	**291.2647**	**9.5700e-003**	**8.7700e-003**	**294.1161**

Wake Avenue Affordable Housing Project - Imperial County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.7 Paving - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9152	8.5816	14.5780	0.0228		0.4185	0.4185		0.3850	0.3850		2,206.7452	2,206.7452	0.7137		2,224.5878
Paving	0.6131					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.5282**	**8.5816**	**14.5780**	**0.0228**		**0.4185**	**0.4185**		**0.3850**	**0.3850**		**2,206.7452**	**2,206.7452**	**0.7137**		**2,224.5878**

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	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
Worker	0.0561	0.0217	0.3393	7.3000e-004	0.0833	3.9000e-004	0.0837	0.0221	3.6000e-004	0.0225		74.0504	74.0504	2.4300e-003	2.2300e-003	74.7753
Total	**0.0561**	**0.0217**	**0.3393**	**7.3000e-004**	**0.0833**	**3.9000e-004**	**0.0837**	**0.0221**	**3.6000e-004**	**0.0225**		**74.0504**	**74.0504**	**2.4300e-003**	**2.2300e-003**	**74.7753**

Wake Avenue Affordable Housing Project - Imperial County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.7 Paving - 2025

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9152	8.5816	14.5780	0.0228		0.4185	0.4185		0.3850	0.3850	0.0000	2,206.7452	2,206.7452	0.7137		2,224.5878
Paving	0.6131					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.5282**	**8.5816**	**14.5780**	**0.0228**		**0.4185**	**0.4185**		**0.3850**	**0.3850**	**0.0000**	**2,206.7452**	**2,206.7452**	**0.7137**		**2,224.5878**

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	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
Worker	0.0561	0.0217	0.3393	7.3000e-004	0.0833	3.9000e-004	0.0837	0.0221	3.6000e-004	0.0225		74.0504	74.0504	2.4300e-003	2.2300e-003	74.7753
Total	**0.0561**	**0.0217**	**0.3393**	**7.3000e-004**	**0.0833**	**3.9000e-004**	**0.0837**	**0.0221**	**3.6000e-004**	**0.0225**		**74.0504**	**74.0504**	**2.4300e-003**	**2.2300e-003**	**74.7753**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	4.5174	3.0793	26.0036	0.0485	4.9961	0.0345	5.0305	1.3311	0.0322	1.3633		4,924.2999	4,924.2999	0.2760	0.2519	5,006.2580
Unmitigated	4.5174	3.0793	26.0036	0.0485	4.9961	0.0345	5.0305	1.3311	0.0322	1.3633		4,924.2999	4,924.2999	0.2760	0.2519	5,006.2580

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	1,209.60	1,414.08	1177.92	2,069,033	2,069,033
Parking Lot	0.00	0.00	0.00		
Total	1,209.60	1,414.08	1,177.92	2,069,033	2,069,033

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	7.30	3.90	3.70	40.20	19.20	40.60	86	11	3
Parking Lot	6.70	5.00	8.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Wake Avenue Affordable Housing Project - Imperial County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.534506	0.059297	0.179652	0.141644	0.025634	0.006729	0.008348	0.016161	0.000956	0.000117	0.022945	0.000739	0.003273
Parking Lot	0.534506	0.059297	0.179652	0.141644	0.025634	0.006729	0.008348	0.016161	0.000956	0.000117	0.022945	0.000739	0.003273

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	0.1224	1.0458	0.4450	6.6800e-003		0.0846	0.0846		0.0846	0.0846		1,335.0733	1,335.0733	0.0256	0.0245	1,343.0070
NaturalGas Unmitigated	0.1224	1.0458	0.4450	6.6800e-003		0.0846	0.0846		0.0846	0.0846		1,335.0733	1,335.0733	0.0256	0.0245	1,343.0070

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Mid Rise	11348.1	0.1224	1.0458	0.4450	6.6800e-003		0.0846	0.0846		0.0846	0.0846		1,335.0733	1,335.0733	0.0256	0.0245	1,343.0070
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.1224**	**1.0458**	**0.4450**	**6.6800e-003**		**0.0846**	**0.0846**		**0.0846**	**0.0846**		**1,335.0733**	**1,335.0733**	**0.0256**	**0.0245**	**1,343.0070**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Mid Rise	11.3481	0.1224	1.0458	0.4450	6.6800e-003		0.0846	0.0846		0.0846	0.0846		1,335.0733	1,335.0733	0.0256	0.0245	1,343.0070
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.1224**	**1.0458**	**0.4450**	**6.6800e-003**		**0.0846**	**0.0846**		**0.0846**	**0.0846**		**1,335.0733**	**1,335.0733**	**0.0256**	**0.0245**	**1,343.0070**

6.0 Area Detail

Wake Avenue Affordable Housing Project - Imperial County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

No Hearths Installed

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	7.9657	0.2739	23.7908	1.2600e-003		0.1319	0.1319		0.1319	0.1319	0.0000	42.8969	42.8969	0.0413	0.0000	43.9285
Unmitigated	8.2516	2.7176	24.8307	0.0169		0.3295	0.3295		0.3295	0.3295	0.0000	3,162.4451	3,162.4451	0.1011	0.0572	3,182.0147

Wake Avenue Affordable Housing Project - Imperial County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	1.0112					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	6.2369					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.2860	2.4437	1.0399	0.0156		0.1976	0.1976		0.1976	0.1976	0.0000	3,119.5482	3,119.5482	0.0598	0.0572	3,138.0862
Landscaping	0.7176	0.2739	23.7908	1.2600e-003		0.1319	0.1319		0.1319	0.1319		42.8969	42.8969	0.0413		43.9285
Total	**8.2516**	**2.7176**	**24.8307**	**0.0169**		**0.3295**	**0.3295**		**0.3295**	**0.3295**	**0.0000**	**3,162.4451**	**3,162.4451**	**0.1011**	**0.0572**	**3,182.0147**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	1.0112					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	6.2369					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.7176	0.2739	23.7908	1.2600e-003		0.1319	0.1319		0.1319	0.1319		42.8969	42.8969	0.0413		43.9285
Total	**7.9657**	**0.2739**	**23.7908**	**1.2600e-003**		**0.1319**	**0.1319**		**0.1319**	**0.1319**	**0.0000**	**42.8969**	**42.8969**	**0.0413**	**0.0000**	**43.9285**

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Wake Avenue Affordable Housing Project

Imperial County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Mid Rise	288.00	Dwelling Unit	7.58	288,000.00	930
Parking Lot	520.00	Space	4.68	208,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	3.4	**Precipitation Freq (Days)**	12
Climate Zone	15			**Operational Year**	2026
Utility Company	Imperial Irrigation District				
CO2 Intensity (lb/MWhr)	189.98	**CH4 Intensity (lb/MWhr)**	0.033	**N2O Intensity (lb/MWhr)**	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Painting phase was modifed to overlap with building construction to reflect the anticipated construction scheudule.

On-road Fugitive Dust - Assumes all roads used during construction are 100% paved.

Vehicle Trips - Weekday trip generation rate modified to reflect Traffic Study (February 2022).

Road Dust - All construction would occur in an urban environment with paved streets.

Construction Off-road Equipment Mitigation -

Area Mitigation -

Water Mitigation -

Waste Mitigation -

Wake Avenue Affordable Housing Project - Imperial County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Table Name	Column Name	Default Value	New Value
tblAreaMitigation	UseLowVOCPaintParkingCheck	False	True
tblConstructionPhase	NumDays	20.00	56.00
tblConstructionPhase	PhaseEndDate	7/14/2025	5/19/2025
tblConstructionPhase	PhaseStartDate	6/17/2025	3/1/2025
tblOnRoadDust	HaulingPercentPave	50.00	100.00
tblOnRoadDust	HaulingPercentPave	50.00	100.00
tblOnRoadDust	HaulingPercentPave	50.00	100.00
tblOnRoadDust	HaulingPercentPave	50.00	100.00
tblOnRoadDust	HaulingPercentPave	50.00	100.00
tblOnRoadDust	HaulingPercentPave	50.00	100.00
tblOnRoadDust	VendorPercentPave	50.00	100.00
tblOnRoadDust	VendorPercentPave	50.00	100.00
tblOnRoadDust	VendorPercentPave	50.00	100.00
tblOnRoadDust	VendorPercentPave	50.00	100.00
tblOnRoadDust	VendorPercentPave	50.00	100.00
tblOnRoadDust	VendorPercentPave	50.00	100.00
tblOnRoadDust	WorkerPercentPave	50.00	100.00
tblOnRoadDust	WorkerPercentPave	50.00	100.00
tblOnRoadDust	WorkerPercentPave	50.00	100.00
tblOnRoadDust	WorkerPercentPave	50.00	100.00
tblOnRoadDust	WorkerPercentPave	50.00	100.00
tblOnRoadDust	WorkerPercentPave	50.00	100.00
tblRoadDust	RoadPercentPave	50	100
tblVehicleTrips	WD_TR	5.44	4.20

2.0 Emissions Summary

Wake Avenue Affordable Housing Project - Imperial County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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					
2024	0.3411	2.4981	3.0527	7.0900e-003	0.4565	0.1007	0.5572	0.1650	0.0941	0.2590	0.0000	633.9438	633.9438	0.1020	0.0238	643.5694
2025	1.9880	0.8889	1.3528	3.0900e-003	0.1169	0.0334	0.1503	0.0316	0.0314	0.0630	0.0000	277.1095	277.1095	0.0365	0.0115	281.4580
Maximum	**1.9880**	**2.4981**	**3.0527**	**7.0900e-003**	**0.4565**	**0.1007**	**0.5572**	**0.1650**	**0.0941**	**0.2590**	**0.0000**	**633.9438**	**633.9438**	**0.1020**	**0.0238**	**643.5694**

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					
2024	0.3411	2.4981	3.0527	7.0900e-003	0.4565	0.1007	0.5572	0.1650	0.0941	0.2590	0.0000	633.9434	633.9434	0.1020	0.0238	643.5689
2025	1.9880	0.8889	1.3528	3.0900e-003	0.1169	0.0334	0.1503	0.0316	0.0314	0.0630	0.0000	277.1094	277.1094	0.0365	0.0115	281.4579
Maximum	**1.9880**	**2.4981**	**3.0527**	**7.0900e-003**	**0.4565**	**0.1007**	**0.5572**	**0.1650**	**0.0941**	**0.2590**	**0.0000**	**633.9434**	**633.9434**	**0.1020**	**0.0238**	**643.5689**

Wake Avenue Affordable Housing Project - Imperial County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**1-2-2024**	**4-1-2024**	0.9646	0.9646
2	**4-2-2024**	**7-1-2024**	0.6234	0.6234
3	**7-2-2024**	**10-1-2024**	0.6303	0.6303
4	**10-2-2024**	**1-1-2025**	0.6274	0.6274
5	**1-2-2025**	**4-1-2025**	1.3457	1.3457
6	**4-2-2025**	**7-1-2025**	1.5670	1.5670
		Highest	1.5670	1.5670

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.3880	0.0299	2.1434	1.5000e-004		0.0123	0.0123		0.0123	0.0123	0.0000	9.5869	9.5869	3.4900e-003	1.1000e-004	9.7073
Energy	0.0223	0.1909	0.0812	1.2200e-003		0.0154	0.0154		0.0154	0.0154	0.0000	325.5892	325.5892	0.0224	6.2500e-003	328.0127
Mobile	0.5362	0.5173	3.5648	7.1600e-003	0.7881	5.4700e-003	0.7935	0.2101	5.1100e-003	0.2152	0.0000	660.6100	660.6100	0.0401	0.0365	672.4747
Waste						0.0000	0.0000		0.0000	0.0000	26.8922	0.0000	26.8922	1.5893	0.0000	66.6244
Water						0.0000	0.0000		0.0000	0.0000	5.9531	32.3804	38.3335	0.6171	0.0151	58.2655
Total	**1.9465**	**0.7380**	**5.7894**	**8.5300e-003**	**0.7881**	**0.0332**	**0.8213**	**0.2101**	**0.0328**	**0.2429**	**32.8453**	**1,028.1665**	**1,061.0118**	**2.2724**	**0.0579**	**1,135.0846**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.3874	0.0247	2.1412	1.1000e-004		0.0119	0.0119		0.0119	0.0119	0.0000	3.5024	3.5024	3.3700e-003	0.0000	3.5866
Energy	0.0223	0.1909	0.0812	1.2200e-003		0.0154	0.0154		0.0154	0.0154	0.0000	325.5892	325.5892	0.0224	6.2500e-003	328.0127
Mobile	0.5362	0.5173	3.5648	7.1600e-003	0.7881	5.4700e-003	0.7935	0.2101	5.1100e-003	0.2152	0.0000	660.6100	660.6100	0.0401	0.0365	672.4747
Waste						0.0000	0.0000		0.0000	0.0000	6.7231	0.0000	6.7231	0.3973	0.0000	16.6561
Water						0.0000	0.0000		0.0000	0.0000	4.7625	25.9044	30.6668	0.4937	0.0121	46.6124
Total	**1.9459**	**0.7328**	**5.7872**	**8.4900e-003**	**0.7881**	**0.0328**	**0.8208**	**0.2101**	**0.0324**	**0.2425**	**11.4855**	**1,015.6059**	**1,027.0914**	**0.9569**	**0.0548**	**1,067.3426**

	ROG	NOx	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	**0.03**	**0.71**	**0.04**	**0.47**	**0.00**	**1.30**	**0.05**	**0.00**	**1.31**	**0.18**	**65.03**	**1.22**	**3.20**	**57.89**	**5.40**	**5.97**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/2/2024	1/29/2024	5	20	
2	Site Preparation	Site Preparation	1/30/2024	2/12/2024	5	10	
3	Grading	Grading	2/13/2024	3/25/2024	5	30	

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4	Building Construction	Building Construction	3/26/2024	5/19/2025	5	300	
5	Architectural Coating	Architectural Coating	3/1/2025	5/19/2025	5	56	
6	Paving	Paving	5/20/2025	6/16/2025	5	20	

Acres of Grading (Site Preparation Phase): 15

Acres of Grading (Grading Phase): 90

Acres of Paving: 4.68

Residential Indoor: 583,200; Residential Outdoor: 194,400; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 12,480 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Architectural Coating	Air Compressors	1	6.00	78	0.48
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction	Cranes	1	7.00	231	0.29
Demolition	Excavators	3	8.00	158	0.38
Grading	Excavators	2	8.00	158	0.38
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Grading	Graders	1	8.00	187	0.41
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	0.00	7.30	8.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	7.30	8.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	7.30	8.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	295.00	65.00	0.00	7.30	8.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	7.30	8.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	59.00	0.00	0.00	7.30	8.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2024

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	0.0224	0.2088	0.1971	3.9000e-004		9.6000e-003	9.6000e-003		8.9200e-003	8.9200e-003	0.0000	33.9961	33.9961	9.5100e-003	0.0000	34.2338
Total	**0.0224**	**0.2088**	**0.1971**	**3.9000e-004**		**9.6000e-003**	**9.6000e-003**		**8.9200e-003**	**8.9200e-003**	**0.0000**	**33.9961**	**33.9961**	**9.5100e-003**	**0.0000**	**34.2338**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Demolition - 2024

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	4.8000e-004	2.5000e-004	2.9800e-003	1.0000e-005	8.3000e-004	0.0000	8.3000e-004	2.2000e-004	0.0000	2.2000e-004	0.0000	0.6346	0.6346	2.0000e-005	2.0000e-005	0.6417
Total	**4.8000e-004**	**2.5000e-004**	**2.9800e-003**	**1.0000e-005**	**8.3000e-004**	**0.0000**	**8.3000e-004**	**2.2000e-004**	**0.0000**	**2.2000e-004**	**0.0000**	**0.6346**	**0.6346**	**2.0000e-005**	**2.0000e-005**	**0.6417**

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	0.0224	0.2088	0.1971	3.9000e-004		9.6000e-003	9.6000e-003		8.9200e-003	8.9200e-003	0.0000	33.9960	33.9960	9.5100e-003	0.0000	34.2338
Total	**0.0224**	**0.2088**	**0.1971**	**3.9000e-004**		**9.6000e-003**	**9.6000e-003**		**8.9200e-003**	**8.9200e-003**	**0.0000**	**33.9960**	**33.9960**	**9.5100e-003**	**0.0000**	**34.2338**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Demolition - 2024

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	4.8000e-004	2.5000e-004	2.9800e-003	1.0000e-005	8.3000e-004	0.0000	8.3000e-004	2.2000e-004	0.0000	2.2000e-004	0.0000	0.6346	0.6346	2.0000e-005	2.0000e-005	0.6417
Total	**4.8000e-004**	**2.5000e-004**	**2.9800e-003**	**1.0000e-005**	**8.3000e-004**	**0.0000**	**8.3000e-004**	**2.2000e-004**	**0.0000**	**2.2000e-004**	**0.0000**	**0.6346**	**0.6346**	**2.0000e-005**	**2.0000e-005**	**0.6417**

3.3 Site Preparation - 2024

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					0.0983	0.0000	0.0983	0.0505	0.0000	0.0505	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0133	0.1359	0.0917	1.9000e-004		6.1500e-003	6.1500e-003		5.6600e-003	5.6600e-003	0.0000	16.7285	16.7285	5.4100e-003	0.0000	16.8638
Total	**0.0133**	**0.1359**	**0.0917**	**1.9000e-004**	**0.0983**	**6.1500e-003**	**0.1044**	**0.0505**	**5.6600e-003**	**0.0562**	**0.0000**	**16.7285**	**16.7285**	**5.4100e-003**	**0.0000**	**16.8638**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Site Preparation - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.9000e-004	1.5000e-004	1.7900e-003	0.0000	5.0000e-004	0.0000	5.0000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.3808	0.3808	1.0000e-005	1.0000e-005	0.3850
Total	**2.9000e-004**	**1.5000e-004**	**1.7900e-003**	**0.0000**	**5.0000e-004**	**0.0000**	**5.0000e-004**	**1.3000e-004**	**0.0000**	**1.3000e-004**	**0.0000**	**0.3808**	**0.3808**	**1.0000e-005**	**1.0000e-005**	**0.3850**

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					0.0983	0.0000	0.0983	0.0505	0.0000	0.0505	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0133	0.1359	0.0917	1.9000e-004		6.1500e-003	6.1500e-003		5.6500e-003	5.6500e-003	0.0000	16.7285	16.7285	5.4100e-003	0.0000	16.8638
Total	**0.0133**	**0.1359**	**0.0917**	**1.9000e-004**	**0.0983**	**6.1500e-003**	**0.1044**	**0.0505**	**5.6500e-003**	**0.0562**	**0.0000**	**16.7285**	**16.7285**	**5.4100e-003**	**0.0000**	**16.8638**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Site Preparation - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.9000e-004	1.5000e-004	1.7900e-003	0.0000	5.0000e-004	0.0000	5.0000e-004	1.3000e-004	0.0000	1.3000e-004	0.0000	0.3808	0.3808	1.0000e-005	1.0000e-005	0.3850
Total	**2.9000e-004**	**1.5000e-004**	**1.7900e-003**	**0.0000**	**5.0000e-004**	**0.0000**	**5.0000e-004**	**1.3000e-004**	**0.0000**	**1.3000e-004**	**0.0000**	**0.3808**	**0.3808**	**1.0000e-005**	**1.0000e-005**	**0.3850**

3.4 Grading - 2024

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					0.1381	0.0000	0.1381	0.0548	0.0000	0.0548	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0483	0.4857	0.4158	9.3000e-004		0.0200	0.0200		0.0184	0.0184	0.0000	81.7793	81.7793	0.0265	0.0000	82.4405
Total	**0.0483**	**0.4857**	**0.4158**	**9.3000e-004**	**0.1381**	**0.0200**	**0.1581**	**0.0548**	**0.0184**	**0.0732**	**0.0000**	**81.7793**	**81.7793**	**0.0265**	**0.0000**	**82.4405**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Grading - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.6000e-004	4.9000e-004	5.9700e-003	1.0000e-005	1.6500e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.2693	1.2693	5.0000e-005	4.0000e-005	1.2834
Total	**9.6000e-004**	**4.9000e-004**	**5.9700e-003**	**1.0000e-005**	**1.6500e-003**	**1.0000e-005**	**1.6600e-003**	**4.4000e-004**	**1.0000e-005**	**4.5000e-004**	**0.0000**	**1.2693**	**1.2693**	**5.0000e-005**	**4.0000e-005**	**1.2834**

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					0.1381	0.0000	0.1381	0.0548	0.0000	0.0548	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0483	0.4857	0.4158	9.3000e-004		0.0200	0.0200		0.0184	0.0184	0.0000	81.7792	81.7792	0.0265	0.0000	82.4404
Total	**0.0483**	**0.4857**	**0.4158**	**9.3000e-004**	**0.1381**	**0.0200**	**0.1581**	**0.0548**	**0.0184**	**0.0732**	**0.0000**	**81.7792**	**81.7792**	**0.0265**	**0.0000**	**82.4404**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Grading - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.6000e-004	4.9000e-004	5.9700e-003	1.0000e-005	1.6500e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.2693	1.2693	5.0000e-005	4.0000e-005	1.2834
Total	**9.6000e-004**	**4.9000e-004**	**5.9700e-003**	**1.0000e-005**	**1.6500e-003**	**1.0000e-005**	**1.6600e-003**	**4.4000e-004**	**1.0000e-005**	**4.5000e-004**	**0.0000**	**1.2693**	**1.2693**	**5.0000e-005**	**4.0000e-005**	**1.2834**

3.5 Building Construction - 2024

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	0.1479	1.3511	1.6248	2.7100e-003		0.0616	0.0616		0.0580	0.0580	0.0000	233.0084	233.0084	0.0551	0.0000	234.3859
Total	**0.1479**	**1.3511**	**1.6248**	**2.7100e-003**		**0.0616**	**0.0616**		**0.0580**	**0.0580**	**0.0000**	**233.0084**	**233.0084**	**0.0551**	**0.0000**	**234.3859**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 2024

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	0.0129	0.2670	0.1230	1.4700e-003	0.0537	2.4100e-003	0.0561	0.0155	2.3100e-003	0.0178	0.0000	140.7120	140.7120	6.2000e-004	0.0194	146.4995
Worker	0.0945	0.0487	0.5896	1.3700e-003	0.1635	8.1000e-004	0.1644	0.0434	7.5000e-004	0.0442	0.0000	125.4349	125.4349	4.7900e-003	4.3000e-003	126.8357
Total	**0.1075**	**0.3158**	**0.7126**	**2.8400e-003**	**0.2172**	**3.2200e-003**	**0.2204**	**0.0589**	**3.0600e-003**	**0.0619**	**0.0000**	**266.1469**	**266.1469**	**5.4100e-003**	**0.0237**	**273.3352**

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	0.1479	1.3511	1.6248	2.7100e-003		0.0616	0.0616		0.0580	0.0580	0.0000	233.0081	233.0081	0.0551	0.0000	234.3856
Total	**0.1479**	**1.3511**	**1.6248**	**2.7100e-003**		**0.0616**	**0.0616**		**0.0580**	**0.0580**	**0.0000**	**233.0081**	**233.0081**	**0.0551**	**0.0000**	**234.3856**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 2024

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	0.0129	0.2670	0.1230	1.4700e-003	0.0537	2.4100e-003	0.0561	0.0155	2.3100e-003	0.0178	0.0000	140.7120	140.7120	6.2000e-004	0.0194	146.4995
Worker	0.0945	0.0487	0.5896	1.3700e-003	0.1635	8.1000e-004	0.1644	0.0434	7.5000e-004	0.0442	0.0000	125.4349	125.4349	4.7900e-003	4.3000e-003	126.8357
Total	**0.1075**	**0.3158**	**0.7126**	**2.8400e-003**	**0.2172**	**3.2200e-003**	**0.2204**	**0.0589**	**3.0600e-003**	**0.0619**	**0.0000**	**266.1469**	**266.1469**	**5.4100e-003**	**0.0237**	**273.3352**

3.5 Building Construction - 2025

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	0.0677	0.6173	0.7962	1.3300e-003		0.0261	0.0261		0.0246	0.0246	0.0000	114.8001	114.8001	0.0270	0.0000	115.4748
Total	**0.0677**	**0.6173**	**0.7962**	**1.3300e-003**		**0.0261**	**0.0261**		**0.0246**	**0.0246**	**0.0000**	**114.8001**	**114.8001**	**0.0270**	**0.0000**	**115.4748**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 2025

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	6.1900e-003	0.1297	0.0589	7.1000e-004	0.0264	1.1800e-003	0.0276	7.6200e-003	1.1300e-003	8.7500e-003	0.0000	68.1043	68.1043	3.0000e-004	9.3200e-003	70.8877
Worker	0.0433	0.0215	0.2683	6.5000e-004	0.0806	3.8000e-004	0.0809	0.0214	3.5000e-004	0.0217	0.0000	59.6729	59.6729	2.1300e-003	1.9700e-003	60.3128
Total	**0.0495**	**0.1511**	**0.3271**	**1.3600e-003**	**0.1070**	**1.5600e-003**	**0.1085**	**0.0290**	**1.4800e-003**	**0.0305**	**0.0000**	**127.7772**	**127.7772**	**2.4300e-003**	**0.0113**	**131.2005**

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	0.0677	0.6173	0.7962	1.3300e-003		0.0261	0.0261		0.0246	0.0246	0.0000	114.8000	114.8000	0.0270	0.0000	115.4746
Total	**0.0677**	**0.6173**	**0.7962**	**1.3300e-003**		**0.0261**	**0.0261**		**0.0246**	**0.0246**	**0.0000**	**114.8000**	**114.8000**	**0.0270**	**0.0000**	**115.4746**

Wake Avenue Affordable Housing Project - Imperial County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Building Construction - 2025

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	6.1900e-003	0.1297	0.0589	7.1000e-004	0.0264	1.1800e-003	0.0276	7.6200e-003	1.1300e-003	8.7500e-003	0.0000	68.1043	68.1043	3.0000e-004	9.3200e-003	70.8877
Worker	0.0433	0.0215	0.2683	6.5000e-004	0.0806	3.8000e-004	0.0809	0.0214	3.5000e-004	0.0217	0.0000	59.6729	59.6729	2.1300e-003	1.9700e-003	60.3128
Total	**0.0495**	**0.1511**	**0.3271**	**1.3600e-003**	**0.1070**	**1.5600e-003**	**0.1085**	**0.0290**	**1.4800e-003**	**0.0305**	**0.0000**	**127.7772**	**127.7772**	**2.4300e-003**	**0.0113**	**131.2005**

3.6 Architectural Coating - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.8455					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.7800e-003	0.0321	0.0507	8.0000e-005		1.4400e-003	1.4400e-003		1.4400e-003	1.4400e-003	0.0000	7.1491	7.1491	3.9000e-004	0.0000	7.1589
Total	**1.8503**	**0.0321**	**0.0507**	**8.0000e-005**		**1.4400e-003**	**1.4400e-003**		**1.4400e-003**	**1.4400e-003**	**0.0000**	**7.1491**	**7.1491**	**3.9000e-004**	**0.0000**	**7.1589**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Architectural Coating - 2025

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	4.9000e-003	2.4300e-003	0.0304	7.0000e-005	9.1100e-003	4.0000e-005	9.1600e-003	2.4200e-003	4.0000e-005	2.4600e-003	0.0000	6.7509	6.7509	2.4000e-004	2.2000e-004	6.8233
Total	**4.9000e-003**	**2.4300e-003**	**0.0304**	**7.0000e-005**	**9.1100e-003**	**4.0000e-005**	**9.1600e-003**	**2.4200e-003**	**4.0000e-005**	**2.4600e-003**	**0.0000**	**6.7509**	**6.7509**	**2.4000e-004**	**2.2000e-004**	**6.8233**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.8455					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.7800e-003	0.0321	0.0507	8.0000e-005		1.4400e-003	1.4400e-003		1.4400e-003	1.4400e-003	0.0000	7.1491	7.1491	3.9000e-004	0.0000	7.1589
Total	**1.8503**	**0.0321**	**0.0507**	**8.0000e-005**		**1.4400e-003**	**1.4400e-003**		**1.4400e-003**	**1.4400e-003**	**0.0000**	**7.1491**	**7.1491**	**3.9000e-004**	**0.0000**	**7.1589**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Architectural Coating - 2025

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	4.9000e-003	2.4300e-003	0.0304	7.0000e-005	9.1100e-003	4.0000e-005	9.1600e-003	2.4200e-003	4.0000e-005	2.4600e-003	0.0000	6.7509	6.7509	2.4000e-004	2.2000e-004	6.8233
Total	**4.9000e-003**	**2.4300e-003**	**0.0304**	**7.0000e-005**	**9.1100e-003**	**4.0000e-005**	**9.1600e-003**	**2.4200e-003**	**4.0000e-005**	**2.4600e-003**	**0.0000**	**6.7509**	**6.7509**	**2.4000e-004**	**2.2000e-004**	**6.8233**

3.7 Paving - 2025

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	9.1500e-003	0.0858	0.1458	2.3000e-004		4.1900e-003	4.1900e-003		3.8500e-003	3.8500e-003	0.0000	20.0193	20.0193	6.4700e-003	0.0000	20.1811
Paving	6.1300e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0153**	**0.0858**	**0.1458**	**2.3000e-004**		**4.1900e-003**	**4.1900e-003**		**3.8500e-003**	**3.8500e-003**	**0.0000**	**20.0193**	**20.0193**	**6.4700e-003**	**0.0000**	**20.1811**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.7 Paving - 2025

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	4.4000e-004	2.2000e-004	2.7600e-003	1.0000e-005	8.3000e-004	0.0000	8.3000e-004	2.2000e-004	0.0000	2.2000e-004	0.0000	0.6130	0.6130	2.0000e-005	2.0000e-005	0.6196
Total	**4.4000e-004**	**2.2000e-004**	**2.7600e-003**	**1.0000e-005**	**8.3000e-004**	**0.0000**	**8.3000e-004**	**2.2000e-004**	**0.0000**	**2.2000e-004**	**0.0000**	**0.6130**	**0.6130**	**2.0000e-005**	**2.0000e-005**	**0.6196**

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	9.1500e-003	0.0858	0.1458	2.3000e-004		4.1900e-003	4.1900e-003		3.8500e-003	3.8500e-003	0.0000	20.0192	20.0192	6.4700e-003	0.0000	20.1811
Paving	6.1300e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0153**	**0.0858**	**0.1458**	**2.3000e-004**		**4.1900e-003**	**4.1900e-003**		**3.8500e-003**	**3.8500e-003**	**0.0000**	**20.0192**	**20.0192**	**6.4700e-003**	**0.0000**	**20.1811**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.7 Paving - 2025

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	4.4000e-004	2.2000e-004	2.7600e-003	1.0000e-005	8.3000e-004	0.0000	8.3000e-004	2.2000e-004	0.0000	2.2000e-004	0.0000	0.6130	0.6130	2.0000e-005	2.0000e-005	0.6196
Total	**4.4000e-004**	**2.2000e-004**	**2.7600e-003**	**1.0000e-005**	**8.3000e-004**	**0.0000**	**8.3000e-004**	**2.2000e-004**	**0.0000**	**2.2000e-004**	**0.0000**	**0.6130**	**0.6130**	**2.0000e-005**	**2.0000e-005**	**0.6196**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.5362	0.5173	3.5648	7.1600e-003	0.7881	5.4700e-003	0.7935	0.2101	5.1100e-003	0.2152	0.0000	660.6100	660.6100	0.0401	0.0365	672.4747
Unmitigated	0.5362	0.5173	3.5648	7.1600e-003	0.7881	5.4700e-003	0.7935	0.2101	5.1100e-003	0.2152	0.0000	660.6100	660.6100	0.0401	0.0365	672.4747

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	1,209.60	1,414.08	1177.92	2,069,033	2,069,033
Parking Lot	0.00	0.00	0.00		
Total	1,209.60	1,414.08	1,177.92	2,069,033	2,069,033

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	7.30	3.90	3.70	40.20	19.20	40.60	86	11	3
Parking Lot	6.70	5.00	8.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.534506	0.059297	0.179652	0.141644	0.025634	0.006729	0.008348	0.016161	0.000956	0.000117	0.022945	0.000739	0.003273
Parking Lot	0.534506	0.059297	0.179652	0.141644	0.025634	0.006729	0.008348	0.016161	0.000956	0.000117	0.022945	0.000739	0.003273

5.0 Energy Detail

Wake Avenue Affordable Housing Project - Imperial County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

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	104.5528	104.5528	0.0182	2.2000e-003	105.6628
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	104.5528	104.5528	0.0182	2.2000e-003	105.6628
NaturalGas Mitigated	0.0223	0.1909	0.0812	1.2200e-003		0.0154	0.0154		0.0154	0.0154	0.0000	221.0364	221.0364	4.2400e-003	4.0500e-003	222.3499
NaturalGas Unmitigated	0.0223	0.1909	0.0812	1.2200e-003		0.0154	0.0154		0.0154	0.0154	0.0000	221.0364	221.0364	4.2400e-003	4.0500e-003	222.3499

Wake Avenue Affordable Housing Project - Imperial County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	4.14206e+006	0.0223	0.1909	0.0812	1.2200e-003		0.0154	0.0154		0.0154	0.0154	0.0000	221.0364	221.0364	4.2400e-003	4.0500e-003	222.3499
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0223**	**0.1909**	**0.0812**	**1.2200e-003**		**0.0154**	**0.0154**		**0.0154**	**0.0154**	**0.0000**	**221.0364**	**221.0364**	**4.2400e-003**	**4.0500e-003**	**222.3499**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	4.14206e+006	0.0223	0.1909	0.0812	1.2200e-003		0.0154	0.0154		0.0154	0.0154	0.0000	221.0364	221.0364	4.2400e-003	4.0500e-003	222.3499
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0223**	**0.1909**	**0.0812**	**1.2200e-003**		**0.0154**	**0.0154**		**0.0154**	**0.0154**	**0.0000**	**221.0364**	**221.0364**	**4.2400e-003**	**4.0500e-003**	**222.3499**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	1.14048e+006	98.2794	0.0171	2.0700e-003	99.3228
Parking Lot	72800	6.2734	1.0900e-003	1.3000e-004	6.3400
Total		**104.5528**	**0.0182**	**2.2000e-003**	**105.6628**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	1.14048e+006	98.2794	0.0171	2.0700e-003	99.3228
Parking Lot	72800	6.2734	1.0900e-003	1.3000e-004	6.3400
Total		**104.5528**	**0.0182**	**2.2000e-003**	**105.6628**

6.0 Area Detail

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

No Hearths Installed

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.3874	0.0247	2.1412	1.1000e-004		0.0119	0.0119		0.0119	0.0119	0.0000	3.5024	3.5024	3.3700e-003	0.0000	3.5866
Unmitigated	1.3880	0.0299	2.1434	1.5000e-004		0.0123	0.0123		0.0123	0.0123	0.0000	9.5869	9.5869	3.4900e-003	1.1000e-004	9.7073

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.1846					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.1382					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	6.1000e-004	5.2500e-003	2.2400e-003	3.0000e-005		4.2000e-004	4.2000e-004		4.2000e-004	4.2000e-004	0.0000	6.0845	6.0845	1.2000e-004	1.1000e-004	6.1207
Landscaping	0.0646	0.0247	2.1412	1.1000e-004		0.0119	0.0119		0.0119	0.0119	0.0000	3.5024	3.5024	3.3700e-003	0.0000	3.5866
Total	**1.3880**	**0.0299**	**2.1434**	**1.4000e-004**		**0.0123**	**0.0123**		**0.0123**	**0.0123**	**0.0000**	**9.5869**	**9.5869**	**3.4900e-003**	**1.1000e-004**	**9.7073**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.1846					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.1382					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0646	0.0247	2.1412	1.1000e-004		0.0119	0.0119		0.0119	0.0119	0.0000	3.5024	3.5024	3.3700e-003	0.0000	3.5866
Total	**1.3874**	**0.0247**	**2.1412**	**1.1000e-004**		**0.0119**	**0.0119**		**0.0119**	**0.0119**	**0.0000**	**3.5024**	**3.5024**	**3.3700e-003**	**0.0000**	**3.5866**

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	30.6668	0.4937	0.0121	46.6124
Unmitigated	38.3335	0.6171	0.0151	58.2655

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	18.7644 / 11.8297	38.3335	0.6171	0.0151	58.2655
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**38.3335**	**0.6171**	**0.0151**	**58.2655**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	15.0115 / 9.46376	30.6668	0.4937	0.0121	46.6124
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**30.6668**	**0.4937**	**0.0121**	**46.6124**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	6.7231	0.3973	0.0000	16.6561
Unmitigated	26.8922	1.5893	0.0000	66.6244

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	132.48	26.8922	1.5893	0.0000	66.6244
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**26.8922**	**1.5893**	**0.0000**	**66.6244**

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	33.12	6.7231	0.3973	0.0000	16.6561
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		**6.7231**	**0.3973**	**0.0000**	**16.6561**

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

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied