

AIR QUALITY AND GREENHOUSE GAS ANALYSIS

**THE RITZ-CARLTON RESIDENCES PROJECT
NEWPORT BEACH, CALIFORNIA**



February 2022

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LIST OF ABBREVIATIONS AND ACRONYMS

°C	degrees Celsius
°F	degrees Fahrenheit
µg/m ³	micrograms per cubic meter
AAQS	ambient air quality standards
AB	Assembly Bill
AQMP	Air Quality Management Plan
Basin	South Coast Air Basin
CAAQS	California ambient air quality standards
CAFE	corporate average fuel economy
CalEEMod	California Emissions Estimator Model (version 2020.4.0)
CalEPA	California Environmental Protection Agency
CALGreen Code	California Green Building Standards Code
CalRecycle	California Department of Resources Recycling and Recovery
CARB	California Air Resources Board
CARB Handbook	California Air Resources Board's Air Quality and Land Use Handbook
CAT	Climate Action Team
CCAA	California Clean Air Act
CCR	California Code of Regulations
CEQA	California Environmental Quality Act
CH ₄	methane
City	City of Newport Beach
CO	carbon monoxide
CO ₂	carbon dioxide
CO ₂ e	CO ₂ equivalents
EAP	Energy Action Plan
EO	Executive Order
EV	electric vehicle
FCAA	Federal Clean Air Act
General Plan EIR	2006 General Plan Environmental Impact Report

GHG	greenhouse gas
GWP	Global Warming Potential
HFCs	hydrofluorocarbons
IPCC	Intergovernmental Panel on Climate Change
LCFS	Low Carbon Fuel Standard
LST	localized significance threshold
MMT	million metric tons
MMT CO ₂ e	million metric tons of CO ₂ e
mph	miles per hour
MPO	Metropolitan Planning Organization
MT	metric tons
MT CO ₂ e	metric tons of CO ₂ e
MT CO ₂ e/yr	metric tons of CO ₂ e per year
NAAQS	national ambient air quality standards
NHTSA	National Highway Traffic Safety Administration
N ₂ O	nitrous oxide
NO ₂	nitrogen dioxide
NO _x	nitrogen oxides
O ₃	ozone
Pb	lead
PFCs	perfluorocarbons
PM	particulate matter
PM _{2.5}	particulate matter 2.5 microns or less in diameter (fine particulate matter)
PM ₁₀	particulate matter 10 microns or less in diameter (coarse particulate matter)
ppm	parts per million
PRC	Public Resources Code
project	Ritz-Carlton Residences Project
ROCs	reactive organic compounds
ROGs	reactive organic gases
RTP	Regional Transportation Plan
SAFE	safer affordable fuel-efficient

SB	Senate Bill
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCS	Sustainable Communities Strategy
SF ₆	sulfur hexafluoride
SO ₂	sulfur dioxide
SO _x	sulfur oxides
SRA	Source Receptor Area
TACs	toxic air contaminants
UNFCCC	United Nations Framework Convention on Climate Change
USEPA	United States Environmental Protection Agency
VMT	vehicle miles traveled
VOCs	volatile organic compounds
Working Group	GHG CEQA Significance Threshold Working Group
ZEV	zero emission vehicle

INTRODUCTION

This air quality and greenhouse gas (GHG) impact analysis has been prepared to evaluate the potential air quality and GHG emissions impacts associated with The Ritz-Carlton Residences Project (project) in the City of Newport Beach (City), California. This report provides a project-specific air quality and GHG emissions impact analysis by examining the impacts of the proposed uses on regional air quality and nearby sensitive uses. This air quality and GHG impact analysis follows the guidelines identified by the South Coast Air Quality Management District (SCAQMD) in its California Environmental Quality Act (CEQA) Air Quality Handbook,¹ and associated updates.

This analysis also supports the proposed project's use of an Addendum to the 2006 General Plan Environmental Impact Report (General Plan EIR). This analysis is prepared pursuant to CEQA Guidelines Section 15164(a) which states: "the lead agency or a responsible agency shall prepare an addendum to a previously certified EIR if some changes or additions are necessary but none of the conditions described in PRC Section 21166 and Section 15162 calling for preparation of a subsequent EIR have occurred."

PROJECT DESCRIPTION

Project Location

The project site is the Newport Beach Marriott Resort Hotel, located at 900 Newport Center Drive in the City of Newport Beach, California. See Figure 1, Project Location and Vicinity, below. The Newport Beach Marriott Resort Hotel is a 9.53-acre property located immediately southwest of Fashion Island, within Newport Center. The resort hotel campus includes 532 hotel rooms and expansive amenities, including three swimming pools, a day spa, restaurants, conference/ballroom space, meeting rooms, and ancillary support uses. The resort hotel components are contained within five separate buildings and one parking structure.

The buildings range from 30 feet in height to 151 feet in height and overlook the Newport Beach Country Club golf course. The buildings are predominantly oriented towards Newport Harbor and the Pacific Ocean to the south. The attached Existing Site Plan depicts the location of the existing buildings and the unit count.

The project site is accessible from Newport Center Drive and Santa Barbara Drive and includes approximately 698 parking spaces, mostly provided in an underground parking garage and including self-parking and valet parking options. The Newport Beach Marriott Resort Hotel was originally constructed in 1975 and renovated in 1986 including the construction of the Pacific Pointe building and the parking structure. The hotel operates under Use Permit 2095.

¹ South Coast Air Quality Management District (SCAQMD). 1993. CEQA Air Quality Handbook. Website: [http://www.aqmd.gov/home/rules-compliance/ceqa/air-quality-analysis-handbook/ceqa-air-quality-handbook-\(1993\)](http://www.aqmd.gov/home/rules-compliance/ceqa/air-quality-analysis-handbook/ceqa-air-quality-handbook-(1993)) (accessed December 2021).

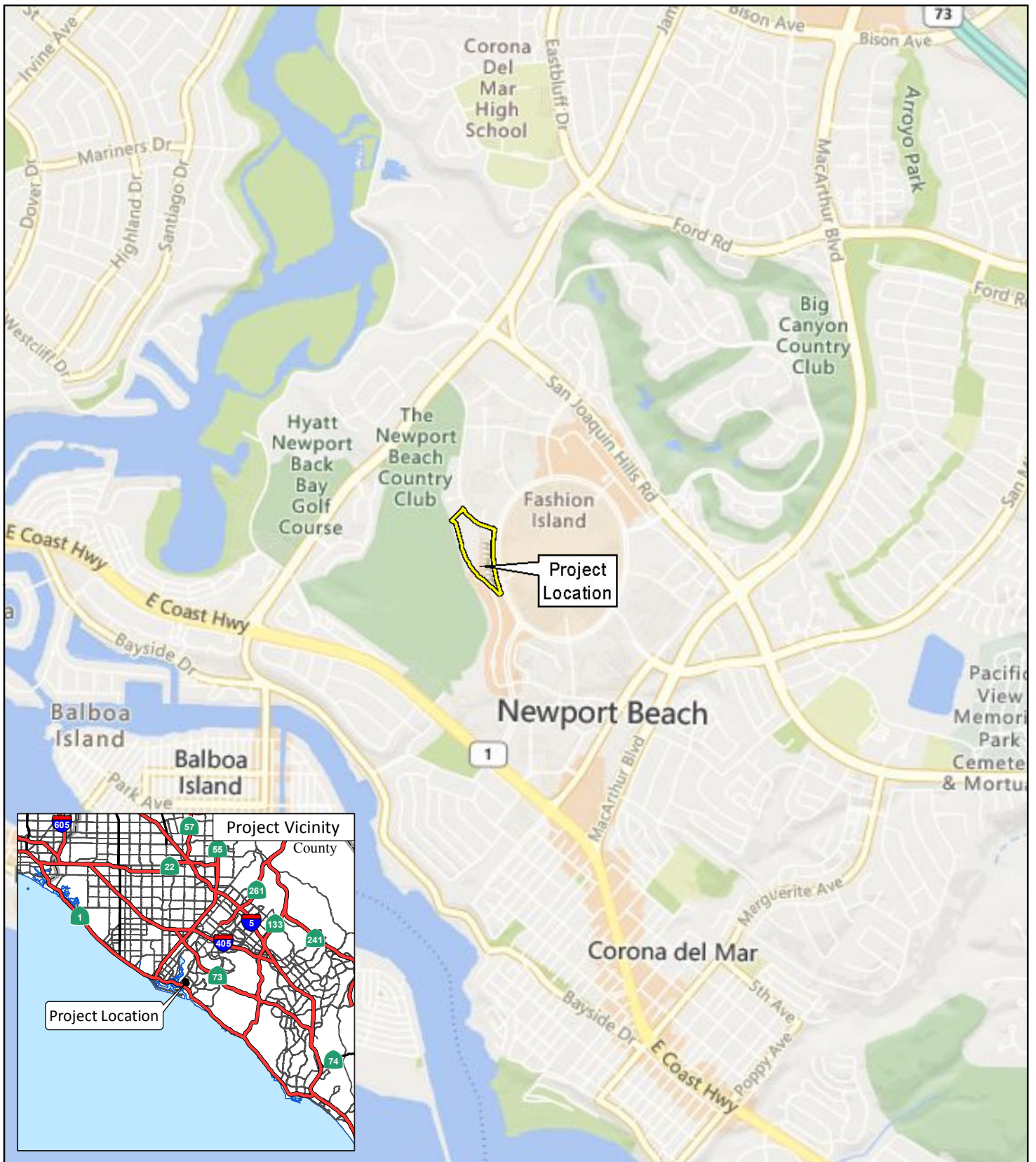


FIGURE 1

LSA

LEGEND
 Project Location



0 1000 2000
 FEET

SOURCE: Bing (2021)

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The Ritz Carlton Residences
 Project Location and Vicinity

Surrounding Land Uses

The project site is located within the Newport Center-Fashion Island subarea, which is a largely mixed-use area of the City. Newport Center is bounded by MacArthur Boulevard to the east, San Joaquin Hills Road to the north, Jamboree Road to the west, and Pacific Coast Highway to the south. Land uses in the project area include the Fashion Island Regional Commercial retail shopping center, major commercial office developments, residential developments including the Granville and Meridian condominium communities, and the Colony at Fashion Island apartment homes, and the Newport Beach Country Club. The Meridian condominium community is located immediately adjacent to the project site on the north along Santa Barbara Drive, with the guard-gated Granville condominiums located immediately to the southeast. Mid-rise commercial office buildings are located across Santa Barbara Drive to the north, and Fashion Island is located across Newport Center Drive to the north/northeast. The Newport Beach Country Club golf course abuts the southern property line. See Figure 2, Aerial Photograph and Surrounding Land Uses, below.

In addition to several residential communities, including Meridian, Granville, Colony at Fashion Island, Vivante Senior Housing (currently under construction), and other pending projects, Newport Center is characterized by high- and mid-rise office buildings surrounding Fashion Island, which provide residents and visitors shopping, entertainment, and restaurant amenities. The majority of the high-rise buildings are located in Blocks 400–600, with building heights exceeding 300 feet above ground level. Low- and mid-rise buildings are concentrated in the southeastern portion of Newport Center closest to MacArthur Boulevard and Pacific Coast Highway. Newport Center is considered a major employment center, which includes research and development and high technology businesses in addition to substantial medical office uses. The Newport Beach Civic Center is located in Newport Center between Avocado Avenue and MacArthur Boulevard.

Proposed Project

The proposed project at the Newport Beach Marriott Resort Hotel consists of the conversion of up to 30 percent of the existing 532 hotel rooms to construct hotel-branded residences. The project contemplates the demolition of the southernmost building, Harbor Landing, and construction of a new residential building in the same location (see next paragraph for more detail regarding the new building). The project would remove 133 hotel units by demolishing the Harbor Landing building and converting 26 hotel rooms in the Harbor Point building via interior reconfiguration into hotel-branded residences. The remainder of the Harbor Point building would change from 153 hotel rooms to 127 hotel rooms, but the building itself would not be demolished and no exterior improvements are proposed. Together, there would be 159 fewer traditional hotel rooms than now exist.

The new 22-story building would accommodate up to 159 hotel-branded residences, representing 30 percent of the total units at the Newport Beach Marriott Resort Hotel. The total units at the Newport Beach Marriott Resort Hotel would remain unchanged at 532, with 373 traditional hotel rooms and up to 159 hotel-branded residences. The details of the project site are included in Figure 3, Site Plan.

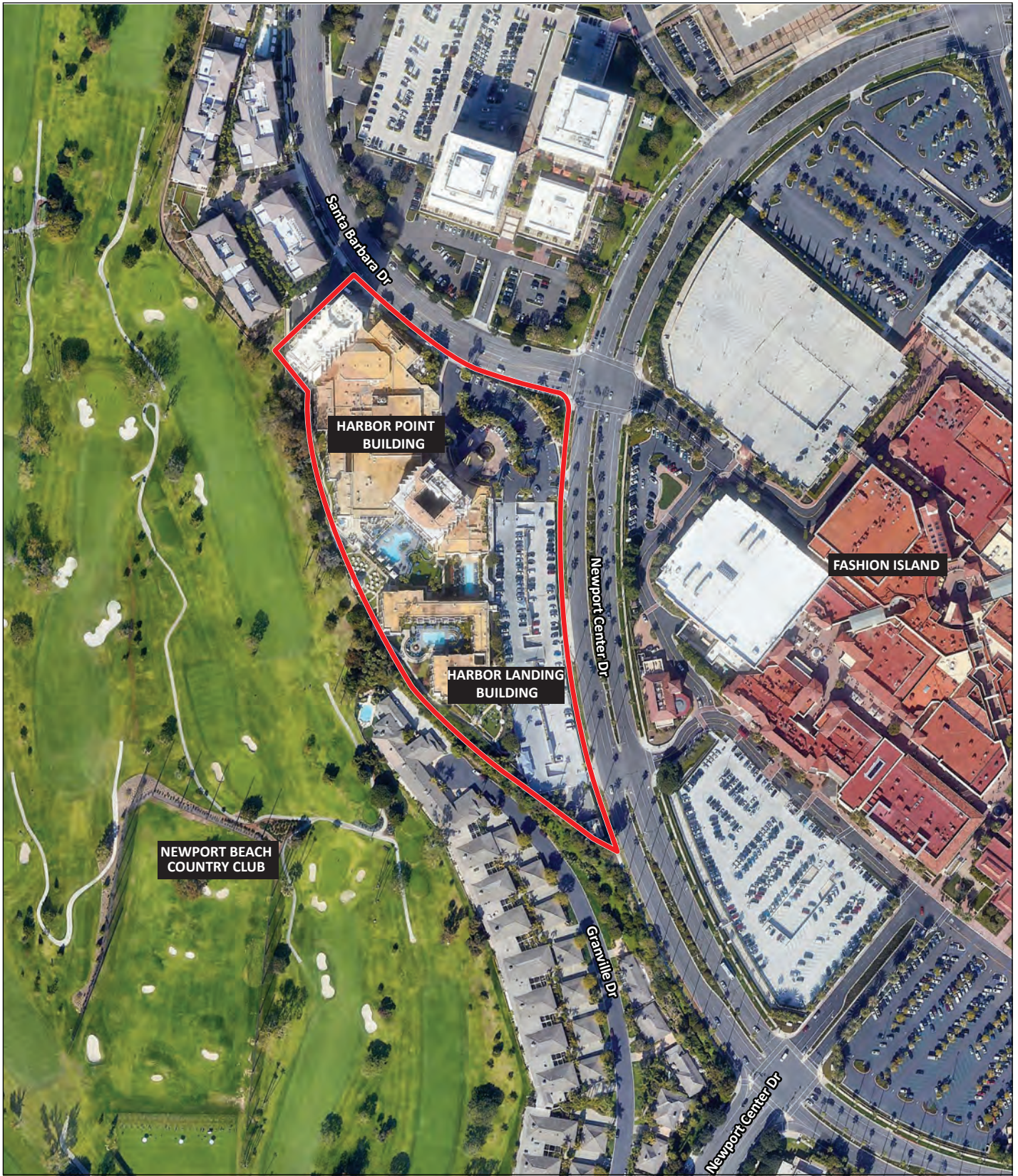
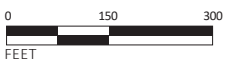


FIGURE 2

LSA



 Project Site Boundary

Ritz-Carlton Residences Project
Aerial Photograph and Surrounding Land Uses

SOURCES: Google Earth, 1/22/2020; LSA, 2022

azcorp04\FREprojects\NCH2101 Ritz-Carlton Residences\PRODUCTS\Graphics\Figure 2.ai (1/25/2022)

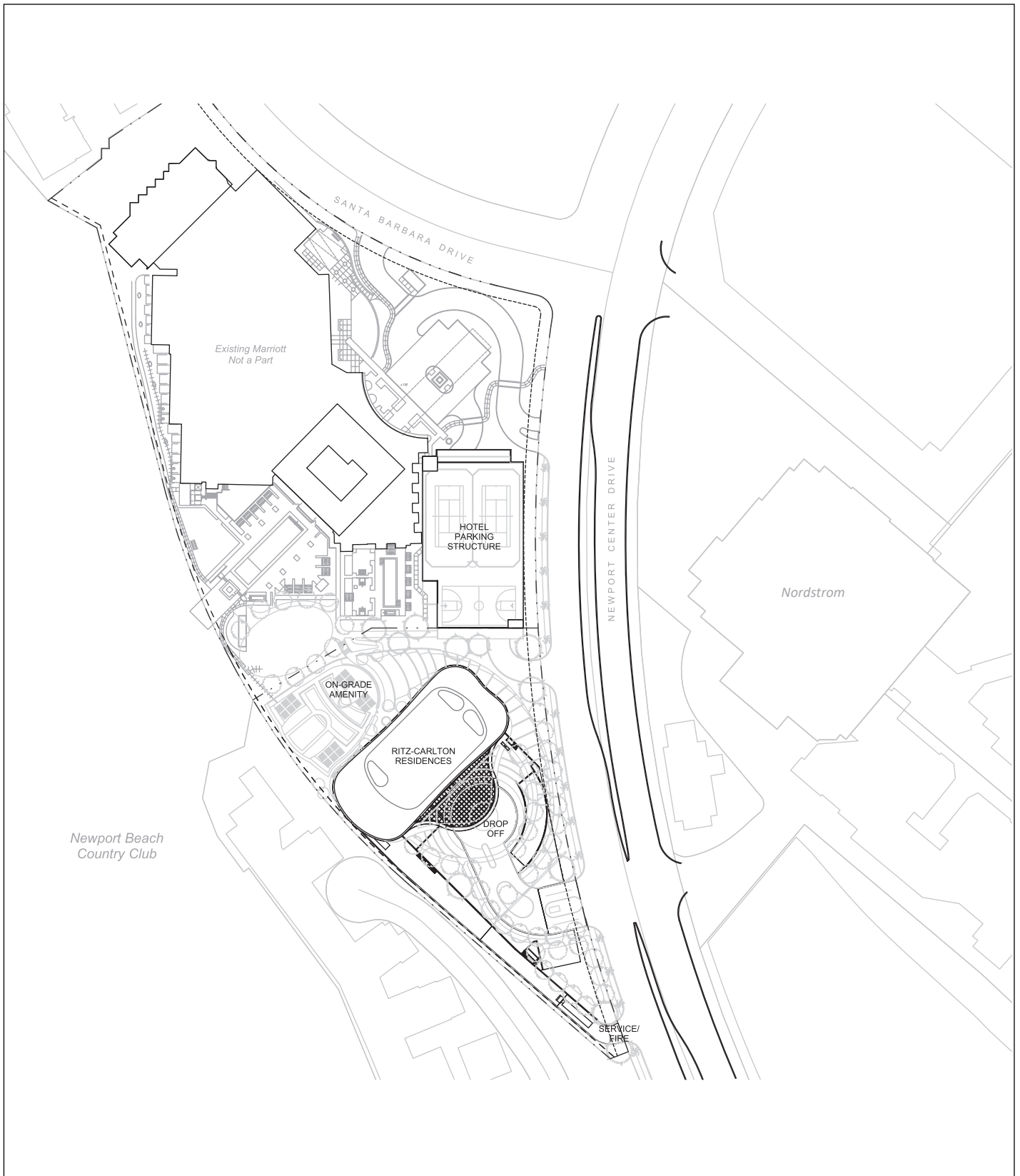


FIGURE 3

LSA

NOT TO SCALE



Ritz-Carlton Residences Project
Site Plan

SOURCES: Newport Center Hotel, LLC; MVE + Partners, 10/15/2021

azcorp04\FREprojects\NCH2101 Ritz-Carlton Residences\PRODUCTS\Graphics\Figure 3.ai (1/12/2022)

The new building is proposed to be up to 295 feet above ground level, with limited projections for rooftop appurtenances such as elevator overruns and screened mechanical equipment, as permitted by City code. On-site circulation for hotel drop-off/pick-up and parking would remain as existing. Residents and guests of the hotel-branded residences would be directed to a separate entrance on the south side of the property for access to the new residential building drop-off/pick-up, parking, and valet areas.

Parking spaces required by City code would be maintained in an existing 6-level, 400-space parking structure proposed to be demolished and rebuilt in substantially the same location and a new 5-level, 408-space subterranean parking structure constructed below the new building. The new building for the hotel-branded residences would be accessed via Newport Center Drive in two ways, including entrance into a porte cochere for valet parking and through direct access into the below-grade parking structure.

The project would include the construction of new extensive hardscape and landscape areas, and guest-serving amenities including, but not limited to, a swimming pool, a fitness facility, meeting rooms, and other food service amenities. In addition, the proposed project would include an emergency diesel generator, natural gas hearth, water-efficient irrigation systems, and water efficient landscape.

Project Construction

Construction is anticipated to be completed in 42 months from the start of demolition. This timeline includes approximately 6 months of demolition and site preparation and approximately 36 months for construction of the new subterranean parking structure and residential building. The proposed project would require the demolition of approximately 263,194 square feet and the export of 205,700 cubic yards of soil. Construction equipment would be staged completely on site in the development area so as not to impede hotel operations and guests. Off-site parking would be provided daily for workers with a shuttle to the hotel, if necessary.

During construction, hotel operations would be slightly impacted, as guests would be redirected to a nearby offsite parking area. However, the hotel and all hotel amenities would remain in operation with possible minimal closure of select outdoor amenities subject to noise and dust during the grading and site preparation phase of construction.

Existing Sensitive Land Uses in the Project Area

For the purposes of this analysis, sensitive receptors are areas of population that have an increased sensitivity to air pollution or environmental contaminants. Sensitive receptor locations include residences, schools, day care centers, hospitals, parks, and similar uses which are sensitive to air quality. Impacts on sensitive receptors are of particular concern because they are the population most vulnerable to the effects of air pollution. The closest sensitive receptors to the project site include the Meridian condominium community immediately adjacent to the project site on the north along Santa Barbara Drive and the Granville Condominiums immediately to the southeast.

BACKGROUND

Based on the SCAQMD attainment status and ambient air quality monitoring data, ambient air quality in the vicinity of the project site has basically remained unchanged since approval of the General Plan EIR. However, regulatory changes have been made since the General Plan EIR was certified in 2006. As such, this section provides current background information on air pollutants and their health effects. It also provides current regulatory background information, including information from the California Air Resources Board's (CARB) Air Quality and Land Use Handbook¹ (CARB Handbook); a description of the general health risks of toxics, and the significance criteria for project evaluation.

AIR POLLUTANTS AND HEALTH EFFECTS

Both State and federal governments have established health-based Ambient Air Quality Standards for six criteria air pollutants:² carbon monoxide (CO), ozone (O₃), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), lead (Pb), and suspended particulate matter (PM). In addition, the State has set standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles. These standards are designed to protect the health and welfare of the populace with a reasonable margin of safety. Long-term exposure to elevated levels of criteria pollutants may result in adverse health effects. However, emission thresholds established by an air district are used to manage total regional emissions within an air basin based on the air basin's attainment status for criteria pollutants. These emission thresholds were established for individual projects that would contribute to regional emissions and pollutant concentrations and could adversely affect or delay the projected attainment target year for certain criteria pollutants.

Because of the conservative nature of the thresholds and the basin-wide context of individual project emissions, there is no known direct correlation between a single project and localized air quality-related health effects. One individual project that generates emissions exceeding a threshold does not necessarily result in adverse health effects for residents in the project vicinity. This condition is especially true when the criteria pollutants exceeding thresholds are those with regional effects, such as ozone precursors like nitrogen oxides (NO_x) and volatile organic compounds (VOC).

Occupants of facilities such as schools, daycare centers, parks and playgrounds, hospitals, and nursing and convalescent homes are considered to be more sensitive than the general public to air pollutants because these population groups have increased susceptibility to respiratory disease. Persons engaged in strenuous outdoor work or exercise also have increased sensitivity to poor air quality. Residential areas are considered more sensitive to air quality conditions, compared to commercial and industrial areas, because people generally spend longer periods of time at their residences, with greater associated exposure to ambient air quality conditions. Recreational uses

¹ California Air Resources Board (CARB), 2005. *Air Quality and Land Use Handbook: A Community Health Perspective*. April.

² Criteria pollutants are defined as those pollutants for which the federal and State governments have established ambient air quality standards, or criteria, for outdoor concentrations in order to protect public health.

are also considered sensitive compared to commercial and industrial uses due to greater exposure to ambient air quality conditions associated with exercise.

Ozone

Rather than being directly emitted, ozone (smog) is formed by photochemical reactions between NO_x and VOC. Ozone is a pungent, colorless gas. Elevated ozone concentrations result in reduced lung function, particularly during vigorous physical activity. This health problem is particularly acute in sensitive receptors such as the sick, elderly, and young children. Ozone levels peak during the summer and early fall months.

Carbon Monoxide

CO is formed by the incomplete combustion of fossil fuels, almost entirely from automobiles. It is a colorless, odorless gas that can cause dizziness, fatigue, and impairments to central nervous system functions. CO passes through the lungs into the bloodstream, where it interferes with the transfer of oxygen to body tissues.

Particulate Matter

Particulate matter is the term used for a mixture of solid particles and liquid droplets found in the air. Coarse particles are those that are 10 microns or less in diameter, or PM_{10} . Fine, suspended particulate matter with an aerodynamic diameter of 2.5 microns or less, or $\text{PM}_{2.5}$, is not readily filtered out by the lungs. Nitrates, sulfates, dust, and combustion particulates are major components of PM_{10} and $\text{PM}_{2.5}$. These small particles can be directly emitted into the atmosphere as byproducts of fuel combustion; through abrasion, such as tire or brake lining wear; or through fugitive dust (wind or mechanical erosion of soil). They can also be formed in the atmosphere through chemical reactions. Particulates may transport carcinogens and other toxic compounds that adhere to the particle surfaces and can enter the human body through the lungs.

Nitrogen Dioxide

NO_2 is a reddish brown gas that is a byproduct of combustion processes. Automobiles and industrial operations are the main sources of NO_2 . Aside from its contribution to ozone formation, NO_2 also contributes to other pollution problems, including a high concentration of fine particulate matter, poor visibility, and acid deposition. NO_2 may be visible as a coloring component on high pollution days, especially in conjunction with high ozone levels. NO_2 decreases lung function and may reduce resistance to infection.

Sulfur Dioxide

SO_2 is a colorless, irritating gas formed primarily from incomplete combustion of fuels containing sulfur. Industrial facilities also contribute to gaseous SO_2 levels in the region. SO_2 irritates the respiratory tract, can injure lung tissue when combined with fine particulate matter, and reduces visibility and the level of sunlight.

Lead

Leaded gasoline (phased out in the United States beginning in 1973), paint (on older houses and cars), smelters (metal refineries), and the manufacture of lead storage batteries have been the primary sources of lead released into the atmosphere. Lead has multiple adverse neurotoxic health effects, and children are at special risk. Some lead-containing chemicals cause cancer in animals. Lead levels in the air have decreased substantially since leaded gasoline was eliminated. Ambient lead concentrations are only monitored on an as-warranted, site-specific basis in California. On October 15, 2008, the United States Environmental Protection Agency (USEPA) strengthened the national ambient air quality standard for lead by lowering it from 1.5 to 0.15 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$). The USEPA revised the monitoring requirements for lead in December 2010. These requirements focus on airports and large urban areas, resulting in an increase in 76 monitors nationally.

Volatile Organic Compounds

VOCs (also known as reactive organic gases [ROGs] and reactive organic compounds [ROCs]) are formed from the combustion of fuels and the evaporation of organic solvents. VOCs are not defined as criteria pollutants, however, because VOCs accumulate in the atmosphere more quickly during the winter, when sunlight is limited and photochemical reactions are slower, they are a prime component of the photochemical smog reaction. There are no attainment designations for VOCs.

Toxic Air Contaminants

In addition to the criteria pollutants discussed above, toxic air contaminants (TACs) are another group of pollutants of concern. TACs are injurious in small quantities and are regulated by the USEPA and the CARB. Some examples of TACs include benzene, butadiene, formaldehyde, and hydrogen sulfide. The identification, regulation, and monitoring of TACs is relatively recent compared to that for criteria pollutants.

TACs do not have ambient air quality standards, but are regulated by the USEPA, CARB, and the SCAQMD. In 1998, the CARB identified particulate matter from diesel-fueled engines as a TAC. The CARB has completed a risk management process that identified potential cancer risks for a range of activities using diesel-fueled engines.¹ High-volume freeways, stationary diesel engines, and facilities attracting heavy and constant diesel vehicle traffic (e.g., distribution centers and truck stops) were identified as posing the highest risk to adjacent receptors. Other facilities associated with increased risk include warehouse distribution centers, large retail or industrial facilities, high-volume transit centers, and schools with a high volume of bus traffic. Health risks from TACs are a function of both concentration and duration of exposure.

Unlike TACs emitted from industrial and other stationary sources noted above, most diesel particulate matter is emitted from mobile sources—primarily “off-road” sources such as construction and mining equipment, agricultural equipment, and truck-mounted refrigeration units, as well as “on-road” sources such as trucks and buses traveling on freeways and local roadways.

¹ CARB. 2000. Stationary Source Division and Mobile Source Control Division. *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles*. October.

Although not specifically monitored, recent studies indicate that exposure to diesel particulate matter may contribute significantly to a cancer risk (a risk of approximately 500 to 700 in 1,000,000) that is greater than all other measured TACs combined.¹ The technology for reducing diesel particulate matter emissions from heavy-duty trucks is well established, and both State and federal agencies are moving aggressively to regulate engines and emission control systems to reduce and remediate diesel emissions. The CARB anticipated that by 2020, average statewide diesel particulate matter concentrations will decrease by 85 percent from levels in 2000 with full implementation of the CARB’s Diesel Risk Reduction Plan,² meaning that the statewide health risk from diesel particulate matter is expected to decrease from 540 cancer cases in 1,000,000 to 21.5 cancer cases in 1,000,000. The CARB 2000 Diesel Risk Reduction Plan is still the most recent version and has not been updated.

Table A summarizes the sources and health effects of air pollutants discussed in this section. Table B presents a summary of State and federal ambient air quality standards (AAQS).

Table A: Sources and Health Effects of Air Pollutants

Pollutants	Sources	Primary Effects
Carbon Monoxide (CO)	<ul style="list-style-type: none"> ● Incomplete combustion of fuels and other carbon-containing substances, such as motor exhaust ● Natural events, such as decomposition of organic matter 	<ul style="list-style-type: none"> ● Reduced tolerance for exercise ● Impairment of mental function ● Impairment of fetal development ● Death at high levels of exposure ● Aggravation of some heart diseases (angina)
Nitrogen Dioxide (NO ₂)	<ul style="list-style-type: none"> ● Motor vehicle exhaust ● High temperature stationary combustion ● Atmospheric reactions 	<ul style="list-style-type: none"> ● Aggravation of respiratory illness ● Reduced visibility ● Reduced plant growth ● Formation of acid rain
Ozone (O ₃)	<ul style="list-style-type: none"> ● Atmospheric reaction of organic gases with nitrogen oxides in sunlight 	<ul style="list-style-type: none"> ● Aggravation of respiratory and cardiovascular diseases ● Irritation of eyes ● Impairment of cardiopulmonary function ● Plant leaf injury
Lead (Pb)	<ul style="list-style-type: none"> ● Contaminated soil 	<ul style="list-style-type: none"> ● Impairment of blood functions and nerve construction ● Behavioral and hearing problems in children
Suspended Particulate Matter (PM _{2.5} and PM ₁₀)	<ul style="list-style-type: none"> ● Stationary combustion of solid fuels ● Construction activities ● Industrial processes ● Atmospheric chemical reactions 	<ul style="list-style-type: none"> ● Reduced lung function ● Aggravation of the effects of gaseous pollutants ● Aggravation of respiratory and cardiorespiratory diseases ● Increased cough and chest discomfort ● Soiling ● Reduced visibility
Sulfur Dioxide (SO ₂)	<ul style="list-style-type: none"> ● Combustion of sulfur-containing fossil fuels ● Smelting of sulfur-bearing metal ores Industrial processes 	<ul style="list-style-type: none"> ● Aggravation of respiratory diseases (asthma, emphysema) ● Reduced lung function ● Irritation of eyes ● Reduced visibility ● Plant injury ● Deterioration of metals, textiles, leather, finishes, coatings, etc.

Source: California Air Resources Board (2015).

¹ Ibid.

² CARB. 2000. Stationary Source Division and Mobile Source Control Division. *Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles*. October.

Table B: Federal and State Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards ^a		Federal Standards ^b			
		Concentration ^c	Method ^d	Primary ^{c,e}	Secondary ^{c,f}	Method ^g	
Ozone (O ₃) ^h	1-Hour	0.09 ppm (180 µg/m ³)	Ultraviolet Photometry	–	Same as Primary Standard	Ultraviolet Photometry	
	8-Hour	0.07 ppm (137 µg/m ³)		0.070 ppm (137 µg/m ³)			
Respirable Particulate Matter (PM ₁₀) ⁱ	24-Hour	50 µg/m ³	Gravimetric or Beta Attenuation	150 µg/m ³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis	
	Annual Arithmetic Mean	20 µg/m ³		–			
Fine Particulate Matter (PM _{2.5}) ⁱ	24-Hour	–	Gravimetric or Beta Attenuation	35 µg/m ³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis	
	Annual Arithmetic Mean	12 µg/m ³		12.0 µg/m ³			
Carbon Monoxide (CO)	8-Hour	9.0 ppm (10 mg/m ³)	Non-Dispersive Infrared Photometry (NDIR)	9 ppm (10 mg/m ³)	–	Non-Dispersive Infrared Photometry (NDIR)	
	1-Hour	20 ppm (23 mg/m ³)		35 ppm (40 mg/m ³)			
	8-Hour (Lake Tahoe)	6 ppm (7 mg/m ³)		–			
Nitrogen Dioxide (NO ₂) ^j	Annual Arithmetic Mean	0.03 ppm (57 µg/m ³)	Gas Phase Chemi-luminescence	53 ppb (100 µg/m ³)	Same as Primary Standard	Gas Phase Chemi-luminescence	
	1-Hour	0.18 ppm (339 µg/m ³)		100 ppb (188 µg/m ³)			
Lead (Pb) ^{l,m}	30-Day Average	1.5 µg/m ³	Atomic Absorption	–	Same as Primary Standard	High-Volume Sampler and Atomic Absorption	
	Calendar Quarter	–		1.5 µg/m ³ (for certain areas) ^l			
	Rolling 3-Month Average ⁱ	–		0.15 µg/m ³			
Sulfur Dioxide (SO ₂) ^k	24-Hour	0.04 ppm (105 µg/m ³)	Ultraviolet Fluorescence	0.14 ppm (for certain areas)	–	Ultraviolet Fluorescence; Spectrophotometry (Pararosaniline Method)	
	3-Hour	–		–			0.5 ppm (1300 µg/m ³)
	1-Hour	0.25 ppm (655 µg/m ³)		75 ppb (196 µg/m ³) ^k			–
	Annual Arithmetic Mean	–		0.030 ppm (for certain areas) ^k			–
Visibility-Reducing Particles ^l	8-Hour	See footnote n	Beta Attenuation and Transmittance through Filter Tape.	No Federal Standards			
Sulfates	24-Hour	25 µg/m ³	Ion Chromatography				
Hydrogen Sulfide	1-Hour	0.03 ppm (42 µg/m ³)	Ultraviolet Fluorescence				
Vinyl Chloride ^j	24-Hour	0.01 ppm (26 µg/m ³)	Gas Chromatography				

Source: California Air Resources Board, 2016 (Website: <https://www.arb.ca.gov/research/aaqs/aaqs2.pdf>).

Table notes are provided on the following page.

- ^a California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1- and 24-hour), nitrogen dioxide, and particulate matter (PM₁₀, 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.
- ^b 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 PM₁₀, 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 USEPA for further clarification and current national policies.
- ^c 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.
- ^d 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.
- ^e National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.
- ^f National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.
- ^g Reference method as described by the USEPA. An “equivalent method” of measurement may be used but must have a “consistent relationship to the reference method” and must be approved by the USEPA.
- ^h On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.
- ⁱ On December 14, 2012, the national annual PM_{2.5} primary standard was lowered from 15 µg/m³ to 12.0 µg/m³. The existing national 24-hour PM_{2.5} standards (primary and secondary) were retained at 35 µg/m³, as was the annual secondary standard of 15 µg/m³. The existing 24-hour PM₁₀ standards (primary and secondary) of 150 µg/m³ also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.
- ^j 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.
- ^k On June 2, 2010, a new 1-hour SO₂ 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 SO₂ 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.
- ^l 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.
- ^m The national standard for lead was revised on October 15, 2008, to a rolling 3-month average. The 1978 lead standard (1.5 µg/m³ 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.
- ⁿ 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.

°C = degrees Celsius

µg/m³ = micrograms per cubic meter

CARB = California Air Resources Board

mg/m³ = milligrams per cubic meter

ppb = parts per billion

ppm = parts per million

USEPA = United States Environmental Protection Agency

GREENHOUSE GASES AND GLOBAL CLIMATE CHANGE

Global climate change is the observed increase in the average temperature of the Earth's atmosphere and oceans in recent decades. The Earth's average near-surface atmospheric temperature rose $0.6 \pm 0.2^\circ$ Celsius ($^\circ\text{C}$) or $1.1 \pm 0.4^\circ$ Fahrenheit ($^\circ\text{F}$) in the 20th century. The prevailing scientific opinion on climate change is that most of the warming observed over the last 50 years is attributable to human activities. The increased amounts of carbon dioxide (CO_2) and other GHGs are the primary causes of the human-induced component of warming. GHGs are released by the burning of fossil fuels, land clearing, agriculture, and other activities, and lead to an increase in the greenhouse effect.¹

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 global climate change are:

- CO_2
- Methane (CH_4)
- Nitrous oxide (N_2O)
- Hydrofluorocarbons (HFCs)
- Perfluorocarbons (PFCs)
- Sulfur hexafluoride (SF_6)

Over the last 200 years, humans have caused substantial quantities of GHGs to be released into the atmosphere. These extra emissions are increasing GHG concentrations in the atmosphere, and enhancing the natural greenhouse effect, which is believed to be causing global warming. While manmade GHGs include naturally-occurring GHGs such as CO_2 , methane, and N_2O , some gases, like HFCs, PFCs, and SF_6 are completely new to the atmosphere.

Certain gases, such as water vapor, are short-lived in the atmosphere. Others remain in the atmosphere for significant periods of time, contributing to climate change in the long term. Water vapor is excluded from the list of GHGs above because it is short-lived in the atmosphere and its atmospheric concentrations are largely determined by natural processes, such as oceanic evaporation. For the purposes of this air quality analysis, the term "GHGs" will refer collectively to the six gases listed above.

These gases vary considerably in terms of Global Warming Potential (GWP), which is a concept developed to compare the ability of each GHG to trap heat in the atmosphere relative to another gas. The global warming potential is based on several factors, including the relative effectiveness of a gas to absorb infrared radiation and length of time that the gas remains in the atmosphere

¹ The temperature on Earth is regulated by a system commonly known as the "greenhouse effect." Just as the glass in a greenhouse lets heat from sunlight in and reduces the heat escaping, greenhouse gases like carbon dioxide, methane, and nitrous oxide in the atmosphere keep the Earth at a relatively even temperature. Without the greenhouse effect, the Earth would be a frozen globe; thus, although an excess of greenhouse gas results in global warming, the naturally occurring greenhouse effect is necessary to keep our planet at a comfortable temperature.

“atmospheric lifetime”). The GWP of each gas is measured relative to carbon dioxide, the most abundant GHG; the definition of GWP for a particular GHG is the ratio of heat trapped by one unit mass of the GHG to the ratio of heat trapped by one unit mass of CO₂ over a specified time period. GHG emissions are typically measured in terms of pounds or tons of “CO₂ equivalents” (CO₂e). Table C shows the GWP for each type of GHG. For example, sulfur hexafluoride is 22,800 times more potent at contributing to global warming than carbon dioxide.

Table C: Global Warming Potential of Greenhouse Gases

Gas	Atmospheric Lifetime (Years)	Global Warming Potential (100-Year Time Horizon)
Carbon Dioxide	50-200	1
Methane	12	25
Nitrous Oxide	114	298
HFC-23	270	14,800
HFC-134a	14	1,430
HFC-152a	1.4	124
PFC: Tetrafluoromethane (CF ₄)	50,000	7,390
PFC: Hexafluoromethane (C ₂ F ₆)	10,000	12,200
Sulfur Hexafluoride (SF ₆)	3,200	22,800

Source: *Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the IPCC* (Intergovernmental Panel on Climate Change, 2007).

The following discussion summarizes the characteristics of the six GHGs and black carbon.

Carbon Dioxide

In the atmosphere, carbon generally exists in its oxidized form, as CO₂. Natural sources of CO₂ include the respiration (breathing) of humans, animals and plants, volcanic out gassing, decomposition of organic matter and evaporation from the oceans. Human caused sources of CO₂ include the combustion of fossil fuels and wood, waste incineration, mineral production, and deforestation. Natural sources release approximately 150 billion tons of CO₂ each year, far outweighing the 7 billion tons of man-made emissions of CO₂ each year. Nevertheless, natural removal processes, such as photosynthesis by land- and ocean-dwelling plant species, cannot keep pace with this extra input of man-made CO₂, and consequently, the gas is building up in the atmosphere.

In 2019, total annual CO₂ accounted for approximately 83 percent of California's overall GHG emissions.¹ Transportation is the single largest source of CO₂ in California, which is primarily comprised of on-road travel. Electricity production, industrial and residential sources also make important contributions to CO₂ emissions in California.

Methane

Methane is produced when organic matter decomposes in environments lacking sufficient oxygen. Natural sources include wetlands, termites, and oceans. Decomposition occurring in landfills

¹ CARB. 2021. GHGs Descriptions & Sources in California. Website: ww2.arb.ca.gov/ghg-descriptions-sources (accessed December 2021).

accounts for the majority of human-generated CH₄ emissions in California and in the United States as a whole. Agricultural processes such as intestinal fermentation, manure management, and rice cultivation are also significant sources of CH₄ in California. Total annual emissions of CH₄ accounted for approximately 9 percent of GHG emissions in California.¹

Nitrous Oxide

Nitrous oxide is produced naturally by a wide variety of biological sources, particularly microbial action in soils and water. Tropical soils and oceans account for the majority of natural source emissions. Nitrous oxide is a product of the reaction that occurs between nitrogen and oxygen during fuel combustion. Both mobile and stationary combustion emit N₂O, and the quantity emitted varies according to the type of fuel, technology, and pollution control device used, as well as maintenance and operating practices. Agricultural soil management and fossil fuel combustion are the primary sources of human-generated N₂O emissions in California. Nitrous oxide emissions accounted for approximately 3 percent of GHG emissions in California in 2019.²

Hydrofluorocarbons, Perfluorocarbons, and Sulfur Hexafluoride

HFCs are primarily used as substitutes for ozone-depleting substances regulated under the Montreal Protocol.³ PFCs and SF₆ are emitted from various industrial processes, including aluminum smelting, semiconductor manufacturing, electric power transmission and distribution, and magnesium casting. There is no aluminum or magnesium production in California; however, the rapid growth in the semiconductor industry leads to greater use of PFCs. HFCs, PFCs, and SF₆ accounted for about 5 percent of GHG emissions in California in 2019.⁴

Black Carbon

Black carbon is the most strongly light-absorbing component of PM formed by burning fossil fuels such as coal, diesel, and biomass. Black carbon is emitted directly into the atmosphere in the form of PM_{2.5} and is the most effective form of PM, by mass, at absorbing solar energy. Per unit of mass in the atmosphere, black carbon can absorb one million times more energy than CO₂.⁵ Black carbon contributes to climate change both directly, such as absorbing sunlight, and indirectly, such as affecting cloud formation. However, because black carbon is short-lived in the atmosphere, it can be difficult to quantify its effect on global warming.

Most U.S. emissions of black carbon come from mobile sources (52 percent), particularly from diesel-fueled vehicles. The other major source of black carbon is open biomass burning, including

¹ CARB. 2021. GHGs Descriptions & Sources in California. Website: ww2.arb.ca.gov/ghg-descriptions-sources (accessed December 2021).

² Ibid.

³ The Montreal Protocol is an international treaty that was approved on January 1, 1989, and was designated to protect the ozone layer by phasing out the production of several groups of halogenated hydrocarbons believed to be responsible for ozone depletion.

⁴ CARB, 2021. op. cit.

⁵ U.S. Environmental Protection Agency (USEPA). 2015. Black Carbon, Basic Information. February 14, 2017. Website: 19january2017snapshot.epa.gov/www3/airquality/blackcarbon/basic.html (accessed December 2021).

wildfires, although residential heating and industry also contribute. The CARB estimates that the annual black carbon emissions in California will be reduced approximately 50 percent below 2013 levels by 2030.¹

Effects of Global Climate Change

Effects from global climate change may arise from temperature increases, climate-sensitive diseases, extreme weather events, and air quality. There may be direct temperature effects through increases in average temperature leading to more extreme heat waves and less extreme cold spells. Those living in warmer climates are likely to experience more stress and heat-related problems. Heat-related problems include heat rash and heat stroke. In addition, climate-sensitive diseases may increase, such as those spread by mosquitoes and other disease-carrying insects. Such diseases include malaria, dengue fever, yellow fever, and encephalitis. Extreme events such as flooding and hurricanes can displace people and agriculture. Global climate change may also contribute to air quality problems from increased frequency of smog and particulate air pollution.²

Additionally, according to the 2006 California Climate Action Team (CAT) Report,³ the following applicable climate change effects, which are based on trends established by the United Nations Intergovernmental Panel on Climate Change (IPCC), can be expected in California over the course of the next century:

- The loss of sea ice and mountain snow-pack, resulting in higher sea levels and higher sea surface evaporation rates with a corresponding increase in tropospheric water vapor due to the atmosphere's ability to hold more water vapor at higher temperatures.⁴
- Rise in global average sea level, primarily due to thermal expansion and melting of glaciers and ice caps in the Greenland and Antarctic ice sheets.⁵
- Changes in weather that include widespread changes in precipitation, ocean salinity, wind patterns, and more energetic aspects of extreme weather, including droughts, heavy precipitation, heat waves, extreme cold, and the intensity of tropical cyclones.⁶
- Decline of the Sierra snowpack, which accounts for approximately one-half of the surface water storage in California by 70 percent to as much as 90 percent over the next 100 years.¹

¹ CARB, 2017. *Short-Lived Climate Pollutant Reduction Strategy*. March. Website: https://ww2.arb.ca.gov/sites/default/files/2020-07/final_SLCP_strategy.pdf (accessed January 2022).

² USEPA. 2016. *Climate Impacts on Human Health*. April. Website: https://19january2017snapshot.epa.gov/climate-impacts/climate-impacts-human-health_.html, last updated on February 24, 2017 (accessed December 2021).

³ California Environmental Protection Agency (CalEPA). 2006. *Climate Action Team Report to Governor Schwarzenegger and the Legislature*. March.

⁴ Ibid.

⁵ Ibid.

⁶ Intergovernmental Panel on Climate Change (IPCC). 2007. *Climate Change 2007: The Physical Science Basis, Summary for Policymakers*. February.

- Increase in the number of days conducive to O₃ formation by 25–85 percent (depending on the future temperature scenario) in high O₃ areas by the end of the 21st century.²
- High potential for erosion of California’s coastlines and seawater intrusion into the Delta and levee systems due to the rise in sea level.³

A summary of these potential effects are identified in Table D.

AIR QUALITY REGULATORY SETTING

The USEPA and the CARB regulate direct emissions from motor vehicles. The SCAQMD is the regional agency primarily responsible for regulating air pollution emissions from stationary sources (e.g., factories) and indirect sources (e.g., traffic associated with new development), as well as monitoring ambient pollutant concentrations.

Federal Regulations

The 1970 Federal Clean Air Act authorized the establishment of national health-based air quality standards and also set deadlines for their attainment. The Federal Clean Air Act Amendments of 1990 changed deadlines for attaining national standards as well as the remedial actions required of areas of the nation that exceed the standards. Under the Clean Air Act, State and local agencies in areas that exceed the national standards are required to develop State Implementation Plans to demonstrate how they will achieve the national standards by specified dates.

State Regulations

California Clean Air Act

In 1988, the California Clean Air Act (CCAA) required that all air districts in the State endeavor to achieve and maintain CAAQS for carbon monoxide, ozone, sulfur dioxide, and nitrogen dioxide by the earliest practical date. The California Clean Air Act provides districts with authority to regulate indirect sources and mandates that air quality districts focus particular attention on reducing emissions from transportation and area-wide emission sources. Each nonattainment district is required to adopt a plan to achieve a 5 percent annual reduction, averaged over consecutive 3-year periods, in district-wide emissions of each nonattainment pollutant or its precursors. A Clean Air Plan shows how a district would reduce emissions to achieve air quality standards. Generally, the State standards for these pollutants are more stringent than the national standards.

¹ CALEPA. 2006, *op. cit.*

² *Ibid.*

³ *Ibid.*

Table D: Potential Impacts of Global Warming and Expected Consequences for California

Potential Water Resource Impacts	Anticipated Consequences Statewide
Reduction of the State’s average annual snowpack	<ul style="list-style-type: none"> Specifically, the decline of the Sierra snowpack would lead to a loss in half of the surface water storage in California by 70% to 90% over the next 100 years Potential loss of 5 million acre-feet or more of average annual water storage in the State’s snowpack Increased challenges for reservoir management and balancing the competing concerns of flood protection and water supply Higher surface evaporation rates with a corresponding increase in tropospheric water vapor
Rise in average sea level	<ul style="list-style-type: none"> Potential economic impacts related to coastal tourism, commercial fisheries, coastal agriculture, and ports Increased risk of flooding, coastal erosion along the State’s coastline, seawater intrusion into the Delta and levee systems
Changes in weather	<ul style="list-style-type: none"> Changes in precipitation, ocean salinity, and wind patterns Increased likelihood for extreme weather events, including droughts, heavy precipitation, heat waves, extreme cold, and the intensity of tropical cyclones
Changes in the timing, intensity, location, amount, and variability of precipitation	<ul style="list-style-type: none"> Potential increased storm intensity and increased potential for flooding Possible increased potential for droughts Long-term changes in vegetation and increased incidence of wildfires Changes in the intensity and timing of runoff Possible increased incidence of flooding and increased sedimentation Sea level rise and inundation of coastal marshes and estuaries Increased potential for salinity intrusion into coastal aquifers (groundwater) Increased potential for flooding near the mouths of rivers due to backwater effects
Increased water temperatures	<ul style="list-style-type: none"> Increased environmental water demand for temperature control Possible increased problems with foreign invasive species in aquatic ecosystems Potential adverse changes in water quality, including the reduction of dissolved oxygen levels Possible critical effects on listed and endangered aquatic species
Changes in urban and agricultural water demand	<ul style="list-style-type: none"> Changes in demand patterns and evapotranspiration
Increase in the number of days conducive to O ₃ formation	<ul style="list-style-type: none"> Increased temperatures Potential health effects, including adverse impacts to respiratory systems

Source: United States Department of the Interior, Environmental Water Account, Draft Supplemental EIS/EIR to the Environmental Water Account Final EIS/EIR, Bureau of Reclamation Mid-Pacific Region, Sacramento, California (October 2007).

EIR = Environmental Impact Report
EIS = Environmental Impact Statement
O₃ = ozone

California Air Resources Board

The CARB is the State’s “clean air agency.” The CARB’s goals are to attain and maintain healthy air quality, protect the public from exposure to toxic air contaminants, and oversee compliance with air pollution rules and regulations.

Assembly Bill 2588 Air Toxics “Hot Spots” Information and Assessment Act. Under Assembly Bill (AB) 2588, stationary sources of air pollutants are required to report the types and quantities of certain substances their facilities routinely released into the air. The goals of the Air Toxics “Hot

Spots” Act are to collect emission data, identify facilities having localized impacts, determine health risks, and notify nearby residents of significant risks.

The California Air Resources Board Handbook. The CARB has developed an Air Quality and Land Use Handbook¹ which is intended to serve as a general reference guide for evaluating and reducing air pollution impacts associated with new projects that go through the land use decision-making process. According to the CARB Handbook, air pollution studies have shown an association between respiratory and other non-cancer health effects and proximity to high traffic roadways. Other studies have shown that diesel exhaust and other cancer-causing chemicals emitted from cars and trucks are responsible for much of the overall cancer risk from airborne toxics in California. The CARB Handbook recommends that county and city planning agencies strongly consider proximity to these sources when finding new locations for “sensitive” land uses such as homes, medical facilities, daycare centers, schools, and playgrounds.

Land uses that can produce air pollution sources of concern include freeways, rail yards, ports, refineries, distribution centers, chrome plating facilities, dry cleaners, and large gasoline service stations. Key recommendations in the CARB Handbook include taking steps to avoid siting new, sensitive land uses:

- Within 500 feet of a freeway, urban roads with 100,000 vehicles/day or rural roads with 50,000 vehicles/day;
- Within 1,000 feet of a major service and maintenance rail yard;
- Immediately downwind of ports (in the most heavily impacted zones) and petroleum refineries;
- Within 300 feet of any dry cleaning operation (for operations with two or more machines, provide 500 feet); and
- Within 300 feet of a large gas station (defined as a facility with a throughput of 3.6 million gallons per year or greater).

The CARB Handbook specifically states that its recommendations are advisory and acknowledges land use agencies have to balance other considerations, including housing and transportation needs, economic development priorities, and other quality of life issues.

The recommendations are generalized and do not consider site-specific meteorology, freeway truck percentages, or other factors that influence risk for a particular project site. The purpose of this guidance is to help land use agencies determine when to further examine project sites for actual health risk associated with the location of new sensitive land uses.

¹ CARB. 2005. *Air Quality and Land Use Handbook: A Community Health Perspective*. April.

Regional Regulations

South Coast Air Quality Management District

The SCAQMD has jurisdiction over most air quality matters in the South Coast Air Basin (Basin). This area includes all of Orange County, Los Angeles County except for the Antelope Valley, the non-desert portion of western San Bernardino County, and the western and Coachella Valley portions of Riverside County. The SCAQMD is the agency principally responsible for comprehensive air pollution control in the Basin and is tasked with implementing certain programs and regulations required by the Federal Clean Air Act (FCAA) and the CCAA. The SCAQMD prepares plans to attain California ambient air quality standards (CAAQS) and national ambient air quality standards (NAAQS). SCAQMD is directly responsible for reducing emissions from stationary (area and point) sources. The SCAQMD develops rules and regulations, establishes permitting requirements, inspects emissions sources, and enforces such measures through educational programs or fines, when necessary.

The proposed project could be subject to the following SCAQMD rules and regulations:

- **Regulation IV - Prohibitions:** This regulation sets forth the restrictions for visible emissions, odor nuisance, fugitive dust, various air pollutant emissions, fuel contaminants, start-up/shutdown exemptions, and breakdown events.
 - **Rule 402 - Nuisance:** This rule restricts the discharge of any contaminant in quantities that cause or have a natural ability to cause injury, damage, nuisance, or annoyance to businesses, property, or the public.
 - **Rule 403 - Fugitive Dust:** This rule requires the prevention, reduction, or mitigation of fugitive dust emissions from a project site. Rule 403 restricts visible fugitive dust to a project property line, restricts the net PM₁₀ emissions to less than 50 µg/m³ and restricts the tracking out of bulk materials onto public roads. Additionally, Rule 403 requires an applicant to utilize one or more of the best available control measures (identified in the tables within the rule). Control measures may include adding freeboard to haul vehicles, covering loose material on haul vehicles, watering, using chemical stabilizers, and/or ceasing all activities. Finally, Rule 403 requires that a contingency plan be prepared if so determined by the USEPA. In addition, SCAQMD Rule 403(e), Additional Requirements for Large Operations, includes requirements to provide Large Operation Notification Form 403 N, appropriate signage, additional dust control measures, and employment of a dust control supervisor that has successfully completed the Dust Control training class in the South Coast Air Basin.
- **Regulation XI - Source Specific Standards:** Regulation XI sets emissions standards for different sources.
 - **Rule 1113 - Architectural Coatings:** This rule limits the amount of VOCs from architectural coatings and solvents, which lowers the emissions of odorous compounds.

The SCAQMD is responsible for demonstrating regional compliance with ambient air quality standards but has limited indirect involvement in reducing emissions from fugitive, mobile, and natural sources. To that end, the SCAQMD works cooperatively with the CARB, the Southern

California Association of Governments (SCAG), county transportation commissions, local governments, and other federal and State government agencies. It has responded to this requirement by preparing a series of Air Quality Management Plans (AQMPs) to meet CAAQS and NAAQS. SCAQMD and the SCAG are responsible for formulating and implementing the AQMP for the Basin. The main purpose of an AQMP is to bring the area into compliance with federal and State air quality standards. Every 3 years, SCAQMD prepares a new AQMP, updating the previous plan and 20-year horizon.¹

SCAQMD approved the 2016 AQMP on March 3, 2017, and submitted the plan to CARB on March 10, 2017. Key elements of the 2016 AQMP include the following:

- Calculating and taking credit for co-benefits from other planning efforts (e.g., climate, energy, and transportation)
- A strategy with fair-share emission reductions at the federal, State, and local levels
- Investment in strategies and technologies meeting multiple air quality objectives
- Seeking new partnerships and significant funding for incentives to accelerate deployment of zero-emission and near-zero emission technologies
- Enhanced socioeconomic assessment, including an expanded environmental justice analysis
- Attainment of the 24-hour PM_{2.5} standard in 2019 with no additional measures
- Attainment of the annual PM_{2.5} standard by 2025 with implementation of a portion of the O₃ strategy
- Attainment of the 1-hour O₃ standard by 2022 with no reliance on “black box” future technology (FCAA Section 182(e)(5) measures)

The SCAQMD is currently preparing the 2022 AQMP, which will address the requirements for meeting the 2015 O₃ standard. A Control Measures Workshop was held on November 10, 2021, to provide an overview of the control measures and strategies that are being developed/considered for the 2022 AQMP. The control measures include updated 2016 AQMP control measures and new control measures related to area, mobile, and stationary sources.

Southern California Association of Governments

SCAG is a council of governments for Los Angeles, Orange, Riverside, San Bernardino, Imperial, and Ventura Counties. It is a regional planning agency and serves as a forum for regional issues relating to transportation, the economy and community development, and the environment. SCAG is the federally designated Metropolitan Planning Organization (MPO) for the majority of the southern California region and is the largest MPO in the nation. With regard to air quality planning, SCAG prepares the Regional Transportation Plan (RTP) and Regional Transportation Improvement Program

¹ South Coast Air Quality Management District (SCAQMD), 2016. *Final 2016 Air Quality Management Plan*. March.

(RTIP), which address regional development and growth forecasts and form the basis for the land use and transportation control portions of the AQMP and are utilized in the preparation of the air quality forecasts and consistency analysis included in the AQMP. The RTP, RTIP, and AQMP are based on projections originating within local jurisdictions.

Although SCAG is not an air quality management agency, it is responsible for developing transportation, land use, and energy conservation measures that affect air quality. SCAG's Regional Comprehensive Plan (RCP) provides growth forecasts that are used in the development of air quality-related land use and transportation control strategies by the SCAQMD. The RCP is a framework for decision-making for local governments, assisting them in meeting federal and State mandates for growth management, mobility, and environmental standards, while maintaining consistency with regional goals regarding growth and changes. Policies within the RCP include consideration of air quality, land use, transportation, and economic relationships by all levels of government.

On April 7, 2016, SCAG adopted the 2016–2040 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS). Using growth forecasts and economic trends, the RTP provides a vision for transportation throughout the region for the next 20 years. It considers the role of transportation in the broader context of economic, environmental, and quality-of-life goals for the future, identifying regional transportation strategies to address mobility needs. The SCS is a required element of the RTP, which integrates land use and transportation strategies to achieve CARB emissions reduction targets. The inclusion of the SCS is required by Senate Bill (SB) 375, which was enacted to reduce GHG emissions from automobiles and light trucks through integrated transportation, land use, housing, and environmental planning. The RTP/SCS would successfully achieve and exceed the GHG emission-reduction targets set by CARB by achieving an 8 percent reduction by 2020, an 18 percent reduction by 2035, and a 21 percent reduction by 2040 compared to the 2005 level on a per capita basis. This RTP/SCS also meets criteria pollutant emission budgets set by the USEPA.

SCAG recently adopted an updated strategy, the 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy (Connect SoCal) on September 3, 2020. Connect SoCal is a long-range visioning plan that balances future mobility and housing needs with economic, environmental, and public health goals. Connect SoCal is an important planning document for the region, allowing project sponsors to qualify for federal funding and takes into account operations and maintenance costs, to ensure reliability, longevity, and cost effectiveness. The forecasted development pattern, when integrated with the financially constrained transportation investments identified in Connect SoCal, would reach the regional target of reducing GHG emissions from autos and light-duty trucks by 19 percent by 2035 (compared to 2005 levels).

Local Regulations

The City of Newport Beach addresses air quality in the Natural Resources Element of the Newport Beach General Plan.¹ The Natural Resources Element contains goals and policies that work to reduce

¹ Newport Beach, City of. 2006. City of Newport Beach General Plan. July 25.

air pollutant emissions from mobile sources, stationary sources, construction activities, and aircraft operations. The following policies are applicable to the proposed project:

- **Policy NR 6.1: Walkable Neighborhoods.** Provide for walkable neighborhoods to reduce vehicle trips by siting amenities such as services, parks, and schools in close proximity to residential areas.
- **Policy NR 6.2: Mixed-Use Development.** Support mixed-use development consisting of commercial or office with residential uses in accordance with the Land Use Element that increases the opportunity for residents to live in proximity to jobs, services, and entertainment.
- **Policy NR 6.3: Vehicle-Trip Reduction Measures.** Support measures to reduce vehicle-trip generation such as at-work day care facilities, and on-site automated banking machines.
- **Policy NR 6.4: Transportation Demand Management Ordinance.** Implement the Transportation Demand Management (TDM) Ordinance, which promotes and encourages the use of alternative transportation modes, and provides those facilities such as bicycle lanes that support such alternate modes.
- **Policy NR 6.8: Accessible Alternative Fuel Infrastructure.** Support the development of alternative fuel infrastructure that is available and accessible to the public, and provide incentives for alternative fuel vehicles.
- **Policy NR 7.1: Fuel Efficient Equipment.** Support the use of fuel efficient heating equipment and other appliances.
- **Policy NR 8.1: Management of Construction Activities to Reduce Air Pollution.** Require developers to use and operate construction equipment, use building materials and paints, and control dust created by construction activities to minimize air pollutants.

GLOBAL CLIMATE CHANGE REGULATION

This section describes regulations related to Global Climate Change at the federal, State, and local level.

Federal Regulations

The United States has historically had a voluntary approach to reducing GHG emissions. However, on April 2, 2007, the United States Supreme Court ruled that the USEPA has the authority to regulate CO₂ emissions under the federal Clean Air Act. While there currently are no adopted federal regulations for the control or reduction of GHG emissions, the USEPA commenced several actions in 2009 to implement a regulatory approach to global climate change.

This includes the 2009 USEPA final rule for mandatory reporting of GHGs from large GHG emission sources in the United States. Additionally, the USEPA Administrator signed an endangerment finding action in 2009 under the Clean Air Act, finding that six GHGs (CO₂, CH₄, N₂O, HFCs, PFCs, SF₆)

constitute a threat to public health and welfare, and that the combined emissions from motor vehicles cause and contribute to global climate change, leading to national GHG emission standards.

In October 2012, the USEPA and the National Highway Traffic Safety Administration (NHTSA), on behalf of the Department of Transportation, issued final rules to further reduce GHG emissions and improve corporate average fuel economy (CAFE) standards for light-duty vehicles for model years 2017 and beyond (77 Federal Register 62624). The NHTSA's CAFE standards have been enacted under the Energy Policy and Conservation Act since 1978. This national program requires automobile manufacturers to build a single light-duty national fleet that meets all requirements under both federal programs and the standards of California and other states. This program would increase fuel economy to the equivalent of 54.5 miles per gallon, limiting vehicle emissions to 163 grams of CO₂ per mile for the fleet of cars and light-duty trucks by model year 2025 (77 Federal Register 62630).

On March 21, 2020, the USEPA and NHTSA finalized the *Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule for Model Years 2021–2026 Passenger Cars and Light Trucks (SAFE Vehicles Rule)*. The SAFE Vehicles Rule amends certain existing Corporate Average Fuel Economy and tailpipe CO₂ emissions standards for passenger cars and light trucks and establish new standards, all covering model years 2021 through 2026. More specifically, NHTSA set new CAFE standards for model years 2022 through 2026 and amended its 2021 model year CAFE standards, and the USEPA amended its CO₂ emissions standards for model years 2021 and later. On May 12, 2021, the NHTSA published a notice of proposed rulemaking in the Federal Register, proposing to repeal key portions of the SAFE Vehicles Rule that would have reduced CAFE standards. The final rule repealing portions of the SAFE Vehicles Rule was published on December 29, 2021. The repeal will allow California to set its own GHG standards if it chooses, even if the emissions standards conflict with CAFE standards enacted by the Department of Transportation.

State Regulations

The CARB is the lead agency for implementing climate change regulations in the State. Since its formation, the CARB has worked with the public, the business sector, and local governments to find solutions to California's air pollution problems. Key efforts by the State are described below.

Assembly Bill 1493 (2002)

In a response to the transportation sector's significant contribution to California's CO₂ emissions, AB 1493 was enacted on July 22, 2002. AB 1493 requires the CARB to set GHG emission standards for passenger vehicles and light duty trucks (and other vehicles whose primary use is noncommercial personal transportation in the State) manufactured in 2009 and all subsequent model years. These standards (starting in model years 2009 to 2016) were approved by the CARB in 2004, but the needed waiver of CAA Preemption was not granted by the USEPA until June 30, 2009. The CARB responded by amending its original regulation, now referred to as Low Emission Vehicle III, to take effect for model years starting in 2017 to 2025. The Trump administration revoked California's waiver in 2019, but the Biden administration restored California's waiver in 2021.

Executive Order S-3-05 (2005)

Governor Arnold Schwarzenegger signed Executive Order (EO) S-3-05 on June 1, 2005, which proclaimed that California is vulnerable to the impacts of climate change. To combat those concerns, the executive order established California's GHG emissions reduction targets, which established the following goals:

- GHG emissions should be reduced to 2000 levels by 2010;
- GHG emissions should be reduced to 1990 levels by 2020; and
- GHG emissions should be reduced to 80 percent below 1990 levels by 2050.

The Secretary of the California Environmental Protection Agency (CalEPA) is required to coordinate efforts of various State agencies in order to collectively and efficiently reduce GHGs. A biannual progress report must be submitted to the Governor and State Legislature disclosing the progress made toward greenhouse emission reduction targets. In addition, another biannual report must be submitted illustrating the impacts of global warming on California's water supply, public health, agriculture, the coastline, and forestry, and report possible mitigation and adaptation plans to address these impacts.

The Secretary of CalEPA leads this CAT made up of representatives from State agencies as well as numerous other boards and departments. The CAT members work to coordinate statewide efforts to implement global warming emission reduction programs and the State's Climate Adaptation Strategy. The CAT is also responsible for reporting on the progress made toward meeting the statewide GHG targets that were established in the executive order and further defined under AB 32, the "Global Warming Solutions Act of 2006." The first CAT Report to the Governor and the Legislature was released in March 2006, which it laid out 46 specific emission reduction strategies for reducing GHG emissions and reaching the targets established in the Executive Order. The most recent report was released in December 2020.

Assembly Bill 32 (2006), California Global Warming Solutions Act

California's major initiative for reducing GHG emissions is AB 32, passed by the State legislature on August 31, 2006. This effort aims at reducing GHG emissions to 1990 levels by 2020. The CARB has established the level of GHG emissions in 1990 at 427 million metric tons (MMT) of CO₂e. The emissions target of 427 MMT requires the reduction of 169 MMT from the State's projected business-as-usual 2020 emissions of 596 MMT. AB 32 requires the CARB to prepare a Scoping Plan that outlines the main State strategies for meeting the 2020 deadline and to reduce GHGs that contribute to global climate change. The Scoping Plan was approved by the CARB on December 11, 2008, and contains the main strategies California will implement to achieve the reduction of approximately 169 MMT CO₂e, or approximately 30 percent, from the State's projected 2020 emissions level of 596 MMT CO₂e under a business-as-usual scenario (this is a reduction of 42 MMT CO₂e, or almost 10 percent from 2002–2004 average emissions). The Scoping Plan also includes CARB-recommended GHG reductions for each emissions sector of the State's GHG inventory. The Scoping Plan calls for the largest reductions in GHG emissions to be achieved by implementing the following measures and standards:

- Improved emissions standards for light-duty vehicles (estimated reductions of 31.7 MMT CO₂e);
- The Low-Carbon Fuel Standard (15.0 MMT CO₂e);
- Energy efficiency measures in buildings and appliances and the widespread development of combined heat and power systems (26.3 MMT CO₂e); and
- A renewable portfolio standard for electricity production (21.3 MMT CO₂e).

The Scoping Plan identifies 18 emission reduction measures that address cap-and-trade programs, vehicle gas standards, energy efficiency, low carbon fuel standards, renewable energy, regional transportation-related GHG targets, vehicle efficiency measures, goods movement, solar roof programs, industrial emissions, high speed rail, green building strategies, recycling, sustainable forests, water, and air. The measures would result in a total reduction of 174 MMT CO₂e by 2020.

On August 24, 2011, the CARB unanimously approved both the new supplemental assessment and reapproved its Scoping Plan, which provides the overall roadmap and rule measures to carry out AB 32. The CARB also approved a more robust CEQA equivalent document supporting the supplemental analysis of the cap-and-trade program. The cap-and-trade took effect on January 1, 2012, with an enforceable compliance obligation that began January 1, 2013.

CARB has not yet determined what amount of GHG reductions it recommends from local government operations and local land use decisions; however, the Scoping Plan states that land use planning and urban growth decisions will play an important role in the State's GHG reductions because local governments have primary authority to plan, zone, approve, and permit how land is developed to accommodate population growth and the changing needs of their jurisdictions (meanwhile, CARB is also developing an additional protocol for community emissions). CARB further acknowledges that decisions on how land is used will have large impacts on the GHG emissions that will result from the transportation, housing, industry, forestry, water, agriculture, electricity, and natural gas emission sectors. The Scoping Plan states that the ultimate GHG reduction assignment to local government operations is to be determined. With regard to land use planning, the Scoping Plan expects an approximately 5.0 MMT CO₂e reduction due to implementation of SB 375.

In addition to reducing GHG emissions to 1990 levels by 2020, AB 32 directed the CARB and the CAT to identify a list of "discrete early action GHG reduction measures" that could be adopted and made enforceable by January 1, 2010. On January 18, 2007, Governor Schwarzenegger signed EO S-1-07, further solidifying California's dedication to reducing GHGs by setting a new Low Carbon Fuel Standard (LCFS). This executive order sets a target to reduce the carbon intensity of California transportation fuels by at least 10 percent by 2020 and directs the CARB to consider the LCFS as a discrete early action measure. In 2011, U.S. District Court Judge Lawrence O'Neil issued an injunction preventing implementation of the LCFS, ruling that it is unconstitutional. In 2012, the Ninth Circuit Court of Appeal stayed the District Court's injunction, allowing implementation of the LCFS. The Ninth Circuit decided to uphold the LCFS.

In June 2007, the CARB approved a list of 37 early action measures, including three discrete early action measures (LCFS, Restrictions on GWP Refrigerants, and Landfill CH₄ Capture).¹ Discrete early action measures are measures that were required to be adopted as regulations and made effective no later than January 1, 2010, the date established by Health and Safety Code Section 38560.5. The CARB adopted additional early action measures in October 2007 that tripled the number of discrete early action measures. These measures relate to truck efficiency, port electrification, reduction of PFCs from the semiconductor industry, reduction of propellants in consumer products, proper tire inflation, and SF₆ reductions from the non-electricity sector. The combination of early action measures is estimated to reduce statewide GHG emissions by nearly 16 MMT.²

The CARB approved the First Update to the Climate Change Scoping Plan on May 22, 2014. The First Update identifies opportunities to leverage existing and new funds to further drive GHG emission reductions through strategic planning and targeted low carbon investments. The First Update defines CARB climate change priorities until 2020, and also sets the groundwork to reach long-term goals set forth in EOs S-3-05 and B-16-2012. The Update highlights California's progress toward meeting the "near-term" 2020 GHG emission reduction goals as defined in the initial Scoping Plan. It also evaluates how to align the State's "longer-term" GHG reduction strategies with other State policy priorities for water, waste, natural resources, clean energy, transportation, and land use. CARB released a second update to the Scoping Plan, the 2017 Scoping Plan,³ to reflect the 2030 target set by EO B-30-15 and codified by SB 32.

CARB is currently working on an update to the 2017 Scoping Plan, which will be released this year. The 2022 Scoping Plan Update will assess progress towards achieving the SB 32 2030 target and lay out a path to achieve carbon neutrality no later than 2045.

Senate Bill 97 (2007)

SB 97, signed by the Governor in August 2007 (Chapter 185, Statutes of 2007; Public Resources Code [PRC], Sections 21083.05 and 21097), acknowledges climate change is a prominent environmental issue that requires analysis under CEQA. This bill directed the Governor's Office of Planning and Research (OPR) to prepare, develop, and transmit to the California Resources Agency guidelines for mitigating GHG emissions or the effects of GHG emissions, as required by CEQA.

The California Natural Resources Agency adopted the amendments to the CEQA Guidelines in November 2018, which went into effect in December 2018. The amendments do not identify a threshold of significance for GHG emissions, nor do they prescribe assessment methodologies or specific mitigation measures. The amendments encourage lead agencies to consider many factors in performing a CEQA analysis, but preserve the discretion granted by CEQA to lead agencies in making their own determinations based on substantial evidence. The amendments also encourage public agencies to make use of programmatic mitigation plans and programs when they perform individual project analyses.

¹ CARB. 2007. *Expanded List of Early Action Measures to Reduce Greenhouse Gas Emissions in California Recommended for Board Consideration*. October.

² CARB. 2007. "ARB approves tripling of early action measures required under AB 32" News Release 07-46. October 25.

³ CARB. 2017. *California's 2017 Climate Change Scoping Plan*. November.

Senate Bill 375 (2008)

SB 375, the Sustainable Communities and Climate Protection Act, which establishes mechanisms for the development of regional targets for reducing passenger vehicle GHG emissions, was adopted by the State on September 30, 2008. On September 23, 2010, the CARB adopted the vehicular GHG emissions reduction targets that had been developed in consultation with the Metropolitan Planning Organization (MPOs); the targets require a 6 to 15 percent reduction by 2020 and between 13 to 19 percent reduction by 2035 for each MPO. SB 375 recognizes the importance of achieving significant GHG reductions by working with cities and counties to change land use patterns and improve transportation alternatives. Through the SB 375 process, MPOs such as the SCAG will work with local jurisdictions in the development of Sustainable Communities Strategy (SCS) designed to integrate development patterns and the transportation network in a way that reduces GHG emissions while meeting housing needs and other regional planning objectives. Pursuant to SB 375, the SCAG reduction targets for per capita vehicular emissions were 8 percent by 2020 and are 19 percent by 2035 as shown in Table E.

Table E: Senate Bill 375 Regional Greenhouse Gas Emissions Reduction Targets

Metropolitan Planning Organization	By 2020 (percent)	By 2035 (percent)
San Francisco Bay Area	10	19
San Diego	15	19
Sacramento	7	19
Central Valley/San Joaquin	6-13	13-16
Los Angeles/Southern California	8	19

Source: California Air Resources Board (2018).

Executive Order B-30-15 (2015)

Governor Jerry Brown signed EO B-30-15 on April 29, 2015, which added the immediate target of:

- GHG emissions should be reduced to 40 percent below 1990 levels by 2030.

All State agencies with jurisdiction over sources of GHG emissions were directed to implement measures to achieve reductions of GHG emissions to meet the 2030 and 2050 targets. CARB was directed to update the AB 32 Scoping Plan to reflect the 2030 target, and therefore, is moving forward with the update process. The mid-term target is critical to help frame the suite of policy measures, regulations, planning efforts, and investments in clean technologies and infrastructure needed to continue reducing emissions.

Senate Bill 350 (2015) Clean Energy and Pollution Reduction Act

SB 350, signed by Governor Jerry Brown on October 7, 2015, updates and enhances AB 32 by introducing the following set of objectives in clean energy, clean air, and pollution reduction for 2030:

- Raise California’s renewable portfolio standard from 33 percent to 50 percent; and
- Increasing energy efficiency in buildings by 50 percent by the year 2030.

The 50 percent renewable energy standard will be implemented by the California Public Utilities Commission for the private utilities and by the California Energy Commission for municipal utilities. Each utility must submit a procurement plan showing it will purchase clean energy to displace other non-renewable resources. The 50 percent increase in energy efficiency in buildings must be achieved through the use of existing energy efficiency retrofit funding and regulatory tools already available to state energy agencies under existing law. The addition made by this legislation requires state energy agencies to plan for, and implement those programs in a manner that achieves the energy efficiency target.

Senate Bill 32, California Global Warming Solutions Act of 2016, and Assembly Bill 197

In summer 2016 the Legislature passed, and the Governor signed, SB 32, and AB 197. SB 32 affirms the importance of addressing climate change by codifying into statute the GHG emissions reductions target of at least 40 percent below 1990 levels by 2030 contained in Governor Brown’s April 2015 EO B-30-15. SB 32 builds on AB 32 and keeps us on the path toward achieving the State’s 2050 objective of reducing emissions to 80 percent below 1990 levels, consistent with an IPCC analysis of the emissions trajectory that would stabilize atmospheric GHG concentrations at 450 parts per million CO₂e and reduce the likelihood of catastrophic impacts from climate change.

The companion bill to SB 32, AB 197, provides additional direction to CARB related to the adoption of strategies to reduce GHG emissions. Additional direction in AB 197 meant to provide easier public access to air emissions data that are collected by CARB was posted in December 2016.

Senate Bill 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

EO B-55-18, signed September 10, 2018, sets a goal “to achieve carbon neutrality as soon as possible, and no later than 2045, and achieve and maintain net negative emissions thereafter.” EO B-55-18 directs CARB to work with relevant state agencies to ensure future Scoping Plans identify and recommend measures to achieve the carbon neutrality goal. The goal of carbon neutrality by 2045 is in addition to other statewide goals, meaning not only should emissions be reduced to 80 percent below 1990 levels by 2050, but that, by no later than 2045, the remaining emissions be offset by equivalent net removals of CO₂e from the atmosphere, including through sequestration in forests, soils, and other natural landscapes.

Title 24, Part 11, Building Standards Code and CALGreen Code

In November 2008, the California Building Standards Commission established the California Green Building Standards Code (CALGreen Code), which sets performance standards for residential and nonresidential development to reduce environmental impacts and encourage sustainable construction practices. The CALGreen Code addresses energy efficiency, water conservation, material conservation, planning and design, and overall environmental quality. The CALGreen Code is updated every 3 years and was most recently updated in 2019 to include new mandatory measures for residential as well as nonresidential uses; the new measures took effect on January 1, 2020. The next set of standards will be adopted in 2022 and apply to projects seeking building permits on or after January 1, 2023.

California Building Efficiency Standards (Title 24, Part 6)

The California Building Standards Code, or Title 24 of the California Code of Regulations (CCR) contains the regulations that govern the construction of buildings in California. Within the Building Standards Code, two parts pertain to the incorporation of both energy efficient and green building elements into land use development. Part 6 is California's Energy Efficiency Standards for Residential and Non-Residential Buildings. These standards were first adopted in 1978 in response to a legislative mandate to reduce California's energy consumption and are updated on an approximately 3-year cycle to allow consideration and possible incorporation of new energy efficient technologies and methods. All buildings for which an application for a building permit is submitted on or after January 1, 2020, must follow the 2019 standards. The next set of standards is anticipated for release in 2022. Energy efficient buildings require less electricity; therefore, increased energy efficiency reduces fossil fuel consumption and decreases GHG emissions.

Cap and Trade

The development of a cap-and-trade program was included as a key reduction measure of the CARB AB 32 Climate Change Scoping Plan. The cap-and-trade program will help put California on the path to meet its goal of reducing GHG emissions to 1990 levels by 2020 and ultimately achieving an 80 percent reduction from 1990 levels by 2050. The cap-and-trade emissions trading program developed by the CARB took effect on January 1, 2012, with enforceable compliance obligations beginning January 1, 2013. The cap-and-trade program aims to regulate GHG emissions from the largest producers in the State by setting a statewide firm limit, or cap, on allowable annual GHG emissions. The cap was set in 2013 at approximately 2 percent below the emissions forecast for 2020. In 2014, the cap declined approximately 2 percent. Beginning in 2015 and continuing through 2020, the cap has been declining approximately 3 percent annually. The CARB administered the first auction on November 14, 2012, with many of the qualified bidders representing corporations or organizations that produce large amounts of GHG emissions, including energy companies, agriculture and food industries, steel mills, cement companies, and universities. On January 1, 2015, compliance obligation began for distributors of transportation fuels, natural gas, and other fuels. The cap-and-trade program was initially slated to sunset in 2020 but the passage of SB 398 in 2017 extended the program through 2030.

Executive Order N-79-20

EO N-79-20, which was signed by the Governor on September 23, 2020, sets the following goals for the State: 100 percent of in-state sales of new passenger cars and trucks shall be zero-emission by 2035; 100 percent of medium- and heavy-duty vehicles in the State shall be zero-emission by 2045 for all operations where feasible and by 2035 for drayage trucks; and 100 percent of off-road vehicles and equipment in the State shall be zero-emission by 2035, where feasible.

California Integrated Waste Management Act

To minimize the amount of solid waste that must be disposed of in landfills, the State Legislature passed the California Integrated Waste Management Act of 1989 (AB 939), effective January 1990. According to AB 939, all cities and counties were required to divert 25 percent of all solid waste from landfill facilities by January 1, 1995, and 50 percent by January 1, 2000. Through other statutes and regulations, this 50 percent diversion rate also applies to State agencies. In order of priority, waste reduction efforts must promote source reduction, recycling and composting, and environmentally safe transformation and land disposal. In 2011, AB 341 modified the California Integrated Waste Management Act and directed the California Department of Resources Recycling and Recovery (CalRecycle) to develop and adopt regulations for mandatory commercial recycling. The resulting 2012 Mandatory Commercial Recycling Regulation requires that on and after July 1, 2012, certain businesses that generate four cubic yards or more of commercial solid waste per week shall arrange recycling services. To comply with this requirement, businesses may either separate recyclables and self-haul them or subscribe to a recycling service that includes mixed waste processing. AB 341 also established a statewide recycling goal of 75 percent; the 50 percent disposal reduction mandate still applies for cities and counties under AB 939, the Integrated Waste Management Act. In April 2016, AB 1826 further modified the California Integrated Waste Management Act, requiring businesses that generate a specified amount of organic waste per week to arrange for recycling services for that organic waste in a specified manner. If CalRecycle determines that statewide disposal of organic waste has not been reduced by 50 percent below 2014 levels by 2020, businesses generating more than two cubic yards of organic waste per week would be subject to these waste collection requirements. CalRecycle plans to make this assessment in the fall of 2020. Diverting organic waste from landfills reduces emissions of CH₄. This is equivalent to reducing anaerobic decomposition of organic waste that would have otherwise occurred in landfills where organic waste is often buried with other inorganic waste.

Low Carbon Fuel Standard

In January 2007, EO S-01-07 established an LCFS. This executive order calls for a statewide goal to be established to reduce the carbon intensity of California's transportation fuels by at least 10 percent by 2020, and that an LCFS for transportation fuels be established for California. The LCFS applies to all refiners, blenders, producers, or importers ("Providers") of transportation fuels in California, including fuels used by off-road construction equipment. In June 2007, CARB adopted the LCFS under AB 32 pursuant to Health and Safety Code Section 38560.5, and, in April 2009, CARB approved the new rules and carbon intensity reference values with new regulatory requirements taking effect in January 2011. The standards require providers of transportation fuels to report on the mix of fuels they provide and demonstrate they meet the LCFS intensity standards annually. This is accomplished by ensuring that the number of "credits" earned by providing fuels with a lower carbon intensity

than the established baseline (or obtained from another party) is equal to or greater than the “deficits” earned from selling higher intensity fuels. In response to certain court rulings, CARB re-adopted the LCFS regulation in September 2015, and the LCFS went into effect on January 1, 2016. In 2018, CARB approved amendments to the regulation to readjust carbon intensity benchmarks to meet California’s 2030 GHG reductions targets under SB 32. These amendments include opportunities to promote zero emission vehicle (ZEV) adoption, carbon capture and sequestration, and advanced technologies for decarbonization of the transportation sector.

Advanced Clean Cars Program

In January 2012, CARB approved the Advanced Clean Cars program, which combines the control of GHG emissions and criteria air pollutants, as well as requirements for greater numbers of ZEVs, into a single package of regulatory standards for vehicle model years 2017 through 2025. The new regulations strengthen the GHG standard for 2017 models and beyond. This will be achieved through existing technologies, the use of stronger and lighter materials, and more efficient drivetrains and engines. The program’s ZEVs regulation requires battery, fuel cell, and/or plug-in hybrid electric vehicles to account for up to 15 percent of California’s new vehicle sales by 2025. The program also includes a clean fuels outlet regulation designed to support the commercialization of zero-emission hydrogen fuel cell vehicles planned by vehicle manufacturers by 2015 by requiring increased numbers of hydrogen fueling stations throughout the State. The number of stations will grow as vehicle manufacturers sell more fuel cell vehicles. By 2025, when the rules will be fully implemented, the statewide fleet of new cars and light trucks will emit 40 percent fewer GHGs and 75 percent fewer smog-forming emissions than 2012 model year vehicles.

Executive Order B-48-18

In January 2018, Governor Brown signed EO B-48-18 requiring all State entities to work with the private sector to have at least 5 million ZEVs on the road by 2030, as well as install 200 hydrogen fueling stations and 250,000 electric vehicle charging stations by 2025. It specifies that 10,000 of the electric vehicle charging stations should be direct current fast chargers. This order also requires all State entities to continue to partner with local and regional governments to streamline the installation of ZEV infrastructure. The Governor’s Office of Business and Economic Development is required to publish a Plug-in Charging Station Design Guidebook and update the 2015 Hydrogen Station Permitting Guidebook to aid in these efforts. All State entities are required to participate in updating the 2016 Zero-Emissions Vehicle Action Plan to help expand private investment in ZEV infrastructure with a focus on serving low-income and disadvantaged communities. Additionally, all State entities are to support and recommend policies and actions to expand ZEV infrastructure at residential land uses, through the LCFS Program, and recommend how to ensure affordability and accessibility for all drivers.

Regional Regulations

South Coast Air Quality Management District

In 2008, the SCAQMD formed a Working Group to identify GHG emissions thresholds for land use projects that could be used by local lead agencies in the Basin. The Working Group developed several different options that are contained in the SCAQMD 2008 draft guidance document titled

Interim CEQA GHG Significance Threshold for Stationary Sources, Rules and Plans¹ that could be applied by lead agencies. On September 28, 2010, SCAQMD Working Group Meeting No. 15 provided further guidance, including a tiered approach for evaluating GHG emissions for development projects where the SCAQMD is not the lead agency. The SCAQMD has not presented a finalized version of these thresholds to the governing board.

The SCAQMD identifies the emissions level for which a project would not be expected to substantially conflict with any State legislation adopted to reduce statewide GHG emissions. As such, the utilization of a service population represents the rates of emissions needed to achieve a fair share of the State's mandated emissions reductions. Overall, the SCAQMD identifies a GHG efficiency level that, when applied statewide or to a defined geographic area, would meet the year 2020 and post-2020 emissions targets as required by AB 32 and SB 32. If projects are able to achieve targeted rates of emissions per the service population, the State will be able to accommodate expected population growth and achieve economic development objectives, while also abiding by AB 32's emissions target and future post-2020 targets.

Southern California Association of Governments

On September 3, 2020, SCAG adopted Connect SoCal—The 2020–2045 Regional Transportation Plan/Sustainable Communities Strategy (2020–2045 RTP/SCS).² In general, the SCS outlines a development pattern for the region, which, when integrated with the transportation network and other transportation measures and policies, would reduce vehicle miles traveled (VMT) from automobiles and light-duty trucks and thereby reduce GHG emissions from these sources. For the SCAG region, CARB has set GHG reduction targets at 8 percent below 2005 per capita emissions levels by 2020, and 19 percent below 2005 per capita emissions levels by 2035. The RTP/SCS lays out a strategy for the region to meet these targets. Overall, the SCS is meant to provide growth strategies that will achieve the regional GHG emissions reduction targets. Land use strategies to achieve the region's targets include planning for new growth around high-quality transit areas and livable corridors, and creating neighborhood mobility areas to integrate land use and transportation and plan for more active lifestyles.³ However, the SCS does not require that local General Plans, Specific Plans, or zoning be consistent with the SCS; SCAG is required to consider local land use controls when drafting the SCS.

Local Regulations

The City of Newport Beach has an Energy Action Plan (EAP)⁴, which identifies the City's vision and goals on achieving energy efficiency in local government facilities and in the community. The driving

¹ SCAQMD. 2008. Interim CEQA GHG Significance Threshold for Stationary Sources, Rules and Plans.

² Southern California Association of Governments (SCAG). 2020. Connect SoCal: The 2020–2045 Regional Transportation Plan/Sustainable Communities Strategy of the Southern California Association of Governments. Website: https://scag.ca.gov/sites/main/files/file-attachments/0903fconnectsocial-plan_0.pdf?1606001176 (accessed November 2021).

³ SCAG. 2020. Connect SoCal: The 2020–2045 Regional Transportation Plan/Sustainable Communities Strategy of the Southern California Association of Governments. Website: https://scag.ca.gov/sites/main/files/file-attachments/0903fconnectsocial-plan_0.pdf?1606001176 (accessed December 2021).

⁴ Newport Beach, City of. 2013. City of Newport Beach Energy Action Plan (EAP). July.

force for City of Newport Beach's energy efficiency efforts includes demonstrating leadership through the implementation of cost-effective energy efficiency improvements in their own facilities, minimizing costs associated with energy and utilities, and protecting the environment. The EAP is intended to guide the City to reduce GHG emissions by lowering municipal and community wide energy use.

SETTING

As identified previously, based on the SCAQMD attainment status and ambient air quality monitoring data, ambient air quality in the vicinity of the project site has basically remained unchanged since approval of the General Plan EIR. This section provides the current SCAQMD attainment status, climate and air quality, ambient air quality monitoring results, and GHG emissions inventory.

ATTAINMENT STATUS

The CARB is required to designate areas of the state as attainment, nonattainment, or unclassified for all State standards. An *attainment* designation for an area signifies that pollutant concentrations did not violate the standard for that pollutant in that area. A *nonattainment* designation indicates that a pollutant concentration violated the standard at least once, excluding those occasions when a violation was caused by an exceptional event, as defined in the criteria. An *unclassified* designation signifies that data do not support either an attainment or nonattainment status. The CCAA divides districts into moderate, serious, and severe air pollution categories, with increasingly stringent control requirements mandated for each category.

The USEPA designates areas for O₃, CO, and NO₂ as either does not meet the primary standards, or cannot be classified, or better than national standards. For SO₂, areas are designated as does not meet the primary standards, does not meet the secondary standards, cannot be classified, or better than national standards.

Table F provides a summary of the attainment status for the Basin with respect to NAAQS and CAAQS.

Table F: Attainment Status of Criteria Pollutants in the South Coast Air Basin

Pollutant	State	Federal
O ₃ 1 hour	Nonattainment	Extreme Nonattainment
O ₃ 8 hour	Nonattainment	Extreme Nonattainment
PM ₁₀	Nonattainment	Attainment/Maintenance
PM _{2.5}	Nonattainment	Serious Nonattainment
CO	Attainment	Attainment/Maintenance
NO ₂	Attainment	Attainment/Maintenance
SO ₂	N/A	Attainment/Unclassified
Lead	Attainment	Attainment ¹
All others	Attainment/Unclassified	Attainment/Unclassified

Source: South Coast Air Quality Management District (2018).

Notes:

¹ Except in Los Angeles County.

CO = carbon monoxide

N/A = not applicable

NO₂ = nitrogen dioxide

O₃ = ozone

PM₁₀ = particulate matter less than 10 microns in size

PM_{2.5} = particulate matter less than 2.5 microns in size

SO₂ = sulfur dioxide

EXISTING CLIMATE AND AIR QUALITY

Air quality in the planning area is not only affected by various emission sources (e.g., mobile and industry), but also by atmospheric conditions (e.g., wind speed, wind direction, temperature, and rainfall). The combination of topography, low mixing height, abundant sunshine, and emissions from the second-largest urban area in the United States gives the Basin some of the worst air pollution in the nation.

The annual average temperature varies little throughout the Basin, ranging from the low to middle 60s°F. With a more pronounced oceanic influence, coastal areas show less variability in annual minimum and maximum temperatures than inland areas. The climatological station closest to the site is the Newport Beach Harbor station.¹ The monthly average maximum temperature recorded at this station ranged from 63.2°F in January to 73.4°F in August, with an annual average maximum of 67.8°F. The monthly average minimum temperature recorded at this station ranged from 46.9°F in January to 63.2°F in August, with an annual average minimum of 54.6°F. These levels are representative of the project area.

The majority of annual rainfall in the Basin occurs between November and March. Summer rainfall is minimal and is generally limited to scattered thundershowers in coastal regions and slightly heavier showers in the eastern portion of the Basin and along the coastal side of the mountains. Average monthly rainfall at the Newport Beach Harbor station varied from 0.01 inch in July to 2.30 inches in February, with an annual total of 11.00 inches. Patterns in monthly and yearly rainfall totals are unpredictable due to fluctuations in the weather.

The Basin experiences a persistent temperature inversion (increasing temperature with increasing altitude) as a result of the Pacific high. This inversion limits the vertical dispersion of air contaminants, holding them relatively near the ground. As the sun warms the ground and the lower air layer, the temperature of the lower air layer approaches the temperature of the base of the inversion (upper) layer until the inversion layer finally breaks, allowing vertical mixing with the lower layer. This phenomenon is observed in mid-afternoon to late afternoon on hot summer days, when the air appears to clear up suddenly. Winter inversions frequently break by midmorning.

Winds in the project area blow predominantly from the south-southwest, with relatively low velocities. Wind speeds in the project area average about 5 miles per hour (mph). Summer wind speeds average slightly higher than winter wind speeds. Low average wind speeds, together with a persistent temperature inversion, limit the vertical dispersion of air pollutants throughout the Basin. Strong, dry, north or northeasterly winds, known as Santa Ana winds, occur during the fall and winter months, dispersing air contaminants. The Santa Ana conditions tend to last for several days at a time.

The combination of stagnant wind conditions and low inversions produces the greatest pollutant concentrations. On days of no inversion or high wind speeds, ambient air pollutant concentrations are the lowest. During periods of low inversions and low wind speeds, air pollutants generated in urbanized areas are transported predominantly on shore into Riverside and San Bernardino

¹ Western Regional Climate Center. Recent Climate in the West. Website: <http://www.wrcc.dri.edu>, (accessed December 2021).

Counties. In the winter, the greatest pollution problems are CO and NO_x because of extremely low inversions and air stagnation during the night and early morning hours. In the summer, the longer daylight hours and brighter sunshine combine to cause a reaction between hydrocarbons and NO_x to form photochemical smog. Smog is a general term that is naturally occurring fog that has become mixed with smoke or pollution. In this context it is better described as a form of air pollution produced by the photochemical reaction of sunlight with pollutants that have been released into the atmosphere, especially by automotive emissions.

AIR QUALITY MONITORING RESULTS

Air quality monitoring stations are located throughout the nation and are maintained by the local air pollution control district and State air quality regulating agencies. The SCAQMD, together with the CARB, maintains ambient air quality monitoring stations in the Basin. The air quality monitoring stations closest to the project site located at 2425 Webster Street, 1710 E. 20th Street, and 1305 E. Pacific Coast Highway in the City of Long Beach.

Pollutant monitoring results for years 2018 to 2020 at the Long Beach ambient air quality monitoring stations, shown in Table G, indicate that air quality in the area has generally been good. As indicated in the monitoring results, the federal PM₁₀ standard had no exceedances in 2018, one exceedance in 2019, and no exceedances in 2020. The State PM₁₀ standard was exceeded four times in 2018, four times in 2019, and three times in 2020. PM_{2.5} levels exceeded the federal standard seven times in 2018, with no exceedances in 2019, and ten exceedances in 2020. Neither State nor federal 1-hour ozone standards nor the State 8-hour ozone standards were exceeded in 2018 or 2019, but both the State and federal ozone 1-hour and 8-hour standards were exceeded four times in 2020. In addition, the CO, SO₂, and NO₂ standards were also not exceeded in this area during the 3-year period.

GREENHOUSE GAS EMISSIONS INVENTORY

An emissions inventory that identifies and quantifies the primary human-generated sources and sinks of GHGs is a well-recognized and useful tool for addressing climate change. This section summarizes the latest information on global, United States, and California GHG emission inventories.

Global Emissions

Worldwide emissions of GHGs in 2018 totaled 25.6 billion metric tons of CO₂e. Global estimates are based on country inventories developed as part of the programs of the United Nations Framework Convention on Climate Change.¹

¹ United Nations Framework Convention on Climate Change (UNFCCC). 2021. GHG Data from UNFCCC. Website: unfccc.int/process-and-meetings/transparency-and-reporting/greenhouse-gas-data/ghg-data-unfccc/ghg-data-from-unfccc (accessed December 2021).

Table G: Ambient Air Quality at Nearby Monitoring Stations

Pollutant	Standard	2018	2019	2020
Carbon Monoxide (CO)				
Maximum 1-hour concentration (ppm)		4.7	3.0	ND
Number of days exceeded:	State: > 20 ppm	0	0	ND
	Federal: > 35 ppm	0	0	ND
Maximum 8-hour concentration (ppm)		2.1	2.1	ND
Number of days exceeded:	State: > 9 ppm	0	0	ND
	Federal: > 9 ppm	0	0	ND
Ozone (O₃)¹				
Maximum 1-hour concentration (ppm)		0.074	0.075	0.105
Number of days exceeded:	State: > 0.09 ppm	0	0	4
Maximum 8-hour concentration (ppm)		0.063	0.068	0.083
Number of days exceeded:	State: > 0.07 ppm	0	0	4
	Federal: > 0.07 ppm	0	0	4
Coarse Particulates (PM₁₀)				
Maximum 24-hour concentration (µg/m ³)		84.0	155.8	61.6
Number of days exceeded:	State: > 50 µg/m ³	4	4	3
	Federal: > 150 µg/m ³	0	1	0
Annual arithmetic average concentration (µg/m ³)		32.5	29.5	31.8
Exceeded for the year:	State: > 20 µg/m ³	Yes	Yes	Yes
	Federal: > 50 µg/m ³	No	No	No
Fine Particulates (PM_{2.5})²				
Maximum 24-hour concentration (µg/m ³)		77.3	31.2	72.6
Number of days exceeded:	Federal: > 35 µg/m ³	7	0	10
Annual arithmetic average concentration (µg/m ³)		11.6	10.6	12.2
Exceeded for the year:	State: > 12 µg/m ³	No	No	Yes
	Federal: > 15 µg/m ³	No	No	No
Nitrogen Dioxide (NO₂)¹				
Maximum 1-hour concentration (ppm)		0.085	0.082	0.075
Number of days exceeded:	State: > 0.250 ppm	0	0	0
Annual arithmetic average concentration (ppm)		0.017	0.016	0.013
Exceeded for the year:	Federal: > 0.053 ppm	No	No	No
Sulfur Dioxide (SO₂)				
Maximum 1-hour concentration (ppm)		0.011	0.009	ND
Number of days exceeded:	State: > 0.25 ppm	0	0	ND
Maximum 24-hour concentration (ppm)		0.002	0.002	ND
Number of days exceeded:	State: > 0.04 ppm	0	0	ND
	Federal: > 0.14 ppm	0	0	ND
Annual arithmetic average concentration (ppm)		0.0009	0.0007	ND
Exceeded for the year:	Federal: > 0.030 ppm	No	No	ND

Sources: CARB (2021) and USEPA (2021).

¹ 2018 and 2019 data were taken from the 2425 Webster Street Long Beach monitoring station, and 2020 data were taken from the 1710 E. 20th Street Long Beach monitoring station.

² Data were taken from the 1305 E. Pacific Coast Highway Long Beach monitoring station.

µg/m³ = micrograms per cubic meter

CARB = California Air Resources Board

ND = No data. There were insufficient (or no) data to determine the value.

ppm = parts per million

USEPA = United States Environmental Protection Agency

United States Emissions

In 2019, the year for which the most recent data are available, the United States emitted about 6,558 million metric tons of CO₂e (MMT CO₂e). Overall, emissions in 2019 decreased by 1.7 percent since 2018 and were 13 percent 2005 levels. This decrease was driven largely by a decrease in emissions from fossil fuel combustion resulting from a decrease in total energy use in 2019 compared to 2018 and a continued shift from coal to natural gas and renewables in the electric power sector. Of the six major sectors – residential, commercial, agricultural, industry, transportation, and electricity generation – transportation accounted for the highest amount of GHG emissions in 2019 (approximately 29 percent), with electricity generation second at 25 percent and emissions from industry third at 23 percent.¹

State of California Emissions

The State emitted approximately 418.2 MMT CO₂e emissions in 2019, 7.2 MMT CO₂e lower than 2018 levels and almost 13 MMT CO₂e below the 2020 GHG Limit of 431 MMT CO₂e.² The CARB estimates that transportation was the source of approximately 40 percent of the State's GHG emissions in 2019, followed by industrial sources at approximately 21 percent and electricity generation at 14 percent. The remaining sources of GHG emissions were agriculture at 8 percent, residential activities at 7 percent, commercial activities at 4 percent, high GWP at 5 percent, and waste at 2 percent.³

¹ USEPA. 2021. Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2019. Website: <https://www.epa.gov/ghgemissions/inventory-us-greenhouse-gas-emissions-and-sinks-1990-2019> (accessed December 2021).

² CARB. 2021. *California Greenhouse Gas Emissions for 2000 to 2019, Trends of Emissions and Other Indicators Report*. Website: https://ww3.arb.ca.gov/cc/inventory/pubs/reports/2000_2019/ghg_inventory_trends_00-19.pdf (accessed December 2021).

³ Ibid.

METHODOLOGY

The methodology used to estimate air quality and GHG impacts is described below.

CONSTRUCTION EMISSIONS

Construction activities can generate a substantial amount of air pollution. Construction activities are considered temporary; however, short term impacts can contribute to exceedances of air quality standards. Construction activities include demolition, site preparation, earthmoving, and general construction. The emissions generated from these common construction activities include fugitive dust from soil disturbance, fuel combustion from mobile heavy-duty diesel and gasoline powered equipment, portable auxiliary equipment, and worker commute trips. The California Emissions Estimator Model version 2020.4.0 (CalEEMod) computer program was used to calculate emissions from on-site construction equipment and emissions from worker and vehicle trips to the site. As discussed in the Project Description, demolition of the 263,194-square-foot existing structure is anticipated to last 6 months and construction of the proposed project would start December 31, 2022, and occur for approximately 36 months, ending December 31, 2025, which was included in CalEEMod. The proposed project would require the export of 205,700 cubic yards of soil associated with excavation work on the parking garage, which were also included in CalEEMod.

OPERATIONAL EMISSIONS

The air quality analysis includes estimating emissions associated with long-term operation of the proposed project. Consistent with the SCAQMD guidance for estimating emissions associated with land use development projects, the CalEEMod computer program was used to calculate the long-term operational emissions associated with the project. As discussed in the Project Description, the proposed project would reduce hotel rooms by 159 rooms and add 159 hotel-branded residences and associated parking. Therefore, the existing conditions analysis was conducted using land use codes *Hotel*, *Enclosed Parking Structure with Elevator*, and *Other Non-Asphalt Surfaces*. The proposed project analysis was conducted using land use codes *Apartments High Rise*, *Enclosed Parking Structure with Elevator*, and *Other Non-Asphalt Surfaces*. Trip generation rates used in CalEEMod for the project were based on the project's Trip Generation Letter¹, which identifies that the existing conditions typically generate approximately 1,271 average daily trips and the proposed project would generate approximately 722 average daily trips. As such, the proposed project would result in fewer daily trips than under existing conditions.

In addition, consistent with the project design plans, this CalEEMod analysis incorporates selections to reflect an emergency diesel generator (50 hours per year operation), only natural gas hearth (no wood burning), water-efficient irrigation systems, and use of water efficient landscape materials. Other amenities such as the hotel pool and fitness center are incorporated into the overall site acreage and building square footage used in CalEEMod. When project-specific data were not available, default assumptions from CalEEMod were used to estimate project emissions, which are appropriate for infill projects in urban areas such as Newport Beach.

¹ Pirzadeh Associates, Inc. 2022. Newport Beach Marriott Hotel and Spa Trip Generation Letter. January 26.

GREENHOUSE GAS ANALYSIS

Recognizing that the field of global climate change analysis is rapidly evolving, the approaches advocated most recently indicate that for determining a project's contribution to GHG emissions, lead agencies should calculate, or estimate, emissions from vehicular traffic, energy consumption, water conveyance and treatment, waste generation, construction activities, and any other significant source of emissions within the project area. The CalEEMod results were used to quantify GHG emissions generated by the project.

THRESHOLDS OF SIGNIFICANCE

The *State CEQA Guidelines* indicate that a project would normally have a significant adverse air quality impact if project-generated pollutant emissions would:

- Conflict with or obstruct implementation of the applicable air quality plan;
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project is nonattainment under applicable federal or state ambient air quality standards;
- Expose sensitive receptors to substantial pollutant concentrations; or
- Result in other emissions (such as those leading to odors) affecting a substantial number of people.

The *State CEQA Guidelines* indicate that a project would normally have a significant adverse greenhouse gas emission impact if the project would:

- Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment; or
- Conflict with an applicable plan, policy or regulation adopted for the purpose of reduction the emissions of greenhouse gases.

Certain air districts (e.g., SCAQMD) have created guidelines and requirements to conduct air quality analysis. SCAQMD's current guidelines, the CEQA Air Quality Handbook with associated updates, were followed in this assessment of air quality and GHG impacts for the proposed project.

REGIONAL EMISSIONS THRESHOLDS

SCAQMD has established daily emissions thresholds for construction and operation of a proposed project in the Basin. The emissions thresholds were established based on the attainment status of the Basin with regard to air quality standards for specific criteria pollutants. Because the concentration standards were set at a level that protects public health with an adequate margin of safety, these emissions thresholds are regarded as conservative and would overstate an individual project's contribution to health risks.

Table H lists the CEQA significance thresholds for construction and operational emissions established for the Basin. Projects in the Basin with construction- or operation-related emissions that exceed any of their respective emission thresholds would be considered significant under SCAQMD guidelines. These thresholds, which SCAQMD developed and that apply throughout the Basin, apply as both project and cumulative thresholds. If a project exceeds these standards, it is considered to have a project-specific and cumulative impact.

Table H: Regional Thresholds for Construction and Operational Emissions

Emissions Source	Pollutant Emissions Threshold (lbs/day)					
	VOC	NO _x	CO	PM ₁₀	PM _{2.5}	SO _x
Construction	75	100	550	150	55	150
Operations	55	55	550	150	55	150

Source: SCAQMD. Air Quality Significance Thresholds. Website: <http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf> (accessed December 2021).

CO = carbon monoxide

lbs/day = pounds per day

NO_x = nitrogen oxides

PM₁₀ = particulate matter less than 10 microns in size

PM_{2.5} = particulate matter less than 2.5 microns in size

SCAQMD = South Coast Air Quality Management District

SO_x = sulfur oxides

VOC = volatile organic compounds

LOCALIZED IMPACTS ANALYSIS

The SCAQMD published its Final Localized Significance Threshold Methodology in July 2008, recommending that all air quality analyses include an assessment of air quality impacts to nearby sensitive receptors.¹ This guidance was used to analyze potential localized air quality impacts associated with construction of the proposed project. Localized significance thresholds (LSTs) are developed based on the size or total area of the emission source, the ambient air quality in the source receptor area, and the distance to the project. Sensitive receptors include residences, schools, hospitals, and similar uses that are sensitive to adverse air quality.

LSTs are based on the ambient concentrations of that pollutant within the project Source Receptor Area (SRA) and the distance to the nearest sensitive receptor. For the proposed project, the appropriate SRA for the LST is the nearby North Coastal Orange County area (SRA 18). SCAQMD provides LST screening tables for 25, 50, 100, 200, and 500-meter source receptor distances. As identified above, the closest sensitive receptors to the project site include the Meridian condominium community immediately adjacent to the project site on the north along Santa Barbara Drive and the Granville Condominiums immediately to the southeast; therefore, the 25-meter source receptor distance would apply. The total project site is 9.53 acres; however, the proposed project lot area is approximately 2.775 acres. Table I lists the emissions thresholds that apply during project construction and operation.

Table I: SCAQMD Localized Significance Thresholds (lbs/day)

Emissions Source	Pollutant Emissions Threshold (lbs/day)			
	NO _x	CO	PM ₁₀	PM _{2.5}
Construction	148.0	1,155.0	8.8	6.0
Operation	148.0	1,155.0	2.5	2.0

Source: SCAQMD LST Guidance Manual

CO = carbon monoxide

lbs/day = pounds per day

LST = localized significance threshold

NO_x = nitrogen oxides

PM₁₀ = particulate matter less than 10 microns in size

PM_{2.5} = particulate matter less than 2.5 microns in size

SCAQMD = South Coast Air Quality Management District

¹ SCAQMD. 2008. Final Localized Significance Threshold Methodology. July.

LOCAL MICROSCALE CONCENTRATION STANDARDS

The significance of localized project impacts under CEQA depends on whether ambient CO levels in the vicinity of the project are above or below State and federal CO standards. Because ambient CO levels are below the standards throughout the Basin, a project would be considered to have a significant CO impact if project emissions result in an exceedance of one or more of the 1-hour or 8-hour standards. The following are applicable local emission concentration standards for CO:

- California State 1-hour CO standard of 20 parts per million (ppm)
- California State 8-hour CO standard of 9 ppm

GLOBAL CLIMATE CHANGE

To provide guidance to local lead agencies on determining significance for GHG emissions in their CEQA documents, SCAQMD convened a GHG CEQA Significance Threshold Working Group (Working Group). Based on the last Working Group meeting held in September 2010 (Meeting No. 15), SCAQMD proposed to adopt a tiered approach for evaluating GHG emissions for development projects where SCAQMD is not the lead agency:

- **Tier 1. Exemptions:** If a project is exempt from CEQA, project-level and cumulative GHG emissions are less than significant.
- **Tier 2. Consistency with a locally adopted GHG Reduction Plan:** If the project complies with a GHG emissions reduction plan or mitigation program that avoids or substantially reduces GHG emissions in the project's geographic area (i.e., city or county), project-level and cumulative GHG emissions are less than significant.
- **Tier 3. Numerical Screening Threshold:** If GHG emissions are less than the numerical screening-level threshold, project-level and cumulative GHG emissions are less than significant.

For projects that are not exempt or where no qualifying GHG reduction plans are directly applicable, SCAQMD requires an assessment of GHG emissions. SCAQMD, under Option 1, is proposing a "bright-line" screening-level threshold of 3,000 metric tons (MT) of CO₂e (or MT CO₂e) per year (or MT CO₂e/yr) for all land use types or, under Option 2, the following land-use-specific thresholds: 1,400 MT CO₂e commercial projects; 3,500 MT CO₂e for residential projects; or 3,000 MT CO₂e for mixed-use projects. This bright-line threshold is based on a review of the Governor's Office of Planning and Research database of CEQA projects. Based on their review of 711 CEQA projects, 90 percent of CEQA projects would exceed the bright-line thresholds identified above. Therefore, projects that do not exceed the bright-line threshold would have a nominal and therefore less than cumulatively considerable impact on GHG emissions.

- **Tier 4. Performance Standards:** If emissions exceed the numerical screening threshold, a more detailed review of the project's GHG emissions is warranted. SCAQMD has proposed an efficiency target for projects that exceed the bright-line threshold. The current recommended approach is per capita efficiency targets. SCAQMD is not recommending use of a percent emissions reduction target. Instead, SCAQMD proposes a 2020 efficiency target of 4.8 MT

CO₂e/yr per service population (for project-level analyses and 6.6 MT CO₂e/yr per service population for plan-level projects (e.g., program-level projects such as general plans). The GHG efficiency metric divides annualized GHG emissions by the service population, which is the sum of residents and employees, per the following equation:

$$\text{Rate of Emission: GHG Emissions (MT CO}_2\text{e/yr)} \div \text{Service Population}$$

The efficiency evaluation consists of comparing the project's efficiency metric to efficiency targets. Efficiency targets represent the maximum quantity of emissions each resident and employee in the State of California could emit in various years based on emissions levels necessary to achieve the statewide GHG emissions reduction goals. A project that results in a lower rate of emissions would be more efficient than a project with a higher rate of emissions, based on the same service population. The metric considers GHG reduction measures integrated into a project's design and operation (or through mitigation). The per capita efficiency targets are based on the AB 32 GHG reduction target and 2020 GHG emissions inventory prepared for the CARB's 2008 Scoping Plan.

However, the SCAQMD's thresholds are based on the AB 32 GHG reduction target and 2020 GHG emissions inventory prepared for CARB's 2008 Scoping Plan. Because the project would begin operations in the post-2020 timeframe, the 2020 numerical screening threshold of 3,000 MT CO₂e and the efficiency target of 4.8 MT CO₂e/yr per service population would need to be adjusted to reflect the State's post-2020 GHG reduction goals.

SCAQMD has yet to publish a quantified GHG efficiency threshold for the 2030 target. A scaled threshold consistent with State goals detailed in SB 32, EO B-30-15, and EO S-3-05 to reduce GHG emissions by 40 percent below 1990 levels by 2030 and 80 percent below 1990 levels by 2050, respectively, was developed for 2025, when the proposed project is anticipated to be operational. Though the SCAQMD has not published a quantified threshold beyond 2020, this assessment uses a threshold of 2,400 MT CO₂e/yr, which was calculated for the buildout year of 2025 based on the GHG reduction goals of SB 32 and EO B-30-15. Due to uncertainty created by recent case law, this assessment does not rely on an adjusted SCAQMD service population metric.

For the purpose of this analysis, the proposed project will be compared to the adjusted screening-level Tier 3 Numerical Screening Threshold of 2,400 MT CO₂e/yr for all land use types.

The project is also evaluated for compliance with the City's EAP, the 2017 Scoping Plan, and the 2020–2045 RTP/SCS.

IMPACTS ANALYSIS

This section identifies the air quality and GHG emissions impacts associated with implementation of the proposed project. The results of the impact analyses are then compared to applicable thresholds of significance. As noted below, no thresholds were met or exceeded, therefore no mitigation measures are required for the proposed project.

AIR QUALITY IMPACTS

Air pollutant emissions associated with the project would occur over the short term from construction activities and over the long term from operational activities associated with the proposed land uses.

Consistency with Applicable Air Quality Plans

General Plan EIR Significance Determination: Significant and Unavoidable Impact.

The General Plan EIR referenced the SCAQMD's 2003 AQMP to determine if implementation of the General Plan would conflict with or obstruct implementation of an applicable air quality plan. The General Plan EIR found that the General Plan would be consistent with the 2003 AQMP goal to reduce VMT; however, the General Plan EIR concluded that since the AQMP growth projections are based on SCAG population levels, the increase in population growth associated with the General Plan would not have been accounted for in the AQMP. As such, the General Plan EIR found that implementation of the General Plan would not be consistent with the AQMP. As such, the General Plan EIR identified this inconsistency as a significant and unavoidable impact.

Project-Specific Analysis and Significance Determination: Less than Significant Impact; no new or substantially more severe significant impact.

A consistency determination plays an essential role in local agency project review by linking local planning and unique individual projects to the air quality plans. A consistency determination fulfills the CEQA goal of fully informing local agency decision-makers of the environmental costs of the project under consideration at a stage early enough to ensure that air quality concerns are addressed. Only new or amended General Plan elements, Specific Plans, and significantly unique projects need to undergo a consistency review due to the air quality plan strategies being based on projections from local General Plans.

The current SCAQMD clean air plan is the 2016 AQMP. Consistency with the 2016 AQMP would be achieved if the project is consistent with the goals, objectives, and assumptions in this plan to achieve the federal and State air quality standards. Per the SCAQMD CEQA Air Quality Handbook, there are two main indicators of a project's consistency with the AQMP: (1) whether the project would increase the frequency or severity of existing air quality violations or cause or contribute to new violations, or delay timely attainment of air quality standards or the interim emission reductions specified in the 2016 AQMP; and (2) whether the project would exceed the 2016 AQMP's assumptions for 2040 or yearly increments based on the year of project buildout and phasing.

With respect to determining the proposed project consistency with AQMP growth assumptions, the projections in the AQMP for achieving air quality goals are based on assumptions in SCAG's RTP/SCS regarding population, housing, and growth trends. According to SCAG's 2020–2045 RTP/SCS, the City's population, households, and employment are forecast to increase by approximately 7,100 residents, 2,900 households, and 1,500 jobs, respectively, between 2016 and 2045.¹

The proposed project would convert 159 hotel rooms to 159 hotel-branded residences and associated parking. The proposed project would result in an increase of 361 residents (5 percent of SCAG's projected population growth for the City from 2016 to 2045 of 7,100 residents) and 159 residential units (5 percent of SCAG's projected household growth for the County from 2016 to 2045 of 2,900 households). Therefore, it is unlikely that the additional units from the proposed project would interfere with SCAQMD's goals for improving air quality in the region because they would house growth that SCAQMD already projected for the City. Therefore, the proposed project would not conflict with the 2016 AQMP and, as such, would not jeopardize attainment of the CAAQS and NAAQS in the area under the jurisdiction of the SCAQMD.

Furthermore, as shown in Tables L and M below, construction and operation of the project would not result in an exceedance of the SCAQMD's thresholds for criteria pollutants; therefore, the project is not expected to result in a violation of air quality standards. Due to these factors, it can be concluded that the proposed project would be consistent with the projections in the AQMP. Therefore, the proposed project would not lead to new or substantially more severe significant impacts associated with clean air consistency beyond those identified in the General Plan EIR.

Criteria Pollutant Analysis

General Plan EIR Significance Determination: Significant and Unavoidable Impact.

As discussed in the General Plan EIR, implementation of the General Plan would result in new emissions generated by construction activities. The General Plan EIR determined that some projects that would be implemented under the General Plan could individually exceed the SCAQMD thresholds and that the total amount of construction assumed in the General Plan could also exceed the SCAQMD's thresholds of significance. The General Plan EIR identified General Plan Policies NR 8.1 through NR 8.5 to reduce air pollutant emissions from construction activities, which call for the maintenance of construction equipment, the use of non-polluting and non-toxic building equipment, and minimizing fugitive dust. However, the General Plan EIR found that the impact would remain significant and unavoidable.

In addition, the General Plan EIR determined that the General Plan may not meet the performance standard for annual emissions reductions and could result in a cumulatively considerable net increase of one or more criteria pollutants for which the project region is in nonattainment under an applicable federal or state ambient air quality standard, and this impact would be significant and unavoidable.

¹ SCAG. 2020. Connect SoCal 2020–2045 Regional Transportation Plan/Sustainable Communities Strategy. Website: https://scag.ca.gov/sites/main/files/file-attachments/0903fconnectsocial-plan_0.pdf?1606001176 (accessed December 2021).

Project-Specific Analysis and Significance Determination: Less than Significant Impact; no new or substantially more severe significant impact.

The following sections describe the proposed project's construction- and operation-related air quality impacts and localized impacts. As explained in the following pages, the proposed project would result in less-than-significant construction and operational air quality impacts.

Construction Emissions

During construction, short-term degradation of air quality may occur due to the release of particulate emissions generated by demolition, grading, paving, building, and other activities. Emissions from construction equipment are also anticipated and would include CO, NO_x, VOC, directly-emitted particulate matter (PM_{2.5} and PM₁₀), and TACs such as diesel exhaust particulate matter.

Project construction activities would include demolition, grading, site preparation, building, paving, and architectural coating activities. Construction-related effects on air quality from the proposed project would be greatest during the site preparation phase due to the disturbance of soils. If not properly controlled, these activities would temporarily generate particulate emissions. Sources of fugitive dust would include disturbed soils at the construction site. Unless properly controlled, vehicles leaving the site would deposit dirt and mud on local streets, which could be an additional source of airborne dust after it dries. PM₁₀ emissions would vary from day to day, depending on the nature and magnitude of construction activity and local weather conditions. PM₁₀ emissions would depend on soil moisture, silt content of soil, wind speed, and the amount of operating equipment. Larger dust particles would settle near the source, while fine particles would be dispersed over greater distances from the construction site.

Water or other soil stabilizers can be used to control dust, resulting in emission reductions of 50 percent or more. The SCAQMD has established Rule 403: Fugitive Dust, which would require the applicant to implement measures that would reduce the amount of particulate matter generated during the construction period.

In addition to dust-related PM₁₀ emissions, heavy trucks and construction equipment powered by gasoline and diesel engines would generate CO, SO₂, NO_x, VOCs and some soot particulate (PM_{2.5} and PM₁₀) in exhaust emissions. If construction activities were to increase traffic congestion in the area, CO and other emissions from traffic would increase slightly while those vehicles idle in traffic. These emissions would be temporary in nature and limited to the immediate area surrounding the construction site.

Construction emissions were estimated for the project using CalEEMod. Table J lists the tentative project construction schedule based on a 6-month demolition duration and a 36-month construction duration. The proposed project would require the demolition of the existing on-site buildings, which was included in CalEEMod. Table K lists the potential construction equipment to be used during project construction under each phase of construction. Construction-related emissions are presented in Table L. CalEEMod output sheets are included in Appendix A.

Table J: Tentative Project Construction Schedule

Phase Number	Phase Name	Phase Start Date	Phase End Date	Number of Days/Week	Number of Days
1	Demolition	6/4/2022	12/30/2022	6	180
2	Site Preparation	12/31/2022	1/11/2023	6	10
3	Grading	1/12/2023	5/8/2023	6	100
4	Building Construction	5/9/2023	10/22/2025	6	770
5	Paving	10/23/2025	12/8/2025	6	40
6	Architectural Coating	11/25/2024	12/31/2025	6	345

Source: Compiled by LSA assuming a 6-month demolition period and a 36-month construction period (February 2022).

Table K: Diesel Construction Equipment Utilized by Construction Phase

Construction Phase	Off-Road Equipment Type	Off-Road Equipment Unit Amount	Hours Used per Day	Horsepower	Load Factor
Demolition	Concrete/Industrial Saws	1	8	81	0.73
	Rubber Tired Dozers	1	8	247	0.4
	Tractors/Loaders/Backhoes	3	8	97	0.37
Site Preparation	Graders	1	8	187	0.41
	Scrapers	1	8	367	0.48
	Tractors/Loaders/Backhoes	1	7	97	0.37
Grading	Graders	1	8	187	0.41
	Rubber Tired Dozers	1	8	247	0.4
	Tractors/Loaders/Backhoes	2	7	97	0.37
Building Construction	Cranes	1	8	231	0.29
	Forklifts	2	7	89	0.2
	Generator Sets	1	8	84	0.74
	Tractors/Loaders/Backhoes	1	6	97	0.37
	Welders	3	8	46	0.45
Paving	Cement and Mortar Mixers	1	8	9	0.56
	Pavers	1	8	130	0.42
	Paving Equipment	1	8	132	0.36
	Rollers	2	8	80	0.38
	Tractors/Loaders/Backhoes	1	8	97	0.37
Architectural Coating	Air Compressors	1	6	78	0.48

Source: Compiled by LSA using CalEEMod defaults (February 2022).

Table L: Project Construction Emissions (lbs/day)

Project Construction	Maximum Pollutant Emissions (lbs/day)					
	VOC	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
Demolition	1.0	22.3	16.1	<0.1	1.6	0.9
Site Preparation	0.7	20.0	13.9	<0.1	1.3	0.6
Grading	1.2	50.1	23.0	0.2	8.6	3.5
Building Construction	1.9	23.4	24.9	0.1	4.4	1.8
Paving	0.8	15.6	13.4	<0.1	0.7	0.6
Architectural Coating	8.1	2.5	3.5	<0.1	0.7	0.3
Maximum (lbs/day)	10.0	50.1	27.4	0.2	8.6	3.5
SCAQMD Thresholds	75.0	100.0	550.0	150	150.0	55.0
Exceeds?	No	No	No	No	No	No

Source: Compiled by LSA (February 2022).

Note: Maximum emissions of VOC and CO occurred during the overlapping building construction and architectural coating phases.

CO = carbon monoxide

PM₁₀ = particulate matter less than 10 microns in size

lbs/day = pounds per day

SCAQMD = South Coast Air Quality Management District

NO_x = nitrogen oxides

SO_x = sulfur oxides

PM_{2.5} = particulate matter less than 2.5 microns in size

VOC = volatile organic compounds

As shown in Table L, construction emissions associated with the project would not exceed the SCAQMD thresholds for VOC, NO_x, CO, sulfur oxides (SO_x), PM_{2.5}, or PM₁₀ emissions. In addition to the construction period thresholds of significance, the project is required to comply with regional rules that assist in reducing short-term air pollutant emissions. SCAQMD Rule 403 requires that fugitive dust be controlled with best-available control measures so that the presence of such dust does not remain visible in the atmosphere beyond the property line of the emission source. In addition, SCAQMD Rule 403 requires implementation of dust suppression techniques to prevent fugitive dust from creating a nuisance off site. Even through the project’s construction would not exceed any of the emissions thresholds as noted in Table L, compliance with Rule 403 dust suppression techniques can further reduce the fugitive dust generation (and thus, the PM₁₀ component). With compliance with Rule 403, construction of the proposed project would not result in emissions that would result in a cumulatively considerable net increase of any criteria pollutant for which the project is nonattainment under an applicable federal or State ambient air quality standard. Therefore, the proposed project would not lead to new or substantially more severe significant impacts associated with construction-related air quality beyond those identified in the General Plan EIR.

Operational Air Quality Impacts

Long-term air pollutant emission impacts are those typically associated with mobile sources (e.g., vehicle trips), energy sources (e.g., electricity and natural gas), area sources (e.g., architectural coatings and the use of landscape maintenance equipment), and stationary sources (e.g. diesel emergency backup generator) related to the proposed project.

PM₁₀ emissions result from running exhaust, tire and brake wear, and the entrainment of dust into the atmosphere from vehicles traveling on paved roadways. Entrainment of PM₁₀ occurs when vehicle tires pulverize small rocks and pavement and the vehicle wakes generate airborne dust. The contribution of tire and brake wear is small compared to the other PM emission processes. Gasoline-powered engines have small rates of particulate matter emissions compared with diesel-

powered vehicles. As discussed in the Methodology section above, the proposed project would result in fewer daily trips than under existing conditions; therefore, the proposed project would not generate new mobile source emissions.

Energy source emissions result from activities in buildings for which electricity and natural gas are used. The quantity of emissions is the product of usage intensity (i.e., the amount of electricity or natural gas) and the emission factor of the fuel source. The primary sources of energy demand for the proposed project would include building mechanical systems, such as heating and air conditioning, lighting, and plug-in electronics, such as refrigerators or computers. Greater building or appliance efficiency reduces the amount of energy for a given activity and thus lowers the resultant emissions. The emission factor is determined by the fuel source, with cleaner energy sources, like renewable energy, producing fewer emissions than conventional sources. The project would comply with the 20019 CALGreen Code and 2019 Energy Efficiency Standards (Title 24, Part 6), which are accounted for in CalEEMod.

Typically, area source emissions consist of direct sources of air emissions located at the project site, including architectural coatings and the use of landscape maintenance equipment. Area source emissions associated with the project would include emissions from the use of architectural coatings, consumer products, and landscaping equipment. The residential units would not include wood-burning hearths. The proposed project would also generate stationary source emissions associated with use of the diesel emergency backup generator.

Long-term operation emissions associated with the proposed project were calculated using CalEEMod. Model results are shown in Table M below. CalEEMod output sheets are included in Appendix A.

The results shown in Table M indicate the project would not exceed the significance criteria for VOC, NO_x, CO, sulfur oxides (SO_x), PM₁₀, or PM_{2.5} emissions; thus, the proposed project would not have a significant effect on regional air quality. Therefore, operation of the project would not result in a cumulatively considerable net increase of any criteria pollutant for which the project is nonattainment under an applicable federal or State ambient air quality standard. Therefore, the proposed project would not lead to new or substantially more severe significant impacts associated with operation-related air quality beyond those identified in the General Plan EIR.

Localized Significance Analysis

Project construction and operation emissions were compared to the LST screening tables in SRA 18, based on a 25-meter source receptor distance and a 2.775-acre project size. The results of the LST analysis, summarized in Table N and Table O, indicate that the project would not result in an exceedance of the SCAQMD LSTs during project construction or operation. Therefore, the proposed project would not lead to new or substantially more severe significant impacts associated with localized air quality beyond those identified in the General Plan EIR.

Table M: Project Operational Emissions (lbs/day)

Source	Pollutant Emissions (lbs/day)					
	VOC	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
Existing Operational Emissions						
Existing Area Sources	1.5	<0.1	0.1	<0.1	<0.1	<0.1
Existing Energy Sources	0.1	0.6	0.5	<0.1	<0.1	<0.1
Existing Mobile Sources	2.8	2.5	25.2	0.1	6.4	1.7
Total Existing Emissions	4.4	3.1	25.8	0.1	6.5	1.8
Proposed Project Operational Emissions						
Project Area Sources	9.8	2.5	14.2	<0.1	0.3	0.3
Project Energy Sources	0.1	0.4	0.2	<0.1	<0.1	<0.1
Project Mobile Sources	1.6	1.2	14.1	<0.1	3.6	1.0
Project Stationary Sources	0.1	0.2	0.2	<0.1	<0.1	<0.1
Total Project Emissions	11.5	4.4	28.7	<0.1	3.9	1.3
Net Operational Emissions	7.1	1.3	2.9	<0.1	-2.6	-0.5
SCAQMD Thresholds	55.0	55.0	550.0	150.0	150.0	55.0
Exceeds?	No	No	No	No	No	No

Source: Compiled by LSA (February 2022).

CO = carbon monoxide

lbs/day = pounds per day

NO_x = nitrogen oxides

PM_{2.5} = particulate matter less than 2.5 microns in size

PM₁₀ = particulate matter less than 10 microns in size

SCAQMD = South Coast Air Quality Management District

SO_x = sulfur oxides

VOC = volatile organic compounds

Table N: Project Localized Construction Emissions (lbs/day)

Source	NO _x	CO	PM ₁₀	PM _{2.5}
On-Site Project Emissions	21.2	15.4	3.8	2.0
Localized Significance Threshold	148.0	1,155.0	8.8	6.0
Exceeds?	No	No	No	No

Source: LSA (February 2022).

CO = carbon monoxide

lbs/day = pounds per day

NO_x = nitrogen oxides

PM_{2.5} = particulate matter less than 2.5 microns in size

PM₁₀ = particulate matter less than 10 microns in size

Table O: Project Localized Operational Emissions (lbs/day)

Source	NO _x	CO	PM ₁₀	PM _{2.5}
On-Site Project Emissions	2.8	15.1	<0.1	<0.1
Localized Significance Threshold	148.0	1,155.0	2.5	2.0
Exceeds?	No	No	No	No

Source: LSA (February 2022).

CO = carbon monoxide

lbs/day = pounds per day

NO_x = nitrogen oxides

PM_{2.5} = particulate matter less than 2.5 microns in size

PM₁₀ = particulate matter less than 10 microns in size

Long-Term Microscale (CO Hot Spot) Analysis

General Plan EIR Significance Determination: Less than Significant Impact.

Motor vehicles, and traffic-congested roadways and intersections are the primary source of high localized CO concentrations. Localized areas where ambient concentrations exceed federal and/or state standards for CO are termed CO “hotspots.” Based on the General Plan-related traffic, the General Plan EIR determined that implementation of the General Plan would not expose existing or future sensitive uses within the City to substantial CO concentrations. This impact was found to be less than significant.

Project-Specific Analysis and Significance Determination: Less than Significant Impact; no new or substantially more severe significant impact.

Vehicular trips contribute to congestion at intersections and along roadway segments. Localized air quality impacts would occur when emissions from vehicular traffic increase as a result of the proposed project. The primary mobile-source pollutant of local concern is CO, a direct function of vehicle idling time and, thus, of traffic flow conditions. CO transport is extremely limited; under normal meteorological conditions, CO disperses rapidly with distance from the source. However, under certain extreme meteorological conditions, CO concentrations near a congested roadway or intersection may reach unhealthful levels, affecting local sensitive receptors (e.g., residents, schoolchildren, the elderly, and hospital patients). Typically, high CO concentrations are associated with roadways or intersections operating at unacceptable levels of service or with extremely high traffic volumes. In areas with high ambient background CO concentrations, modeling is recommended to determine a project’s effect on local CO levels.

An assessment of project-related impacts on localized ambient air quality requires that future ambient air quality levels be projected. Existing CO concentrations in the immediate project vicinity are not available. Ambient CO levels monitored at the Long Beach station, the closest station to the project site, showed a highest recorded 1-hour concentration of 4.7 ppm (the State standard is 20 ppm) and a highest 8-hour concentration of 2.1 ppm (the State standard is 9 ppm) during the past 3 years (Table G). The highest CO concentrations would normally occur during peak traffic hours; hence, CO impacts calculated under peak traffic conditions represent a worst-case analysis.

As described in the Trip Generation Analysis¹, the proposed project would generate 30 fewer AM peak hour trips and 43 fewer PM peak-hour trips. As the proposed project would not generate 100 or more AM or PM peak hour trips, the proposed project did not meet the criteria for an evaluation of study area intersection or roadway segment LOS. Therefore, it is assumed that the addition of the proposed project traffic would not create any significant adverse impacts to nearby intersections.

Therefore, given the extremely low level of CO concentrations in the project area, and lack of traffic impacts at any intersections, project-related vehicles are not expected to contribute significantly to result in the CO concentrations exceeding the State or federal CO standards. Therefore, the proposed project would not lead to new or substantially more severe significant impacts associated with CO hot spots beyond those identified in the General Plan EIR.

¹ Pirzadeh Associates, Inc., 2022. op. cit.

Health Risk on Nearby Sensitive Receptors

General Plan EIR Significance Determination: Less than Significant Impact.

The General Plan EIR determined that when evaluating potential air quality impacts to sensitive receptors, the SCAQMD is primarily concerned with high localized concentrations of CO. As discussed above, the General Plan EIR determined that implementation of the General Plan would not expose existing or future sensitive uses within the City to substantial CO concentrations. This impact was found to be less than significant. Consumer products and diesel particulate matter and other sources of TACs were not addressed at the General Plan Level.

Project-Specific Analysis and Significance Determination: Less than Significant Impact; no new or substantially more severe significant impact.

Sensitive receptors are defined as people that have an increased sensitivity to air pollution or environmental contaminants. Sensitive receptor locations include schools, parks and playgrounds, day care centers, nursing homes, hospitals, and residential dwelling units. As identified above, the closest sensitive receptors to the project site include the Meridian condominium community immediately adjacent to the project site on the north along Santa Barbara Drive and the Granville Condominiums immediately to the southeast.

Construction of the proposed project may expose surrounding sensitive receptors to airborne particulates, as well as a small quantity of construction equipment pollutants (i.e., usually diesel-fueled vehicles and equipment). However, construction contractors would be required to implement measures to reduce or eliminate emissions by following SCAQMD rules for standard construction practices. The use of diesel-powered construction equipment would be temporary and episodic. The duration of exposure would be short, and exhaust from construction equipment dissipates rapidly. Current models and methodologies for conducting health risk assessments are associated with chronic exposure periods of 9, 30, and 70 years, which do not correlate with the temporary and highly variable nature of construction activities. Construction would be subject to and would comply with California regulations (e.g., CCR Title 13, Division 3, Article 1, Chapter 10, Sections 2485 and 2449), which reduce diesel particulate matter and criteria pollutant emissions from in-use off-road diesel-fueled vehicles and limit the idling of heavy-duty construction equipment to no more than five minutes. These regulations further reduce nearby sensitive receptors' exposure to temporary and variable diesel particulate matter emissions.

As shown in Table N and Table O, the project would not result in significant localized or regional emissions during project construction or operation. In addition, as discussed above, given the extremely low level of CO concentrations in the project area and lack of traffic impacts at any intersections, project-related vehicles are not expected to contribute significantly to, or result in CO concentrations exceeding the State or federal CO standards. Therefore, once the project is constructed, the project would not be a source of substantial pollutant emissions and sensitive receptors would not be exposed to substantial pollutant concentrations during project construction and operation. Therefore, the proposed project would not lead to new or substantially more severe significant impacts to nearby sensitive receptors beyond those identified in the General Plan EIR.

Odors

General Plan EIR Significance Determination: Less than Significant Impact.

The General Plan EIR concluded that construction-related odors are limited to the number of people living and working nearby the source, and due to the temporary nature of such odors, impacts were considered less than significant. In addition, the General Plan EIR found that trash receptacles would be stored in areas and in containers as required by City and Health Department regulations, and would be emptied on a regular basis, before potentially substantial odors have a chance to develop. As such, the General Plan EIR found that General Plan implementation would not create objectionable odors affecting a substantial number of people within the City, and potential impacts would be less than significant.

Project-Specific Analysis and Significance Determination: Less than Significant Impact; no new or substantially more severe significant impact.

During project construction, some odors may be present due to diesel exhaust. However, these odors would be temporary and limited to the construction period. The proposed project would not include any activities or operations that would generate objectionable odors and once operational, the project would not be a source of odors. Therefore, the proposed project would not result in other emissions (such as those leading to odors) affecting a substantial number of people. Therefore, the proposed project would not lead to new or substantially more severe significant impacts to odors beyond those identified in the General Plan EIR.

GREENHOUSE GAS EMISSIONS IMPACTS

The following sections describe the proposed project's construction- and operation-related GHG impacts and consistency with applicable GHG reduction plans.

Generation of Greenhouse Gas Emissions

General Plan EIR Significance Determination.

The determination of whether GHG emissions and climate change needs to be analyzed for this specific development is governed by the law on supplemental or subsequent EIRs (PRC Section 21166 and CEQA Guidelines Sections 15162 and 15163). GHG emissions and climate change are not required to be analyzed under those standards unless they constitute "new information of substantial importance, which was not known and could not have been known at the time" the General Plan EIR was approved (*State CEQA Guidelines* Section 15162(a)(3)). The issue of GHG emissions and climate change impacts is not new information that was not known or could not have been known at the time of the certification of the General Plan EIR. The United Nations Framework Convention on Climate Change (UNFCCC) was established in 1992. The regulation of GHG emissions to reduce climate change impacts was extensively debated and analyzed throughout the early 1990s. The studies and analyses of this issue resulted in the adoption of the Kyoto Protocol in 1997. Many EIRs from 2006 and earlier described how climate change (often called global warming) would result in sea-level rise and other environmental changes. At the time of approval of the General Plan EIR, the contribution of GHG emissions to climate change was a prominent issue of concern. Therefore, the fact that GHG emissions could have a significant adverse environmental impact was

known at the time the General Plan was approved and the General Plan Program EIR was certified. When the Housing Element was updated in 2013, the City analyzed GHG emissions and found that the Housing Element would have less than significant impacts with respect to this threshold. Although the City finds that the issue of GHG impacts and climate change is not “new information” under PRC Section 21166, the following analysis for the proposed project is provided for informational purposes.

Project-Specific Analysis and Significance Determination: Less than Significant Impact; no new or substantially more severe significant impact.

This section describes the proposed project’s construction- and operational-related GHG emissions and contribution to global climate change. The SCAQMD has not addressed emission thresholds for construction in their CEQA Handbook; however, the SCAQMD requires quantification and disclosure. Thus, construction emissions are discussed in this section.

Construction Greenhouse Gas Emissions

Demolition and construction activities associated with the proposed project would produce combustion emissions from various sources. During construction, GHGs would be emitted through the operation of construction equipment and from worker and builder supply vendor vehicles, each of which typically use fossil-based fuels to operate. The combustion of fossil-based fuels creates GHGs such as CO₂, CH₄, and N₂O. Furthermore, CH₄ is emitted during the fueling of heavy equipment. Exhaust emissions from on-site construction activities would vary daily as construction activity levels change.

As indicated above, the SCAQMD does not have an adopted threshold of significance for construction-related GHG emissions. However, lead agencies are required to quantify and disclose GHG emissions that would occur during construction. The SCAQMD then requires the construction GHG emissions to be amortized over the life of the project, defined by the SCAQMD as 30 years¹, added to the operational emissions, and compared to the applicable interim GHG significance threshold tier.

Using CalEEMod, it is estimated that the project would generate approximately 3,508.3 MT CO₂e during construction of the project. When annualized over the 30-year life of the project, annual emissions would be 116.9 MT CO₂e.

Operational Greenhouse Gas Emissions

Long-term operational GHG emissions are typically associated with mobile, area, and stationary sources as well as indirect emissions from sources associated with energy consumption, waste sources, and water sources. As identified above, the proposed project would result in fewer daily trips than under existing conditions; therefore, the proposed project would not generate new mobile source GHG emissions. Area source emissions would be associated with activities such as landscaping and maintenance on the project site, and other sources. Energy source emissions would

¹ The SCAQMD has identified the average operational lifespan of buildings to be 30 years. Website: [http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-\(ghg\)-ceqa-significance-thresholds/ghgattachmente.pdf](http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-(ghg)-ceqa-significance-thresholds/ghgattachmente.pdf)

be generated at off-site utility providers as a result of increased electricity demand generated by the project. Waste source emissions generated by the proposed project include energy generated by land filling and other methods of disposal related to transporting and managing project generated waste. Water source emissions associated with the proposed project are generated by water supply and conveyance, water treatment, water distribution, and wastewater treatment. The proposed project would also generate stationary source emissions associated with the diesel emergency backup generator.

Following guidance from the SCAQMD, GHG emissions were estimated for the operational year of 2025 using CalEEMod. Table P shows the calculated GHG emissions for the proposed project.

Table P: Greenhouse Gas Emissions (MT/yr)

Emissions Source	Operational Emissions				
	CO ₂	CH ₄	N ₂ O	CO ₂ e	Percent of Total
Existing Operational Emissions					
Existing Area Sources	<0.1	<0.1	0.0	<0.1	<1
Existing Energy Sources	431.4	<0.1	<0.1	433.7	30
Existing Mobile Sources	954.3	0.1	<0.1	968.4	66
Existing Waste Sources	17.7	1.0	0.0	43.8	3
Existing Water Sources	11.5	0.1	<0.1	15.7	1
Total Project Operational Emissions				1,461.6	-
Proposed Project Operational Emissions					
Project Area Sources	37.1	<0.1	<0.1	37.3	3
Project Energy Sources	514.5	<0.1	<0.1	517.2	44
Project Mobile Sources	533.0	<0.1	<0.1	540.9	45
Project Stationary Sources	6.7	<0.1	0.0	6.7	1
Project Waste Sources	14.8	0.9	0.0	36.8	3
Project Water Sources	39.3	0.3	<0.1	50.3	4
Total Project Operational Emissions				1,189.2	-
Total Net Operational Emissions				-272.4	-
Amortized Construction Emissions				116.9	-
Total Net Annual Emissions				-155.5	-
SCAQMD Threshold				2,400	-
Exceed?				No	-

Source: Compiled by LSA (February 2022).
 CH₄ = methane
 CO₂ = carbon dioxide
 CO₂e = carbon dioxide equivalent
 MT/yr = metric tons per year
 N₂O = nitrous oxide
 SCAQMD = South Coast Air Quality Management District

As discussed above, a project would have less than significant GHG emissions if it would result in operational-related GHG emissions of less than 2,400 MT CO₂e/yr. Based on the analysis results, the proposed project would result in a net decrease of approximately 155.5 MT CO₂e/yr over existing conditions. Therefore, operation of the proposed project would not generate significant GHG emissions that would have a significant effect on the environment. Therefore, the proposed project would not lead to new or substantially more severe significant impacts associated with operational GHG emissions.

Consistency with Greenhouse Gas Reduction Plans

General Plan EIR Significance Determination.

The General Plan EIR did not evaluate consistency with GHG reduction plans.

Project-Specific Analysis and Significance Determination: Less than Significant Impact; no new or substantially more severe significant impact.

An evaluation of the proposed project's consistency with the City's EAP, the 2017 Scoping Plan, and the 2020–2045 RTP/SCS is provided below.

City of Newport Beach EAP

As identified above, the City has an adopted EAP that outlines various measures and strategizes numerous methods on how the City's long term vision can be achieved. The EAP goals include:

- Meet and exceed AB 32 energy reduction goals;
- Be an example for energy efficiency and sustainability at City facilities;
- Continue interacting, educating, and informing the community about energy efficiency and GHG emissions;
- Explore the newest green technologies and methods to decrease future energy dependency;
- Explore renewable energy recourses (not limited to solar) and possible financing based on available grants/rebates;
- Enhance energy efficiency and operations in existing buildings through systematic commissioning strategies or independent energy efficiency studies; and
- Evaluate all the suggested energy efficiency action measures presented in this EAP, establish a priority for implementation, and determine possible funding sources.

The proposed project would meet the latest California CalGreen Code and Energy Efficiency Code, which include the latest in energy efficiency standards, consistent with the goals of the Scoping Plan and the City's EAP.

2017 Scoping Plan

The proposed project was also analyzed for consistency with the 2017 Scoping Plan. The measures applicable to the proposed project from the 2017 Scoping Plan include energy efficiency measures, water conservation and efficiency measures, and transportation and motor vehicle measures, as discussed below.

Energy efficient measures are intended to maximize energy efficiency building and appliance standards, pursue additional efficiency efforts including new technologies and new policy and implementation mechanisms, and pursue comparable investment in energy efficiency from all retail

providers of electricity in California. In addition, these measures are designed to expand the use of green building practices to reduce the carbon footprint of California's new and existing inventory of buildings. As discussed above, the proposed project would comply with the CALGreen Code and the Energy Efficiency Code regarding energy conservation and green building standards. Therefore, the proposed project would comply with applicable energy measures.

Water conservation and efficiency measures are intended to continue efficiency programs and use cleaner energy sources to move and treat water. Increasing the efficiency of water transport and reducing water use would reduce GHG emissions. As noted above, the project would comply with the CALGreen Code and Title 24, which includes a variety of different measures, including reduction of wastewater and water use. In addition, the proposed project would include water-efficient irrigation systems and use water efficient landscape. Therefore, the proposed project would not conflict with any of the water conservation and efficiency measures.

The goal of transportation and motor vehicle measures is to develop regional GHG emissions reduction targets for passenger vehicles. Specific regional emission targets for transportation emissions would not directly apply to the proposed project. The second phase of Pavley standards will reduce GHG emissions from new cars by 34 percent from 2016 levels by 2025, resulting in a 3 percent decrease in average vehicle emissions for all vehicles by 2020. Vehicles traveling to the project site would comply with the Pavley II (LEV III) Advanced Clean Cars Program. Therefore, the proposed project would not conflict with the identified transportation and motor vehicle measures.

2020–2045 RTP/SCS

SCAG's RTP/SCS identifies that land use strategies that focus on new housing and job growth in areas served by high quality transit and other opportunity areas would be consistent with a land use development pattern that supports and complements the proposed transportation network. The core vision in the 2020–2045 RTP/SCS is to better manage the existing transportation system through design management strategies, integrate land use decisions and technological advancements, create complete streets that are safe to all roadway users, preserve the transportation system, and expand transit and foster development in transit oriented communities. The 2020–2045 RTP/SCS contains transportation projects to help more efficiently distribute population, housing, and employment growth, as well as forecast development that is generally consistent with regional-level general plan data. The forecasted development pattern, when integrated with the financially constrained transportation investments identified in the 2020–2045 RTP/SCS, would reach the regional target of reducing GHG emissions from autos and light-duty trucks by 19 percent by 2035 (compared to 2005 levels). The 2020–2045 RTP/SCS does not require that local general plans, specific plans, or zoning be consistent with the 2020–2045 RTP/SCS, but provides incentives for consistency for governments and developers.

The proposed project would include the demolition of 159 hotel rooms and would construct 159 hotel-branded residences and associated parking. As discussed above, the proposed project would result in an increase of 361 residents (5 percent of SCAG's projected population growth for the City from 2016 to 2045 of 7,100 residents) and 159 residential units (5 percent of SCAG's projected household growth for the County from 2016 to 2045 of 2,900 households). The proposed project is envisioned as a high-rise housing development adjacent to commercial opportunities to encourage

pedestrian access and provide a consumer base for nearby commercial uses. The proposed project would also provide on-site amenities and would provide connections to adjacent parcels to provide connectivity and convenient access to the nearby commercial and retail uses. In addition, as discussed in the Methodology section above, the proposed project would result in fewer daily trips than under existing conditions; therefore, the proposed project would not generate new mobile source emissions.

Implementing SCAG's RTP/SCS will greatly reduce the regional GHG emissions from transportation, helping to achieve statewide emissions reduction targets. As stated above, the proposed project would result in fewer daily trips than under existing conditions and would in no way conflict with the stated goals of the RTP/SCS; therefore, the proposed project would not interfere with SCAG's ability to achieve the region's GHG reduction target of 19 percent below 2005 per capita emissions levels by 2035. Furthermore, the proposed project is not regionally significant per *State CEQA Guidelines* Section 15206 and as such, it would not conflict with the SCAG RTP/SCS targets, since those targets were established and are applicable on a regional level.

Based on the nature of the proposed project, it is anticipated that implementation of the proposed project would not interfere with SCAG's ability to implement the regional strategies outlined in the RTP/SCS.

Summary

Therefore, the proposed project would comply with existing State regulations adopted to achieve the overall GHG emissions reduction goals identified in AB 32 and would be consistent with applicable plans and programs designed to reduce GHG emissions. Therefore, the proposed project would not conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHGs. Therefore, the proposed project would not lead to new or substantially more severe significant impacts associated with consistency with GHG reduction plans.

CUMULATIVE ANALYSIS

Air Quality Cumulative Impact

General Plan EIR Significance Determination: Significant and Unavoidable Impact.

The General Plan EIR found that growth under the General Plan is inconsistent with growth under the 2003 AQMP; therefore, the impact of the General Plan is cumulatively considerable. This was considered a significant impact.

In addition, the General Plan EIR determined that the General Plan would have the potential to contribute to a cumulatively considerable net increase of a criteria as the contribution of daily construction and operational emissions from the proposed project could be cumulatively considerable. This cumulative impact was considered to be significant.

The General Plan EIR also found that cumulative development is not expected to expose sensitive receptors to substantial pollutant concentrations. Therefore, the project's contribution to the impact was considered less than cumulatively considerable, and the cumulative impact would be less than significant.

Lastly, the General Plan EIR determined that cumulative development would not have a potentially significant impact in terms of the creation of objectionable odors affecting a substantial number of people. Cumulative odor impacts would thus be less than significant.

Project-Specific Analysis and Significance Determination: Less than Significant Impact; no new or substantially more severe significant impact.

Regional air pollution is largely a cumulative impact. No single project is sufficient in size to independently create regional nonattainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts.

The SCAQMD is currently designated as nonattainment for the federal and State standards for O₃ and PM_{2.5}. In addition, the SCAQMD is in nonattainment for the PM₁₀ standard. The SCAQMD's nonattainment status is attributed to the region's development history. Past, present, and future development projects contribute to the region's adverse air quality impacts on a cumulative basis. By its very nature, air pollution is largely a cumulative impact. No single project is sufficient in size to, by itself, result in nonattainment of AAQS. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. If a project's contribution to the cumulative impact is considerable, then the project's impact on air quality would be considered significant.

In developing thresholds of significance for air pollutants, the SCAQMD considered the emission levels for which a project's individual emissions would be cumulatively considerable. If a project exceeds the identified significance thresholds, its emissions would be cumulatively considerable, resulting in significant adverse air quality impacts to the region's existing air quality conditions. Therefore, additional analysis to assess cumulative impacts is not necessary. As shown in Tables L and M, the proposed project would not generate significant construction or operation emissions. Therefore, the proposed project would not result in a cumulatively considerable contribution to air quality impacts.

In addition, as shown in the project-specific air quality impacts discussion above, the proposed project would not result in individually significant impacts related to localized air quality, CO hotspots, health risk on sensitive receptors, or odors; therefore, the proposed project would not result in a cumulatively considerable contribution to significant cumulative air quality impacts. The proposed project's cumulative air quality impacts would be less than significant. Therefore, the proposed project would not lead to new or substantially more severe significant cumulative air quality impacts beyond those identified in the General Plan EIR.

Greenhouse Gas Cumulative Impact

General Plan EIR Significance Determination.

The General Plan EIR did not evaluate the effects of GHG emissions. Although the City finds that the issue of GHG impacts and climate change is not "new information" under PRC Section 21166, the following analysis for the proposed project is provided for informational purposes.

Project-Specific Analysis and Significance Determination: Less than Significant Impact; no new or substantially more severe significant impact.

Cumulative impacts are the collective impacts of one or more past, present, or future projects, that when combined, result in adverse changes to the environment. Climate change is a global environmental problem in which: (a) any given development project contributes only a small portion of any net increase in GHGs, and (b) global growth is continuing to contribute large amounts of GHGs across the world. Land use projects may contribute to the phenomenon of global climate change in ways that would be experienced worldwide, and with some specific effects felt in California. However, no scientific study has established a direct causal link between individual land use project impacts and global warming.

The analysis of impacts related to GHG emissions is inherently cumulative. The proposed project would have no conflict with applicable statewide and regional climate action measures. In addition, as discussed above, the project's operational-related GHG emissions would not exceed the SCAQMD's numeric threshold. Therefore, GHG emissions impacts associated with the proposed project would be less than significant, and therefore the cumulative impact would also be less than significant. Therefore, the proposed project would not lead to new or substantially more severe significant cumulative GHG impacts.

CONCLUSION

Based on the analysis presented above, construction and operation of the proposed project would not result in the generation of criteria air pollutants that would exceed SCAQMD thresholds of significance. Compliance with SCAQMD Rule 403: Fugitive Dust would further reduce construction dust impacts. The proposed project is not expected to produce significant emissions that would affect nearby sensitive receptors. The project would also not result in other emissions (such as those leading to odors) affecting a substantial number of people. GHG emissions released during construction and operation of the project are estimated to be lower than significance thresholds and would not be cumulatively considerable. The project would also be consistent with the State's GHG emissions reductions objectives embodied in the 2017 Scoping Plan and the 2020–2045 RTP/SCS. Therefore, the proposed project would not result in significant air quality or GHG impacts. As identified in the analysis presented above, the proposed project would not lead to new or substantially more severe significant air quality or GHG impacts beyond those identified in the General Plan EIR.

APPENDIX A

CALEEMOD OUTPUT SHEETS

The Ritz-Carlton Residences - Orange County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

**The Ritz-Carlton Residences
Orange County, Annual**

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking with Elevator	808.00	Space	1.03	323,200.00	0
Other Non-Asphalt Surfaces	1.17	Acre	1.17	50,965.20	0
Apartments High Rise	159.00	Dwelling Unit	0.57	414,999.00	360

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	30
Climate Zone	8	Operational Year	2025		
Utility Company	Southern California Edison				
CO2 Intensity (lb/MW hr)	390.98	CH4 Intensity (lb/MW hr)	0.033	N2O Intensity (lb/MW hr)	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Based on the Project Description provided to LSA on January 21, 2022. Other non-asphalt surfaces includes the vehicle entry, pedestrian walk, landscaping, and pool deck.

Construction Phase - 6 months of demolition then construction start 12/31/22, 36 month duration, complete 12/31/25.

Demolition - The project would demolish approximately 263,194 square feet.

Grading - The project would require the export of 205,700 cubic yards of soil.

Vehicle Trips - Trip rates based on the average daily trip generation provided in the project's Trip Generation letter dated January 26, 2022.

Woodstoves - Assuming no woodstoves or wood-burning hearths.

Construction Off-road Equipment Mitigation - Assuming use of Tier 2 construction equipment and compliance with SCAQMD Rule 403: Fugitive Dust measures.

Mobile Land Use Mitigation -

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstructionPhase	NumDays	20.00	180.00
tblConstructionPhase	NumDays	3.00	10.00
tblConstructionPhase	NumDays	6.00	100.00
tblConstructionPhase	NumDays	220.00	770.00
tblConstructionPhase	NumDays	10.00	345.00
tblConstructionPhase	NumDays	10.00	40.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	PhaseEndDate	6/28/2022	12/30/2022
tblConstructionPhase	PhaseEndDate	7/1/2022	1/11/2023
tblConstructionPhase	PhaseEndDate	7/11/2022	5/8/2023
tblConstructionPhase	PhaseEndDate	5/15/2023	10/22/2025
tblConstructionPhase	PhaseEndDate	6/12/2023	12/31/2025
tblConstructionPhase	PhaseEndDate	5/29/2023	12/8/2025
tblConstructionPhase	PhaseStartDate	6/1/2022	6/4/2022
tblConstructionPhase	PhaseStartDate	6/29/2022	12/31/2022
tblConstructionPhase	PhaseStartDate	7/2/2022	1/12/2023
tblConstructionPhase	PhaseStartDate	7/12/2022	5/9/2023
tblConstructionPhase	PhaseStartDate	5/30/2023	11/25/2024

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tblConstructionPhase	PhaseStartDate	5/16/2023	10/23/2025
tblGrading	MaterialExported	0.00	205,700.00
tblLandUse	LandUseSquareFeet	159,000.00	414,999.00
tblLandUse	LotAcreage	7.27	1.03
tblLandUse	LotAcreage	2.56	0.57
tblLandUse	Population	455.00	360.00
tblStationaryGeneratorsPumpsUse	HorsePowerValue	0.00	350.00
tblStationaryGeneratorsPumpsUse	HoursPerDay	0.00	0.13
tblStationaryGeneratorsPumpsUse	HoursPerYear	0.00	50.00
tblStationaryGeneratorsPumpsUse	NumberOfEquipment	0.00	1.00
tblVehicleTrips	ST_TR	4.53	4.54
tblVehicleTrips	SU_TR	3.59	4.54
tblVehicleTrips	WD_TR	4.45	4.54

2.0 Emissions Summary

The Ritz-Carlton Residences - Orange County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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					
2022	0.1586	1.6045	1.3246	2.6500e-003	0.1607	0.0765	0.2371	0.0267	0.0715	0.0982	0.0000	237.6746	237.6746	0.0524	6.1300e-003	240.8138
2023	0.3600	4.1300	3.3872	0.0149	0.9533	0.1079	1.0611	0.3308	0.1020	0.4329	0.0000	1,436.9935	1,436.9935	0.1614	0.1458	1,484.4638
2024	0.5067	2.5600	3.6075	9.9800e-003	0.5554	0.0901	0.6456	0.1493	0.0863	0.2355	0.0000	905.6584	905.6584	0.0818	0.0394	919.4364
2025	1.5741	2.2792	3.5377	9.3700e-003	0.5360	0.0786	0.6146	0.1438	0.0753	0.2190	0.0000	851.9421	851.9421	0.0779	0.0324	863.5409
Maximum	1.5741	4.1300	3.6075	0.0149	0.9533	0.1079	1.0611	0.3308	0.1020	0.4329	0.0000	1,436.9935	1,436.9935	0.1614	0.1458	1,484.4638

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

2.1 Overall Construction

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					
2022	0.0860	2.0192	1.4573	2.6500e-003	0.0850	0.0657	0.1507	0.0155	0.0656	0.0811	0.0000	237.6744	237.6744	0.0524	6.1300e-003	240.8135
2023	0.2439	4.9895	3.6978	0.0149	0.7477	0.1224	0.8702	0.2352	0.1218	0.3570	0.0000	1,436.993 2	1,436.993 2	0.1614	0.1458	1,484.463 4
2024	0.4036	3.7122	3.8132	9.9800e-003	0.5554	0.1346	0.6900	0.1493	0.1343	0.2836	0.0000	905.6580	905.6580	0.0818	0.0394	919.4360
2025	1.4955	3.6465	3.7445	9.3700e-003	0.5360	0.1336	0.6696	0.1438	0.1334	0.2771	0.0000	851.9417	851.9417	0.0779	0.0324	863.5405
Maximum	1.4955	4.9895	3.8132	0.0149	0.7477	0.1346	0.8702	0.2352	0.1343	0.3570	0.0000	1,436.993 2	1,436.993 2	0.1614	0.1458	1,484.463 4

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	14.25	-35.88	-7.22	0.00	12.75	-29.22	6.96	16.43	-35.83	-1.33	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	6-1-2022	8-31-2022	0.7414	0.8856
2	9-1-2022	11-30-2022	0.7593	0.9067
3	12-1-2022	2-28-2023	1.3251	1.4596
4	3-1-2023	5-31-2023	1.5989	1.7413
5	6-1-2023	8-31-2023	0.7652	0.9882
6	9-1-2023	11-30-2023	0.7631	0.9837
7	12-1-2023	2-29-2024	0.7397	0.9839
8	3-1-2024	5-31-2024	0.7280	0.9871

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9	6-1-2024	8-31-2024	0.7249	0.9840
10	9-1-2024	11-30-2024	0.7474	1.0065
11	12-1-2024	2-28-2025	1.0557	1.3754
12	3-1-2025	5-31-2025	1.0576	1.3979
13	6-1-2025	8-31-2025	1.0543	1.3946
14	9-1-2025	9-30-2025	0.3438	0.4548
		Highest	1.5989	1.7413

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	2.2298	0.0602	2.6592	2.6700e-003		0.1610	0.1610		0.1610	0.1610	16.8888	35.1531	52.0419	0.0530	1.1500e-003	53.7081
Energy	9.5600e-003	0.0817	0.0348	5.2000e-004		6.6000e-003	6.6000e-003		6.6000e-003	6.6000e-003	0.0000	514.5193	514.5193	0.0373	6.0300e-003	517.2477
Mobile	0.3360	0.3744	3.4690	8.1200e-003	0.9292	5.5800e-003	0.9348	0.2480	5.1900e-003	0.2532	0.0000	769.6589	769.6589	0.0457	0.0315	780.1911
Stationary	0.0144	0.0401	0.0366	7.0000e-005		2.1100e-003	2.1100e-003		2.1100e-003	2.1100e-003	0.0000	6.6640	6.6640	9.3000e-004	0.0000	6.6873
Waste						0.0000	0.0000		0.0000	0.0000	14.8468	0.0000	14.8468	0.8774	0.0000	36.7822
Water						0.0000	0.0000		0.0000	0.0000	3.2866	36.7904	40.0770	0.3407	8.3500e-003	51.0811
Total	2.5896	0.5565	6.1996	0.0114	0.9292	0.1752	1.1045	0.2480	0.1749	0.4229	35.0222	1,362.7856	1,397.8078	1.3550	0.0470	1,445.6975

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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	1.7124	0.0486	1.6611	2.8000e-004		0.0115	0.0115		0.0115	0.0115	0.0000	37.0622	37.0622	3.2800e-003	6.3000e-004	37.3318
Energy	9.5600e-003	0.0817	0.0348	5.2000e-004		6.6000e-003	6.6000e-003		6.6000e-003	6.6000e-003	0.0000	514.5193	514.5193	0.0373	6.0300e-003	517.2477
Mobile	0.2786	0.2792	2.5798	5.6200e-003	0.6375	3.9800e-003	0.6414	0.1702	3.7000e-003	0.1739	0.0000	532.9663	532.9663	0.0353	0.0236	540.8790
Stationary	0.0144	0.0401	0.0366	7.0000e-005		2.1100e-003	2.1100e-003		2.1100e-003	2.1100e-003	0.0000	6.6640	6.6640	9.3000e-004	0.0000	6.6873
Waste						0.0000	0.0000		0.0000	0.0000	14.8468	0.0000	14.8468	0.8774	0.0000	36.7822
Water						0.0000	0.0000		0.0000	0.0000	3.2866	36.0054	39.2920	0.3406	8.3400e-003	50.2921
Total	2.0149	0.4497	4.3123	6.4900e-003	0.6375	0.0242	0.6617	0.1702	0.0239	0.1941	18.1334	1,127.2171	1,145.3504	1.2948	0.0386	1,189.2201

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	22.19	19.19	30.44	42.97	31.40	86.18	40.09	31.40	86.31	54.10	48.22	17.29	18.06	4.44	17.96	17.74

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	6/4/2022	12/30/2022	6	180	
2	Site Preparation	Site Preparation	12/31/2022	1/11/2023	6	10	

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3	Grading	Grading	1/12/2023	5/8/2023	6	100
4	Building Construction	Building Construction	5/9/2023	10/22/2025	6	770
5	Paving	Paving	10/23/2025	12/8/2025	6	40
6	Architectural Coating	Architectural Coating	11/25/2024	12/31/2025	6	345

Acres of Grading (Site Preparation Phase): 15

Acres of Grading (Grading Phase): 100

Acres of Paving: 2.2

Residential Indoor: 840,373; Residential Outdoor: 280,124; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 22,450 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Scrapers	1	8.00	367	0.48
Site Preparation	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Building Construction	Cranes	1	8.00	231	0.29
Building Construction	Forklifts	2	7.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	1	8.00	9	0.56

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Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37

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	5	13.00	0.00	1,197.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	25,713.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	272.00	78.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	54.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1295	0.0000	0.1295	0.0196	0.0000	0.0196	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1520	1.4960	1.2564	2.1700e-003		0.0754	0.0754		0.0705	0.0705	0.0000	189.6992	189.6992	0.0483	0.0000	190.9077
Total	0.1520	1.4960	1.2564	2.1700e-003	0.1295	0.0754	0.2050	0.0196	0.0705	0.0901	0.0000	189.6992	189.6992	0.0483	0.0000	190.9077

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	2.4000e-003	0.0980	0.0263	3.6000e-004	0.0103	7.1000e-004	0.0110	2.8200e-003	6.8000e-004	3.4900e-003	0.0000	36.7123	36.7123	3.5000e-003	5.8800e-003	38.5521
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.5300e-003	2.6500e-003	0.0367	1.1000e-004	0.0128	7.0000e-005	0.0129	3.4100e-003	6.0000e-005	3.4800e-003	0.0000	10.1511	10.1511	2.5000e-004	2.5000e-004	10.2330
Total	5.9300e-003	0.1007	0.0630	4.7000e-004	0.0231	7.8000e-004	0.0239	6.2300e-003	7.4000e-004	6.9700e-003	0.0000	46.8634	46.8634	3.7500e-003	6.1300e-003	48.7850

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3.2 Demolition - 2022

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					0.0583	0.0000	0.0583	8.8300e-003	0.0000	8.8300e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0797	1.9085	1.3874	2.1700e-003		0.0646	0.0646		0.0646	0.0646	0.0000	189.6989	189.6989	0.0483	0.0000	190.9075
Total	0.0797	1.9085	1.3874	2.1700e-003	0.0583	0.0646	0.1229	8.8300e-003	0.0646	0.0735	0.0000	189.6989	189.6989	0.0483	0.0000	190.9075

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	2.4000e-003	0.0980	0.0263	3.6000e-004	0.0103	7.1000e-004	0.0110	2.8200e-003	6.8000e-004	3.4900e-003	0.0000	36.7123	36.7123	3.5000e-003	5.8800e-003	38.5521
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.5300e-003	2.6500e-003	0.0367	1.1000e-004	0.0128	7.0000e-005	0.0129	3.4100e-003	6.0000e-005	3.4800e-003	0.0000	10.1511	10.1511	2.5000e-004	2.5000e-004	10.2330
Total	5.9300e-003	0.1007	0.0630	4.7000e-004	0.0231	7.8000e-004	0.0239	6.2300e-003	7.4000e-004	6.9700e-003	0.0000	46.8634	46.8634	3.7500e-003	6.1300e-003	48.7850

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3.3 Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					7.9500e-003	0.0000	7.9500e-003	8.6000e-004	0.0000	8.6000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.9000e-004	7.8300e-003	5.0300e-003	1.0000e-005		3.0000e-004	3.0000e-004		2.7000e-004	2.7000e-004	0.0000	1.0774	1.0774	3.5000e-004	0.0000	1.0861
Total	6.9000e-004	7.8300e-003	5.0300e-003	1.0000e-005	7.9500e-003	3.0000e-004	8.2500e-003	8.6000e-004	2.7000e-004	1.1300e-003	0.0000	1.0774	1.0774	3.5000e-004	0.0000	1.0861

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-005	1.0000e-005	1.3000e-004	0.0000	4.0000e-005	0.0000	4.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0347	0.0347	0.0000	0.0000	0.0350
Total	1.0000e-005	1.0000e-005	1.3000e-004	0.0000	4.0000e-005	0.0000	4.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0347	0.0347	0.0000	0.0000	0.0350

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3.3 Site Preparation - 2022

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					3.5800e-003	0.0000	3.5800e-003	3.9000e-004	0.0000	3.9000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.3000e-004	0.0100	6.8200e-003	1.0000e-005		2.5000e-004	2.5000e-004		2.5000e-004	2.5000e-004	0.0000	1.0774	1.0774	3.5000e-004	0.0000	1.0861
Total	3.3000e-004	0.0100	6.8200e-003	1.0000e-005	3.5800e-003	2.5000e-004	3.8300e-003	3.9000e-004	2.5000e-004	6.4000e-004	0.0000	1.0774	1.0774	3.5000e-004	0.0000	1.0861

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-005	1.0000e-005	1.3000e-004	0.0000	4.0000e-005	0.0000	4.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0347	0.0347	0.0000	0.0000	0.0350
Total	1.0000e-005	1.0000e-005	1.3000e-004	0.0000	4.0000e-005	0.0000	4.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.0347	0.0347	0.0000	0.0000	0.0350

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					7.9500e-003	0.0000	7.9500e-003	8.6000e-004	0.0000	8.6000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.8600e-003	0.0643	0.0440	1.1000e-004		2.4400e-003	2.4400e-003		2.2400e-003	2.2400e-003	0.0000	9.6950	9.6950	3.1400e-003	0.0000	9.7734
Total	5.8600e-003	0.0643	0.0440	1.1000e-004	7.9500e-003	2.4400e-003	0.0104	8.6000e-004	2.2400e-003	3.1000e-003	0.0000	9.6950	9.6950	3.1400e-003	0.0000	9.7734

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-004	7.0000e-005	1.0500e-003	0.0000	4.0000e-004	0.0000	4.0000e-004	1.0000e-004	0.0000	1.1000e-004	0.0000	0.3043	0.3043	1.0000e-005	1.0000e-005	0.3066
Total	1.0000e-004	7.0000e-005	1.0500e-003	0.0000	4.0000e-004	0.0000	4.0000e-004	1.0000e-004	0.0000	1.1000e-004	0.0000	0.3043	0.3043	1.0000e-005	1.0000e-005	0.3066

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3.3 Site Preparation - 2023

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					3.5800e-003	0.0000	3.5800e-003	3.9000e-004	0.0000	3.9000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.9800e-003	0.0901	0.0614	1.1000e-004		2.2400e-003	2.2400e-003		2.2400e-003	2.2400e-003	0.0000	9.6950	9.6950	3.1400e-003	0.0000	9.7734
Total	2.9800e-003	0.0901	0.0614	1.1000e-004	3.5800e-003	2.2400e-003	5.8200e-003	3.9000e-004	2.2400e-003	2.6300e-003	0.0000	9.6950	9.6950	3.1400e-003	0.0000	9.7734

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0000e-004	7.0000e-005	1.0500e-003	0.0000	4.0000e-004	0.0000	4.0000e-004	1.0000e-004	0.0000	1.1000e-004	0.0000	0.3043	0.3043	1.0000e-005	1.0000e-005	0.3066
Total	1.0000e-004	7.0000e-005	1.0500e-003	0.0000	4.0000e-004	0.0000	4.0000e-004	1.0000e-004	0.0000	1.1000e-004	0.0000	0.3043	0.3043	1.0000e-005	1.0000e-005	0.3066

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3.4 Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.3658	0.0000	0.3658	0.1730	0.0000	0.1730	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0667	0.7234	0.4352	1.0300e-003		0.0302	0.0302		0.0278	0.0278	0.0000	90.5196	90.5196	0.0293	0.0000	91.2515
Total	0.0667	0.7234	0.4352	1.0300e-003	0.3658	0.0302	0.3960	0.1730	0.0278	0.2008	0.0000	90.5196	90.5196	0.0293	0.0000	91.2515

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	0.0261	1.6120	0.5275	7.2200e-003	0.2207	9.8700e-003	0.2306	0.0605	9.4500e-003	0.0700	0.0000	746.2049	746.2049	0.0752	0.1197	783.7577
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.4100e-003	1.0100e-003	0.0146	5.0000e-005	5.4900e-003	3.0000e-005	5.5200e-003	1.4600e-003	3.0000e-005	1.4800e-003	0.0000	4.2257	4.2257	1.0000e-004	1.0000e-004	4.2582
Total	0.0275	1.6130	0.5421	7.2700e-003	0.2262	9.9000e-003	0.2361	0.0620	9.4800e-003	0.0715	0.0000	750.4307	750.4307	0.0753	0.1198	788.0159

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3.4 Grading - 2023

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					0.1646	0.0000	0.1646	0.0779	0.0000	0.0779	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0313	0.9053	0.6073	1.0300e-003		0.0243	0.0243		0.0243	0.0243	0.0000	90.5195	90.5195	0.0293	0.0000	91.2514
Total	0.0313	0.9053	0.6073	1.0300e-003	0.1646	0.0243	0.1888	0.0779	0.0243	0.1021	0.0000	90.5195	90.5195	0.0293	0.0000	91.2514

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	0.0261	1.6120	0.5275	7.2200e-003	0.2207	9.8700e-003	0.2306	0.0605	9.4500e-003	0.0700	0.0000	746.2049	746.2049	0.0752	0.1197	783.7577
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.4100e-003	1.0100e-003	0.0146	5.0000e-005	5.4900e-003	3.0000e-005	5.5200e-003	1.4600e-003	3.0000e-005	1.4800e-003	0.0000	4.2257	4.2257	1.0000e-004	1.0000e-004	4.2582
Total	0.0275	1.6130	0.5421	7.2700e-003	0.2262	9.9000e-003	0.2361	0.0620	9.4800e-003	0.0715	0.0000	750.4307	750.4307	0.0753	0.1198	788.0159

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3.5 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1739	1.3828	1.4428	2.5400e-003		0.0623	0.0623		0.0597	0.0597	0.0000	210.8176	210.8176	0.0399	0.0000	211.8143
Total	0.1739	1.3828	1.4428	2.5400e-003		0.0623	0.0623		0.0597	0.0597	0.0000	210.8176	210.8176	0.0399	0.0000	211.8143

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	7.8500e-003	0.2906	0.1167	1.4200e-003	0.0499	1.4300e-003	0.0513	0.0144	1.3700e-003	0.0158	0.0000	141.8996	141.8996	8.4200e-003	0.0204	148.1824
Worker	0.0780	0.0558	0.8054	2.5100e-003	0.3031	1.5800e-003	0.3047	0.0805	1.4500e-003	0.0819	0.0000	233.3269	233.3269	5.3600e-003	5.5700e-003	235.1197
Total	0.0859	0.3464	0.9221	3.9300e-003	0.3530	3.0100e-003	0.3560	0.0949	2.8200e-003	0.0977	0.0000	375.2265	375.2265	0.0138	0.0260	383.3021

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3.5 Building Construction - 2023

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	0.0961	2.0347	1.5639	2.5400e-003		0.0830	0.0830		0.0830	0.0830	0.0000	210.8173	210.8173	0.0399	0.0000	211.8141
Total	0.0961	2.0347	1.5639	2.5400e-003		0.0830	0.0830		0.0830	0.0830	0.0000	210.8173	210.8173	0.0399	0.0000	211.8141

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	7.8500e-003	0.2906	0.1167	1.4200e-003	0.0499	1.4300e-003	0.0513	0.0144	1.3700e-003	0.0158	0.0000	141.8996	141.8996	8.4200e-003	0.0204	148.1824
Worker	0.0780	0.0558	0.8054	2.5100e-003	0.3031	1.5800e-003	0.3047	0.0805	1.4500e-003	0.0819	0.0000	233.3269	233.3269	5.3600e-003	5.5700e-003	235.1197
Total	0.0859	0.3464	0.9221	3.9300e-003	0.3530	3.0100e-003	0.3560	0.0949	2.8200e-003	0.0977	0.0000	375.2265	375.2265	0.0138	0.0260	383.3021

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	tons/yr										MT/yr					
Off-Road	0.2508	2.0133	2.2137	3.9300e-003		0.0845	0.0845		0.0809	0.0809	0.0000	326.1109	326.1109	0.0607	0.0000	327.6293
Total	0.2508	2.0133	2.2137	3.9300e-003		0.0845	0.0845		0.0809	0.0809	0.0000	326.1109	326.1109	0.0607	0.0000	327.6293

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	0.0120	0.4482	0.1792	2.1600e-003	0.0772	2.3100e-003	0.0795	0.0223	2.2100e-003	0.0245	0.0000	216.0884	216.0884	0.0132	0.0312	225.7031
Worker	0.1136	0.0775	1.1621	3.7600e-003	0.4688	2.3200e-003	0.4711	0.1245	2.1400e-003	0.1266	0.0000	352.2472	352.2472	7.5300e-003	8.0500e-003	354.8339
Total	0.1255	0.5257	1.3413	5.9200e-003	0.5460	4.6300e-003	0.5506	0.1468	4.3500e-003	0.1511	0.0000	568.3355	568.3355	0.0207	0.0392	580.5370

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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	tons/yr										MT/yr					
Off-Road	0.1487	3.1473	2.4191	3.9300e-003		0.1284	0.1284		0.1284	0.1284	0.0000	326.1105	326.1105	0.0607	0.0000	327.6289
Total	0.1487	3.1473	2.4191	3.9300e-003		0.1284	0.1284		0.1284	0.1284	0.0000	326.1105	326.1105	0.0607	0.0000	327.6289

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	0.0120	0.4482	0.1792	2.1600e-003	0.0772	2.3100e-003	0.0795	0.0223	2.2100e-003	0.0245	0.0000	216.0884	216.0884	0.0132	0.0312	225.7031
Worker	0.1136	0.0775	1.1621	3.7600e-003	0.4688	2.3200e-003	0.4711	0.1245	2.1400e-003	0.1266	0.0000	352.2472	352.2472	7.5300e-003	8.0500e-003	354.8339
Total	0.1255	0.5257	1.3413	5.9200e-003	0.5460	4.6300e-003	0.5506	0.1468	4.3500e-003	0.1511	0.0000	568.3355	568.3355	0.0207	0.0392	580.5370

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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	0.1885	1.5210	1.7719	3.1700e-003		0.0595	0.0595		0.0569	0.0569	0.0000	262.7852	262.7852	0.0482	0.0000	263.9900
Total	0.1885	1.5210	1.7719	3.1700e-003		0.0595	0.0595		0.0569	0.0569	0.0000	262.7852	262.7852	0.0482	0.0000	263.9900

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	9.4900e-003	0.3594	0.1438	1.7100e-003	0.0622	1.8700e-003	0.0640	0.0179	1.7900e-003	0.0197	0.0000	170.8523	170.8523	0.0107	0.0247	178.4933
Worker	0.0865	0.0565	0.8813	2.9300e-003	0.3777	1.7900e-003	0.3795	0.1003	1.6500e-003	0.1020	0.0000	276.8971	276.8971	5.5200e-003	6.1000e-003	278.8524
Total	0.0960	0.4159	1.0250	4.6400e-003	0.4399	3.6600e-003	0.4436	0.1182	3.4400e-003	0.1217	0.0000	447.7493	447.7493	0.0163	0.0308	457.3457

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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	tons/yr										MT/yr					
Off-Road	0.1198	2.5359	1.9491	3.1700e-003		0.1035	0.1035		0.1035	0.1035	0.0000	262.7849	262.7849	0.0482	0.0000	263.9897
Total	0.1198	2.5359	1.9491	3.1700e-003		0.1035	0.1035		0.1035	0.1035	0.0000	262.7849	262.7849	0.0482	0.0000	263.9897

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	9.4900e-003	0.3594	0.1438	1.7100e-003	0.0622	1.8700e-003	0.0640	0.0179	1.7900e-003	0.0197	0.0000	170.8523	170.8523	0.0107	0.0247	178.4933
Worker	0.0865	0.0565	0.8813	2.9300e-003	0.3777	1.7900e-003	0.3795	0.1003	1.6500e-003	0.1020	0.0000	276.8971	276.8971	5.5200e-003	6.1000e-003	278.8524
Total	0.0960	0.4159	1.0250	4.6400e-003	0.4399	3.6600e-003	0.4436	0.1182	3.4400e-003	0.1217	0.0000	447.7493	447.7493	0.0163	0.0308	457.3457

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3.6 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	0.0157	0.1487	0.2335	3.6000e-004		7.0000e-003	7.0000e-003		6.4700e-003	6.4700e-003	0.0000	31.0258	31.0258	9.8300e-003	0.0000	31.2717
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0157	0.1487	0.2335	3.6000e-004		7.0000e-003	7.0000e-003		6.4700e-003	6.4700e-003	0.0000	31.0258	31.0258	9.8300e-003	0.0000	31.2717

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	7.5000e-004	4.9000e-004	7.6800e-003	3.0000e-005	3.2900e-003	2.0000e-005	3.3100e-003	8.7000e-004	1.0000e-005	8.9000e-004	0.0000	2.4142	2.4142	5.0000e-005	5.0000e-005	2.4313
Total	7.5000e-004	4.9000e-004	7.6800e-003	3.0000e-005	3.2900e-003	2.0000e-005	3.3100e-003	8.7000e-004	1.0000e-005	8.9000e-004	0.0000	2.4142	2.4142	5.0000e-005	5.0000e-005	2.4313

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3.6 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	tons/yr										MT/yr					
Off-Road	0.0147	0.3122	0.2595	3.6000e-004		0.0112	0.0112		0.0112	0.0112	0.0000	31.0258	31.0258	9.8300e-003	0.0000	31.2716
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0147	0.3122	0.2595	3.6000e-004		0.0112	0.0112		0.0112	0.0112	0.0000	31.0258	31.0258	9.8300e-003	0.0000	31.2716

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	7.5000e-004	4.9000e-004	7.6800e-003	3.0000e-005	3.2900e-003	2.0000e-005	3.3100e-003	8.7000e-004	1.0000e-005	8.9000e-004	0.0000	2.4142	2.4142	5.0000e-005	5.0000e-005	2.4313
Total	7.5000e-004	4.9000e-004	7.6800e-003	3.0000e-005	3.2900e-003	2.0000e-005	3.3100e-003	8.7000e-004	1.0000e-005	8.9000e-004	0.0000	2.4142	2.4142	5.0000e-005	5.0000e-005	2.4313

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3.7 Architectural Coating - 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					
Archit. Coating	0.1253					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.8900e-003	0.0195	0.0290	5.0000e-005		9.7000e-004	9.7000e-004		9.7000e-004	9.7000e-004	0.0000	4.0852	4.0852	2.3000e-004	0.0000	4.0910
Total	0.1281	0.0195	0.0290	5.0000e-005		9.7000e-004	9.7000e-004		9.7000e-004	9.7000e-004	0.0000	4.0852	4.0852	2.3000e-004	0.0000	4.0910

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	2.3000e-003	1.5700e-003	0.0235	8.0000e-005	9.4800e-003	5.0000e-005	9.5300e-003	2.5200e-003	4.0000e-005	2.5600e-003	0.0000	7.1268	7.1268	1.5000e-004	1.6000e-004	7.1791
Total	2.3000e-003	1.5700e-003	0.0235	8.0000e-005	9.4800e-003	5.0000e-005	9.5300e-003	2.5200e-003	4.0000e-005	2.5600e-003	0.0000	7.1268	7.1268	1.5000e-004	1.6000e-004	7.1791

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3.7 Architectural Coating - 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	tons/yr										MT/yr					
Archit. Coating	0.1253					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.8200e-003	0.0376	0.0293	5.0000e-005		1.5200e-003	1.5200e-003		1.5200e-003	1.5200e-003	0.0000	4.0852	4.0852	2.3000e-004	0.0000	4.0910
Total	0.1271	0.0376	0.0293	5.0000e-005		1.5200e-003	1.5200e-003		1.5200e-003	1.5200e-003	0.0000	4.0852	4.0852	2.3000e-004	0.0000	4.0910

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	2.3000e-003	1.5700e-003	0.0235	8.0000e-005	9.4800e-003	5.0000e-005	9.5300e-003	2.5200e-003	4.0000e-005	2.5600e-003	0.0000	7.1268	7.1268	1.5000e-004	1.6000e-004	7.1791
Total	2.3000e-003	1.5700e-003	0.0235	8.0000e-005	9.4800e-003	5.0000e-005	9.5300e-003	2.5200e-003	4.0000e-005	2.5600e-003	0.0000	7.1268	7.1268	1.5000e-004	1.6000e-004	7.1791

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3.7 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	1.2252					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0267	0.1793	0.2831	4.7000e-004		8.0600e-003	8.0600e-003		8.0600e-003	8.0600e-003	0.0000	39.9584	39.9584	2.1800e-003	0.0000	40.0129
Total	1.2519	0.1793	0.2831	4.7000e-004		8.0600e-003	8.0600e-003		8.0600e-003	8.0600e-003	0.0000	39.9584	39.9584	2.1800e-003	0.0000	40.0129

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0213	0.0139	0.2164	7.2000e-004	0.0928	4.4000e-004	0.0932	0.0246	4.1000e-004	0.0250	0.0000	68.0091	68.0091	1.3600e-003	1.5000e-003	68.4894
Total	0.0213	0.0139	0.2164	7.2000e-004	0.0928	4.4000e-004	0.0932	0.0246	4.1000e-004	0.0250	0.0000	68.0091	68.0091	1.3600e-003	1.5000e-003	68.4894

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3.7 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	tons/yr										MT/yr					
Archit. Coating	1.2252					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0178	0.3682	0.2868	4.7000e-004		0.0149	0.0149		0.0149	0.0149	0.0000	39.9584	39.9584	2.1800e-003	0.0000	40.0129
Total	1.2430	0.3682	0.2868	4.7000e-004		0.0149	0.0149		0.0149	0.0149	0.0000	39.9584	39.9584	2.1800e-003	0.0000	40.0129

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0213	0.0139	0.2164	7.2000e-004	0.0928	4.4000e-004	0.0932	0.0246	4.1000e-004	0.0250	0.0000	68.0091	68.0091	1.3600e-003	1.5000e-003	68.4894
Total	0.0213	0.0139	0.2164	7.2000e-004	0.0928	4.4000e-004	0.0932	0.0246	4.1000e-004	0.0250	0.0000	68.0091	68.0091	1.3600e-003	1.5000e-003	68.4894

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4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Density

Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.2786	0.2792	2.5798	5.6200e-003	0.6375	3.9800e-003	0.6414	0.1702	3.7000e-003	0.1739	0.0000	532.9663	532.9663	0.0353	0.0236	540.8790
Unmitigated	0.3360	0.3744	3.4690	8.1200e-003	0.9292	5.5800e-003	0.9348	0.2480	5.1900e-003	0.2532	0.0000	769.6589	769.6589	0.0457	0.0315	780.1911

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments High Rise	721.86	721.86	721.86	2,466,705	1,692,160
Enclosed Parking with Elevator	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	721.86	721.86	721.86	2,466,705	1,692,160

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	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 High Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
Enclosed Parking with Elevator	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

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Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments High Rise	0.547453	0.060181	0.185039	0.126487	0.024236	0.006679	0.014707	0.004926	0.000662	0.000378	0.024745	0.000705	0.003801
Enclosed Parking with Elevator	0.547453	0.060181	0.185039	0.126487	0.024236	0.006679	0.014707	0.004926	0.000662	0.000378	0.024745	0.000705	0.003801
Other Non-Asphalt Surfaces	0.547453	0.060181	0.185039	0.126487	0.024236	0.006679	0.014707	0.004926	0.000662	0.000378	0.024745	0.000705	0.003801

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	419.9165	419.9165	0.0354	4.3000e-003	422.0828
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	419.9165	419.9165	0.0354	4.3000e-003	422.0828
NaturalGas Mitigated	9.5600e-003	0.0817	0.0348	5.2000e-004		6.6000e-003	6.6000e-003		6.6000e-003	6.6000e-003	0.0000	94.6028	94.6028	1.8100e-003	1.7300e-003	95.1650
NaturalGas Unmitigated	9.5600e-003	0.0817	0.0348	5.2000e-004		6.6000e-003	6.6000e-003		6.6000e-003	6.6000e-003	0.0000	94.6028	94.6028	1.8100e-003	1.7300e-003	95.1650

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - Natural Gas

Unmitigated

	Natural Gas 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 High Rise	1.77279e+006	9.5600e-003	0.0817	0.0348	5.2000e-004		6.6000e-003	6.6000e-003		6.6000e-003	6.6000e-003	0.0000	94.6028	94.6028	1.8100e-003	1.7300e-003	95.1650
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		9.5600e-003	0.0817	0.0348	5.2000e-004		6.6000e-003	6.6000e-003		6.6000e-003	6.6000e-003	0.0000	94.6028	94.6028	1.8100e-003	1.7300e-003	95.1650

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - Natural Gas

Mitigated

	Natural Gas 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 High Rise	1.77279e+006	9.5600e-003	0.0817	0.0348	5.2000e-004		6.6000e-003	6.6000e-003		6.6000e-003	6.6000e-003	0.0000	94.6028	94.6028	1.8100e-003	1.7300e-003	95.1650
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		9.5600e-003	0.0817	0.0348	5.2000e-004		6.6000e-003	6.6000e-003		6.6000e-003	6.6000e-003	0.0000	94.6028	94.6028	1.8100e-003	1.7300e-003	95.1650

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments High Rise	609579	108.1061	9.1200e-003	1.1100e-003	108.6638
Enclosed Parking with Elevator	1.75821e+006	311.8104	0.0263	3.1900e-003	313.4189
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		419.9165	0.0354	4.3000e-003	422.0828

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments High Rise	609579	108.1061	9.1200e-003	1.1100e-003	108.6638
Enclosed Parking with Elevator	1.75821e+006	311.8104	0.0263	3.1900e-003	313.4189
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		419.9165	0.0354	4.3000e-003	422.0828

6.0 Area Detail

6.1 Mitigation Measures Area

Use only Natural Gas Hearths

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	1.7124	0.0486	1.6611	2.8000e-004		0.0115	0.0115		0.0115	0.0115	0.0000	37.0622	37.0622	3.2800e-003	6.3000e-004	37.3318
Unmitigated	2.2298	0.0602	2.6592	2.6700e-003		0.1610	0.1610		0.1610	0.1610	16.8888	35.1531	52.0419	0.0530	1.1500e-003	53.7081

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	0.1350					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.5238					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.5208	0.0412	1.0108	2.5800e-003		0.1518	0.1518		0.1518	0.1518	16.8888	32.4545	49.3434	0.0504	1.1500e-003	50.9441
Landscaping	0.0501	0.0190	1.6485	9.0000e-005		9.1300e-003	9.1300e-003		9.1300e-003	9.1300e-003	0.0000	2.6985	2.6985	2.6200e-003	0.0000	2.7640
Total	2.2298	0.0602	2.6592	2.6700e-003		0.1610	0.1610		0.1610	0.1610	16.8888	35.1531	52.0419	0.0530	1.1500e-003	53.7081

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	0.1350					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.5238					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	3.4700e-003	0.0297	0.0126	1.9000e-004		2.4000e-003	2.4000e-003		2.4000e-003	2.4000e-003	0.0000	34.3636	34.3636	6.6000e-004	6.3000e-004	34.5678
Landscaping	0.0501	0.0190	1.6485	9.0000e-005		9.1300e-003	9.1300e-003		9.1300e-003	9.1300e-003	0.0000	2.6985	2.6985	2.6200e-003	0.0000	2.7640
Total	1.7124	0.0486	1.6611	2.8000e-004		0.0115	0.0115		0.0115	0.0115	0.0000	37.0621	37.0621	3.2800e-003	6.3000e-004	37.3318

7.0 Water Detail

7.1 Mitigation Measures Water

Use Water Efficient Irrigation System

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	39.2920	0.3406	8.3400e-003	50.2921
Unmitigated	40.0770	0.3407	8.3500e-003	51.0811

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments High Rise	10.3595 / 6.53098	40.0770	0.3407	8.3500e-003	51.0811
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		40.0770	0.3407	8.3500e-003	51.0811

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments High Rise	10.3595 / 6.13259	39.2920	0.3406	8.3400e-003	50.2921
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		39.2920	0.3406	8.3400e-003	50.2921

8.0 Waste Detail

8.1 Mitigation Measures Waste

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	14.8468	0.8774	0.0000	36.7822
Unmitigated	14.8468	0.8774	0.0000	36.7822

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments High Rise	73.14	14.8468	0.8774	0.0000	36.7822
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		14.8468	0.8774	0.0000	36.7822

The Ritz-Carlton Residences - Orange County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments High Rise	73.14	14.8468	0.8774	0.0000	36.7822
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		14.8468	0.8774	0.0000	36.7822

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
Emergency Generator	1	0.13	50	350	0.73	Diesel

Boilers

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

The Ritz-Carlton Residences - Orange County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Equipment Type	Number
----------------	--------

10.1 Stationary Sources

Unmitigated/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
Equipment Type	tons/yr										MT/yr					
Emergency Generator - Diesel (300 - 600 HP)	0.0144	0.0401	0.0366	7.0000e-005		2.1100e-003	2.1100e-003		2.1100e-003	2.1100e-003	0.0000	6.6640	6.6640	9.3000e-004	0.0000	6.6873
Total	0.0144	0.0401	0.0366	7.0000e-005		2.1100e-003	2.1100e-003		2.1100e-003	2.1100e-003	0.0000	6.6640	6.6640	9.3000e-004	0.0000	6.6873

11.0 Vegetation

The Ritz-Carlton Residences - Orange County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

The Ritz-Carlton Residences

Orange County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking with Elevator	808.00	Space	1.03	323,200.00	0
Other Non-Asphalt Surfaces	1.17	Acre	1.17	50,965.20	0
Apartments High Rise	159.00	Dwelling Unit	0.57	414,999.00	360

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	30
Climate Zone	8	Operational Year	2025		
Utility Company	Southern California Edison				
CO2 Intensity (lb/MW hr)	390.98	CH4 Intensity (lb/MW hr)	0.033	N2O Intensity (lb/MW hr)	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Based on the Project Description provided to LSA on January 21, 2022. Other non-asphalt surfaces includes the vehicle entry, pedestrian walk, landscaping, and pool deck.

Construction Phase - 6 months of demolition then construction start 12/31/22, 36 month duration, complete 12/31/25.

Demolition - The project would demolish approximately 263,194 square feet.

Grading - The project would require the export of 205,700 cubic yards of soil.

Vehicle Trips - Trip rates based on the average daily trip generation provided in the project's Trip Generation letter dated January 26, 2022.

Woodstoves - Assuming no woodstoves or wood-burning hearths.

Construction Off-road Equipment Mitigation - Assuming use of Tier 2 construction equipment and compliance with SCAQMD Rule 403: Fugitive Dust measures.

Mobile Land Use Mitigation -

The Ritz-Carlton Residences - Orange County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstructionPhase	NumDays	20.00	180.00
tblConstructionPhase	NumDays	3.00	10.00
tblConstructionPhase	NumDays	6.00	100.00
tblConstructionPhase	NumDays	220.00	770.00
tblConstructionPhase	NumDays	10.00	345.00
tblConstructionPhase	NumDays	10.00	40.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	PhaseEndDate	6/28/2022	12/30/2022
tblConstructionPhase	PhaseEndDate	7/1/2022	1/11/2023
tblConstructionPhase	PhaseEndDate	7/11/2022	5/8/2023
tblConstructionPhase	PhaseEndDate	5/15/2023	10/22/2025
tblConstructionPhase	PhaseEndDate	6/12/2023	12/31/2025
tblConstructionPhase	PhaseEndDate	5/29/2023	12/8/2025
tblConstructionPhase	PhaseStartDate	6/1/2022	6/4/2022
tblConstructionPhase	PhaseStartDate	6/29/2022	12/31/2022
tblConstructionPhase	PhaseStartDate	7/2/2022	1/12/2023
tblConstructionPhase	PhaseStartDate	7/12/2022	5/9/2023
tblConstructionPhase	PhaseStartDate	5/30/2023	11/25/2024

The Ritz-Carlton Residences - Orange County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblConstructionPhase	PhaseStartDate	5/16/2023	10/23/2025
tblGrading	MaterialExported	0.00	205,700.00
tblLandUse	LandUseSquareFeet	159,000.00	414,999.00
tblLandUse	LotAcreage	7.27	1.03
tblLandUse	LotAcreage	2.56	0.57
tblLandUse	Population	455.00	360.00
tblStationaryGeneratorsPumpsUse	HorsePowerValue	0.00	350.00
tblStationaryGeneratorsPumpsUse	HoursPerDay	0.00	0.13
tblStationaryGeneratorsPumpsUse	HoursPerYear	0.00	50.00
tblStationaryGeneratorsPumpsUse	NumberOfEquipment	0.00	1.00
tblVehicleTrips	ST_TR	4.53	4.54
tblVehicleTrips	SU_TR	3.59	4.54
tblVehicleTrips	WD_TR	4.45	4.54

2.0 Emissions Summary

The Ritz-Carlton Residences - Orange County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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					
2022	1.7550	17.6834	14.6791	0.0294	1.7006	0.8465	2.5471	0.2882	0.7911	1.0793	0.0000	2,901.861 3	2,901.861 3	0.7700	0.0749	2,940.126 5
2023	2.5588	45.1286	23.6766	0.1658	11.9113	0.8022	12.7135	4.7176	0.7453	5.4629	0.0000	18,536.90 96	18,536.90 96	2.3068	2.6400	19,381.30 12
2024	10.5475	17.2958	26.3395	0.0716	4.1427	0.6314	4.7740	1.1099	0.6065	1.7165	0.0000	7,158.523 0	7,158.523 0	0.5968	0.2813	7,257.261 5
2025	10.3810	16.3595	25.6890	0.0703	4.1426	0.5532	4.6959	1.1099	0.5311	1.6410	0.0000	7,055.272 6	7,055.272 6	0.5853	0.2744	7,151.666 7
Maximum	10.5475	45.1286	26.3395	0.1658	11.9113	0.8465	12.7135	4.7176	0.7911	5.4629	0.0000	18,536.90 96	18,536.90 96	2.3068	2.6400	19,381.30 12

The Ritz-Carlton Residences - Orange County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	51.1543	3.4507	94.0474	0.2070		12.2188	12.2188		12.2188	12.2188	1,489.340 0	2,885.796 9	4,375.136 9	4.4646	0.1011	4,516.875 0
Energy	0.0524	0.4476	0.1905	2.8600e-003		0.0362	0.0362		0.0362	0.0362		571.4068	571.4068	0.0110	0.0105	574.8024
Mobile	1.8993	1.8893	19.1441	0.0460	5.1977	0.0307	5.2284	1.3854	0.0286	1.4140		4,800.454 4	4,800.454 4	0.2701	0.1824	4,861.550 3
Stationary	0.0747	0.2087	0.1904	3.6000e-004		0.0110	0.0110		0.0110	0.0110		38.1979	38.1979	5.3600e-003		38.3318
Total	53.1806	5.9963	113.5724	0.2562	5.1977	12.2966	17.4943	1.3854	12.2945	13.6799	1,489.340 0	8,295.855 9	9,785.196 0	4.7510	0.2939	9,991.559 5

The Ritz-Carlton Residences - Orange County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	lb/day										lb/day					
Area	9.7683	2.5255	14.1978	0.0159		0.2649	0.2649		0.2649	0.2649	0.0000	3,054.1499	3,054.1499	0.0812	0.0556	3,072.7347
Energy	0.0524	0.4476	0.1905	2.8600e-003		0.0362	0.0362		0.0362	0.0362		571.4068	571.4068	0.0110	0.0105	574.8024
Mobile	1.5881	1.4126	14.0928	0.0318	3.5656	0.0219	3.5875	0.9504	0.0204	0.9708		3,323.0200	3,323.0200	0.2070	0.1366	3,368.9084
Stationary	0.0747	0.2087	0.1904	3.6000e-004		0.0110	0.0110		0.0110	0.0110		38.1979	38.1979	5.3600e-003		38.3318
Total	11.4834	4.5944	28.6714	0.0509	3.5656	0.3340	3.8996	0.9504	0.3325	1.2829	0.0000	6,986.7745	6,986.7745	0.3044	0.2027	7,054.7772

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	78.41	23.38	74.75	80.13	31.40	97.28	77.71	31.40	97.30	90.62	100.00	15.78	28.60	93.59	31.05	29.39

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	6/4/2022	12/30/2022	6	180	
2	Site Preparation	Site Preparation	12/31/2022	1/11/2023	6	10	
3	Grading	Grading	1/12/2023	5/8/2023	6	100	
4	Building Construction	Building Construction	5/9/2023	10/22/2025	6	770	

The Ritz-Carlton Residences - Orange County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5	Paving	Paving	10/23/2025	12/8/2025	6	40
6	Architectural Coating	Architectural Coating	11/25/2024	12/31/2025	6	345

Acres of Grading (Site Preparation Phase): 15

Acres of Grading (Grading Phase): 100

Acres of Paving: 2.2

Residential Indoor: 840,373; Residential Outdoor: 280,124; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 22,450 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Scrapers	1	8.00	367	0.48
Site Preparation	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Building Construction	Cranes	1	8.00	231	0.29
Building Construction	Forklifts	2	7.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36

The Ritz-Carlton Residences - Orange County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Paving	Rollers	2	8.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37

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	5	13.00	0.00	1,197.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	25,713.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	272.00	78.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	54.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

The Ritz-Carlton Residences - Orange County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.4393	0.0000	1.4393	0.2179	0.0000	0.2179			0.0000			0.0000
Off-Road	1.6889	16.6217	13.9605	0.0241		0.8379	0.8379		0.7829	0.7829		2,323.4168	2,323.4168	0.5921		2,338.2191
Total	1.6889	16.6217	13.9605	0.0241	1.4393	0.8379	2.2772	0.2179	0.7829	1.0008		2,323.4168	2,323.4168	0.5921		2,338.2191

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	0.0269	1.0354	0.2908	3.9700e-003	0.1160	7.8300e-003	0.1238	0.0318	7.4900e-003	0.0393		449.6041	449.6041	0.0429	0.0720	472.1346
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	0.0391	0.0263	0.4278	1.2700e-003	0.1453	7.8000e-004	0.1461	0.0385	7.2000e-004	0.0393		128.8404	128.8404	3.0100e-003	2.8800e-003	129.7729
Total	0.0661	1.0616	0.7187	5.2400e-003	0.2613	8.6100e-003	0.2699	0.0703	8.2100e-003	0.0785		578.4445	578.4445	0.0459	0.0749	601.9075

The Ritz-Carlton Residences - Orange County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.6477	0.0000	0.6477	0.0981	0.0000	0.0981			0.0000			0.0000
Off-Road	0.8857	21.2053	15.4154	0.0241		0.7182	0.7182		0.7182	0.7182	0.0000	2,323.4168	2,323.4168	0.5921		2,338.2191
Total	0.8857	21.2053	15.4154	0.0241	0.6477	0.7182	1.3659	0.0981	0.7182	0.8163	0.0000	2,323.4168	2,323.4168	0.5921		2,338.2191

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	0.0269	1.0354	0.2908	3.9700e-003	0.1160	7.8300e-003	0.1238	0.0318	7.4900e-003	0.0393		449.6041	449.6041	0.0429	0.0720	472.1346
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	0.0391	0.0263	0.4278	1.2700e-003	0.1453	7.8000e-004	0.1461	0.0385	7.2000e-004	0.0393		128.8404	128.8404	3.0100e-003	2.8800e-003	129.7729
Total	0.0661	1.0616	0.7187	5.2400e-003	0.2613	8.6100e-003	0.2699	0.0703	8.2100e-003	0.0785		578.4445	578.4445	0.0459	0.0749	601.9075

The Ritz-Carlton Residences - Orange County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.5908	0.0000	1.5908	0.1718	0.0000	0.1718			0.0000			0.0000
Off-Road	1.3784	15.6673	10.0558	0.0245		0.5952	0.5952		0.5476	0.5476		2,375.1569	2,375.1569	0.7682		2,394.3613
Total	1.3784	15.6673	10.0558	0.0245	1.5908	0.5952	2.1859	0.1718	0.5476	0.7193		2,375.1569	2,375.1569	0.7682		2,394.3613

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	0.0241	0.0162	0.2633	7.8000e-004	0.0894	4.8000e-004	0.0899	0.0237	4.4000e-004	0.0242		79.2864	79.2864	1.8500e-003	1.7700e-003	79.8603
Total	0.0241	0.0162	0.2633	7.8000e-004	0.0894	4.8000e-004	0.0899	0.0237	4.4000e-004	0.0242		79.2864	79.2864	1.8500e-003	1.7700e-003	79.8603

The Ritz-Carlton Residences - Orange County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7158	0.0000	0.7158	0.0773	0.0000	0.0773			0.0000			0.0000
Off-Road	0.6625	20.0179	13.6431	0.0245		0.4988	0.4988		0.4988	0.4988	0.0000	2,375.1569	2,375.1569	0.7682		2,394.3613
Total	0.6625	20.0179	13.6431	0.0245	0.7158	0.4988	1.2146	0.0773	0.4988	0.5760	0.0000	2,375.1569	2,375.1569	0.7682		2,394.3613

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	0.0241	0.0162	0.2633	7.8000e-004	0.0894	4.8000e-004	0.0899	0.0237	4.4000e-004	0.0242		79.2864	79.2864	1.8500e-003	1.7700e-003	79.8603
Total	0.0241	0.0162	0.2633	7.8000e-004	0.0894	4.8000e-004	0.0899	0.0237	4.4000e-004	0.0242		79.2864	79.2864	1.8500e-003	1.7700e-003	79.8603

The Ritz-Carlton Residences - Orange County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.5908	0.0000	1.5908	0.1718	0.0000	0.1718			0.0000			0.0000
Off-Road	1.3027	14.2802	9.7820	0.0245		0.5419	0.5419		0.4985	0.4985		2,374.863 4	2,374.863 4	0.7681		2,394.065 4
Total	1.3027	14.2802	9.7820	0.0245	1.5908	0.5419	2.1326	0.1718	0.4985	0.6703		2,374.863 4	2,374.863 4	0.7681		2,394.065 4

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	0.0225	0.0144	0.2450	7.5000e-004	0.0894	4.6000e-004	0.0899	0.0237	4.2000e-004	0.0241		77.2248	77.2248	1.6800e-003	1.6500e-003	77.7578
Total	0.0225	0.0144	0.2450	7.5000e-004	0.0894	4.6000e-004	0.0899	0.0237	4.2000e-004	0.0241		77.2248	77.2248	1.6800e-003	1.6500e-003	77.7578

The Ritz-Carlton Residences - Orange County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7158	0.0000	0.7158	0.0773	0.0000	0.0773			0.0000			0.0000
Off-Road	0.6625	20.0179	13.6431	0.0245		0.4988	0.4988		0.4988	0.4988	0.0000	2,374.863 4	2,374.863 4	0.7681		2,394.065 4
Total	0.6625	20.0179	13.6431	0.0245	0.7158	0.4988	1.2146	0.0773	0.4988	0.5760	0.0000	2,374.863 4	2,374.863 4	0.7681		2,394.065 4

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	0.0225	0.0144	0.2450	7.5000e-004	0.0894	4.6000e-004	0.0899	0.0237	4.2000e-004	0.0241		77.2248	77.2248	1.6800e-003	1.6500e-003	77.7578
Total	0.0225	0.0144	0.2450	7.5000e-004	0.0894	4.6000e-004	0.0899	0.0237	4.2000e-004	0.0241		77.2248	77.2248	1.6800e-003	1.6500e-003	77.7578

The Ritz-Carlton Residences - Orange County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.3152	0.0000	7.3152	3.4600	0.0000	3.4600			0.0000			0.0000
Off-Road	1.3330	14.4676	8.7038	0.0206		0.6044	0.6044		0.5560	0.5560		1,995.6147	1,995.6147	0.6454		2,011.7503
Total	1.3330	14.4676	8.7038	0.0206	7.3152	0.6044	7.9196	3.4600	0.5560	4.0160		1,995.6147	1,995.6147	0.6454		2,011.7503

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	0.5359	30.6429	10.5043	0.1443	4.4843	0.1973	4.6816	1.2280	0.1887	1.4167		16,444.7638	16,444.7638	1.6593	2.6380	17,272.3537
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	0.0282	0.0180	0.3062	9.4000e-004	0.1118	5.7000e-004	0.1124	0.0296	5.3000e-004	0.0302		96.5311	96.5311	2.1000e-003	2.0600e-003	97.1972
Total	0.5641	30.6609	10.8105	0.1452	4.5961	0.1978	4.7939	1.2576	0.1893	1.4469		16,541.2949	16,541.2949	1.6614	2.6400	17,369.5509

The Ritz-Carlton Residences - Orange County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.2919	0.0000	3.2919	1.5570	0.0000	1.5570			0.0000			0.0000
Off-Road	0.6262	18.1050	12.1450	0.0206		0.4850	0.4850		0.4850	0.4850	0.0000	1,995.6147	1,995.6147	0.6454		2,011.7503
Total	0.6262	18.1050	12.1450	0.0206	3.2919	0.4850	3.7769	1.5570	0.4850	2.0420	0.0000	1,995.6147	1,995.6147	0.6454		2,011.7503

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	0.5359	30.6429	10.5043	0.1443	4.4843	0.1973	4.6816	1.2280	0.1887	1.4167		16,444.7638	16,444.7638	1.6593	2.6380	17,272.3537
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	0.0282	0.0180	0.3062	9.4000e-004	0.1118	5.7000e-004	0.1124	0.0296	5.3000e-004	0.0302		96.5311	96.5311	2.1000e-003	2.0600e-003	97.1972
Total	0.5641	30.6609	10.8105	0.1452	4.5961	0.1978	4.7939	1.2576	0.1893	1.4469		16,541.2949	16,541.2949	1.6614	2.6400	17,369.5509

The Ritz-Carlton Residences - Orange County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7136	13.6239	14.2145	0.0250		0.6136	0.6136		0.5880	0.5880		2,289.523 3	2,289.523 3	0.4330		2,300.347 9
Total	1.7136	13.6239	14.2145	0.0250		0.6136	0.6136		0.5880	0.5880		2,289.523 3	2,289.523 3	0.4330		2,300.347 9

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	0.0788	2.7336	1.1334	0.0140	0.4988	0.0140	0.5128	0.1435	0.0134	0.1570		1,540.105 2	1,540.105 2	0.0916	0.2210	1,608.248 1
Worker	0.7664	0.4903	8.3287	0.0257	3.0403	0.0156	3.0559	0.8063	0.0143	0.8206		2,625.644 7	2,625.644 7	0.0570	0.0560	2,643.763 6
Total	0.8452	3.2239	9.4621	0.0397	3.5391	0.0296	3.5686	0.9499	0.0277	0.9776		4,165.749 9	4,165.749 9	0.1486	0.2770	4,252.011 7

The Ritz-Carlton Residences - Orange County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2023

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	0.9471	20.0464	15.4081	0.0250		0.8178	0.8178		0.8178	0.8178	0.0000	2,289.5233	2,289.5233	0.4330		2,300.3479
Total	0.9471	20.0464	15.4081	0.0250		0.8178	0.8178		0.8178	0.8178	0.0000	2,289.5233	2,289.5233	0.4330		2,300.3479

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	0.0788	2.7336	1.1334	0.0140	0.4988	0.0140	0.5128	0.1435	0.0134	0.1570		1,540.1052	1,540.1052	0.0916	0.2210	1,608.2481
Worker	0.7664	0.4903	8.3287	0.0257	3.0403	0.0156	3.0559	0.8063	0.0143	0.8206		2,625.6447	2,625.6447	0.0570	0.0560	2,643.7636
Total	0.8452	3.2239	9.4621	0.0397	3.5391	0.0296	3.5686	0.9499	0.0277	0.9776		4,165.7499	4,165.7499	0.1486	0.2770	4,252.0117

The Ritz-Carlton Residences - Orange County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	1.5971	12.8235	14.1002	0.0250		0.5381	0.5381		0.5153	0.5153		2,289.654 1	2,289.654 1	0.4265		2,300.315 4
Total	1.5971	12.8235	14.1002	0.0250		0.5381	0.5381		0.5153	0.5153		2,289.654 1	2,289.654 1	0.4265		2,300.315 4

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	0.0776	2.7256	1.1250	0.0138	0.4987	0.0147	0.5134	0.1435	0.0140	0.1576		1,516.213 6	1,516.213 6	0.0925	0.2185	1,583.633 8
Worker	0.7205	0.4406	7.7631	0.0248	3.0403	0.0148	3.0551	0.8063	0.0136	0.8199		2,562.479 6	2,562.479 6	0.0517	0.0524	2,579.384 4
Total	0.7981	3.1661	8.8880	0.0386	3.5391	0.0295	3.5685	0.9499	0.0277	0.9775		4,078.693 3	4,078.693 3	0.1442	0.2709	4,163.018 2

The Ritz-Carlton Residences - Orange County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	0.9471	20.0464	15.4081	0.0250		0.8178	0.8178		0.8178	0.8178	0.0000	2,289.654 1	2,289.654 1	0.4265		2,300.315 4
Total	0.9471	20.0464	15.4081	0.0250		0.8178	0.8178		0.8178	0.8178	0.0000	2,289.654 1	2,289.654 1	0.4265		2,300.315 4

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	0.0776	2.7256	1.1250	0.0138	0.4987	0.0147	0.5134	0.1435	0.0140	0.1576		1,516.213 6	1,516.213 6	0.0925	0.2185	1,583.633 8
Worker	0.7205	0.4406	7.7631	0.0248	3.0403	0.0148	3.0551	0.8063	0.0136	0.8199		2,562.479 6	2,562.479 6	0.0517	0.0524	2,579.384 4
Total	0.7981	3.1661	8.8880	0.0386	3.5391	0.0295	3.5685	0.9499	0.0277	0.9775		4,078.693 3	4,078.693 3	0.1442	0.2709	4,163.018 2

The Ritz-Carlton Residences - Orange County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	1.4897	12.0233	14.0072	0.0250		0.4700	0.4700		0.4498	0.4498		2,289.8898	2,289.8898	0.4200		2,300.3887
Total	1.4897	12.0233	14.0072	0.0250		0.4700	0.4700		0.4498	0.4498		2,289.8898	2,289.8898	0.4200		2,300.3887

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	0.0765	2.7121	1.1204	0.0135	0.4987	0.0148	0.5135	0.1435	0.0141	0.1577		1,487.8286	1,487.8286	0.0937	0.2153	1,554.3298
Worker	0.6805	0.3993	7.3025	0.0240	3.0403	0.0142	3.0545	0.8063	0.0130	0.8194		2,499.8186	2,499.8186	0.0469	0.0493	2,515.6799
Total	0.7569	3.1114	8.4229	0.0375	3.5391	0.0289	3.5680	0.9498	0.0272	0.9770		3,987.6472	3,987.6472	0.1407	0.2646	4,070.0097

The Ritz-Carlton Residences - Orange County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	0.9471	20.0464	15.4081	0.0250		0.8178	0.8178		0.8178	0.8178	0.0000	2,289.8898	2,289.8898	0.4200		2,300.3887
Total	0.9471	20.0464	15.4081	0.0250		0.8178	0.8178		0.8178	0.8178	0.0000	2,289.8898	2,289.8898	0.4200		2,300.3887

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	0.0765	2.7121	1.1204	0.0135	0.4987	0.0148	0.5135	0.1435	0.0141	0.1577		1,487.8286	1,487.8286	0.0937	0.2153	1,554.3298
Worker	0.6805	0.3993	7.3025	0.0240	3.0403	0.0142	3.0545	0.8063	0.0130	0.8194		2,499.8186	2,499.8186	0.0469	0.0493	2,515.6799
Total	0.7569	3.1114	8.4229	0.0375	3.5391	0.0289	3.5680	0.9498	0.0272	0.9770		3,987.6472	3,987.6472	0.1407	0.2646	4,070.0097

The Ritz-Carlton Residences - Orange County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 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	0.7854	7.4371	11.6737	0.0179		0.3503	0.3503		0.3234	0.3234		1,710.0067	1,710.0067	0.5420		1,723.5556
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.7854	7.4371	11.6737	0.0179		0.3503	0.3503		0.3234	0.3234		1,710.0067	1,710.0067	0.5420		1,723.5556

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	0.0375	0.0220	0.4027	1.3200e-003	0.1677	7.8000e-004	0.1685	0.0445	7.2000e-004	0.0452		137.8576	137.8576	2.5900e-003	2.7200e-003	138.7324
Total	0.0375	0.0220	0.4027	1.3200e-003	0.1677	7.8000e-004	0.1685	0.0445	7.2000e-004	0.0452		137.8576	137.8576	2.5900e-003	2.7200e-003	138.7324

The Ritz-Carlton Residences - Orange County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 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	0.7344	15.6108	12.9737	0.0179		0.5580	0.5580		0.5580	0.5580	0.0000	1,710.0067	1,710.0067	0.5420		1,723.5556
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.7344	15.6108	12.9737	0.0179		0.5580	0.5580		0.5580	0.5580	0.0000	1,710.0067	1,710.0067	0.5420		1,723.5556

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	0.0375	0.0220	0.4027	1.3200e-003	0.1677	7.8000e-004	0.1685	0.0445	7.2000e-004	0.0452		137.8576	137.8576	2.5900e-003	2.7200e-003	138.7324
Total	0.0375	0.0220	0.4027	1.3200e-003	0.1677	7.8000e-004	0.1685	0.0445	7.2000e-004	0.0452		137.8576	137.8576	2.5900e-003	2.7200e-003	138.7324

The Ritz-Carlton Residences - Orange County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 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					
Archit. Coating	7.8284					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609		281.4481	281.4481	0.0159		281.8443
Total	8.0092	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609		281.4481	281.4481	0.0159		281.8443

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	0.1430	0.0875	1.5412	4.9300e-003	0.6036	2.9400e-003	0.6065	0.1601	2.7000e-003	0.1628		508.7276	508.7276	0.0103	0.0104	512.0837
Total	0.1430	0.0875	1.5412	4.9300e-003	0.6036	2.9400e-003	0.6065	0.1601	2.7000e-003	0.1628		508.7276	508.7276	0.0103	0.0104	512.0837

The Ritz-Carlton Residences - Orange County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 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					
Archit. Coating	7.8284					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1139	2.3524	1.8324	2.9700e-003		0.0951	0.0951		0.0951	0.0951	0.0000	281.4481	281.4481	0.0159		281.8443
Total	7.9423	2.3524	1.8324	2.9700e-003		0.0951	0.0951		0.0951	0.0951	0.0000	281.4481	281.4481	0.0159		281.8443

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	0.1430	0.0875	1.5412	4.9300e-003	0.6036	2.9400e-003	0.6065	0.1601	2.7000e-003	0.1628		508.7276	508.7276	0.0103	0.0104	512.0837
Total	0.1430	0.0875	1.5412	4.9300e-003	0.6036	2.9400e-003	0.6065	0.1601	2.7000e-003	0.1628		508.7276	508.7276	0.0103	0.0104	512.0837

The Ritz-Carlton Residences - Orange County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 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	7.8284					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	7.9993	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	0.1351	0.0793	1.4498	4.7600e-003	0.6036	2.8100e-003	0.6064	0.1601	2.5900e-003	0.1627		496.2875	496.2875	9.3200e-003	9.7900e-003	499.4365
Total	0.1351	0.0793	1.4498	4.7600e-003	0.6036	2.8100e-003	0.6064	0.1601	2.5900e-003	0.1627		496.2875	496.2875	9.3200e-003	9.7900e-003	499.4365

The Ritz-Carlton Residences - Orange County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 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	7.8284					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1139	2.3524	1.8324	2.9700e-003		0.0951	0.0951		0.0951	0.0951	0.0000	281.4481	281.4481	0.0154		281.8319
Total	7.9423	2.3524	1.8324	2.9700e-003		0.0951	0.0951		0.0951	0.0951	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	0.1351	0.0793	1.4498	4.7600e-003	0.6036	2.8100e-003	0.6064	0.1601	2.5900e-003	0.1627		496.2875	496.2875	9.3200e-003	9.7900e-003	499.4365
Total	0.1351	0.0793	1.4498	4.7600e-003	0.6036	2.8100e-003	0.6064	0.1601	2.5900e-003	0.1627		496.2875	496.2875	9.3200e-003	9.7900e-003	499.4365

The Ritz-Carlton Residences - Orange County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Density

Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.5881	1.4126	14.0928	0.0318	3.5656	0.0219	3.5875	0.9504	0.0204	0.9708		3,323.020 0	3,323.020 0	0.2070	0.1366	3,368.908 4
Unmitigated	1.8993	1.8893	19.1441	0.0460	5.1977	0.0307	5.2284	1.3854	0.0286	1.4140		4,800.454 4	4,800.454 4	0.2701	0.1824	4,861.550 3

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments High Rise	721.86	721.86	721.86	2,466,705	1,692,160
Enclosed Parking with Elevator	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	721.86	721.86	721.86	2,466,705	1,692,160

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	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 High Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
Enclosed Parking with Elevator	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

The Ritz-Carlton Residences - Orange County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments High Rise	0.547453	0.060181	0.185039	0.126487	0.024236	0.006679	0.014707	0.004926	0.000662	0.000378	0.024745	0.000705	0.003801
Enclosed Parking with Elevator	0.547453	0.060181	0.185039	0.126487	0.024236	0.006679	0.014707	0.004926	0.000662	0.000378	0.024745	0.000705	0.003801
Other Non-Asphalt Surfaces	0.547453	0.060181	0.185039	0.126487	0.024236	0.006679	0.014707	0.004926	0.000662	0.000378	0.024745	0.000705	0.003801

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
NaturalGas Mitigated	0.0524	0.4476	0.1905	2.8600e-003		0.0362	0.0362		0.0362	0.0362		571.4068	571.4068	0.0110	0.0105	574.8024
NaturalGas Unmitigated	0.0524	0.4476	0.1905	2.8600e-003		0.0362	0.0362		0.0362	0.0362		571.4068	571.4068	0.0110	0.0105	574.8024

The Ritz-Carlton Residences - Orange County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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 High Rise	4856.96	0.0524	0.4476	0.1905	2.8600e-003		0.0362	0.0362		0.0362	0.0362		571.4068	571.4068	0.0110	0.0105	574.8024
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0524	0.4476	0.1905	2.8600e-003		0.0362	0.0362		0.0362	0.0362		571.4068	571.4068	0.0110	0.0105	574.8024

The Ritz-Carlton Residences - Orange County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments High Rise	4.85696	0.0524	0.4476	0.1905	2.8600e-003		0.0362	0.0362		0.0362	0.0362		571.4068	571.4068	0.0110	0.0105	574.8024
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0524	0.4476	0.1905	2.8600e-003		0.0362	0.0362		0.0362	0.0362		571.4068	571.4068	0.0110	0.0105	574.8024

6.0 Area Detail

6.1 Mitigation Measures Area

Use only Natural Gas Hearths

The Ritz-Carlton Residences - Orange County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	lb/day										lb/day					
Mitigated	9.7683	2.5255	14.1978	0.0159		0.2649	0.2649		0.2649	0.2649	0.0000	3,054.1499	3,054.1499	0.0812	0.0556	3,072.7347
Unmitigated	51.1543	3.4507	94.0474	0.2070		12.2188	12.2188		12.2188	12.2188	1,489.3400	2,885.7969	4,375.1369	4.4646	0.1011	4,516.8750

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.7400					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	8.3495					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	41.6637	3.2990	80.8597	0.2063		12.1457	12.1457		12.1457	12.1457	1,489.3400	2,862.0000	4,351.3400	4.4415	0.1011	4,492.5011
Landscaping	0.4011	0.1517	13.1877	7.0000e-004		0.0730	0.0730		0.0730	0.0730		23.7969	23.7969	0.0231		24.3739
Total	51.1543	3.4507	94.0474	0.2070		12.2188	12.2188		12.2188	12.2188	1,489.3400	2,885.7969	4,375.1369	4.4646	0.1011	4,516.8750

The Ritz-Carlton Residences - Orange County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	0.7400					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	8.3495					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.2778	2.3738	1.0101	0.0152		0.1919	0.1919		0.1919	0.1919	0.0000	3,030.3529	3,030.3529	0.0581	0.0556	3,048.3608
Landscaping	0.4011	0.1517	13.1877	7.0000e-004		0.0730	0.0730		0.0730	0.0730		23.7969	23.7969	0.0231		24.3739
Total	9.7683	2.5255	14.1978	0.0159		0.2649	0.2649		0.2649	0.2649	0.0000	3,054.1498	3,054.1498	0.0812	0.0556	3,072.7347

7.0 Water Detail

7.1 Mitigation Measures Water

Use Water Efficient Irrigation System

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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The Ritz-Carlton Residences - Orange County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
Emergency Generator	1	0.13	50	350	0.73	Diesel

Boilers

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

Equipment Type	Number
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10.1 Stationary Sources

Unmitigated/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
Equipment Type	lb/day										lb/day					
Emergency Generator - Diesel (300 - 600 HP)	0.0747	0.2087	0.1904	3.6000e-004		0.0110	0.0110		0.0110	0.0110		38.1979	38.1979	5.3600e-003		38.3318
Total	0.0747	0.2087	0.1904	3.6000e-004		0.0110	0.0110		0.0110	0.0110		38.1979	38.1979	5.3600e-003		38.3318

11.0 Vegetation

The Ritz-Carlton Residences - Orange County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

The Ritz-Carlton Residences

Orange County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking with Elevator	808.00	Space	1.03	323,200.00	0
Other Non-Asphalt Surfaces	1.17	Acre	1.17	50,965.20	0
Apartments High Rise	159.00	Dwelling Unit	0.57	414,999.00	360

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	30
Climate Zone	8	Operational Year	2025		
Utility Company	Southern California Edison				
CO2 Intensity (lb/MW hr)	390.98	CH4 Intensity (lb/MW hr)	0.033	N2O Intensity (lb/MW hr)	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Based on the Project Description provided to LSA on January 21, 2022. Other non-asphalt surfaces includes the vehicle entry, pedestrian walk, landscaping, and pool deck.

Construction Phase - 6 months of demolition then construction start 12/31/22, 36 month duration, complete 12/31/25.

Demolition - The project would demolish approximately 263,194 square feet.

Grading - The project would require the export of 205,700 cubic yards of soil.

Vehicle Trips - Trip rates based on the average daily trip generation provided in the project's Trip Generation letter dated January 26, 2022.

Woodstoves - Assuming no woodstoves or wood-burning hearths.

Construction Off-road Equipment Mitigation - Assuming use of Tier 2 construction equipment and compliance with SCAQMD Rule 403: Fugitive Dust measures.

Mobile Land Use Mitigation -

The Ritz-Carlton Residences - Orange County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstEquipMitigation	Tier	No Change	Tier 2
tblConstructionPhase	NumDays	20.00	180.00
tblConstructionPhase	NumDays	3.00	10.00
tblConstructionPhase	NumDays	6.00	100.00
tblConstructionPhase	NumDays	220.00	770.00
tblConstructionPhase	NumDays	10.00	345.00
tblConstructionPhase	NumDays	10.00	40.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	NumDaysWeek	5.00	6.00
tblConstructionPhase	PhaseEndDate	6/28/2022	12/30/2022
tblConstructionPhase	PhaseEndDate	7/1/2022	1/11/2023
tblConstructionPhase	PhaseEndDate	7/11/2022	5/8/2023
tblConstructionPhase	PhaseEndDate	5/15/2023	10/22/2025
tblConstructionPhase	PhaseEndDate	6/12/2023	12/31/2025
tblConstructionPhase	PhaseEndDate	5/29/2023	12/8/2025
tblConstructionPhase	PhaseStartDate	6/1/2022	6/4/2022
tblConstructionPhase	PhaseStartDate	6/29/2022	12/31/2022
tblConstructionPhase	PhaseStartDate	7/2/2022	1/12/2023
tblConstructionPhase	PhaseStartDate	7/12/2022	5/9/2023
tblConstructionPhase	PhaseStartDate	5/30/2023	11/25/2024

The Ritz-Carlton Residences - Orange County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblConstructionPhase	PhaseStartDate	5/16/2023	10/23/2025
tblGrading	MaterialExported	0.00	205,700.00
tblLandUse	LandUseSquareFeet	159,000.00	414,999.00
tblLandUse	LotAcreage	7.27	1.03
tblLandUse	LotAcreage	2.56	0.57
tblLandUse	Population	455.00	360.00
tblStationaryGeneratorsPumpsUse	HorsePowerValue	0.00	350.00
tblStationaryGeneratorsPumpsUse	HoursPerDay	0.00	0.13
tblStationaryGeneratorsPumpsUse	HoursPerYear	0.00	50.00
tblStationaryGeneratorsPumpsUse	NumberOfEquipment	0.00	1.00
tblVehicleTrips	ST_TR	4.53	4.54
tblVehicleTrips	SU_TR	3.59	4.54
tblVehicleTrips	WD_TR	4.45	4.54

2.0 Emissions Summary

The Ritz-Carlton Residences - Orange County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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					
2022	1.7578	17.7266	14.6537	0.0293	1.7006	0.8465	2.5471	0.2882	0.7911	1.0793	0.0000	2,895.7909	2,895.7909	0.7701	0.0751	2,934.1176
2023	2.6273	46.4340	23.1428	0.1659	11.9113	0.8027	12.7140	4.7176	0.7458	5.4634	0.0000	18,547.1587	18,547.1587	2.3049	2.6426	19,392.2670
2024	10.6281	17.4693	25.7478	0.0702	4.1427	0.6315	4.7741	1.1099	0.6066	1.7165	0.0000	7,014.1972	7,014.1972	0.5981	0.2858	7,114.3065
2025	10.4596	16.5277	25.1391	0.0689	4.1426	0.5533	4.6959	1.1099	0.5311	1.6411	0.0000	6,914.8298	6,914.8298	0.5865	0.2786	7,012.5150
Maximum	10.6281	46.4340	25.7478	0.1659	11.9113	0.8465	12.7140	4.7176	0.7911	5.4634	0.0000	18,547.1587	18,547.1587	2.3049	2.6426	19,392.2670

The Ritz-Carlton Residences - Orange County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	51.1543	3.4507	94.0474	0.2070		12.2188	12.2188		12.2188	12.2188	1,489.340 0	2,885.796 9	4,375.136 9	4.4646	0.1011	4,516.875 0
Energy	0.0524	0.4476	0.1905	2.8600e-003		0.0362	0.0362		0.0362	0.0362		571.4068	571.4068	0.0110	0.0105	574.8024
Mobile	1.8860	2.0284	18.9381	0.0442	5.1977	0.0307	5.2284	1.3854	0.0286	1.4140		4,617.768 3	4,617.768 3	0.2784	0.1898	4,681.283 4
Stationary	0.0747	0.2087	0.1904	3.6000e-004		0.0110	0.0110		0.0110	0.0110		38.1979	38.1979	5.3600e-003		38.3318
Total	53.1673	6.1354	113.3663	0.2544	5.1977	12.2966	17.4944	1.3854	12.2945	13.6799	1,489.340 0	8,113.169 9	9,602.509 9	4.7593	0.3014	9,811.292 5

The Ritz-Carlton Residences - Orange County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	lb/day										lb/day					
Area	9.7683	2.5255	14.1978	0.0159		0.2649	0.2649		0.2649	0.2649	0.0000	3,054.1499	3,054.1499	0.0812	0.0556	3,072.7347
Energy	0.0524	0.4476	0.1905	2.8600e-003		0.0362	0.0362		0.0362	0.0362		571.4068	571.4068	0.0110	0.0105	574.8024
Mobile	1.5705	1.5168	14.1235	0.0306	3.5656	0.0219	3.5875	0.9504	0.0204	0.9708		3,198.0807	3,198.0807	0.2153	0.1424	3,245.8993
Stationary	0.0747	0.2087	0.1904	3.6000e-004		0.0110	0.0110		0.0110	0.0110		38.1979	38.1979	5.3600e-003		38.3318
Total	11.4659	4.6986	28.7021	0.0497	3.5656	0.3340	3.8996	0.9504	0.3325	1.2829	0.0000	6,861.8353	6,861.8353	0.3128	0.2084	6,931.7681

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	78.43	23.42	74.68	80.47	31.40	97.28	77.71	31.40	97.30	90.62	100.00	15.42	28.54	93.43	30.83	29.35

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	6/4/2022	12/30/2022	6	180	
2	Site Preparation	Site Preparation	12/31/2022	1/11/2023	6	10	
3	Grading	Grading	1/12/2023	5/8/2023	6	100	
4	Building Construction	Building Construction	5/9/2023	10/22/2025	6	770	

The Ritz-Carlton Residences - Orange County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5	Paving	Paving	10/23/2025	12/8/2025	6	40
6	Architectural Coating	Architectural Coating	11/25/2024	12/31/2025	6	345

Acres of Grading (Site Preparation Phase): 15

Acres of Grading (Grading Phase): 100

Acres of Paving: 2.2

Residential Indoor: 840,373; Residential Outdoor: 280,124; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 22,450 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Scrapers	1	8.00	367	0.48
Site Preparation	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Building Construction	Cranes	1	8.00	231	0.29
Building Construction	Forklifts	2	7.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36

The Ritz-Carlton Residences - Orange County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Paving	Rollers	2	8.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37

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	5	13.00	0.00	1,197.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	25,713.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	272.00	78.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	54.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

The Ritz-Carlton Residences - Orange County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.4393	0.0000	1.4393	0.2179	0.0000	0.2179			0.0000			0.0000
Off-Road	1.6889	16.6217	13.9605	0.0241		0.8379	0.8379		0.7829	0.7829		2,323.4168	2,323.4168	0.5921		2,338.2191
Total	1.6889	16.6217	13.9605	0.0241	1.4393	0.8379	2.2772	0.2179	0.7829	1.0008		2,323.4168	2,323.4168	0.5921		2,338.2191

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	0.0263	1.0760	0.2951	3.9700e-003	0.1160	7.8500e-003	0.1238	0.0318	7.5100e-003	0.0393		449.7109	449.7109	0.0428	0.0720	472.2461
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	0.0426	0.0289	0.3981	1.2100e-003	0.1453	7.8000e-004	0.1461	0.0385	7.2000e-004	0.0393		122.6631	122.6631	3.0800e-003	3.0600e-003	123.6524
Total	0.0689	1.1049	0.6932	5.1800e-003	0.2613	8.6300e-003	0.2699	0.0703	8.2300e-003	0.0785		572.3740	572.3740	0.0459	0.0751	595.8985

The Ritz-Carlton Residences - Orange County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.6477	0.0000	0.6477	0.0981	0.0000	0.0981			0.0000			0.0000
Off-Road	0.8857	21.2053	15.4154	0.0241		0.7182	0.7182		0.7182	0.7182	0.0000	2,323.4168	2,323.4168	0.5921		2,338.2191
Total	0.8857	21.2053	15.4154	0.0241	0.6477	0.7182	1.3659	0.0981	0.7182	0.8163	0.0000	2,323.4168	2,323.4168	0.5921		2,338.2191

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	0.0263	1.0760	0.2951	3.9700e-003	0.1160	7.8500e-003	0.1238	0.0318	7.5100e-003	0.0393		449.7109	449.7109	0.0428	0.0720	472.2461
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	0.0426	0.0289	0.3981	1.2100e-003	0.1453	7.8000e-004	0.1461	0.0385	7.2000e-004	0.0393		122.6631	122.6631	3.0800e-003	3.0600e-003	123.6524
Total	0.0689	1.1049	0.6932	5.1800e-003	0.2613	8.6300e-003	0.2699	0.0703	8.2300e-003	0.0785		572.3740	572.3740	0.0459	0.0751	595.8985

The Ritz-Carlton Residences - Orange County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.5908	0.0000	1.5908	0.1718	0.0000	0.1718			0.0000			0.0000
Off-Road	1.3784	15.6673	10.0558	0.0245		0.5952	0.5952		0.5476	0.5476		2,375.1569	2,375.1569	0.7682		2,394.3613
Total	1.3784	15.6673	10.0558	0.0245	1.5908	0.5952	2.1859	0.1718	0.5476	0.7193		2,375.1569	2,375.1569	0.7682		2,394.3613

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	0.0262	0.0178	0.2450	7.4000e-004	0.0894	4.8000e-004	0.0899	0.0237	4.4000e-004	0.0242		75.4850	75.4850	1.8900e-003	1.8800e-003	76.0938
Total	0.0262	0.0178	0.2450	7.4000e-004	0.0894	4.8000e-004	0.0899	0.0237	4.4000e-004	0.0242		75.4850	75.4850	1.8900e-003	1.8800e-003	76.0938

The Ritz-Carlton Residences - Orange County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7158	0.0000	0.7158	0.0773	0.0000	0.0773			0.0000			0.0000
Off-Road	0.6625	20.0179	13.6431	0.0245		0.4988	0.4988		0.4988	0.4988	0.0000	2,375.1569	2,375.1569	0.7682		2,394.3613
Total	0.6625	20.0179	13.6431	0.0245	0.7158	0.4988	1.2146	0.0773	0.4988	0.5760	0.0000	2,375.1569	2,375.1569	0.7682		2,394.3613

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	0.0262	0.0178	0.2450	7.4000e-004	0.0894	4.8000e-004	0.0899	0.0237	4.4000e-004	0.0242		75.4850	75.4850	1.8900e-003	1.8800e-003	76.0938
Total	0.0262	0.0178	0.2450	7.4000e-004	0.0894	4.8000e-004	0.0899	0.0237	4.4000e-004	0.0242		75.4850	75.4850	1.8900e-003	1.8800e-003	76.0938

The Ritz-Carlton Residences - Orange County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.5908	0.0000	1.5908	0.1718	0.0000	0.1718			0.0000			0.0000
Off-Road	1.3027	14.2802	9.7820	0.0245		0.5419	0.5419		0.4985	0.4985		2,374.863 4	2,374.863 4	0.7681		2,394.065 4
Total	1.3027	14.2802	9.7820	0.0245	1.5908	0.5419	2.1326	0.1718	0.4985	0.6703		2,374.863 4	2,374.863 4	0.7681		2,394.065 4

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	0.0246	0.0158	0.2282	7.2000e-004	0.0894	4.6000e-004	0.0899	0.0237	4.2000e-004	0.0241		73.5325	73.5325	1.7200e-003	1.7500e-003	74.0978
Total	0.0246	0.0158	0.2282	7.2000e-004	0.0894	4.6000e-004	0.0899	0.0237	4.2000e-004	0.0241		73.5325	73.5325	1.7200e-003	1.7500e-003	74.0978

The Ritz-Carlton Residences - Orange County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.7158	0.0000	0.7158	0.0773	0.0000	0.0773			0.0000			0.0000
Off-Road	0.6625	20.0179	13.6431	0.0245		0.4988	0.4988		0.4988	0.4988	0.0000	2,374.863 4	2,374.863 4	0.7681		2,394.065 4
Total	0.6625	20.0179	13.6431	0.0245	0.7158	0.4988	1.2146	0.0773	0.4988	0.5760	0.0000	2,374.863 4	2,374.863 4	0.7681		2,394.065 4

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	0.0246	0.0158	0.2282	7.2000e-004	0.0894	4.6000e-004	0.0899	0.0237	4.2000e-004	0.0241		73.5325	73.5325	1.7200e-003	1.7500e-003	74.0978
Total	0.0246	0.0158	0.2282	7.2000e-004	0.0894	4.6000e-004	0.0899	0.0237	4.2000e-004	0.0241		73.5325	73.5325	1.7200e-003	1.7500e-003	74.0978

The Ritz-Carlton Residences - Orange County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.3152	0.0000	7.3152	3.4600	0.0000	3.4600			0.0000			0.0000
Off-Road	1.3330	14.4676	8.7038	0.0206		0.6044	0.6044		0.5560	0.5560		1,995.6147	1,995.6147	0.6454		2,011.7503
Total	1.3330	14.4676	8.7038	0.0206	7.3152	0.6044	7.9196	3.4600	0.5560	4.0160		1,995.6147	1,995.6147	0.6454		2,011.7503

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	0.5044	31.9466	10.6195	0.1444	4.4843	0.1978	4.6821	1.2280	0.1893	1.4173		16,459.6283	16,459.6283	1.6573	2.6404	17,287.8944
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	0.0308	0.0198	0.2853	9.0000e-004	0.1118	5.7000e-004	0.1124	0.0296	5.3000e-004	0.0302		91.9157	91.9157	2.1500e-003	2.1900e-003	92.6223
Total	0.5352	31.9664	10.9048	0.1453	4.5961	0.1984	4.7945	1.2576	0.1898	1.4474		16,551.5439	16,551.5439	1.6594	2.6426	17,380.5167

The Ritz-Carlton Residences - Orange County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2023

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.2919	0.0000	3.2919	1.5570	0.0000	1.5570			0.0000			0.0000
Off-Road	0.6262	18.1050	12.1450	0.0206		0.4850	0.4850		0.4850	0.4850	0.0000	1,995.6147	1,995.6147	0.6454		2,011.7503
Total	0.6262	18.1050	12.1450	0.0206	3.2919	0.4850	3.7769	1.5570	0.4850	2.0420	0.0000	1,995.6147	1,995.6147	0.6454		2,011.7503

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	0.5044	31.9466	10.6195	0.1444	4.4843	0.1978	4.6821	1.2280	0.1893	1.4173		16,459.6283	16,459.6283	1.6573	2.6404	17,287.8944
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	0.0308	0.0198	0.2853	9.0000e-004	0.1118	5.7000e-004	0.1124	0.0296	5.3000e-004	0.0302		91.9157	91.9157	2.1500e-003	2.1900e-003	92.6223
Total	0.5352	31.9664	10.9048	0.1453	4.5961	0.1984	4.7945	1.2576	0.1898	1.4474		16,551.5439	16,551.5439	1.6594	2.6426	17,380.5167

The Ritz-Carlton Residences - Orange County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7136	13.6239	14.2145	0.0250		0.6136	0.6136		0.5880	0.5880		2,289.5233	2,289.5233	0.4330		2,300.3479
Total	1.7136	13.6239	14.2145	0.0250		0.6136	0.6136		0.5880	0.5880		2,289.5233	2,289.5233	0.4330		2,300.3479

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	0.0760	2.8555	1.1696	0.0140	0.4988	0.0141	0.5129	0.1435	0.0135	0.1570		1,542.3704	1,542.3704	0.0914	0.2215	1,610.6568
Worker	0.8376	0.5384	7.7587	0.0244	3.0403	0.0156	3.0559	0.8063	0.0143	0.8206		2,500.1056	2,500.1056	0.0584	0.0596	2,519.3260
Total	0.9136	3.3939	8.9283	0.0385	3.5391	0.0297	3.5687	0.9499	0.0278	0.9777		4,042.4759	4,042.4759	0.1497	0.2811	4,129.9828

The Ritz-Carlton Residences - Orange County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2023

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	0.9471	20.0464	15.4081	0.0250		0.8178	0.8178		0.8178	0.8178	0.0000	2,289.5233	2,289.5233	0.4330		2,300.3479
Total	0.9471	20.0464	15.4081	0.0250		0.8178	0.8178		0.8178	0.8178	0.0000	2,289.5233	2,289.5233	0.4330		2,300.3479

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	0.0760	2.8555	1.1696	0.0140	0.4988	0.0141	0.5129	0.1435	0.0135	0.1570		1,542.3704	1,542.3704	0.0914	0.2215	1,610.6568
Worker	0.8376	0.5384	7.7587	0.0244	3.0403	0.0156	3.0559	0.8063	0.0143	0.8206		2,500.1056	2,500.1056	0.0584	0.0596	2,519.3260
Total	0.9136	3.3939	8.9283	0.0385	3.5391	0.0297	3.5687	0.9499	0.0278	0.9777		4,042.4759	4,042.4759	0.1497	0.2811	4,129.9828

The Ritz-Carlton Residences - Orange County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	1.5971	12.8235	14.1002	0.0250		0.5381	0.5381		0.5153	0.5153		2,289.654 1	2,289.654 1	0.4265		2,300.315 4
Total	1.5971	12.8235	14.1002	0.0250		0.5381	0.5381		0.5153	0.5153		2,289.654 1	2,289.654 1	0.4265		2,300.315 4

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	0.0749	2.8473	1.1604	0.0138	0.4987	0.0148	0.5135	0.1435	0.0141	0.1577		1,518.498 7	1,518.498 7	0.0923	0.2190	1,586.059 4
Worker	0.7900	0.4836	7.2398	0.0237	3.0403	0.0148	3.0551	0.8063	0.0136	0.8199		2,440.154 0	2,440.154 0	0.0530	0.0557	2,458.085 2
Total	0.8649	3.3310	8.4002	0.0375	3.5391	0.0296	3.5686	0.9499	0.0277	0.9776		3,958.652 7	3,958.652 7	0.1453	0.2747	4,044.144 7

The Ritz-Carlton Residences - Orange County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	0.9471	20.0464	15.4081	0.0250		0.8178	0.8178		0.8178	0.8178	0.0000	2,289.654 1	2,289.654 1	0.4265		2,300.315 4
Total	0.9471	20.0464	15.4081	0.0250		0.8178	0.8178		0.8178	0.8178	0.0000	2,289.654 1	2,289.654 1	0.4265		2,300.315 4

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	0.0749	2.8473	1.1604	0.0138	0.4987	0.0148	0.5135	0.1435	0.0141	0.1577		1,518.498 7	1,518.498 7	0.0923	0.2190	1,586.059 4
Worker	0.7900	0.4836	7.2398	0.0237	3.0403	0.0148	3.0551	0.8063	0.0136	0.8199		2,440.154 0	2,440.154 0	0.0530	0.0557	2,458.085 2
Total	0.8649	3.3310	8.4002	0.0375	3.5391	0.0296	3.5686	0.9499	0.0277	0.9776		3,958.652 7	3,958.652 7	0.1453	0.2747	4,044.144 7

The Ritz-Carlton Residences - Orange County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	1.4897	12.0233	14.0072	0.0250		0.4700	0.4700		0.4498	0.4498		2,289.8898	2,289.8898	0.4200		2,300.3887
Total	1.4897	12.0233	14.0072	0.0250		0.4700	0.4700		0.4498	0.4498		2,289.8898	2,289.8898	0.4200		2,300.3887

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	0.0737	2.8336	1.1551	0.0135	0.4987	0.0148	0.5136	0.1435	0.0142	0.1577		1,490.1193	1,490.1193	0.0935	0.2158	1,556.7580
Worker	0.7484	0.4382	6.8148	0.0229	3.0403	0.0142	3.0545	0.8063	0.0130	0.8194		2,380.7281	2,380.7281	0.0482	0.0524	2,397.5519
Total	0.8221	3.2719	7.9698	0.0364	3.5391	0.0290	3.5681	0.9498	0.0272	0.9771		3,870.8474	3,870.8474	0.1417	0.2682	3,954.3099

The Ritz-Carlton Residences - Orange County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	0.9471	20.0464	15.4081	0.0250		0.8178	0.8178		0.8178	0.8178	0.0000	2,289.8898	2,289.8898	0.4200		2,300.3887
Total	0.9471	20.0464	15.4081	0.0250		0.8178	0.8178		0.8178	0.8178	0.0000	2,289.8898	2,289.8898	0.4200		2,300.3887

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	0.0737	2.8336	1.1551	0.0135	0.4987	0.0148	0.5136	0.1435	0.0142	0.1577		1,490.1193	1,490.1193	0.0935	0.2158	1,556.7580
Worker	0.7484	0.4382	6.8148	0.0229	3.0403	0.0142	3.0545	0.8063	0.0130	0.8194		2,380.7281	2,380.7281	0.0482	0.0524	2,397.5519
Total	0.8221	3.2719	7.9698	0.0364	3.5391	0.0290	3.5681	0.9498	0.0272	0.9771		3,870.8474	3,870.8474	0.1417	0.2682	3,954.3099

The Ritz-Carlton Residences - Orange County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 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	0.7854	7.4371	11.6737	0.0179		0.3503	0.3503		0.3234	0.3234		1,710.0067	1,710.0067	0.5420		1,723.5556
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.7854	7.4371	11.6737	0.0179		0.3503	0.3503		0.3234	0.3234		1,710.0067	1,710.0067	0.5420		1,723.5556

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	0.0413	0.0242	0.3758	1.2600e-003	0.1677	7.8000e-004	0.1685	0.0445	7.2000e-004	0.0452		131.2902	131.2902	2.6600e-003	2.8900e-003	132.2179
Total	0.0413	0.0242	0.3758	1.2600e-003	0.1677	7.8000e-004	0.1685	0.0445	7.2000e-004	0.0452		131.2902	131.2902	2.6600e-003	2.8900e-003	132.2179

The Ritz-Carlton Residences - Orange County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 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	0.7344	15.6108	12.9737	0.0179		0.5580	0.5580		0.5580	0.5580	0.0000	1,710.0067	1,710.0067	0.5420		1,723.5556
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.7344	15.6108	12.9737	0.0179		0.5580	0.5580		0.5580	0.5580	0.0000	1,710.0067	1,710.0067	0.5420		1,723.5556

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	0.0413	0.0242	0.3758	1.2600e-003	0.1677	7.8000e-004	0.1685	0.0445	7.2000e-004	0.0452		131.2902	131.2902	2.6600e-003	2.8900e-003	132.2179
Total	0.0413	0.0242	0.3758	1.2600e-003	0.1677	7.8000e-004	0.1685	0.0445	7.2000e-004	0.0452		131.2902	131.2902	2.6600e-003	2.8900e-003	132.2179

The Ritz-Carlton Residences - Orange County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 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					
Archit. Coating	7.8284					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609		281.4481	281.4481	0.0159		281.8443
Total	8.0092	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609		281.4481	281.4481	0.0159		281.8443

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	0.1569	0.0960	1.4373	4.7000e-003	0.6036	2.9400e-003	0.6065	0.1601	2.7000e-003	0.1628		484.4423	484.4423	0.0105	0.0111	488.0022
Total	0.1569	0.0960	1.4373	4.7000e-003	0.6036	2.9400e-003	0.6065	0.1601	2.7000e-003	0.1628		484.4423	484.4423	0.0105	0.0111	488.0022

The Ritz-Carlton Residences - Orange County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 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					
Archit. Coating	7.8284					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1139	2.3524	1.8324	2.9700e-003		0.0951	0.0951		0.0951	0.0951	0.0000	281.4481	281.4481	0.0159		281.8443
Total	7.9423	2.3524	1.8324	2.9700e-003		0.0951	0.0951		0.0951	0.0951	0.0000	281.4481	281.4481	0.0159		281.8443

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	0.1569	0.0960	1.4373	4.7000e-003	0.6036	2.9400e-003	0.6065	0.1601	2.7000e-003	0.1628		484.4423	484.4423	0.0105	0.0111	488.0022
Total	0.1569	0.0960	1.4373	4.7000e-003	0.6036	2.9400e-003	0.6065	0.1601	2.7000e-003	0.1628		484.4423	484.4423	0.0105	0.0111	488.0022

The Ritz-Carlton Residences - Orange County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 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	7.8284					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	7.9993	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	0.1486	0.0870	1.3529	4.5400e-003	0.6036	2.8100e-003	0.6064	0.1601	2.5900e-003	0.1627		472.6446	472.6446	9.5700e-003	0.0104	475.9846
Total	0.1486	0.0870	1.3529	4.5400e-003	0.6036	2.8100e-003	0.6064	0.1601	2.5900e-003	0.1627		472.6446	472.6446	9.5700e-003	0.0104	475.9846

The Ritz-Carlton Residences - Orange County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 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	7.8284					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1139	2.3524	1.8324	2.9700e-003		0.0951	0.0951		0.0951	0.0951	0.0000	281.4481	281.4481	0.0154		281.8319
Total	7.9423	2.3524	1.8324	2.9700e-003		0.0951	0.0951		0.0951	0.0951	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	0.1486	0.0870	1.3529	4.5400e-003	0.6036	2.8100e-003	0.6064	0.1601	2.5900e-003	0.1627		472.6446	472.6446	9.5700e-003	0.0104	475.9846
Total	0.1486	0.0870	1.3529	4.5400e-003	0.6036	2.8100e-003	0.6064	0.1601	2.5900e-003	0.1627		472.6446	472.6446	9.5700e-003	0.0104	475.9846

The Ritz-Carlton Residences - Orange County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Density

Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.5705	1.5168	14.1235	0.0306	3.5656	0.0219	3.5875	0.9504	0.0204	0.9708		3,198.080 7	3,198.080 7	0.2153	0.1424	3,245.899 3
Unmitigated	1.8860	2.0284	18.9381	0.0442	5.1977	0.0307	5.2284	1.3854	0.0286	1.4140		4,617.768 3	4,617.768 3	0.2784	0.1898	4,681.283 4

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments High Rise	721.86	721.86	721.86	2,466,705	1,692,160
Enclosed Parking with Elevator	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	721.86	721.86	721.86	2,466,705	1,692,160

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	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 High Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
Enclosed Parking with Elevator	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

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Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments High Rise	0.547453	0.060181	0.185039	0.126487	0.024236	0.006679	0.014707	0.004926	0.000662	0.000378	0.024745	0.000705	0.003801
Enclosed Parking with Elevator	0.547453	0.060181	0.185039	0.126487	0.024236	0.006679	0.014707	0.004926	0.000662	0.000378	0.024745	0.000705	0.003801
Other Non-Asphalt Surfaces	0.547453	0.060181	0.185039	0.126487	0.024236	0.006679	0.014707	0.004926	0.000662	0.000378	0.024745	0.000705	0.003801

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
NaturalGas Mitigated	0.0524	0.4476	0.1905	2.8600e-003		0.0362	0.0362		0.0362	0.0362		571.4068	571.4068	0.0110	0.0105	574.8024
NaturalGas Unmitigated	0.0524	0.4476	0.1905	2.8600e-003		0.0362	0.0362		0.0362	0.0362		571.4068	571.4068	0.0110	0.0105	574.8024

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5.2 Energy by Land Use - Natural Gas

Unmitigated

	Natural Gas 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 High Rise	4856.96	0.0524	0.4476	0.1905	2.8600e-003		0.0362	0.0362		0.0362	0.0362		571.4068	571.4068	0.0110	0.0105	574.8024
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0524	0.4476	0.1905	2.8600e-003		0.0362	0.0362		0.0362	0.0362		571.4068	571.4068	0.0110	0.0105	574.8024

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5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments High Rise	4.85696	0.0524	0.4476	0.1905	2.8600e-003		0.0362	0.0362		0.0362	0.0362		571.4068	571.4068	0.0110	0.0105	574.8024
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0524	0.4476	0.1905	2.8600e-003		0.0362	0.0362		0.0362	0.0362		571.4068	571.4068	0.0110	0.0105	574.8024

6.0 Area Detail

6.1 Mitigation Measures Area

Use only Natural Gas Hearths

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	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	9.7683	2.5255	14.1978	0.0159		0.2649	0.2649		0.2649	0.2649	0.0000	3,054.1499	3,054.1499	0.0812	0.0556	3,072.7347
Unmitigated	51.1543	3.4507	94.0474	0.2070		12.2188	12.2188		12.2188	12.2188	1,489.3400	2,885.7969	4,375.1369	4.4646	0.1011	4,516.8750

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.7400					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	8.3495					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	41.6637	3.2990	80.8597	0.2063		12.1457	12.1457		12.1457	12.1457	1,489.3400	2,862.0000	4,351.3400	4.4415	0.1011	4,492.5011
Landscaping	0.4011	0.1517	13.1877	7.0000e-004		0.0730	0.0730		0.0730	0.0730		23.7969	23.7969	0.0231		24.3739
Total	51.1543	3.4507	94.0474	0.2070		12.2188	12.2188		12.2188	12.2188	1,489.3400	2,885.7969	4,375.1369	4.4646	0.1011	4,516.8750

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6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.7400					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	8.3495					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.2778	2.3738	1.0101	0.0152		0.1919	0.1919		0.1919	0.1919	0.0000	3,030.3529	3,030.3529	0.0581	0.0556	3,048.3608
Landscaping	0.4011	0.1517	13.1877	7.0000e-004		0.0730	0.0730		0.0730	0.0730		23.7969	23.7969	0.0231		24.3739
Total	9.7683	2.5255	14.1978	0.0159		0.2649	0.2649		0.2649	0.2649	0.0000	3,054.1498	3,054.1498	0.0812	0.0556	3,072.7347

7.0 Water Detail

7.1 Mitigation Measures Water

Use Water Efficient Irrigation System

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
Emergency Generator	1	0.13	50	350	0.73	Diesel

Boilers

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

Equipment Type	Number
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10.1 Stationary Sources

Unmitigated/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
Equipment Type	lb/day										lb/day					
Emergency Generator - Diesel (300 - 600 HP)	0.0747	0.2087	0.1904	3.6000e-004		0.0110	0.0110		0.0110	0.0110		38.1979	38.1979	5.3600e-003		38.3318
Total	0.0747	0.2087	0.1904	3.6000e-004		0.0110	0.0110		0.0110	0.0110		38.1979	38.1979	5.3600e-003		38.3318

11.0 Vegetation

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

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1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Hotel	159.00	Room	1.33	63,048.00	0
Enclosed Parking with Elevator	612.00	Space	0.52	159,846.00	0
Other Non-Asphalt Surfaces	0.93	Acre	0.93	40,300.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	30
Climate Zone	8			Operational Year	2025
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	CH4 Intensity (lb/MWhr)	0.033	N2O Intensity (lb/MWhr)	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Based on the Project Description provided to LSA on January 21, 2022. Other non-asphalt surfaces includes hardscape.

Construction Phase - Operational run only.

Vehicle Trips - Trip rates based on the average daily trip generation provided in the project's Trip Generation letter dated January 26, 2022.

Energy Use - Using historical data.

Table Name	Column Name	Default Value	New Value
tblEnergyUse	LightingElect	2.63	2.63
tblEnergyUse	T24E	3.92	3.92
tblLandUse	LandUseSquareFeet	230,868.00	63,048.00

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblLandUse	LandUseSquareFeet	244,800.00	159,846.00
tblLandUse	LandUseSquareFeet	40,510.80	40,300.00
tblLandUse	LotAcreage	5.30	1.33
tblLandUse	LotAcreage	5.51	0.52
tblVehicleTrips	ST_TR	8.19	7.99
tblVehicleTrips	SU_TR	5.95	7.99
tblVehicleTrips	WD_TR	8.36	7.99

2.0 Emissions Summary

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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					
2022	0.1643	1.2874	1.3364	3.0600e-003	0.1179	0.0566	0.1745	0.0359	0.0539	0.0899	0.0000	269.8612	269.8612	0.0374	8.7200e-003	273.3954
2023	0.4253	0.7904	0.9410	2.1800e-003	0.0735	0.0327	0.1062	0.0198	0.0312	0.0511	0.0000	192.3166	192.3166	0.0247	6.4200e-003	194.8473
Maximum	0.4253	1.2874	1.3364	3.0600e-003	0.1179	0.0566	0.1745	0.0359	0.0539	0.0899	0.0000	269.8612	269.8612	0.0374	8.7200e-003	273.3954

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					
2022	0.1643	1.2874	1.3364	3.0600e-003	0.1179	0.0566	0.1745	0.0359	0.0539	0.0899	0.0000	269.8610	269.8610	0.0374	8.7200e-003	273.3952
2023	0.4253	0.7904	0.9410	2.1800e-003	0.0735	0.0327	0.1062	0.0198	0.0312	0.0511	0.0000	192.3165	192.3165	0.0247	6.4200e-003	194.8472
Maximum	0.4253	1.2874	1.3364	3.0600e-003	0.1179	0.0566	0.1745	0.0359	0.0539	0.0899	0.0000	269.8610	269.8610	0.0374	8.7200e-003	273.3952

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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
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	6-1-2022	8-31-2022	0.6148	0.6148
2	9-1-2022	11-30-2022	0.6209	0.6209
3	12-1-2022	2-28-2023	0.5810	0.5810
4	3-1-2023	5-31-2023	0.5682	0.5682
5	6-1-2023	8-31-2023	0.2812	0.2812
		Highest	0.6209	0.6209

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.2737	9.0000e-005	9.8300e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0192	0.0192	5.0000e-005	0.0000	0.0204
Energy	0.0123	0.1120	0.0941	6.7000e-004		8.5100e-003	8.5100e-003		8.5100e-003	8.5100e-003	0.0000	431.3749	431.3749	0.0285	5.4000e-003	433.6959
Mobile	0.4942	0.4980	4.6015	0.0101	1.1420	7.1200e-003	1.1491	0.3048	6.6100e-003	0.3114	0.0000	954.2809	954.2809	0.0628	0.0421	968.3871
Waste						0.0000	0.0000		0.0000	0.0000	17.6704	0.0000	17.6704	1.0443	0.0000	43.7776
Water						0.0000	0.0000		0.0000	0.0000	1.2796	10.1968	11.4764	0.1323	3.2100e-003	15.7394
Total	0.7802	0.6101	4.7054	0.0107	1.1420	0.0157	1.1576	0.3048	0.0152	0.3200	18.9500	1,395.8718	1,414.8217	1.2679	0.0507	1,461.6203

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2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.2737	9.0000e-005	9.8300e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0192	0.0192	5.0000e-005	0.0000	0.0204
Energy	0.0123	0.1120	0.0941	6.7000e-004		8.5100e-003	8.5100e-003		8.5100e-003	8.5100e-003	0.0000	431.3749	431.3749	0.0285	5.4000e-003	433.6959
Mobile	0.4942	0.4980	4.6015	0.0101	1.1420	7.1200e-003	1.1491	0.3048	6.6100e-003	0.3114	0.0000	954.2809	954.2809	0.0628	0.0421	968.3871
Waste						0.0000	0.0000		0.0000	0.0000	17.6704	0.0000	17.6704	1.0443	0.0000	43.7776
Water						0.0000	0.0000		0.0000	0.0000	1.2796	10.1968	11.4764	0.1323	3.2100e-003	15.7394
Total	0.7802	0.6101	4.7054	0.0107	1.1420	0.0157	1.1576	0.3048	0.0152	0.3200	18.9500	1,395.8718	1,414.8217	1.2679	0.0507	1,461.6203

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	6/1/2022	6/28/2022	5	20	
2	Site Preparation	Site Preparation	6/29/2022	7/1/2022	5	3	
3	Grading	Grading	7/2/2022	7/11/2022	5	6	

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4	Building Construction	Building Construction	7/12/2022	5/15/2023	5	220
5	Paving	Paving	5/16/2023	5/29/2023	5	10
6	Architectural Coating	Architectural Coating	5/30/2023	6/12/2023	5	10

Acres of Grading (Site Preparation Phase): 4.5

Acres of Grading (Grading Phase): 6

Acres of Paving: 1.45

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 94,572; Non-Residential Outdoor: 31,524; Striped Parking Area: 12,009 (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
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction	Cranes	1	8.00	231	0.29
Building Construction	Forklifts	2	7.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Grading	Graders	1	8.00	187	0.41
Site Preparation	Graders	1	8.00	187	0.41
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Site Preparation	Scrapers	1	8.00	367	0.48
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37

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Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Construction	Welders	3	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	5	13.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	111.00	43.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	22.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0169	0.1662	0.1396	2.4000e-004		8.3800e-003	8.3800e-003		7.8300e-003	7.8300e-003	0.0000	21.0777	21.0777	5.3700e-003	0.0000	21.2120
Total	0.0169	0.1662	0.1396	2.4000e-004		8.3800e-003	8.3800e-003		7.8300e-003	7.8300e-003	0.0000	21.0777	21.0777	5.3700e-003	0.0000	21.2120

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.9000e-004	2.9000e-004	4.0700e-003	1.0000e-005	1.4300e-003	1.0000e-005	1.4300e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.1279	1.1279	3.0000e-005	3.0000e-005	1.1370
Total	3.9000e-004	2.9000e-004	4.0700e-003	1.0000e-005	1.4300e-003	1.0000e-005	1.4300e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.1279	1.1279	3.0000e-005	3.0000e-005	1.1370

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	0.0169	0.1662	0.1396	2.4000e-004		8.3800e-003	8.3800e-003		7.8300e-003	7.8300e-003	0.0000	21.0777	21.0777	5.3700e-003	0.0000	21.2119
Total	0.0169	0.1662	0.1396	2.4000e-004		8.3800e-003	8.3800e-003		7.8300e-003	7.8300e-003	0.0000	21.0777	21.0777	5.3700e-003	0.0000	21.2119

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3.2 Demolition - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.9000e-004	2.9000e-004	4.0700e-003	1.0000e-005	1.4300e-003	1.0000e-005	1.4300e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.1279	1.1279	3.0000e-005	3.0000e-005	1.1370
Total	3.9000e-004	2.9000e-004	4.0700e-003	1.0000e-005	1.4300e-003	1.0000e-005	1.4300e-003	3.8000e-004	1.0000e-005	3.9000e-004	0.0000	1.1279	1.1279	3.0000e-005	3.0000e-005	1.1370

3.3 Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.3900e-003	0.0000	2.3900e-003	2.6000e-004	0.0000	2.6000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.0700e-003	0.0235	0.0151	4.0000e-005		8.9000e-004	8.9000e-004		8.2000e-004	8.2000e-004	0.0000	3.2321	3.2321	1.0500e-003	0.0000	3.2582
Total	2.0700e-003	0.0235	0.0151	4.0000e-005	2.3900e-003	8.9000e-004	3.2800e-003	2.6000e-004	8.2000e-004	1.0800e-003	0.0000	3.2321	3.2321	1.0500e-003	0.0000	3.2582

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2022

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	4.0000e-005	3.0000e-005	3.8000e-004	0.0000	1.3000e-004	0.0000	1.3000e-004	3.0000e-005	0.0000	4.0000e-005	0.0000	0.1041	0.1041	0.0000	0.0000	0.1050
Total	4.0000e-005	3.0000e-005	3.8000e-004	0.0000	1.3000e-004	0.0000	1.3000e-004	3.0000e-005	0.0000	4.0000e-005	0.0000	0.1041	0.1041	0.0000	0.0000	0.1050

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					2.3900e-003	0.0000	2.3900e-003	2.6000e-004	0.0000	2.6000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.0700e-003	0.0235	0.0151	4.0000e-005		8.9000e-004	8.9000e-004		8.2000e-004	8.2000e-004	0.0000	3.2321	3.2321	1.0500e-003	0.0000	3.2582
Total	2.0700e-003	0.0235	0.0151	4.0000e-005	2.3900e-003	8.9000e-004	3.2800e-003	2.6000e-004	8.2000e-004	1.0800e-003	0.0000	3.2321	3.2321	1.0500e-003	0.0000	3.2582

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2022

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	4.0000e-005	3.0000e-005	3.8000e-004	0.0000	1.3000e-004	0.0000	1.3000e-004	3.0000e-005	0.0000	4.0000e-005	0.0000	0.1041	0.1041	0.0000	0.0000	0.1050
Total	4.0000e-005	3.0000e-005	3.8000e-004	0.0000	1.3000e-004	0.0000	1.3000e-004	3.0000e-005	0.0000	4.0000e-005	0.0000	0.1041	0.1041	0.0000	0.0000	0.1050

3.4 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0213	0.0000	0.0213	0.0103	0.0000	0.0103	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.6200e-003	0.0510	0.0277	6.0000e-005		2.2300e-003	2.2300e-003		2.0500e-003	2.0500e-003	0.0000	5.4308	5.4308	1.7600e-003	0.0000	5.4747
Total	4.6200e-003	0.0510	0.0277	6.0000e-005	0.0213	2.2300e-003	0.0235	0.0103	2.0500e-003	0.0123	0.0000	5.4308	5.4308	1.7600e-003	0.0000	5.4747

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2022

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	9.0000e-005	7.0000e-005	9.4000e-004	0.0000	3.3000e-004	0.0000	3.3000e-004	9.0000e-005	0.0000	9.0000e-005	0.0000	0.2603	0.2603	1.0000e-005	1.0000e-005	0.2624
Total	9.0000e-005	7.0000e-005	9.4000e-004	0.0000	3.3000e-004	0.0000	3.3000e-004	9.0000e-005	0.0000	9.0000e-005	0.0000	0.2603	0.2603	1.0000e-005	1.0000e-005	0.2624

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					0.0213	0.0000	0.0213	0.0103	0.0000	0.0103	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.6200e-003	0.0510	0.0277	6.0000e-005		2.2300e-003	2.2300e-003		2.0500e-003	2.0500e-003	0.0000	5.4308	5.4308	1.7600e-003	0.0000	5.4747
Total	4.6200e-003	0.0510	0.0277	6.0000e-005	0.0213	2.2300e-003	0.0235	0.0103	2.0500e-003	0.0123	0.0000	5.4308	5.4308	1.7600e-003	0.0000	5.4747

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3.4 Grading - 2022

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	9.0000e-005	7.0000e-005	9.4000e-004	0.0000	3.3000e-004	0.0000	3.3000e-004	9.0000e-005	0.0000	9.0000e-005	0.0000	0.2603	0.2603	1.0000e-005	1.0000e-005	0.2624
Total	9.0000e-005	7.0000e-005	9.4000e-004	0.0000	3.3000e-004	0.0000	3.3000e-004	9.0000e-005	0.0000	9.0000e-005	0.0000	0.2603	0.2603	1.0000e-005	1.0000e-005	0.2624

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1150	0.9055	0.8899	1.5500e-003		0.0435	0.0435		0.0417	0.0417	0.0000	128.7617	128.7617	0.0248	0.0000	129.3827
Total	0.1150	0.9055	0.8899	1.5500e-003		0.0435	0.0435		0.0417	0.0417	0.0000	128.7617	128.7617	0.0248	0.0000	129.3827

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3.5 Building Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.4000e-003	0.1253	0.0432	5.0000e-004	0.0168	1.1700e-003	0.0180	4.8500e-003	1.1100e-003	5.9600e-003	0.0000	50.1573	50.1573	2.8700e-003	7.1900e-003	52.3727
Worker	0.0207	0.0156	0.2156	6.5000e-004	0.0756	4.2000e-004	0.0760	0.0201	3.8000e-004	0.0205	0.0000	59.7094	59.7094	1.4800e-003	1.4900e-003	60.1908
Total	0.0251	0.1409	0.2587	1.1500e-003	0.0924	1.5900e-003	0.0939	0.0249	1.4900e-003	0.0264	0.0000	109.8667	109.8667	4.3500e-003	8.6800e-003	112.5635

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	0.1150	0.9055	0.8899	1.5500e-003		0.0435	0.0435		0.0417	0.0417	0.0000	128.7615	128.7615	0.0248	0.0000	129.3826
Total	0.1150	0.9055	0.8899	1.5500e-003		0.0435	0.0435		0.0417	0.0417	0.0000	128.7615	128.7615	0.0248	0.0000	129.3826

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3.5 Building Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.4000e-003	0.1253	0.0432	5.0000e-004	0.0168	1.1700e-003	0.0180	4.8500e-003	1.1100e-003	5.9600e-003	0.0000	50.1573	50.1573	2.8700e-003	7.1900e-003	52.3727
Worker	0.0207	0.0156	0.2156	6.5000e-004	0.0756	4.2000e-004	0.0760	0.0201	3.8000e-004	0.0205	0.0000	59.7094	59.7094	1.4800e-003	1.4900e-003	60.1908
Total	0.0251	0.1409	0.2587	1.1500e-003	0.0924	1.5900e-003	0.0939	0.0249	1.4900e-003	0.0264	0.0000	109.8667	109.8667	4.3500e-003	8.6800e-003	112.5635

3.5 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0823	0.6540	0.6823	1.2000e-003		0.0295	0.0295		0.0282	0.0282	0.0000	99.6970	99.6970	0.0189	0.0000	100.1683
Total	0.0823	0.6540	0.6823	1.2000e-003		0.0295	0.0295		0.0282	0.0282	0.0000	99.6970	99.6970	0.0189	0.0000	100.1683

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3.5 Building Construction - 2023

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	2.0500e-003	0.0758	0.0304	3.7000e-004	0.0130	3.7000e-004	0.0134	3.7500e-003	3.6000e-004	4.1100e-003	0.0000	36.9939	36.9939	2.2000e-003	5.3100e-003	38.6319
Worker	0.0151	0.0108	0.1554	4.8000e-004	0.0585	3.0000e-004	0.0588	0.0155	2.8000e-004	0.0158	0.0000	45.0292	45.0292	1.0400e-003	1.0700e-003	45.3752
Total	0.0171	0.0865	0.1859	8.5000e-004	0.0715	6.7000e-004	0.0722	0.0193	6.4000e-004	0.0199	0.0000	82.0231	82.0231	3.2400e-003	6.3800e-003	84.0070

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	0.0823	0.6540	0.6823	1.2000e-003		0.0295	0.0295		0.0282	0.0282	0.0000	99.6969	99.6969	0.0189	0.0000	100.1682
Total	0.0823	0.6540	0.6823	1.2000e-003		0.0295	0.0295		0.0282	0.0282	0.0000	99.6969	99.6969	0.0189	0.0000	100.1682

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3.5 Building Construction - 2023

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	2.0500e-003	0.0758	0.0304	3.7000e-004	0.0130	3.7000e-004	0.0134	3.7500e-003	3.6000e-004	4.1100e-003	0.0000	36.9939	36.9939	2.2000e-003	5.3100e-003	38.6319
Worker	0.0151	0.0108	0.1554	4.8000e-004	0.0585	3.0000e-004	0.0588	0.0155	2.8000e-004	0.0158	0.0000	45.0292	45.0292	1.0400e-003	1.0700e-003	45.3752
Total	0.0171	0.0865	0.1859	8.5000e-004	0.0715	6.7000e-004	0.0722	0.0193	6.4000e-004	0.0199	0.0000	82.0231	82.0231	3.2400e-003	6.3800e-003	84.0070

3.6 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	4.4000e-003	0.0431	0.0584	9.0000e-005		2.1700e-003	2.1700e-003		2.0000e-003	2.0000e-003	0.0000	7.7564	7.7564	2.4600e-003	0.0000	7.8179
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	4.4000e-003	0.0431	0.0584	9.0000e-005		2.1700e-003	2.1700e-003		2.0000e-003	2.0000e-003	0.0000	7.7564	7.7564	2.4600e-003	0.0000	7.8179

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3.6 Paving - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.1000e-004	1.5000e-004	2.1900e-003	1.0000e-005	8.2000e-004	0.0000	8.3000e-004	2.2000e-004	0.0000	2.2000e-004	0.0000	0.6339	0.6339	1.0000e-005	2.0000e-005	0.6387
Total	2.1000e-004	1.5000e-004	2.1900e-003	1.0000e-005	8.2000e-004	0.0000	8.3000e-004	2.2000e-004	0.0000	2.2000e-004	0.0000	0.6339	0.6339	1.0000e-005	2.0000e-005	0.6387

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	4.4000e-003	0.0431	0.0584	9.0000e-005		2.1700e-003	2.1700e-003		2.0000e-003	2.0000e-003	0.0000	7.7564	7.7564	2.4600e-003	0.0000	7.8178
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	4.4000e-003	0.0431	0.0584	9.0000e-005		2.1700e-003	2.1700e-003		2.0000e-003	2.0000e-003	0.0000	7.7564	7.7564	2.4600e-003	0.0000	7.8178

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.1000e-004	1.5000e-004	2.1900e-003	1.0000e-005	8.2000e-004	0.0000	8.3000e-004	2.2000e-004	0.0000	2.2000e-004	0.0000	0.6339	0.6339	1.0000e-005	2.0000e-005	0.6387
Total	2.1000e-004	1.5000e-004	2.1900e-003	1.0000e-005	8.2000e-004	0.0000	8.3000e-004	2.2000e-004	0.0000	2.2000e-004	0.0000	0.6339	0.6339	1.0000e-005	2.0000e-005	0.6387

3.7 Architectural Coating - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.3201					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.6000e-004	6.5100e-003	9.0600e-003	1.0000e-005		3.5000e-004	3.5000e-004		3.5000e-004	3.5000e-004	0.0000	1.2766	1.2766	8.0000e-005	0.0000	1.2785
Total	0.3210	6.5100e-003	9.0600e-003	1.0000e-005		3.5000e-004	3.5000e-004		3.5000e-004	3.5000e-004	0.0000	1.2766	1.2766	8.0000e-005	0.0000	1.2785

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.1000e-004	2.2000e-004	3.2100e-003	1.0000e-005	1.2100e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	0.9297	0.9297	2.0000e-005	2.0000e-005	0.9368
Total	3.1000e-004	2.2000e-004	3.2100e-003	1.0000e-005	1.2100e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	0.9297	0.9297	2.0000e-005	2.0000e-005	0.9368

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.3201					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.6000e-004	6.5100e-003	9.0600e-003	1.0000e-005		3.5000e-004	3.5000e-004		3.5000e-004	3.5000e-004	0.0000	1.2766	1.2766	8.0000e-005	0.0000	1.2785
Total	0.3210	6.5100e-003	9.0600e-003	1.0000e-005		3.5000e-004	3.5000e-004		3.5000e-004	3.5000e-004	0.0000	1.2766	1.2766	8.0000e-005	0.0000	1.2785

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.1000e-004	2.2000e-004	3.2100e-003	1.0000e-005	1.2100e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	0.9297	0.9297	2.0000e-005	2.0000e-005	0.9368
Total	3.1000e-004	2.2000e-004	3.2100e-003	1.0000e-005	1.2100e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	0.9297	0.9297	2.0000e-005	2.0000e-005	0.9368

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

The Ritz-Carlton Residences - Existing Uses - Orange County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	0.4942	0.4980	4.6015	0.0101	1.1420	7.1200e-003	1.1491	0.3048	6.6100e-003	0.3114	0.0000	954.2809	954.2809	0.0628	0.0421	968.3871
Unmitigated	0.4942	0.4980	4.6015	0.0101	1.1420	7.1200e-003	1.1491	0.3048	6.6100e-003	0.3114	0.0000	954.2809	954.2809	0.0628	0.0421	968.3871

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Enclosed Parking with Elevator	0.00	0.00	0.00		
Hotel	1,270.41	1,270.41	1,270.41	3,031,416	3,031,416
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	1,270.41	1,270.41	1,270.41	3,031,416	3,031,416

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	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
Enclosed Parking with Elevator	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Hotel	16.60	8.40	6.90	19.40	61.60	19.00	58	38	4
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Enclosed Parking with Elevator	0.547453	0.060181	0.185039	0.126487	0.024236	0.006679	0.014707	0.004926	0.000662	0.000378	0.024745	0.000705	0.003801
Hotel	0.547453	0.060181	0.185039	0.126487	0.024236	0.006679	0.014707	0.004926	0.000662	0.000378	0.024745	0.000705	0.003801

The Ritz-Carlton Residences - Existing Uses - Orange County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Other Non-Asphalt Surfaces	0.547453	0.060181	0.185039	0.126487	0.024236	0.006679	0.014707	0.004926	0.000662	0.000378	0.024745	0.000705	0.003801
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5.0 Energy Detail

Historical Energy Use: Y

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	309.4461	309.4461	0.0261	3.1700e-003	311.0425
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	309.4461	309.4461	0.0261	3.1700e-003	311.0425
NaturalGas Mitigated	0.0123	0.1120	0.0941	6.7000e-004		8.5100e-003	8.5100e-003		8.5100e-003	8.5100e-003	0.0000	121.9288	121.9288	2.3400e-003	2.2400e-003	122.6534
NaturalGas Unmitigated	0.0123	0.1120	0.0941	6.7000e-004		8.5100e-003	8.5100e-003		8.5100e-003	8.5100e-003	0.0000	121.9288	121.9288	2.3400e-003	2.2400e-003	122.6534

The Ritz-Carlton Residences - Existing Uses - Orange County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - Natural Gas

Unmitigated

	Natural Gas 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					
Enclosed Parking with Elevator	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
Hotel	2.28486e+006	0.0123	0.1120	0.0941	6.7000e-004		8.5100e-003	8.5100e-003		8.5100e-003	8.5100e-003	0.0000	121.9288	121.9288	2.3400e-003	2.2400e-003	122.6534
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0123	0.1120	0.0941	6.7000e-004		8.5100e-003	8.5100e-003		8.5100e-003	8.5100e-003	0.0000	121.9288	121.9288	2.3400e-003	2.2400e-003	122.6534

The Ritz-Carlton Residences - Existing Uses - Orange County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - Natural Gas

Mitigated

	Natural Gas 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					
Enclosed Parking with Elevator	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
Hotel	2.28486e+006	0.0123	0.1120	0.0941	6.7000e-004		8.5100e-003	8.5100e-003		8.5100e-003	8.5100e-003	0.0000	121.9288	121.9288	2.3400e-003	2.2400e-003	122.6534
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0123	0.1120	0.0941	6.7000e-004		8.5100e-003	8.5100e-003		8.5100e-003	8.5100e-003	0.0000	121.9288	121.9288	2.3400e-003	2.2400e-003	122.6534

The Ritz-Carlton Residences - Existing Uses - Orange County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Enclosed Parking with Elevator	1.0772e+006	191.0363	0.0161	1.9500e-003	192.0219
Hotel	667678	118.4098	9.9900e-003	1.2100e-003	119.0206
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		309.4461	0.0261	3.1600e-003	311.0425

The Ritz-Carlton Residences - Existing Uses - Orange County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Enclosed Parking with Elevator	1.0772e+006	191.0363	0.0161	1.9500e-003	192.0219
Hotel	667678	118.4098	9.9900e-003	1.2100e-003	119.0206
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		309.4461	0.0261	3.1600e-003	311.0425

6.0 Area Detail

6.1 Mitigation Measures Area

The Ritz-Carlton Residences - Existing Uses - Orange County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	0.2737	9.0000e-005	9.8300e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0192	0.0192	5.0000e-005	0.0000	0.0204
Unmitigated	0.2737	9.0000e-005	9.8300e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0192	0.0192	5.0000e-005	0.0000	0.0204

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	0.0320					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.2408					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	9.0000e-004	9.0000e-005	9.8300e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0192	0.0192	5.0000e-005	0.0000	0.0204
Total	0.2737	9.0000e-005	9.8300e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0192	0.0192	5.0000e-005	0.0000	0.0204

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	0.0320					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.2408					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	9.0000e-004	9.0000e-005	9.8300e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0192	0.0192	5.0000e-005	0.0000	0.0204
Total	0.2737	9.0000e-005	9.8300e-003	0.0000		3.0000e-005	3.0000e-005		3.0000e-005	3.0000e-005	0.0000	0.0192	0.0192	5.0000e-005	0.0000	0.0204

7.0 Water Detail

7.1 Mitigation Measures Water

The Ritz-Carlton Residences - Existing Uses - Orange County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	11.4764	0.1323	3.2100e-003	15.7394
Unmitigated	11.4764	0.1323	3.2100e-003	15.7394

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Hotel	4.03332 / 0.448146	11.4764	0.1323	3.2100e-003	15.7394
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		11.4764	0.1323	3.2100e-003	15.7394

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Hotel	4.03332 / 0.448146	11.4764	0.1323	3.2100e-003	15.7394
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		11.4764	0.1323	3.2100e-003	15.7394

8.0 Waste Detail

8.1 Mitigation Measures Waste

The Ritz-Carlton Residences - Existing Uses - Orange County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	17.6704	1.0443	0.0000	43.7776
Unmitigated	17.6704	1.0443	0.0000	43.7776

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Hotel	87.05	17.6704	1.0443	0.0000	43.7776
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		17.6704	1.0443	0.0000	43.7776

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Hotel	87.05	17.6704	1.0443	0.0000	43.7776
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		17.6704	1.0443	0.0000	43.7776

9.0 Operational Offroad

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

Fire Pumps and Emergency Generators

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

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

Equipment Type	Number
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The Ritz-Carlton Residences - Existing Uses - Orange County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

11.0 Vegetation

The Ritz-Carlton Residences - Existing Uses - Orange County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

The Ritz-Carlton Residences - Existing Uses

Orange County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Hotel	159.00	Room	1.33	63,048.00	0
Enclosed Parking with Elevator	612.00	Space	0.52	159,846.00	0
Other Non-Asphalt Surfaces	0.93	Acre	0.93	40,300.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	30
Climate Zone	8			Operational Year	2025
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	CH4 Intensity (lb/MWhr)	0.033	N2O Intensity (lb/MWhr)	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Based on the Project Description provided to LSA on January 21, 2022. Other non-asphalt surfaces includes hardscape.

Construction Phase - Operational run only.

Vehicle Trips - Trip rates based on the average daily trip generation provided in the project's Trip Generation letter dated January 26, 2022.

Energy Use - Using historical data.

Table Name	Column Name	Default Value	New Value
tblEnergyUse	LightingElect	2.63	2.63
tblEnergyUse	T24E	3.92	3.92
tblLandUse	LandUseSquareFeet	230,868.00	63,048.00

The Ritz-Carlton Residences - Existing Uses - Orange County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblLandUse	LandUseSquareFeet	244,800.00	159,846.00
tblLandUse	LandUseSquareFeet	40,510.80	40,300.00
tblLandUse	LotAcreage	5.30	1.33
tblLandUse	LotAcreage	5.51	0.52
tblVehicleTrips	ST_TR	8.19	7.99
tblVehicleTrips	SU_TR	5.95	7.99
tblVehicleTrips	WD_TR	8.36	7.99

2.0 Emissions Summary

The Ritz-Carlton Residences - Existing Uses - Orange County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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					
2022	2.2610	17.0038	18.6913	0.0440	7.1944	0.8387	7.9373	3.4544	0.7836	4.1378	0.0000	4,281.017 4	4,281.017 4	0.7700	0.1523	4,339.377 2
2023	64.2653	15.3310	18.2381	0.0432	1.5157	0.6277	2.1434	0.4082	0.6013	1.0094	0.0000	4,210.050 4	4,210.050 4	0.5451	0.1447	4,265.835 0
Maximum	64.2653	17.0038	18.6913	0.0440	7.1944	0.8387	7.9373	3.4544	0.7836	4.1378	0.0000	4,281.017 4	4,281.017 4	0.7700	0.1523	4,339.377 2

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					
2022	2.2610	17.0038	18.6913	0.0440	7.1944	0.8387	7.9373	3.4544	0.7836	4.1378	0.0000	4,281.017 4	4,281.017 4	0.7700	0.1523	4,339.377 2
2023	64.2653	15.3310	18.2381	0.0432	1.5157	0.6277	2.1434	0.4082	0.6013	1.0094	0.0000	4,210.050 4	4,210.050 4	0.5451	0.1447	4,265.835 0
Maximum	64.2653	17.0038	18.6913	0.0440	7.1944	0.8387	7.9373	3.4544	0.7836	4.1378	0.0000	4,281.017 4	4,281.017 4	0.7700	0.1523	4,339.377 2

The Ritz-Carlton Residences - Existing Uses - Orange County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	1.5019	7.1000e-004	0.0786	1.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004		0.1689	0.1689	4.4000e-004		0.1799
Energy	0.0675	0.6137	0.5155	3.6800e-003		0.0466	0.0466		0.0466	0.0466		736.4575	736.4575	0.0141	0.0135	740.8339
Mobile	2.8163	2.5189	25.1501	0.0570	6.3876	0.0392	6.4268	1.7026	0.0364	1.7390		5,950.0122	5,950.0122	0.3686	0.2436	6,031.8195
Total	4.3857	3.1333	25.7442	0.0607	6.3876	0.0861	6.4737	1.7026	0.0833	1.7859		6,686.6387	6,686.6387	0.3831	0.2571	6,772.8334

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.5019	7.1000e-004	0.0786	1.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004		0.1689	0.1689	4.4000e-004		0.1799
Energy	0.0675	0.6137	0.5155	3.6800e-003		0.0466	0.0466		0.0466	0.0466		736.4575	736.4575	0.0141	0.0135	740.8339
Mobile	2.8163	2.5189	25.1501	0.0570	6.3876	0.0392	6.4268	1.7026	0.0364	1.7390		5,950.0122	5,950.0122	0.3686	0.2436	6,031.8195
Total	4.3857	3.1333	25.7442	0.0607	6.3876	0.0861	6.4737	1.7026	0.0833	1.7859		6,686.6387	6,686.6387	0.3831	0.2571	6,772.8334

The Ritz-Carlton Residences - Existing Uses - Orange County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	6/1/2022	6/28/2022	5	20	
2	Site Preparation	Site Preparation	6/29/2022	7/1/2022	5	3	
3	Grading	Grading	7/2/2022	7/11/2022	5	6	
4	Building Construction	Building Construction	7/12/2022	5/15/2023	5	220	
5	Paving	Paving	5/16/2023	5/29/2023	5	10	
6	Architectural Coating	Architectural Coating	5/30/2023	6/12/2023	5	10	

Acres of Grading (Site Preparation Phase): 4.5

Acres of Grading (Grading Phase): 6

Acres of Paving: 1.45

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 94,572; Non-Residential Outdoor: 31,524; Striped Parking Area: 12,009 (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
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction	Cranes	1	8.00	231	0.29
Building Construction	Forklifts	2	7.00	89	0.20

The Ritz-Carlton Residences - Existing Uses - Orange County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Building Construction	Generator Sets	1	8.00	84	0.74
Grading	Graders	1	8.00	187	0.41
Site Preparation	Graders	1	8.00	187	0.41
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Site Preparation	Scrapers	1	8.00	367	0.48
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Construction	Welders	3	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	5	13.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	111.00	43.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	22.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

The Ritz-Carlton Residences - Existing Uses - Orange County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.6889	16.6217	13.9605	0.0241		0.8379	0.8379		0.7829	0.7829		2,323.4168	2,323.4168	0.5921		2,338.2191
Total	1.6889	16.6217	13.9605	0.0241		0.8379	0.8379		0.7829	0.7829		2,323.4168	2,323.4168	0.5921		2,338.2191

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	0.0391	0.0263	0.4278	1.2700e-003	0.1453	7.8000e-004	0.1461	0.0385	7.2000e-004	0.0393		128.8404	128.8404	3.0100e-003	2.8800e-003	129.7729
Total	0.0391	0.0263	0.4278	1.2700e-003	0.1453	7.8000e-004	0.1461	0.0385	7.2000e-004	0.0393		128.8404	128.8404	3.0100e-003	2.8800e-003	129.7729

The Ritz-Carlton Residences - Existing Uses - Orange County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

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	1.6889	16.6217	13.9605	0.0241		0.8379	0.8379		0.7829	0.7829	0.0000	2,323.4168	2,323.4168	0.5921		2,338.2191
Total	1.6889	16.6217	13.9605	0.0241		0.8379	0.8379		0.7829	0.7829	0.0000	2,323.4168	2,323.4168	0.5921		2,338.2191

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	0.0391	0.0263	0.4278	1.2700e-003	0.1453	7.8000e-004	0.1461	0.0385	7.2000e-004	0.0393		128.8404	128.8404	3.0100e-003	2.8800e-003	129.7729
Total	0.0391	0.0263	0.4278	1.2700e-003	0.1453	7.8000e-004	0.1461	0.0385	7.2000e-004	0.0393		128.8404	128.8404	3.0100e-003	2.8800e-003	129.7729

The Ritz-Carlton Residences - Existing Uses - Orange County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.5908	0.0000	1.5908	0.1718	0.0000	0.1718			0.0000			0.0000
Off-Road	1.3784	15.6673	10.0558	0.0245		0.5952	0.5952		0.5476	0.5476		2,375.1569	2,375.1569	0.7682		2,394.3613
Total	1.3784	15.6673	10.0558	0.0245	1.5908	0.5952	2.1859	0.1718	0.5476	0.7193		2,375.1569	2,375.1569	0.7682		2,394.3613

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	0.0241	0.0162	0.2633	7.8000e-004	0.0894	4.8000e-004	0.0899	0.0237	4.4000e-004	0.0242		79.2864	79.2864	1.8500e-003	1.7700e-003	79.8603
Total	0.0241	0.0162	0.2633	7.8000e-004	0.0894	4.8000e-004	0.0899	0.0237	4.4000e-004	0.0242		79.2864	79.2864	1.8500e-003	1.7700e-003	79.8603

The Ritz-Carlton Residences - Existing Uses - Orange County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2022

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					1.5908	0.0000	1.5908	0.1718	0.0000	0.1718			0.0000			0.0000
Off-Road	1.3784	15.6673	10.0558	0.0245		0.5952	0.5952		0.5476	0.5476	0.0000	2,375.1569	2,375.1569	0.7682		2,394.3613
Total	1.3784	15.6673	10.0558	0.0245	1.5908	0.5952	2.1859	0.1718	0.5476	0.7193	0.0000	2,375.1569	2,375.1569	0.7682		2,394.3613

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	0.0241	0.0162	0.2633	7.8000e-004	0.0894	4.8000e-004	0.0899	0.0237	4.4000e-004	0.0242		79.2864	79.2864	1.8500e-003	1.7700e-003	79.8603
Total	0.0241	0.0162	0.2633	7.8000e-004	0.0894	4.8000e-004	0.0899	0.0237	4.4000e-004	0.0242		79.2864	79.2864	1.8500e-003	1.7700e-003	79.8603

The Ritz-Carlton Residences - Existing Uses - Orange County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.0826	0.0000	7.0826	3.4247	0.0000	3.4247			0.0000			0.0000
Off-Road	1.5403	16.9836	9.2202	0.0206		0.7423	0.7423		0.6829	0.6829		1,995.4825	1,995.4825	0.6454		2,011.6169
Total	1.5403	16.9836	9.2202	0.0206	7.0826	0.7423	7.8249	3.4247	0.6829	4.1076		1,995.4825	1,995.4825	0.6454		2,011.6169

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	0.0301	0.0202	0.3291	9.7000e-004	0.1118	6.0000e-004	0.1124	0.0296	5.6000e-004	0.0302		99.1080	99.1080	2.3200e-003	2.2100e-003	99.8253
Total	0.0301	0.0202	0.3291	9.7000e-004	0.1118	6.0000e-004	0.1124	0.0296	5.6000e-004	0.0302		99.1080	99.1080	2.3200e-003	2.2100e-003	99.8253

The Ritz-Carlton Residences - Existing Uses - Orange County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2022

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					7.0826	0.0000	7.0826	3.4247	0.0000	3.4247			0.0000			0.0000
Off-Road	1.5403	16.9836	9.2202	0.0206		0.7423	0.7423		0.6829	0.6829	0.0000	1,995.4825	1,995.4825	0.6454		2,011.6169
Total	1.5403	16.9836	9.2202	0.0206	7.0826	0.7423	7.8249	3.4247	0.6829	4.1076	0.0000	1,995.4825	1,995.4825	0.6454		2,011.6169

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	0.0301	0.0202	0.3291	9.7000e-004	0.1118	6.0000e-004	0.1124	0.0296	5.6000e-004	0.0302		99.1080	99.1080	2.3200e-003	2.2100e-003	99.8253
Total	0.0301	0.0202	0.3291	9.7000e-004	0.1118	6.0000e-004	0.1124	0.0296	5.6000e-004	0.0302		99.1080	99.1080	2.3200e-003	2.2100e-003	99.8253

The Ritz-Carlton Residences - Existing Uses - Orange County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.8555	14.6040	14.3533	0.0250		0.7022	0.7022		0.6731	0.6731		2,289.2813	2,289.2813	0.4417		2,300.3230
Total	1.8555	14.6040	14.3533	0.0250		0.7022	0.7022		0.6731	0.6731		2,289.2813	2,289.2813	0.4417		2,300.3230

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	0.0715	1.9294	0.6851	8.1400e-003	0.2750	0.0188	0.2937	0.0791	0.0180	0.0971		891.6376	891.6376	0.0511	0.1278	930.9932
Worker	0.3340	0.2244	3.6529	0.0108	1.2407	6.7000e-003	1.2474	0.3290	6.1600e-003	0.3352		1,100.0985	1,100.0985	0.0257	0.0246	1,108.0611
Total	0.4055	2.1538	4.3380	0.0190	1.5157	0.0255	1.5411	0.4082	0.0241	0.4323		1,991.7361	1,991.7361	0.0768	0.1523	2,039.0542

The Ritz-Carlton Residences - Existing Uses - Orange County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2022

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	1.8555	14.6040	14.3533	0.0250		0.7022	0.7022		0.6731	0.6731	0.0000	2,289.2813	2,289.2813	0.4417		2,300.3230
Total	1.8555	14.6040	14.3533	0.0250		0.7022	0.7022		0.6731	0.6731	0.0000	2,289.2813	2,289.2813	0.4417		2,300.3230

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	0.0715	1.9294	0.6851	8.1400e-003	0.2750	0.0188	0.2937	0.0791	0.0180	0.0971		891.6376	891.6376	0.0511	0.1278	930.9932
Worker	0.3340	0.2244	3.6529	0.0108	1.2407	6.7000e-003	1.2474	0.3290	6.1600e-003	0.3352		1,100.0985	1,100.0985	0.0257	0.0246	1,108.0611
Total	0.4055	2.1538	4.3380	0.0190	1.5157	0.0255	1.5411	0.4082	0.0241	0.4323		1,991.7361	1,991.7361	0.0768	0.1523	2,039.0542

The Ritz-Carlton Residences - Existing Uses - Orange County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7136	13.6239	14.2145	0.0250		0.6136	0.6136		0.5880	0.5880		2,289.5233	2,289.5233	0.4330		2,300.3479
Total	1.7136	13.6239	14.2145	0.0250		0.6136	0.6136		0.5880	0.5880		2,289.5233	2,289.5233	0.4330		2,300.3479

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	0.0434	1.5070	0.6248	7.7300e-003	0.2750	7.7300e-003	0.2827	0.0791	7.3900e-003	0.0865		849.0324	849.0324	0.0505	0.1218	886.5983
Worker	0.3128	0.2001	3.3989	0.0105	1.2407	6.3400e-003	1.2471	0.3290	5.8400e-003	0.3349		1,071.4947	1,071.4947	0.0233	0.0229	1,078.8888
Total	0.3562	1.7071	4.0237	0.0182	1.5157	0.0141	1.5297	0.4082	0.0132	0.4214		1,920.5271	1,920.5271	0.0737	0.1447	1,965.4871

The Ritz-Carlton Residences - Existing Uses - Orange County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2023

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	1.7136	13.6239	14.2145	0.0250		0.6136	0.6136		0.5880	0.5880	0.0000	2,289.5233	2,289.5233	0.4330		2,300.3479
Total	1.7136	13.6239	14.2145	0.0250		0.6136	0.6136		0.5880	0.5880	0.0000	2,289.5233	2,289.5233	0.4330		2,300.3479

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	0.0434	1.5070	0.6248	7.7300e-003	0.2750	7.7300e-003	0.2827	0.0791	7.3900e-003	0.0865		849.0324	849.0324	0.0505	0.1218	886.5983
Worker	0.3128	0.2001	3.3989	0.0105	1.2407	6.3400e-003	1.2471	0.3290	5.8400e-003	0.3349		1,071.4947	1,071.4947	0.0233	0.0229	1,078.8888
Total	0.3562	1.7071	4.0237	0.0182	1.5157	0.0141	1.5297	0.4082	0.0132	0.4214		1,920.5271	1,920.5271	0.0737	0.1447	1,965.4871

The Ritz-Carlton Residences - Existing Uses - Orange County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8802	8.6098	11.6840	0.0179		0.4338	0.4338		0.4003	0.4003		1,709.9926	1,709.9926	0.5420		1,723.5414
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.8802	8.6098	11.6840	0.0179		0.4338	0.4338		0.4003	0.4003		1,709.9926	1,709.9926	0.5420		1,723.5414

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	0.0423	0.0270	0.4593	1.4100e-003	0.1677	8.6000e-004	0.1685	0.0445	7.9000e-004	0.0453		144.7966	144.7966	3.1400e-003	3.0900e-003	145.7958
Total	0.0423	0.0270	0.4593	1.4100e-003	0.1677	8.6000e-004	0.1685	0.0445	7.9000e-004	0.0453		144.7966	144.7966	3.1400e-003	3.0900e-003	145.7958

The Ritz-Carlton Residences - Existing Uses - Orange County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2023

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	0.8802	8.6098	11.6840	0.0179		0.4338	0.4338		0.4003	0.4003	0.0000	1,709.9926	1,709.9926	0.5420		1,723.5414
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.8802	8.6098	11.6840	0.0179		0.4338	0.4338		0.4003	0.4003	0.0000	1,709.9926	1,709.9926	0.5420		1,723.5414

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	0.0423	0.0270	0.4593	1.4100e-003	0.1677	8.6000e-004	0.1685	0.0445	7.9000e-004	0.0453		144.7966	144.7966	3.1400e-003	3.0900e-003	145.7958
Total	0.0423	0.0270	0.4593	1.4100e-003	0.1677	8.6000e-004	0.1685	0.0445	7.9000e-004	0.0453		144.7966	144.7966	3.1400e-003	3.0900e-003	145.7958

The Ritz-Carlton Residences - Existing Uses - Orange County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	64.0117					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708		281.4481	281.4481	0.0168		281.8690
Total	64.2033	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708		281.4481	281.4481	0.0168		281.8690

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	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	0.0620	0.0397	0.6737	2.0800e-003	0.2459	1.2600e-003	0.2472	0.0652	1.1600e-003	0.0664		212.3683	212.3683	4.6100e-003	4.5300e-003	213.8338
Total	0.0620	0.0397	0.6737	2.0800e-003	0.2459	1.2600e-003	0.2472	0.0652	1.1600e-003	0.0664		212.3683	212.3683	4.6100e-003	4.5300e-003	213.8338

The Ritz-Carlton Residences - Existing Uses - Orange County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2023

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	64.0117					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708	0.0000	281.4481	281.4481	0.0168		281.8690
Total	64.2033	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708	0.0000	281.4481	281.4481	0.0168		281.8690

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	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	0.0620	0.0397	0.6737	2.0800e-003	0.2459	1.2600e-003	0.2472	0.0652	1.1600e-003	0.0664		212.3683	212.3683	4.6100e-003	4.5300e-003	213.8338
Total	0.0620	0.0397	0.6737	2.0800e-003	0.2459	1.2600e-003	0.2472	0.0652	1.1600e-003	0.0664		212.3683	212.3683	4.6100e-003	4.5300e-003	213.8338

The Ritz-Carlton Residences - Existing Uses - Orange County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	2.8163	2.5189	25.1501	0.0570	6.3876	0.0392	6.4268	1.7026	0.0364	1.7390		5,950.012 2	5,950.012 2	0.3686	0.2436	6,031.819 5
Unmitigated	2.8163	2.5189	25.1501	0.0570	6.3876	0.0392	6.4268	1.7026	0.0364	1.7390		5,950.012 2	5,950.012 2	0.3686	0.2436	6,031.819 5

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Enclosed Parking with Elevator	0.00	0.00	0.00		
Hotel	1,270.41	1,270.41	1,270.41	3,031,416	3,031,416
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	1,270.41	1,270.41	1,270.41	3,031,416	3,031,416

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	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
Enclosed Parking with Elevator	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Hotel	16.60	8.40	6.90	19.40	61.60	19.00	58	38	4
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

The Ritz-Carlton Residences - Existing Uses - Orange County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Enclosed Parking with Elevator	0.547453	0.060181	0.185039	0.126487	0.024236	0.006679	0.014707	0.004926	0.000662	0.000378	0.024745	0.000705	0.003801
Hotel	0.547453	0.060181	0.185039	0.126487	0.024236	0.006679	0.014707	0.004926	0.000662	0.000378	0.024745	0.000705	0.003801
Other Non-Asphalt Surfaces	0.547453	0.060181	0.185039	0.126487	0.024236	0.006679	0.014707	0.004926	0.000662	0.000378	0.024745	0.000705	0.003801

5.0 Energy Detail

Historical Energy Use: Y

5.1 Mitigation Measures Energy

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
NaturalGas Mitigated	0.0675	0.6137	0.5155	3.6800e-003		0.0466	0.0466		0.0466	0.0466		736.4575	736.4575	0.0141	0.0135	740.8339
NaturalGas Unmitigated	0.0675	0.6137	0.5155	3.6800e-003		0.0466	0.0466		0.0466	0.0466		736.4575	736.4575	0.0141	0.0135	740.8339

The Ritz-Carlton Residences - Existing Uses - Orange County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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					
Enclosed Parking with Elevator	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
Hotel	6259.89	0.0675	0.6137	0.5155	3.6800e-003		0.0466	0.0466		0.0466	0.0466		736.4575	736.4575	0.0141	0.0135	740.8339
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0675	0.6137	0.5155	3.6800e-003		0.0466	0.0466		0.0466	0.0466		736.4575	736.4575	0.0141	0.0135	740.8339

The Ritz-Carlton Residences - Existing Uses - Orange County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Enclosed Parking with Elevator	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
Hotel	6.25989	0.0675	0.6137	0.5155	3.6800e-003		0.0466	0.0466		0.0466	0.0466		736.4575	736.4575	0.0141	0.0135	740.8339
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0675	0.6137	0.5155	3.6800e-003		0.0466	0.0466		0.0466	0.0466		736.4575	736.4575	0.0141	0.0135	740.8339

6.0 Area Detail

6.1 Mitigation Measures Area

The Ritz-Carlton Residences - Existing Uses - Orange County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	lb/day										lb/day					
Mitigated	1.5019	7.1000e-004	0.0786	1.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004		0.1689	0.1689	4.4000e-004		0.1799
Unmitigated	1.5019	7.1000e-004	0.0786	1.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004		0.1689	0.1689	4.4000e-004		0.1799

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1754					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.3192					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	7.2400e-003	7.1000e-004	0.0786	1.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004		0.1689	0.1689	4.4000e-004		0.1799
Total	1.5019	7.1000e-004	0.0786	1.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004		0.1689	0.1689	4.4000e-004		0.1799

The Ritz-Carlton Residences - Existing Uses - Orange County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	0.1754					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.3192					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	7.2400e-003	7.1000e-004	0.0786	1.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004		0.1689	0.1689	4.4000e-004		0.1799
Total	1.5019	7.1000e-004	0.0786	1.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004		0.1689	0.1689	4.4000e-004		0.1799

7.0 Water Detail

7.1 Mitigation Measures Water

The Ritz-Carlton Residences - Existing Uses - Orange County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

Fire Pumps and Emergency Generators

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

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

Equipment Type	Number
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11.0 Vegetation

The Ritz-Carlton Residences - Existing Uses - Orange County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

The Ritz-Carlton Residences - Existing Uses

Orange County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Hotel	159.00	Room	1.33	63,048.00	0
Enclosed Parking with Elevator	612.00	Space	0.52	159,846.00	0
Other Non-Asphalt Surfaces	0.93	Acre	0.93	40,300.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	30
Climate Zone	8			Operational Year	2025
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	390.98	CH4 Intensity (lb/MWhr)	0.033	N2O Intensity (lb/MWhr)	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Based on the Project Description provided to LSA on January 21, 2022. Other non-asphalt surfaces includes hardscape.

Construction Phase - Operational run only.

Vehicle Trips - Trip rates based on the average daily trip generation provided in the project's Trip Generation letter dated January 26, 2022.

Energy Use - Using historical data.

Table Name	Column Name	Default Value	New Value
tblEnergyUse	LightingElect	2.63	2.63
tblEnergyUse	T24E	3.92	3.92
tblLandUse	LandUseSquareFeet	230,868.00	63,048.00

The Ritz-Carlton Residences - Existing Uses - Orange County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

tblLandUse	LandUseSquareFeet	244,800.00	159,846.00
tblLandUse	LandUseSquareFeet	40,510.80	40,300.00
tblLandUse	LotAcreage	5.30	1.33
tblLandUse	LotAcreage	5.51	0.52
tblVehicleTrips	ST_TR	8.19	7.99
tblVehicleTrips	SU_TR	5.95	7.99
tblVehicleTrips	WD_TR	8.36	7.99

2.0 Emissions Summary

The Ritz-Carlton Residences - Existing Uses - Orange County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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					
2022	2.2898	17.0058	18.4621	0.0435	7.1944	0.8387	7.9373	3.4544	0.7836	4.1378	0.0000	4,228.5528	4,228.5528	0.7701	0.1541	4,287.4339
2023	64.2711	15.4178	18.0255	0.0427	1.5157	0.6278	2.1434	0.4082	0.6013	1.0095	0.0000	4,160.0681	4,160.0681	0.5452	0.1464	4,216.3814
Maximum	64.2711	17.0058	18.4621	0.0435	7.1944	0.8387	7.9373	3.4544	0.7836	4.1378	0.0000	4,228.5528	4,228.5528	0.7701	0.1541	4,287.4339

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					
2022	2.2898	17.0058	18.4621	0.0435	7.1944	0.8387	7.9373	3.4544	0.7836	4.1378	0.0000	4,228.5528	4,228.5528	0.7701	0.1541	4,287.4339
2023	64.2711	15.4178	18.0255	0.0427	1.5157	0.6278	2.1434	0.4082	0.6013	1.0095	0.0000	4,160.0681	4,160.0681	0.5452	0.1464	4,216.3814
Maximum	64.2711	17.0058	18.4621	0.0435	7.1944	0.8387	7.9373	3.4544	0.7836	4.1378	0.0000	4,228.5528	4,228.5528	0.7701	0.1541	4,287.4339

The Ritz-Carlton Residences - Existing Uses - Orange County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	1.5019	7.1000e-004	0.0786	1.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004		0.1689	0.1689	4.4000e-004		0.1799
Energy	0.0675	0.6137	0.5155	3.6800e-003		0.0466	0.0466		0.0466	0.0466		736.4575	736.4575	0.0141	0.0135	740.8339
Mobile	2.7857	2.7047	25.1878	0.0548	6.3876	0.0392	6.4268	1.7026	0.0364	1.7390		5,726.1517	5,726.1517	0.3832	0.2539	5,811.3895
Total	4.3550	3.3191	25.7819	0.0585	6.3876	0.0861	6.4737	1.7026	0.0833	1.7859		6,462.7781	6,462.7781	0.3978	0.2674	6,552.4033

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.5019	7.1000e-004	0.0786	1.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004		0.1689	0.1689	4.4000e-004		0.1799
Energy	0.0675	0.6137	0.5155	3.6800e-003		0.0466	0.0466		0.0466	0.0466		736.4575	736.4575	0.0141	0.0135	740.8339
Mobile	2.7857	2.7047	25.1878	0.0548	6.3876	0.0392	6.4268	1.7026	0.0364	1.7390		5,726.1517	5,726.1517	0.3832	0.2539	5,811.3895
Total	4.3550	3.3191	25.7819	0.0585	6.3876	0.0861	6.4737	1.7026	0.0833	1.7859		6,462.7781	6,462.7781	0.3978	0.2674	6,552.4033

The Ritz-Carlton Residences - Existing Uses - Orange County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	6/1/2022	6/28/2022	5	20	
2	Site Preparation	Site Preparation	6/29/2022	7/1/2022	5	3	
3	Grading	Grading	7/2/2022	7/11/2022	5	6	
4	Building Construction	Building Construction	7/12/2022	5/15/2023	5	220	
5	Paving	Paving	5/16/2023	5/29/2023	5	10	
6	Architectural Coating	Architectural Coating	5/30/2023	6/12/2023	5	10	

Acres of Grading (Site Preparation Phase): 4.5

Acres of Grading (Grading Phase): 6

Acres of Paving: 1.45

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 94,572; Non-Residential Outdoor: 31,524; Striped Parking Area: 12,009 (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
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Building Construction	Cranes	1	8.00	231	0.29
Building Construction	Forklifts	2	7.00	89	0.20

The Ritz-Carlton Residences - Existing Uses - Orange County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

Building Construction	Generator Sets	1	8.00	84	0.74
Grading	Graders	1	8.00	187	0.41
Site Preparation	Graders	1	8.00	187	0.41
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Site Preparation	Scrapers	1	8.00	367	0.48
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Building Construction	Welders	3	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	5	13.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	8	111.00	43.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	22.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

The Ritz-Carlton Residences - Existing Uses - Orange County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.6889	16.6217	13.9605	0.0241		0.8379	0.8379		0.7829	0.7829		2,323.4168	2,323.4168	0.5921		2,338.2191
Total	1.6889	16.6217	13.9605	0.0241		0.8379	0.8379		0.7829	0.7829		2,323.4168	2,323.4168	0.5921		2,338.2191

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	0.0426	0.0289	0.3981	1.2100e-003	0.1453	7.8000e-004	0.1461	0.0385	7.2000e-004	0.0393		122.6631	122.6631	3.0800e-003	3.0600e-003	123.6524
Total	0.0426	0.0289	0.3981	1.2100e-003	0.1453	7.8000e-004	0.1461	0.0385	7.2000e-004	0.0393		122.6631	122.6631	3.0800e-003	3.0600e-003	123.6524

The Ritz-Carlton Residences - Existing Uses - Orange County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.2 Demolition - 2022

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	1.6889	16.6217	13.9605	0.0241		0.8379	0.8379		0.7829	0.7829	0.0000	2,323.4168	2,323.4168	0.5921		2,338.2191
Total	1.6889	16.6217	13.9605	0.0241		0.8379	0.8379		0.7829	0.7829	0.0000	2,323.4168	2,323.4168	0.5921		2,338.2191

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	0.0426	0.0289	0.3981	1.2100e-003	0.1453	7.8000e-004	0.1461	0.0385	7.2000e-004	0.0393		122.6631	122.6631	3.0800e-003	3.0600e-003	123.6524
Total	0.0426	0.0289	0.3981	1.2100e-003	0.1453	7.8000e-004	0.1461	0.0385	7.2000e-004	0.0393		122.6631	122.6631	3.0800e-003	3.0600e-003	123.6524

The Ritz-Carlton Residences - Existing Uses - Orange County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.5908	0.0000	1.5908	0.1718	0.0000	0.1718			0.0000			0.0000
Off-Road	1.3784	15.6673	10.0558	0.0245		0.5952	0.5952		0.5476	0.5476		2,375.1569	2,375.1569	0.7682		2,394.3613
Total	1.3784	15.6673	10.0558	0.0245	1.5908	0.5952	2.1859	0.1718	0.5476	0.7193		2,375.1569	2,375.1569	0.7682		2,394.3613

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	0.0262	0.0178	0.2450	7.4000e-004	0.0894	4.8000e-004	0.0899	0.0237	4.4000e-004	0.0242		75.4850	75.4850	1.8900e-003	1.8800e-003	76.0938
Total	0.0262	0.0178	0.2450	7.4000e-004	0.0894	4.8000e-004	0.0899	0.0237	4.4000e-004	0.0242		75.4850	75.4850	1.8900e-003	1.8800e-003	76.0938

The Ritz-Carlton Residences - Existing Uses - Orange County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.3 Site Preparation - 2022

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					1.5908	0.0000	1.5908	0.1718	0.0000	0.1718			0.0000			0.0000
Off-Road	1.3784	15.6673	10.0558	0.0245		0.5952	0.5952		0.5476	0.5476	0.0000	2,375.1569	2,375.1569	0.7682		2,394.3613
Total	1.3784	15.6673	10.0558	0.0245	1.5908	0.5952	2.1859	0.1718	0.5476	0.7193	0.0000	2,375.1569	2,375.1569	0.7682		2,394.3613

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	0.0262	0.0178	0.2450	7.4000e-004	0.0894	4.8000e-004	0.0899	0.0237	4.4000e-004	0.0242		75.4850	75.4850	1.8900e-003	1.8800e-003	76.0938
Total	0.0262	0.0178	0.2450	7.4000e-004	0.0894	4.8000e-004	0.0899	0.0237	4.4000e-004	0.0242		75.4850	75.4850	1.8900e-003	1.8800e-003	76.0938

The Ritz-Carlton Residences - Existing Uses - Orange County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.0826	0.0000	7.0826	3.4247	0.0000	3.4247			0.0000			0.0000
Off-Road	1.5403	16.9836	9.2202	0.0206		0.7423	0.7423		0.6829	0.6829		1,995.4825	1,995.4825	0.6454		2,011.6169
Total	1.5403	16.9836	9.2202	0.0206	7.0826	0.7423	7.8249	3.4247	0.6829	4.1076		1,995.4825	1,995.4825	0.6454		2,011.6169

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	0.0328	0.0222	0.3062	9.3000e-004	0.1118	6.0000e-004	0.1124	0.0296	5.6000e-004	0.0302		94.3562	94.3562	2.3700e-003	2.3600e-003	95.1173
Total	0.0328	0.0222	0.3062	9.3000e-004	0.1118	6.0000e-004	0.1124	0.0296	5.6000e-004	0.0302		94.3562	94.3562	2.3700e-003	2.3600e-003	95.1173

The Ritz-Carlton Residences - Existing Uses - Orange County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.4 Grading - 2022

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					7.0826	0.0000	7.0826	3.4247	0.0000	3.4247			0.0000			0.0000
Off-Road	1.5403	16.9836	9.2202	0.0206		0.7423	0.7423		0.6829	0.6829	0.0000	1,995.4825	1,995.4825	0.6454		2,011.6169
Total	1.5403	16.9836	9.2202	0.0206	7.0826	0.7423	7.8249	3.4247	0.6829	4.1076	0.0000	1,995.4825	1,995.4825	0.6454		2,011.6169

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	0.0328	0.0222	0.3062	9.3000e-004	0.1118	6.0000e-004	0.1124	0.0296	5.6000e-004	0.0302		94.3562	94.3562	2.3700e-003	2.3600e-003	95.1173
Total	0.0328	0.0222	0.3062	9.3000e-004	0.1118	6.0000e-004	0.1124	0.0296	5.6000e-004	0.0302		94.3562	94.3562	2.3700e-003	2.3600e-003	95.1173

The Ritz-Carlton Residences - Existing Uses - Orange County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.8555	14.6040	14.3533	0.0250		0.7022	0.7022		0.6731	0.6731		2,289.2813	2,289.2813	0.4417		2,300.3230
Total	1.8555	14.6040	14.3533	0.0250		0.7022	0.7022		0.6731	0.6731		2,289.2813	2,289.2813	0.4417		2,300.3230

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	0.0705	2.0050	0.7096	8.1500e-003	0.2750	0.0188	0.2938	0.0791	0.0180	0.0972		891.9173	891.9173	0.0510	0.1279	931.3095
Worker	0.3638	0.2465	3.3993	0.0103	1.2407	6.7000e-003	1.2474	0.3290	6.1600e-003	0.3352		1,047.3542	1,047.3542	0.0263	0.0261	1,055.8015
Total	0.4343	2.2515	4.1089	0.0185	1.5157	0.0255	1.5412	0.4082	0.0242	0.4324		1,939.2715	1,939.2715	0.0773	0.1541	1,987.1110

The Ritz-Carlton Residences - Existing Uses - Orange County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2022

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	1.8555	14.6040	14.3533	0.0250		0.7022	0.7022		0.6731	0.6731	0.0000	2,289.2813	2,289.2813	0.4417		2,300.3230
Total	1.8555	14.6040	14.3533	0.0250		0.7022	0.7022		0.6731	0.6731	0.0000	2,289.2813	2,289.2813	0.4417		2,300.3230

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	0.0705	2.0050	0.7096	8.1500e-003	0.2750	0.0188	0.2938	0.0791	0.0180	0.0972		891.9173	891.9173	0.0510	0.1279	931.3095
Worker	0.3638	0.2465	3.3993	0.0103	1.2407	6.7000e-003	1.2474	0.3290	6.1600e-003	0.3352		1,047.3542	1,047.3542	0.0263	0.0261	1,055.8015
Total	0.4343	2.2515	4.1089	0.0185	1.5157	0.0255	1.5412	0.4082	0.0242	0.4324		1,939.2715	1,939.2715	0.0773	0.1541	1,987.1110

The Ritz-Carlton Residences - Existing Uses - Orange County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7136	13.6239	14.2145	0.0250		0.6136	0.6136		0.5880	0.5880		2,289.5233	2,289.5233	0.4330		2,300.3479
Total	1.7136	13.6239	14.2145	0.0250		0.6136	0.6136		0.5880	0.5880		2,289.5233	2,289.5233	0.4330		2,300.3479

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	0.0419	1.5742	0.6448	7.7400e-003	0.2750	7.7800e-003	0.2827	0.0791	7.4400e-003	0.0866		850.2811	850.2811	0.0504	0.1221	887.9262
Worker	0.3418	0.2197	3.1663	9.9700e-003	1.2407	6.3400e-003	1.2471	0.3290	5.8400e-003	0.3349		1,020.2637	1,020.2637	0.0238	0.0243	1,028.1073
Total	0.3837	1.7939	3.8110	0.0177	1.5157	0.0141	1.5298	0.4082	0.0133	0.4215		1,870.5448	1,870.5448	0.0742	0.1464	1,916.0335

The Ritz-Carlton Residences - Existing Uses - Orange County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.5 Building Construction - 2023

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	1.7136	13.6239	14.2145	0.0250		0.6136	0.6136		0.5880	0.5880	0.0000	2,289.5233	2,289.5233	0.4330		2,300.3479
Total	1.7136	13.6239	14.2145	0.0250		0.6136	0.6136		0.5880	0.5880	0.0000	2,289.5233	2,289.5233	0.4330		2,300.3479

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	0.0419	1.5742	0.6448	7.7400e-003	0.2750	7.7800e-003	0.2827	0.0791	7.4400e-003	0.0866		850.2811	850.2811	0.0504	0.1221	887.9262
Worker	0.3418	0.2197	3.1663	9.9700e-003	1.2407	6.3400e-003	1.2471	0.3290	5.8400e-003	0.3349		1,020.2637	1,020.2637	0.0238	0.0243	1,028.1073
Total	0.3837	1.7939	3.8110	0.0177	1.5157	0.0141	1.5298	0.4082	0.0133	0.4215		1,870.5448	1,870.5448	0.0742	0.1464	1,916.0335

The Ritz-Carlton Residences - Existing Uses - Orange County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8802	8.6098	11.6840	0.0179		0.4338	0.4338		0.4003	0.4003		1,709.9926	1,709.9926	0.5420		1,723.5414
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.8802	8.6098	11.6840	0.0179		0.4338	0.4338		0.4003	0.4003		1,709.9926	1,709.9926	0.5420		1,723.5414

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	0.0462	0.0297	0.4279	1.3500e-003	0.1677	8.6000e-004	0.1685	0.0445	7.9000e-004	0.0453		137.8735	137.8735	3.2200e-003	3.2900e-003	138.9334
Total	0.0462	0.0297	0.4279	1.3500e-003	0.1677	8.6000e-004	0.1685	0.0445	7.9000e-004	0.0453		137.8735	137.8735	3.2200e-003	3.2900e-003	138.9334

The Ritz-Carlton Residences - Existing Uses - Orange County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.6 Paving - 2023

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	0.8802	8.6098	11.6840	0.0179		0.4338	0.4338		0.4003	0.4003	0.0000	1,709.9926	1,709.9926	0.5420		1,723.5414
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	0.8802	8.6098	11.6840	0.0179		0.4338	0.4338		0.4003	0.4003	0.0000	1,709.9926	1,709.9926	0.5420		1,723.5414

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	0.0462	0.0297	0.4279	1.3500e-003	0.1677	8.6000e-004	0.1685	0.0445	7.9000e-004	0.0453		137.8735	137.8735	3.2200e-003	3.2900e-003	138.9334
Total	0.0462	0.0297	0.4279	1.3500e-003	0.1677	8.6000e-004	0.1685	0.0445	7.9000e-004	0.0453		137.8735	137.8735	3.2200e-003	3.2900e-003	138.9334

The Ritz-Carlton Residences - Existing Uses - Orange County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	64.0117					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708		281.4481	281.4481	0.0168		281.8690
Total	64.2033	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708		281.4481	281.4481	0.0168		281.8690

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	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	0.0678	0.0436	0.6275	1.9800e-003	0.2459	1.2600e-003	0.2472	0.0652	1.1600e-003	0.0664		202.2144	202.2144	4.7200e-003	4.8200e-003	203.7690
Total	0.0678	0.0436	0.6275	1.9800e-003	0.2459	1.2600e-003	0.2472	0.0652	1.1600e-003	0.0664		202.2144	202.2144	4.7200e-003	4.8200e-003	203.7690

The Ritz-Carlton Residences - Existing Uses - Orange County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

3.7 Architectural Coating - 2023

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	64.0117					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708	0.0000	281.4481	281.4481	0.0168		281.8690
Total	64.2033	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708	0.0000	281.4481	281.4481	0.0168		281.8690

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	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	0.0678	0.0436	0.6275	1.9800e-003	0.2459	1.2600e-003	0.2472	0.0652	1.1600e-003	0.0664		202.2144	202.2144	4.7200e-003	4.8200e-003	203.7690
Total	0.0678	0.0436	0.6275	1.9800e-003	0.2459	1.2600e-003	0.2472	0.0652	1.1600e-003	0.0664		202.2144	202.2144	4.7200e-003	4.8200e-003	203.7690

The Ritz-Carlton Residences - Existing Uses - Orange County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	2.7857	2.7047	25.1878	0.0548	6.3876	0.0392	6.4268	1.7026	0.0364	1.7390		5,726.1517	5,726.1517	0.3832	0.2539	5,811.3895
Unmitigated	2.7857	2.7047	25.1878	0.0548	6.3876	0.0392	6.4268	1.7026	0.0364	1.7390		5,726.1517	5,726.1517	0.3832	0.2539	5,811.3895

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Enclosed Parking with Elevator	0.00	0.00	0.00		
Hotel	1,270.41	1,270.41	1,270.41	3,031,416	3,031,416
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	1,270.41	1,270.41	1,270.41	3,031,416	3,031,416

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	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
Enclosed Parking with Elevator	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Hotel	16.60	8.40	6.90	19.40	61.60	19.00	58	38	4
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

The Ritz-Carlton Residences - Existing Uses - Orange County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Enclosed Parking with Elevator	0.547453	0.060181	0.185039	0.126487	0.024236	0.006679	0.014707	0.004926	0.000662	0.000378	0.024745	0.000705	0.003801
Hotel	0.547453	0.060181	0.185039	0.126487	0.024236	0.006679	0.014707	0.004926	0.000662	0.000378	0.024745	0.000705	0.003801
Other Non-Asphalt Surfaces	0.547453	0.060181	0.185039	0.126487	0.024236	0.006679	0.014707	0.004926	0.000662	0.000378	0.024745	0.000705	0.003801

5.0 Energy Detail

Historical Energy Use: Y

5.1 Mitigation Measures Energy

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
NaturalGas Mitigated	0.0675	0.6137	0.5155	3.6800e-003		0.0466	0.0466		0.0466	0.0466		736.4575	736.4575	0.0141	0.0135	740.8339
NaturalGas Unmitigated	0.0675	0.6137	0.5155	3.6800e-003		0.0466	0.0466		0.0466	0.0466		736.4575	736.4575	0.0141	0.0135	740.8339

The Ritz-Carlton Residences - Existing Uses - Orange County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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					
Enclosed Parking with Elevator	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
Hotel	6259.89	0.0675	0.6137	0.5155	3.6800e-003		0.0466	0.0466		0.0466	0.0466		736.4575	736.4575	0.0141	0.0135	740.8339
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0675	0.6137	0.5155	3.6800e-003		0.0466	0.0466		0.0466	0.0466		736.4575	736.4575	0.0141	0.0135	740.8339

The Ritz-Carlton Residences - Existing Uses - Orange County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Enclosed Parking with Elevator	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
Hotel	6.25989	0.0675	0.6137	0.5155	3.6800e-003		0.0466	0.0466		0.0466	0.0466		736.4575	736.4575	0.0141	0.0135	740.8339
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0675	0.6137	0.5155	3.6800e-003		0.0466	0.0466		0.0466	0.0466		736.4575	736.4575	0.0141	0.0135	740.8339

6.0 Area Detail

6.1 Mitigation Measures Area

The Ritz-Carlton Residences - Existing Uses - Orange County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	lb/day										lb/day					
Mitigated	1.5019	7.1000e-004	0.0786	1.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004		0.1689	0.1689	4.4000e-004		0.1799
Unmitigated	1.5019	7.1000e-004	0.0786	1.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004		0.1689	0.1689	4.4000e-004		0.1799

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1754					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.3192					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	7.2400e-003	7.1000e-004	0.0786	1.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004		0.1689	0.1689	4.4000e-004		0.1799
Total	1.5019	7.1000e-004	0.0786	1.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004		0.1689	0.1689	4.4000e-004		0.1799

The Ritz-Carlton Residences - Existing Uses - Orange County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule 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	0.1754					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.3192					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	7.2400e-003	7.1000e-004	0.0786	1.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004		0.1689	0.1689	4.4000e-004		0.1799
Total	1.5019	7.1000e-004	0.0786	1.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004		0.1689	0.1689	4.4000e-004		0.1799

7.0 Water Detail

7.1 Mitigation Measures Water

The Ritz-Carlton Residences - Existing Uses - Orange County, Winter

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

Fire Pumps and Emergency Generators

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

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

Equipment Type	Number
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11.0 Vegetation
