

AIR QUALITY TECHNICAL REPORT
for the proposed
BDM MIXED-USE PROJECT
OTAY MESA (CITY OF SAN DIEGO)

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GLOSSARY OF TERMS AND ACRONYMS

Acronym	Description
AB	Assembly Bill
ADT	Average Daily Trips
AQIA	Air Quality Impact Analysis
ATCM	Airborne Toxic Control Measure
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CalEEMod	California Emissions Estimator Model
CalEPA	California Environmental Protection Agency
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CEQA	California Environmental Quality Act
CCAA	California Clean Air Act
CCR	California Code of Regulations
CO	Carbon Monoxide
CPA	Community Plan Amendment
DPM	Diesel Particulate Matter
DU	Dwelling Unit
g/L	Grams per Liter
HVAC	Heating, Ventilation and Air Conditioning
H ₂ S	Hydrogen Sulfide
lb/day	Pounds per Day
MERV	Minimum Efficiency Reporting Value
m ³	Cubic meters
MSL	Mean Sea Level
N/A	Not Applicable
NAAQS	National Ambient Air Quality Standards
NO _x	Oxides of Nitrogen
OEHHA	Office of Environmental Health Hazard Assessment
OMCP	Otay Mesa Community Plan
O ₃	Ozone
Pb	Lead
PM _{2.5}	Particulate Matter 2.5 Micrometers or Less in Aerodynamic Diameter
PM ₁₀	Particulate Matter 10 Micrometers or Less in Aerodynamic Diameter
RAQS	Regional Air Quality Strategy
OMCP	Otay Mesa Community Plan
ROG	Reactive Organic Gases
SANDAG	San Diego Association of Governments
SB	Senate Bill
SCAQMD	South Coast Air Quality Management District
SCS	Sustainable Communities Strategy
SD	San Diego
SDAB	San Diego Air Basin
SDAPCD	San Diego Air Pollution Control District
SIP	State Implementation Plan
SO ₂	Sulfur Dioxide
SO _x	Oxides of Sulfur
TAC	Toxic Air Contaminant

GLOSSARY OF TERMS AND ACRONYMS

Acronym	Description
TCM	Transportation Control Measures
Tons/year	Tons Per Year
USEPA	US Environmental Protection Agency
VOC	Volatile Organic Compounds

EXECUTIVE SUMMARY

This report is an analysis of the potential air quality impacts associated with the proposed BDM Mixed-Use project (Project) in Otay Mesa. The BDM mixed-use Project requires an Amendment to the Otay Mesa Plan to change the land use designation from Community Commercial – Residential Prohibited to Community Commercial – Residential Permitted, Rezone from the existing CC-2-3 zone to CC-3-6, Vesting Tentative Map, Site Development Permit, Neighborhood Development Permit, and Public Right-of-Way Vacation to vacate Corporate Center Drive south of Otay Mesa Road. The analysis includes an assessment of potential impacts associated with air emissions from the construction and operation activities that would be associated with the development.

The Project proposes 430 total multi-family residential dwelling units and approximately 6,000 square feet of commercial use. The multi-family residential use includes 378 market-rate dwelling units, situated in the northern portion of the site, and 52 affordable dwelling units (affordable to low-income households) situated in the western portion of the site. Commercial uses would be located in the northwestern portion of the site. Access to the Project would be provided off Emerald Crest Court and by a new private drive off Otay Mesa Road. Parking would be provided in surface parking areas located throughout the Project. There are no existing structures on the parcel, so no demolition activities would be necessary. Construction is assumed to begin in early 2023, and the first year of operation is assumed to be 2025.

Air quality modeling was performed in general accordance with the methodologies outlined in the San Diego County Air Pollution Control District (SDAPCD) 2016 Regional Air Quality Strategy (RAQS) to identify both construction and operational emissions associated with the proposed Project. All emissions were calculated using the California Emissions Estimator Model (CalEEMod) software version 2020.4.0 which incorporates current air emission data, planning methods and protocol approved by the State of California Air Resources Board (CARB).

Construction of the proposed project would not exceed the SDAPCD regional construction emission thresholds for daily emissions. Operational emissions include emissions from electricity consumption (energy sources), vehicle trips (mobile sources), area sources, landscape equipment and architectural coating emissions. The majority of operational emissions are associated with vehicle trips to and from the Project site. The net change in emissions between the existing vacant site conditions versus the proposed Project would not exceed the SDAPCD thresholds for the criteria pollutants evaluated, nor would the impact be cumulatively considerable. The Project would not cause substantial concentration impact to sensitive receptors, nor objectionable odors to large numbers of persons. For these reasons, this study finds that the Project air quality impacts will be less than significant.

1.0 INTRODUCTION

1.1 Project Description

The BDM Mixed-Use Project proposes 430 total multi-family residential dwelling units and approximately 6,000 square feet of commercial use. The multi-family residential use includes 378 market-rate dwelling units, situated in the northern portion of the site, and 52 affordable dwelling units (affordable to low-income households) situated in the western portion of the site. Commercial uses would be located in the northwestern portion of the site. Access to the Project would be provided off Emerald Crest Court and by a new private drive off Otay Mesa Road. Parking would be provided in surface parking areas located throughout the Project. There are no existing structures on the parcel, so no demolition activities would be necessary. Construction is assumed to begin in early 2023, and the first year of operation is assumed to be 2025.

1.2 Project Location

The Project site is located east of Emerald Crest Court, west of Corporate Center Drive, and north of State Route 905, within the Otay Mesa Community Plan area in the City of San Diego. Surrounding uses include multi-family homes to the north, commercial space to the east, single family homes approximately 0.6 miles to the west, and the Pacific Gateway Park directly to the south. The Site Plan and Vesting Tentative Map are provided in Appendix B.

1.3 Purpose of this Analysis

The BDM mixed-use Project requires an Amendment to the Otay Mesa Plan to change the land use designation from Community Commercial – Residential Prohibited to Community Commercial – Residential Permitted, Rezone from the existing CC-2-3 zone to CC-3-6, Vesting Tentative Map, Site Development Permit, Neighborhood Development Permit, and Public Right-of-Way Vacation to vacate Corporate Center Drive south of Otay Mesa Road. The analysis includes an assessment of potential impacts associated with air emissions from the construction and operation activities that would be associated with the development. The analysis within this report addresses the relevant issues listed in Appendix G of the CEQA Guidelines (AEP 2021) and the City's *California Environmental Quality Act Significance Determination Thresholds* (City of SD 2022).

2.0 EXISTING ENVIRONMENTAL SETTING

2.1 Existing Setting

The Project site lies within the Otay Mesa community in the City of San Diego which is located within the San Diego Air Basin (SDAB). The current parcel of the Project site consists of undeveloped land. Elevations within the area of the parcel range from approximately 531 feet above Mean Sea Level (MSL) at the northwest end to

approximately 515 feet above MSL at the southeast end.

2.2 Climate and Meteorology

The Otay Mesa area, like the rest of San Diego County's coastal areas, has a Mediterranean climate characterized by warm, dry summers and mild, wet winters. The mean annual temperature for the project area is 62 degrees Fahrenheit (°F). The average annual precipitation is 12 inches, falling primarily from November to April. Winter low temperatures in the project area average about 41°F, and summer high temperatures average about 78°F (OMCP 2014).

The dominant meteorological feature affecting the region is the Pacific High-Pressure Zone, which produces the prevailing westerly to northwesterly winds. These winds tend to blow pollutants away from the coast toward the inland areas. Consequently, air quality near the coast is generally better than that which occurs at the base of the coastal mountain range.

Fluctuations in the strength and pattern of winds from the Pacific High-Pressure Zone interacting with the daily local cycle produce periodic temperature inversions that influence the dispersal or containment of air pollutants in the SDAB. Beneath the inversion layer pollutants become "trapped" as their ability to disperse diminishes. The mixing depth is the area under the inversion layer. Generally, the morning inversion layer is lower than the afternoon inversion layer. The greater the change between the morning and afternoon mixing depths, the greater the ability of the atmosphere to disperse pollutants.

The prevailing westerly wind pattern is sometimes interrupted by regional "Santa Ana" conditions. A Santa Ana occurs when a strong high-pressure system develops over the Nevada-Utah area and overcomes the prevailing westerly coastal winds, sending strong, steady, hot, dry northeasterly winds from the east over the mountains and out to sea.

Strong Santa Anas tend to blow pollutants out over the ocean, producing clear days. However, at the onset or during breakdown of these conditions, or if the Santa Ana is weak, local air quality may be adversely affected. In these cases, emissions from the South Coast Air Basin (including Los Angeles) to the north are blown out over the ocean, and low pressure over Baja California draws this pollutant-laden air mass southward. As the high pressure weakens, prevailing northwesterly winds reassert themselves and send this cloud of contamination ashore in the SDAB. When this event does occur, the combination of transported contaminants from Los Angeles and Mexico, in addition to locally produced contaminants, produces the worst air quality measurements recorded in the basin (OMCP 2014).

2.3 Pollutants of Concern and Their Effects

2.3.1 Criteria Air Pollutants

Criteria air pollutants are defined as pollutants for which the federal and state

governments have established ambient air quality standards (criteria) for outdoor concentrations to protect public health. The seven criteria air pollutants defined by state and federal law as a risk to the health and welfare of the general public are as follows: ozone (O₃), carbon monoxide (CO), nitrogen dioxide (NO₂), respirable particulate matter (or particulate matter with an aerodynamic diameter of 10 microns or less, PM₁₀), fine particulate matter (or particulate matter with an aerodynamic diameter of 2.5 microns or less, PM_{2.5}), sulfur dioxide (SO₂), and lead (Pb). Criteria pollutants can be emitted directly from sources (primary pollutants such as CO, SO₂, PM₁₀, PM_{2.5}, and lead) or they may be formed through chemical and photochemical reactions of precursor pollutants in the atmosphere (secondary pollutants such as ozone, NO₂, PM₁₀ and PM_{2.5}). PM₁₀ and PM_{2.5} can be both primary and secondary pollutants. The principal precursor pollutants of concern are reactive organic gases (ROG) also known as volatile organic compounds (VOC), and nitrogen oxides (NO_x). The federal standards are known as the National Ambient Air Quality Standards (NAAQS).

CARB sets the laws and regulations for air quality on the state level. The California Ambient Air Quality Standards (CAAQS) are either the same as or more restrictive than the NAAQS and also set limits for four additional contaminants: Visibility Reducing Particles, sulfates, hydrogen sulfide (H₂S) and vinyl chloride.

2.3.2 Non-Criteria Air Pollutants

2.3.2.1 Toxic Air Contaminants

A substance is considered toxic if it has the potential to cause adverse health effects in humans, including increasing the risk of cancer upon exposure, or acute and/or chronic non-cancer health effects. A toxic substance released into the air is considered a Toxic Air Contaminant (TAC). TACs are identified by federal and state agencies based on a review of available scientific evidence. In the State of California, TACs are identified through a two-step process that was established in 1983 under the Toxic Air Contaminant Identification and Control Act. This two-step process of risk identification and risk management and reduction was designed to protect residents from the health effects of toxic substances in the air.

In addition, the California Air Toxics "Hot Spots" Information and Assessment Act, Assembly Bill (AB) 2588, was enacted by the legislature in 1987 to address public concern over the release of TACs into the atmosphere. The law requires facilities emitting toxic substances to provide local air pollution control districts with information that will allow an assessment of the air toxics problem, identification of air toxics emissions sources, location of resulting hotspots, notification of the public exposed to significant risk, and development of effective strategies to reduce potential risks to the public over five years. Examples include certain aromatic and chlorinated hydrocarbons, certain metals, and asbestos. TACs are generated by a number of sources, including stationary sources, such as dry cleaners, gas stations, combustion sources, and laboratories; mobile sources, such as automobiles; and area sources, such as landfills.

Adverse health effects associated with exposure to TACs may include carcinogenic (i.e., cancer-causing) and noncarcinogenic effects. Noncarcinogenic effects typically affect one or more target organ systems and may be experienced on either short-term (acute) or long-term (chronic) exposure to a given TAC.

2.3.2.2 Diesel Particulate Matter

Diesel particulate matter (DPM) is part of a complex mixture that makes up diesel exhaust. Diesel exhaust is composed of two phases, gas and particle, both of which contribute to health risks. More than 90% of DPM is less than one micrometer in diameter (about 1/70th the diameter of a human hair) and, thus, is a subset of PM_{2.5} (CARB 2021). DPM is typically composed of carbon particles ("soot," also called black carbon) and numerous organic compounds, including over 40 known cancer-causing organic substances. Examples of these chemicals include polycyclic aromatic hydrocarbons, benzene, formaldehyde, acetaldehyde, acrolein, and 1,3-butadiene (CARB 2021). On August 27, 1998, CARB and Office of Environmental Health Hazard Assessment (OEHHA) identified "particulate emissions from diesel-fueled engines" (i.e., DPM) as a TAC, based on data linking diesel particulate emissions to increased risks of lung cancer and respiratory disease (CalEPA 1998).

DPM is emitted from a broad range of diesel engines, including on-road diesel engines from trucks, buses, and cars; and off-road diesel engines from locomotives, marine vessels, and heavy-duty construction equipment, among others. Approximately 70% of all airborne cancer risk in California is associated with DPM (CARB 2000). To reduce the cancer risk associated with DPM, CARB adopted a diesel risk reduction plan in 2000 (CARB 2000). Because it is part of PM_{2.5}, DPM also contributes to the same non-cancer health effects as PM_{2.5} exposure. These effects include premature death; hospitalizations and emergency department visits for exacerbated chronic heart and lung disease, including asthma; increased respiratory symptoms; and decreased lung function in children. Several studies suggest that exposure to DPM may also facilitate development of new allergies (CARB 2021). Those most vulnerable to non-cancer health effects are children whose lungs are still developing and the elderly who often have chronic health problems.

2.3.2.3 Odorous Compounds

Odors are generally regarded as an annoyance rather than a health hazard. Manifestations of a person's reaction to odors can range from psychological (e.g., irritation, anger, or anxiety) to physiological (e.g., circulatory and respiratory effects, nausea, vomiting, and headache). The ability to detect odors varies considerably among the population and, overall, is quite subjective. People may have different reactions to the same odor. An odor that is offensive to one person may be perfectly acceptable to another (e.g., coffee roaster). An unfamiliar odor is more easily detected and is more likely to cause complaints than a familiar one. In a phenomenon known as odor fatigue, a person can become desensitized to almost any odor, and recognition may only occur with an alteration in the intensity. The occurrence and severity of odor impacts depend on the nature, frequency, and intensity of the source; wind speed and direction; and the sensitivity of receptors.

3.0 REGULATORY SETTING

3.1 Federal Regulations

3.1.1 Criteria Air Pollutants

The federal air quality standards were developed per the requirements of The Federal Clean Air Act (CAA), which is a federal law that was passed in 1970 and further amended in 1990. This law provides the basis for the national air pollution control effort. An important element of the act included the development of NAAQS for major air pollutants.

The CAA established two types of air quality standards known as primary and secondary standards for the following criteria air pollutants: O₃, CO, NO₂, SO₂, PM₁₀, PM_{2.5}, and lead. Primary standards set limits for the intention of protecting public health, which includes sensitive populations such as people with asthma, children and elderly. Secondary standards set limits to protect public welfare to include the protection against decreased visibility, damage to animals, crops, vegetation and buildings. Areas that do not meet the NAAQS for a particular pollutant are considered to be “non-attainment areas” for that pollutant. States that have these non-attainment areas must prepare a State Implementation Plan (SIP) that demonstrates how those areas will attain the standards within mandated time frames.

3.1.2 Hazardous Air Pollutants

The 1977 federal CAA amendments required the United States Environmental Protection Agency (USEPA) to identify national emission standards for hazardous air pollutants to protect public health and welfare. Hazardous air pollutants include certain VOCs, pesticides, herbicides, and radionuclides that present a tangible hazard, based on scientific studies of exposure to humans and other mammals. Under the 1990 CAA amendments, which expanded the control program for hazardous air pollutants, 189 substances and chemical families were identified as hazardous air pollutants.

3.2 State Regulations

3.2.1 Criteria Air Pollutants

The federal CAA delegates the regulation of air pollution control and the enforcement of the NAAQS to the states. In California, the task of air quality management and regulation has been legislatively granted to CARB, with subsidiary responsibilities assigned to air quality management districts and air pollution control districts at the regional and county levels. CARB, which became part of the California Environmental Protection Agency (CalEPA) in 1991, is responsible for ensuring implementation of the California Clean Air Act of 1988, responding to the CAA and regulating emissions from motor vehicles and consumer products. CARB has established the CAAQS, which are generally more restrictive than the NAAQS. The CAAQS describe adverse conditions; that is, pollution levels must be below these standards before a basin can attain the standard. Air quality is considered “in attainment” if pollutant levels are

continuously below the CAAQS and violate the standards no more than once each year. The CAAQS for O₃, CO, SO₂ (1-hour and 24-hour), NO₂, 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. Table 1 on the next page shows the ambient air quality standards for NAAQS and CAAQS.

3.2.2 Toxic Air Contaminants

A TAC is defined by California law as an air pollutant that may cause or contribute to an increase in mortality or an increase in serious illness, or which may pose a present or potential hazard to human health. Federal laws use the hazardous air pollutants to refer to the same types of compounds that are referred to as TACs under state law. California regulates TACs primarily through the Tanner Air Toxics Act (AB 1807) and the Air Toxics Hot Spots Information and Assessment Act of 1987 (AB 2588). AB 1807 sets forth a formal procedure for CARB to designate substances as TACs. This includes research, public participation, and scientific peer review before CARB can designate a substance as a TAC. Pursuant to AB 2588, existing facilities that emit air pollutants above specified levels are required to (1) prepare a TAC emission inventory plan and report; (2) prepare a risk assessment if TAC emissions were significant; (3) notify the public of significant risk levels; and (4) if health impacts were above specified levels, prepare and implement risk reduction measures.

**TABLE 1
NATIONAL AND STATE AMBIENT AIR QUALITY STANDARDS**

Pollutant	Averaging Time	California Standards ¹		National Standards ²		
		Concentration ³	Method ⁴	Primary ^{3,5}	Secondary ^{3,6}	Method ⁷
Ozone (O ₃) ⁸	1 Hour	0.09 ppm (180 µg/m ³)	Ultraviolet Photometry	—	Same as Primary Standard	Ultraviolet Photometry
	8 Hour	0.070 ppm (137 µg/m ³)		0.070 ppm (137 µg/m ³)		
Respirable Particulate Matter (PM ₁₀) ⁹	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}) ⁹	24 Hour	—	—	35 µg/m ³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m ³	Gravimetric or Beta Attenuation	12.0 µg/m ³		
Carbon Monoxide (CO)	1 Hour	20 ppm (23 mg/m ³)	Non-Dispersive Infrared Photometry (NDIR)	35 ppm (40 mg/m ³)	—	Non-Dispersive Infrared Photometry (NDIR)
	8 Hour	9.0 ppm (10 mg/m ³)		9 ppm (10 mg/m ³)	—	
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m ³)		—	—	
Nitrogen Dioxide (NO ₂) ¹⁰	1 Hour	0.18 ppm (339 µg/m ³)	Gas Phase Chemiluminescence	100 ppb (188 µg/m ³)	—	Gas Phase Chemiluminescence
	Annual Arithmetic Mean	0.030 ppm (57 µg/m ³)		0.053 ppm (100 µg/m ³)	Same as Primary Standard	
Sulfur Dioxide (SO ₂) ¹¹	1 Hour	0.25 ppm (655 µg/m ³)	Ultraviolet Fluorescence	75 ppb (196 µg/m ³)	—	Ultraviolet Fluorescence; Spectrophotometry (Pararosaniline Method)
	3 Hour	—		—	0.5 ppm (1300 µg/m ³)	
	24 Hour	0.04 ppm (105 µg/m ³)		0.14 ppm (for certain areas) ¹¹	—	
	Annual Arithmetic Mean	—		0.030 ppm (for certain areas) ¹¹	—	
Lead ^{12,13}	30 Day Average	1.5 µg/m ³	Atomic Absorption	—	—	High Volume Sampler and Atomic Absorption
	Calendar Quarter	—		1.5 µg/m ³ (for certain areas) ¹²	Same as Primary Standard	
	Rolling 3-Month Average	—		0.15 µg/m ³		
Visibility Reducing Particles ¹⁴	8 Hour	See footnote 14	Beta Attenuation and Transmittance through Filter Tape	No National 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 ¹²	24 Hour	0.01 ppm (26 µg/m ³)	Gas Chromatography			

See footnotes on next page ...

1. California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1 and 24 hour), nitrogen dioxide, and particulate matter (PM10, PM2.5, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.
2. National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM10, the 24 hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above $150 \mu\text{g}/\text{m}^3$ is equal to or less than one. For PM2.5, the 24 hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact the U.S. EPA for further clarification and current national policies.
3. Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.
4. Any equivalent measurement method which can be shown to the satisfaction of the ARB to give equivalent results at or near the level of the air quality standard may be used.
5. National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.
6. National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.
7. Reference method as described by the U.S. EPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the U.S. EPA.
8. On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.
9. On December 14, 2012, the national annual PM2.5 primary standard was lowered from $15 \mu\text{g}/\text{m}^3$ to $12.0 \mu\text{g}/\text{m}^3$. The existing national 24-hour PM2.5 standards (primary and secondary) were retained at $35 \mu\text{g}/\text{m}^3$, as was the annual secondary standard of $15 \mu\text{g}/\text{m}^3$. The existing 24-hour PM10 standards (primary and secondary) of $150 \mu\text{g}/\text{m}^3$ also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.
10. To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. Note that the national 1-hour standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national 1-hour standard to the California standards the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.
11. On June 2, 2010, a new 1-hour SO_2 standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO_2 national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.

Note that the 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.
12. The ARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.
13. The national standard for lead was revised on October 15, 2008 to a rolling 3-month average. The 1978 lead standard ($1.5 \mu\text{g}/\text{m}^3$ as a quarterly average) remains in effect until one year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standard are approved.
14. In 1989, the ARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.

Idling of Commercial Heavy-Duty Trucks (13 CCR 2485):

In July 2004, CARB adopted an Airborne Toxic Control Measure (ATCM) to control emissions from idling trucks. The ATCM prohibits idling for more than five minutes for all commercial trucks with a gross vehicle weight rating over 10,000 pounds. The ATCM contains an exception that allows trucks to idle while queuing or involved in operational activities.

In-Use Off-Road Diesel-Fueled Fleets (13 CCR 2449 et seq.):

In July 2007, CARB adopted an ATCM for in-use off-road diesel vehicles. This regulation requires that specific fleet average requirements are met for NO_x emissions and for particulate matter emissions. Where average requirements cannot be met, best available control technology requirements apply. The regulation also includes several recordkeeping and reporting requirements.

In response to AB 8 2X, which was signed into law to provide economic relief and to preserve jobs in the construction industry, the regulations were revised in July 2009 (effective December 3, 2009) to allow a partial postponement of the compliance schedule in 2011 and 2012 for existing fleets. On December 17, 2010, CARB adopted additional revisions to further delay the deadlines reflecting reductions in diesel emissions due to the poor economy and overestimates of diesel emissions in California. The revisions delayed the first compliance date until no earlier than January 1, 2014, for large fleets, with final compliance by January 1, 2023. The compliance dates for medium fleets were delayed until an initial date of January 1, 2017, and final compliance date of January 1, 2023. The compliance dates for small fleets were delayed until an initial date of January 1, 2019, and final compliance date of January 1, 2028. Correspondingly, the fleet average targets were made more stringent in future compliance years. The revisions also accelerated the phaseout of older equipment with newer equipment added to existing large and medium fleets over time, requiring the addition of Tier 2 or higher engines starting on March 1, 2011, with some exceptions: Tier 2 or higher engines on January 1, 2013, without exception; and Tier 3 or higher engines on January 1, 2018 (January 1, 2023, for small fleets).

On October 28, 2011 (effective December 14, 2011), the Executive Officer approved amendments to the regulation. The amendments included revisions to the applicability section and additions and revisions to the definition. The initial date for requiring the addition of Tier 2 or higher engines for large and medium fleets, with some exceptions, was revised to January 1, 2012. New provisions also allow for the removal of emission control devices for safety or visibility purposes. The regulation also was amended to combine the particulate matter and NO_x fleet average targets under one, instead of two, sections. The amended fleet average targets are based on the fleet's NO_x fleet average, and the previous section regarding particulate matter performance requirements was deleted completely. The best available control technology requirements, if a fleet cannot comply with the fleet average requirements, were restructured and clarified. Other amendments to the regulations included minor administrative changes to the regulatory text.

In-Use On-Road Diesel-Fueled Vehicles (13 CCR 2025):

On December 12, 2008, CARB adopted an ATCM to reduce NO_x and particulate matter emissions from most in-use on-road diesel trucks and buses with a gross vehicle weight rating greater than 14,000 pounds. The original ATCM regulation required fleets of on-road trucks to limit their NO_x and particulate matter emissions through a combination of exhaust retrofit equipment and new vehicles. The regulation limited particulate matter emissions for most fleets by 2011, and limited NO_x emissions for most fleets by 2013. The regulation did not require any vehicle to be replaced before 2012 and never required all vehicles in a fleet be replaced.

In December 2009, the CARB Governing Board directed staff to evaluate amendments that would provide additional flexibility for fleets adversely affected by the struggling California economy. On December 17, 2010, CARB revised this ATCM to delay its implementation along with limited relaxation of its requirements. Starting on January 1, 2015, lighter trucks with a gross vehicle weight rating of 14,001 to 26,000 pounds with 20-year-old or older engines need to be replaced with newer trucks (2010 model year emissions equivalent as defined in the regulation). Trucks with a gross vehicle weight rating greater than 26,000 pounds with 1995 model year or older engines needed to be replaced as of January 1, 2015. Trucks with 1996 to 2006 model year engines must install a Level 3 (85% control) diesel particulate filter starting on January 1, 2012, to January 1, 2014, depending on the model year, and then must be replaced after eight years. Trucks with 2007 to 2009 model year engines have no requirements until 2023, at which time they must be replaced with 2010 model year emissions-equivalent engines, as defined in the regulation. Trucks with 2010 model year engines would meet the final compliance requirements. The ATCM provides a phase-in option under which a fleet operator would equip a percentage of trucks in the fleet with diesel particulate filters, starting at 30% as of January 1, 2012, with 100% by January 1, 2016. Under each option, delayed compliance is granted to fleet operators who have or will comply with requirements before the required deadlines.

On September 19, 2011 (effective December 14, 2011), the Executive Officer approved amendments to the regulations, including revisions to the compliance schedule for vehicles with a gross vehicle weight rating of 26,000 pounds or less to clarify that all vehicles must be equipped with 2010 model year emissions equivalent engines by 2023. The amendments included revised and additional credits for fleets that have downsized; implement early particulate matter retrofits; incorporate hybrid vehicles, alternative-fueled vehicles, and vehicles with heavy-duty pilot ignition engines; and implement early addition of newer vehicles. The amendments included provisions for additional flexibility, such as for low-usage construction trucks, and revisions to previous exemptions, delays, and extensions. Other amendments to the regulations included minor administrative changes to the regulatory text, such as recordkeeping and reporting requirements related to other revisions.

California Health and Safety Code Section 41700:

Section 41700 of the California Health and Safety Code states that a person shall not discharge from any source whatsoever quantities of air contaminants or other material that cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or that endanger the comfort, repose, health, or safety of any of those persons or the public, or that cause, or have a natural tendency to cause, injury or damage to business or property. This section also applies to sources of objectionable odors.

3.3 Local Regulations

3.3.1 San Diego Air Pollution Control District

While CARB is responsible for the regulation of mobile emission sources within the state, local air quality management districts and air pollution control districts are responsible for enforcing standards and regulating stationary sources. The Project site is located within the SDAB and is subject to the guidelines and regulations of the SDAPCD.

In San Diego County (County), O₃ and particulate matter are the pollutants of main concern, since exceedances of state ambient air quality standards for those pollutants have been observed in most years. For this reason, the SDAB has been designated as a non-attainment area for the state PM₁₀, PM_{2.5}, and O₃ standards. The SDAB is also a federal O₃ attainment (maintenance) area for the 1997 8-hour O₃ standard, an O₃ non-attainment area for the 2008 8-hour O₃ standard, and a CO maintenance area (western and central part of the SDAB only, including the Project site area).

Federal Attainment Plans:

In October 2020, the SDAPCD adopted an update to the Eight-Hour Ozone Attainment Plan for San Diego County (2008 O₃ NAAQS), which indicated that local controls and state programs would allow the region to reach attainment of the federal 8-hour O₃ standard (2015 O₃ NAAQS) by August 2024 (SDAPCD 2020a). In this plan, SDAPCD relies on the Regional Air Quality Strategy (RAQS) to demonstrate how the region will comply with the federal O₃ standard. The RAQS details how the region will manage and reduce O₃ precursors (NO_x and VOC) by identifying measures and regulations intended to reduce these pollutants. The control measures identified in the RAQS generally focus on stationary sources; however, the emissions inventories and projections in the RAQS address all potential sources, including those under the authority of CARB and the USEPA. Incentive programs for reduction of emissions from heavy duty diesel vehicles, off-road equipment, and school buses are also established in the RAQS.

Currently, the County is designated as serious non-attainment for the 2008 NAAQS and moderate non-attainment for the 2015 NAAQS. As documented in the 2020 Plan (SDAPCD 2020a), the County needs to demonstrate how the region will further reduce air pollutant emissions in order to attain the current NAAQS for ozone by specified dates. Although total regionwide NO_x and VOC emissions (precursors for

ozone formation) were reduced by over 60% and 50%, respectively, during the 2000-2018 time period, and large portions of the region meet both federal ozone standards, there are a few areas of the County that do not. These region-wide air quality improvements are the result of increasingly stringent air pollution regulations over the years that address issues such as the transition to low-emission cars, stricter new source review rules, and continuing the requirement of general conformity for military growth and the San Diego International Airport. The County will continue emission control measures, including ongoing implementation of existing regulations in O₃ precursor reduction to stationary and area-wide sources, subsequent inspections of facilities and sources, and the adoption of laws requiring best available retrofit control technology for control of emissions. Nevertheless, in order to attain the federal ozone standards, the region still requires further reductions of air pollutants, especially from mobile sources as they contribute 65% of all ozone-forming pollutants emitted in San Diego County in 2020 (SDAPCD 2020a).

Air pollution is largely a cumulative impact. The non-attainment status of regional pollutants is a result of past and present development, and the SDAPCD develops and implements plans for future attainment of ambient air quality standards. Based on these considerations, project-level thresholds of significance for criteria pollutants are relevant in the determination of whether a project's individual emissions would have a cumulatively significant impact on air quality.

The SDAB is designated under the California and National AAQS as non-attainment for O₃ and under the CAAQS as non-attainment for PM₁₀ and PM_{2.5} (SDAPCD 2021a). The poor air quality in the SDAB is the result of cumulative emissions from motor vehicles, off-road equipment, commercial and industrial facilities, and other emission sources. Projects that emit these pollutants or their precursors (i.e., VOCs and NO_x for O₃) potentially contribute to poor air quality. In analyzing cumulative impacts from a project, the analysis must specifically evaluate the project's contribution to the cumulative increase in pollutants for which the SDAB is designated as non-attainment for the CAAQS and NAAQS. If the project does not exceed thresholds and is determined to have less-than-significant project-specific impacts, it may still contribute to a significant cumulative impact on air quality if the emissions from the project, in combination with the emissions from other proposed or reasonably foreseeable future projects, exceed established thresholds. However, a project would only be considered to have a significant cumulative impact if the project's contribution accounts for a significant proportion of the cumulative total emissions (i.e., it represents a "cumulatively considerable contribution" to the cumulative air quality impact).

State Attainment Plans:

The SDAPCD and the San Diego Association of Governments (SANDAG) are responsible for developing and implementing the clean air plan for attainment and maintenance of the ambient air quality standards in the SDAB. The RAQS for the SDAB was initially adopted in 1991 and is updated on a triennial basis, most recently in 2016 (SDAPCD 2016). The RAQS outlines SDAPCD's plans and control measures designed to attain the state air quality standards for O₃. The RAQS relies on

information from CARB and SANDAG, including mobile and area source emissions, as well as information regarding projected growth in the County and the cities in the County, to forecast future emissions and then determine from that the strategies necessary for the reduction of emissions through regulatory controls. CARB mobile source emission projections and SANDAG growth projections are based on population, vehicle trends, and land use plans developed by the County and the cities in the County as part of the development of their general plans (SANDAG 2013, 2021a).

In December 2016, the SDAPCD adopted the revised RAQS for the County. The SDAPCD expects to continue reductions of ozone precursors through 2035 (SDAPCD 2016). Past reductions have been achieved through implementation of six VOC control measures and three NO_x control measures adopted in the SDAPCD's 2009 RAQS (SDAPCD 2009a). The SDAPCD is considering additional measures, including three VOC measures and four control measures to reduce 0.3 daily tons of VOC and 1.2 daily tons of NO_x, provided they are found to be feasible region-wide. In addition, SDAPCD has implemented nine incentive-based programs, has worked with SANDAG to implement regional transportation control measures, and has reaffirmed the state emission offset repeal.

In December 2005, the SDAPCD prepared a report titled "Measures to Reduce Particulate Matter in San Diego County" to address implementation of Senate Bill (SB) 656 in the County (SB 656 required additional controls to reduce ambient concentrations of PM₁₀ and PM_{2.5}) (SDAPCD 2005). In the report, SDAPCD evaluated implementation of source-control measures that would reduce particulate matter emissions associated with residential wood combustion; various construction activities including earthmoving, demolition, and grading; bulk material storage and handling; carry-out and track-out removal and cleanup methods; inactive disturbed land; disturbed open areas; unpaved parking lots/staging areas; unpaved roads; and windblown dust (SDAPCD 2005).

The RAQS outlines SDAPCD's plans and control measures designed to attain the CAAQS for ozone. In addition, the SDAPCD relies on the SIP, which includes the SDAPCD's plans and control measures for attaining the ozone NAAQS. These plans accommodate emissions from all sources, including natural sources, through implementation of control measures, where feasible, on stationary sources to attain the standards. Mobile sources are regulated by the CalEPA and the CARB, and the emission and reduction strategies related to mobile sources are considered in the RAQS and SIP.

The RAQS relies on information from CARB and SANDAG, including projected growth in the County, and mobile, area, and all other source emissions in order to project future emissions and determine from that the strategies necessary for the reduction of stationary source emissions through regulatory controls. The CARB's mobile source emission projections and SANDAG's growth projections are based on population and vehicle trends, and land use plans developed by the cities and by the County. As such, projects that propose development that is consistent with the growth anticipated by these land use plans would be consistent with the RAQS. In the event

that a project proposes development which is less dense than anticipated within the adopted land use plans, the project would likewise be consistent with the RAQS. If a project proposes development that is greater than that anticipated in the adopted land use plans and SANDAG's growth projections upon which the RAQS is based, the project would be in conflict with the RAQS and SIP and could have a potentially significant impact on air quality. This situation would warrant further analysis to determine if the proposed project and the surrounding projects would exceed the growth projections used in the RAQS for the specific subregional area.

SDAPCD Rules and Regulations:

As stated above, the SDAPCD is responsible for planning, implementing, and enforcing federal and state ambient standards in the SDAB. The following rules and regulations apply to all sources in the jurisdiction of SDAPCD and would apply to any proposed projects on the Project site.

SDAPCD Regulation IV: Prohibitions; Rule 51: Nuisance: This rule prohibits the discharge, from any source, of such quantities of air contaminants or other materials that cause or have a tendency to cause injury, detriment, nuisance, annoyance to people and/or the public, or damage to any business or property (SDAPCD 1976). Any criteria air pollutant emissions, TAC emissions, or odors that would be generated during construction or operation of any development project in the parcel area would be subject to SDAPCD Rule 51. Violations can be reported to the SDAPCD in the form of an air quality complaint by telephone, email, and online form. Complaints are investigated by the SDAPCD as soon as possible.

SDAPCD Regulation IV: Prohibitions; Rule 55: Fugitive Dust: This rule regulates fugitive dust emissions from any commercial construction or demolition activity capable of generating fugitive dust emissions, including active operations, open storage piles, and inactive disturbed areas, as well as track-out and carry-out onto paved roads beyond a project area (SDAPCD 2009b). Construction activities, primarily during earth-disturbing activities, may result in fugitive dust emissions that would be subject to SDAPCD Rule 55. Fugitive dust emissions are not anticipated during onsite operation of the mixed-use development.

SDAPCD Regulation IV: Prohibitions; Rule 67.0.1: Architectural Coatings: This rule requires manufacturers, distributors, and end users of architectural and industrial maintenance coatings to reduce VOC emissions from the use of these coatings, primarily by placing limits on the VOC content of various coating categories (SDAPCD 2021b). Construction and operation activities would include application of architectural coatings (e.g., paint and other finishes), which are subject to SDAPCD Rule 67.0.1. Architectural coatings used in the reapplication of coatings during operation of the mixed-use development would be subject to the VOC content limits identified in SDAPCD Rule 67.0.1, which applies to coatings manufactured, sold, or distributed within the County.

3.3.2 San Diego Association of Governments

SANDAG is the regional planning agency for the County and serves as a forum for

regional issues relating to transportation, the economy, community development, and the environment. SANDAG serves as the federally designated metropolitan planning organization for the County. With respect to air quality planning and other regional issues, SANDAG has prepared San Diego Forward: The Regional Plan (Regional Plan) for the San Diego Region (SANDAG 2021a). The Regional Plan combines the big-picture vision for how the region will grow over the next 30 years with an implementation program to help make that vision a reality. The Regional Plan, including its Sustainable Communities Strategy (SCS), is built on an integrated set of public policies, strategies, and investments to maintain, manage, and improve the transportation system so that it meets the diverse needs of the San Diego region through 2050.

In regard to air quality, the Regional Plan sets the policy context in which SANDAG participates in and responds to the air district's air quality plans and builds off the air district's air quality plan processes that are designed to meet health-based criteria pollutant standards in several ways (SANDAG 2021a). First, it complements air quality plans by providing guidance and incentives for public agencies to consider best practices that support the technology-based control measures in air quality plans. Second, the Regional Plan emphasizes the need for better coordination of land use and transportation planning, which heavily influences the emissions inventory from the transportation sectors of the economy. This also minimizes land use conflicts, such as residential development near freeways, industrial areas, or other sources of air pollution.

On February 26, 2021, SANDAG's Board of Directors adopted the final 2021 Regional Transportation Improvement Program, which is a multibillion-dollar, multiyear program of proposed major transportation projects in the San Diego region. Transportation projects funded with federal, state, and TransNet (the San Diego transportation sales tax program) must be included in an approved Regional Transportation Improvement Program. The programming of locally funded projects also may be programmed at the discretion of the agency. The 2021 Regional Transportation Improvement Program covers five fiscal years and incrementally implements the Regional Plan (SANDAG 2021c).

3.3.3 City of San Diego

The San Diego Municipal Code addresses air quality and odor impacts in Chapter 14, Article 2, Division 7 paragraph 142.0710, "Air Contaminant Regulations," which states that air contaminants including smoke, charred paper, dust, soot, grime, carbon, noxious acids, toxic fumes, gases, odors, and particulate matter, or any emissions that endanger human health, cause damage to vegetation or property, or cause soiling shall not be permitted to emanate beyond the boundaries of the premises upon which the use emitting the contaminants is located (City of SD 2010).

3.4 Regional and Local Air Quality Conditions

3.4.1 San Diego Air Basin Attainment Designation

Pursuant to the 1990 federal CAA amendments, the USEPA classifies air basins (or portions thereof) as “attainment” or “non-attainment” for each criteria air pollutant, based on whether the NAAQS have been achieved. Generally, if the recorded concentrations of a pollutant are lower than the standard, the area is classified as “attainment” for that pollutant. If an area exceeds the standard, the area is classified as “non-attainment” for that pollutant. If there is not enough data available to determine whether the standard is exceeded in an area, the area is designated as “unclassified” or “unclassifiable.” The designation of “unclassifiable/attainment” means that the area meets the standard or is expected to be meet the standard despite a lack of monitoring data. Areas that achieve the standards after a non-attainment designation are redesignated as maintenance areas and must have approved maintenance plans to ensure continued attainment of the standards. The California Clean Air Act (CCAA), like its federal counterpart, calls for the designation of areas as “attainment” or “non-attainment,” but based on the CAAQS rather than the NAAQS.

A complete listing of the current attainment status with respect to both federal and state non-attainment status by pollutants for the SDAB is shown in Table 2 (SDAPCD 2021a).

TABLE 2 SUMMARY OF SAN DIEGO AIR BASIN (SDAB) FEDERAL AND STATE ATTAINMENT STATUS		
Criteria Pollutant	Federal Designation	State Designation
Ozone (8-Hour)	Non-attainment	Non-attainment
Ozone (1-Hour)	Attainment *	Non-attainment
Carbon Monoxide	Attainment	Attainment
PM ₁₀	Unclassifiable **	Non-attainment
PM _{2.5}	Attainment	Non-attainment
Nitrogen Dioxide	Attainment	Attainment
Sulfur Dioxide	Attainment	Attainment
Lead	Attainment	Attainment
Sulfates	No Federal Standard	Attainment
Hydrogen Sulfide	No Federal Standard	Unclassified
Visibility	No Federal Standard	Unclassified

* The federal 1-hour standard of 12 ppm was in effect from 1979 through June 15, 2005. The revoked standard is referenced here because it was employed for such a long period and because this benchmark is addressed in state Implementation Plans.

** At the time of designation, if the available data does not support a designation of attainment or non-attainment, the area is designated as unclassifiable.

3.4.2 Local Ambient Air Quality

The SDAPCD monitors air quality conditions at locations throughout the SDAB. The purpose of the monitoring stations is to measure ambient concentrations of pollutants, including criteria pollutants, ozone precursors and TACs, and to determine whether the CAAQS and the NAAQS are met. The monitors closest to the Project site are the Otay Mesa-Donovan station (480 Alta Rd, approximately 4.5 miles northeast of the Project site), and the Chula Vista station (80 E. J St., Chula Vista, approximately 5.25 miles northwest of the Project site). A summary of the data recorded at the two monitoring stations from 2018 through 2020 is presented in Table 3.

TABLE 3 AMBIENT AIR BACKGROUND POLLUTANT CONCENTRATIONS/EXCEEDANCES/STANDARDS			
Pollutant	2018	2019	2020
Ozone (O₃)			
State maximum 1-hour concentration (ppm)	0.092 ¹	0.073 ¹	0.113¹
National maximum 8-hour concentration (ppm)	0.078¹	0.062 ¹	0.100¹
State maximum 8-hour concentration (ppm)	0.079¹	0.062 ¹	0.100¹
<u>Number of Days Standard Exceeded</u>			
CAAQS 1-hour (>0.09 ppm)	0 ¹	0 ¹	3 ¹
NAAQS 8-hour /CAAQS 8-hour (>0.070 ppm)	1/1 ¹	0/0 ¹	10/11 ¹
Respirable Particulate Matter (PM₁₀)			
National maximum 24-hour concentration (µg/m ³)	55 ¹	199¹	174³
State maximum 24-hour concentration (µg/m ³)	55¹	199.8¹	174³
State annual average concentration (µg/m ³)	26.2¹	31.4¹	49.7³
<u>Annual or Days Standard Exceeded *</u>			
NAAQS 24-hour (>150 µg/m ³)	0	7	**
CAAQS 24-hour (>50 µg/m ³)/Annual (>20 µg/m ³)	18/Yes ¹	51/Yes ¹	**/Yes ³
Fine Particulate Matter (PM_{2.5})			
National Maximum 24-hour concentration (µg/m ³)	41.9²	18.6 ²	46.7²
Annual average concentration (µg/m ³)	41.9²	18.6 ²	46.7²
<u>Annual or Days Standard Exceeded *</u>			
NAAQS 24-hour (>35 µg/m ³)/Annual (>12.0 µg/m ³)	32/No ²	**/No ⁴	**/No ⁴
CAAQS Annual (>12 µg/m ³)	No ²	No ⁴	No ⁴

Notes:

$\mu\text{g}/\text{m}^3$ = micrograms per cubic meter; ppb = parts per billion; ppm = parts per million; N/A = Not available.
CAAQS = California Ambient Air Quality Standard; NAAQS = National Ambient Air Quality Standard.
BOLD value indicates greater than standard.

1. Measured at the Otay Mesa-Donovan station (480 Alta Rd, approximately 4.5 miles northeast of the Project site) using iADAM Top 4 Summary.
 2. Measured at the Chula Vista station (80 E. J St., Chula Vista, approximately 5.25 miles northwest of the Project site) using iADAM Top 4 Summary.
 3. Measured at the Otay Mesa-Donovan station (480 Alta Rd, approximately 4.5 miles northeast of the Project site) using SDAPCD 5-Year Air Quality Summary, as there was not a complete set of data for local stations on iADAM.
 4. Measured at the Chula Vista station (80 E. J St., Chula Vista, approximately 5.25 miles northwest of the Project site) using SDAPCD 5-Year Air Quality Summary, as there was not a complete set of data for local stations on iADAM.
- * In the case of an Annual standard a No or Yes response is provided. and, where applicable, number of days presented are the Estimated Number of days as provided in iADAM (as sampling not performed continuously)

** Number of exceedances are not available in SDAPCD summary.

Source: CARB 2022, SDAPCD 2020c

3.5 Air Quality Analysis Significance Criteria

3.5.1 Thresholds of Significance

3.5.1.1 CEQA Guideline Thresholds

The CEQA Guidelines indicate that, where such guidance is available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to determine whether the project would have a significant impact on air quality. The CEQA guidelines also indicate that any available guidance from lead agencies, which in this case, is the City of San Diego, can be used to determine whether or not a project would have a significant impact on air quality. The City of San Diego has established guidelines for determining significance based upon these CEQA guidelines (City of SD 2022). These City guidelines have been used in this analysis to determine significance for the Project. See Section 3.5.1.2 for more details.

3.5.1.2 City of San Diego Thresholds

The City of San Diego has approved guidelines for determining significance, based upon Appendix G of the CEQA Guidelines (City of SD 2022). The criteria provided by the City of San Diego guidelines expand upon the items listed above in Section 3.5.1.1. A project would have a significant air quality environmental impact if it would:

- a. *Conflict with or obstruct implementation of the applicable air quality plan;*
- b. *Violate any air quality standard or contribute substantially to an existing or projected air quality violation;*
- c. *Result in a cumulatively considerable net increase of any criteria pollutant for which the project region (SDAB) is non-attainment under an applicable federal or state ambient standard (including release emissions which exceed quantitative thresholds for ozone precursors);*

- d. *Expose sensitive receptors (including, but not limited to, residences, schools, hospitals, resident care facilities, or day-care centers) to substantial pollutant concentrations;*
- e. *Create objectionable odors affecting a substantial number of people;*
- f. *Release substantial quantities of air contaminants beyond the boundaries of the premises upon which the stationary source emitting the contaminants is located.*

A significant adverse air quality impact may occur when a project individually or cumulatively interferes with progress toward the attainment of the ozone standard by generating emissions that equal or exceed the established long-term quantitative thresholds for pollutants or exceed a state or federal ambient air quality standard for any criteria pollutant. If a project is found to have a significant effect, the project would have to incorporate mitigation measures.

To determine whether a project would (a) conflict with or obstruct implementation of the applicable air quality plan (that is, the San Diego RAQs or SIP) or (b) result in emissions that would violate any air quality standard or contribute substantially to an existing or projected air quality violation, or (c) result in a cumulatively considerable net increase of PM₁₀ or exceed quantitative thresholds for ozone precursors (i.e., NO_x and VOCs), project emissions may be evaluated based on the quantitative emission thresholds established by the SDAPCD. As part of its air quality permitting process, the SDAPCD has established thresholds in Rule 20.2 (SDAPCD 2020b) for the preparation of Air Quality Impact Assessments (AQIAs).

For CEQA purposes, these screening criteria can be used as numeric methods to demonstrate that a project's total emissions would not result in a significant impact to air quality. The screening thresholds from Rule 20.2 (SDAPCD 2020b), except for Reactive Organic Gases (ROG), are included in Table 4. The thresholds for ROGs are from the City's CEQA guidelines (City of SD 2022).

TABLE 4 SCREENING LEVEL THRESHOLDS FOR AIR QUALITY IMPACT ANALYSIS CONSTRUCTION AND OPERATIONS		
Pollutant	Daily Threshold (lb/day)	Annual Threshold (tons/yr)
Criteria Pollutants		
Respirable Particulate Matter (PM ₁₀)	100	15
Fine Particulate Matter (PM _{2.5})	67	10
Oxides of Nitrogen (NO _x)	250	40
Oxides of Sulfur (SO _x)	250	40
Carbon Monoxide (CO)	550	100
Reactive Organic Gases (ROG) ¹	137	15

Sources: SDAPCD Rule 20.2; City of San Diego CEQA Guidelines (City of SD 2022).

1. For purpose of this analysis, Reactive Organic Gases (ROGs) are considered to be equivalent to Volatile Organic Compounds (VOCs).

Air quality varies as a direct function of the amount of pollutants emitted into the atmosphere, the size and topography of the air basin, and the prevailing meteorological conditions. Air quality problems arise when the rate of pollutant emissions exceeds the rate of dispersion. Reduced visibility, eye irritation, and adverse health impacts upon those persons termed “sensitive receptors” are the most serious hazards of existing air quality conditions in the area. Some land uses are considered more sensitive to changes in air quality than others, depending on the population groups and the activities involved. People most likely to be affected by air pollution, as identified by the City (City of SD 2022), include children, the elderly, athletes, and people with cardiovascular and chronic respiratory diseases. As such, sensitive receptors include residences, schools, playgrounds, childcare centers, athletic facilities, long-term healthcare facilities, rehabilitation centers, convalescent centers, and retirement homes. The provisions of these regulations do not apply to odors emanating from agricultural operations necessary for the growing of crops or the raising of fowl or animals. It is generally accepted that the considerable number of persons requirement in Rule 51 is normally satisfied when 10 different individuals/households have made separate complaints within 90 days. Odor complaints from a “considerable” number of persons or businesses in the area would be considered a significant, adverse odor impact. Therefore, any unreasonable odor discernible at the property line of the campus would be considered a significant odor impact.

4.0 AIR QUALITY ANALYSIS METHODOLOGY

Air quality modeling for the Project development was performed in general accordance with the methodologies outlined in the SDAPCD 2016 RAQS to identify construction and operational emissions associated with the Project. Criteria pollutant emissions were calculated using the California Emissions Estimator Model (CalEEMod) software version 2020.4.0 which incorporates current air emission data, planning

methods and protocols approved by CARB (CAPCOA 2021).

As referenced, construction activities would include site preparation, grading, construction of the buildings/utilities and related improvements as well as paving parking areas. Construction activities would require the use of equipment that would generate criteria air pollutant emissions. For modeling purposes, it was assumed that all construction equipment would be diesel-powered. Construction emissions associated with the development of the Project site were calculated based on default equipment amounts and types. Since this parcel is not currently developed, no demolition activities were assumed. Construction emissions were analyzed using the regional thresholds published within the City of San Diego Significance Determination Thresholds Guidelines (City of SD 2022).

Operational emissions from the Project would include mobile source emissions, energy emissions and area source emissions. Mobile source emissions would be generated by motor vehicle trips associated with operation of the Project site. Emissions attributable to energy use include electricity and natural gas consumption for space and water heating. Area source emissions would be generated by landscape maintenance equipment, use of consumer products and painting. To determine whether a regional air quality impact would occur from this development, the increases in emissions were compared with the operational thresholds published by the City of San Diego (City of SD 2022).

4.1 Construction Emissions

Construction of the development would generate temporary air pollutant emissions. These impacts are associated with fugitive dust (PM₁₀ and PM_{2.5}) from soil disturbance and exhaust emissions (NO_x, CO and SO₂) from heavy construction vehicles. As noted, construction would generally consist of site preparation and lot grading, construction of the buildings and related improvements and the application of architectural coating (painting).

Table 5 shows the construction schedule assumed for each of the construction phases at the site. A five-day workweek was assumed with no overlap between the construction phases. Default values were assumed for the number and types of construction equipment for each construction phase.

TABLE 5 CONSTRUCTION SCHEDULE – BDM OTAY MESA MIXED-USE	
Construction Phase	Estimated Dates
Site Preparation	Jan. 28, 2023 – Feb. 10, 2023
Grading	Feb. 11, 2023 – Mar. 24, 2023
Building Construction	Mar. 25, 2023 – May 17, 2024
Paving	May 18, 2024 – June 14, 2024
Architectural Coating	June 15, 2024 – Aug. 16, 2024

Site preparation and grading would involve the greatest concentration of heavy equipment use and the highest potential for fugitive dust emissions. Any development would be required to comply with SDAPCD Rule 55, which identifies fugitive dust standards and is required to be implemented at all construction sites located within the SDAB. Therefore, the following assumptions 1 through 5, which generally reduce fugitive dust emissions, were included in CalEEMod for site preparation and grading phases of construction. Assumption 6 was included in CalEEMod for the architectural coating phase of construction.

1. **Minimization of Disturbance.** Construction contractors should minimize the area disturbed by clearing, grading, earth moving, or excavation operations to prevent excessive amounts of dust.
2. **Soil Treatment.** Construction contractors should treat all graded and excavated material, exposed soil areas, and active portions of the construction site, including unpaved on-site roadways, to minimize fugitive dust. Treatment shall include, but not necessarily be limited to, periodic watering, application of environmentally safe soil stabilization materials, and/or roll compaction as appropriate. Watering shall be done as often as necessary, and at least three times daily, preferably at the start of each morning, mid-day, and after work is completed for the day. For modeling purposes, it was assumed that watering would occur three times daily, during the construction of this development.
3. **Soil Stabilization.** Construction contractors should monitor all graded and/or excavated inactive areas of the construction site at least weekly for dust stabilization. Soil stabilization methods, such as water and roll compaction, and environmentally safe dust control materials shall be applied to portions of the construction site that are inactive for over four days. If no further grading or excavation operations are planned for the area, the area shall be seeded and watered until landscape growth is evident, or periodically treated with environmentally safe dust suppressants, to prevent excessive fugitive dust.

4. **No Grading During High Winds.** Construction contractors should stop all clearing, grading, earth moving, and excavation operations during periods of high winds (20 miles per hour or greater, as measured continuously over a one-hour period).
5. **Street Sweeping.** Construction contractors should sweep all on-site driveways and adjacent streets and roads at least once per day, preferably at the end of the day, if visible soil material is carried over to adjacent streets and roads.
6. **Architectural Coatings.** Construction contractors shall use low-VOC paint (50 g/L for interior and exterior coatings for residential and non-residential buildings, and 100 g/L for parking lot paint) as required by SDAPCD Rule 67.0.1, which became effective on January 1, 2022.

4.2 Operational Emissions

Operational emissions for the Project include emissions from electricity consumption (energy sources), vehicle trips (mobile sources), area sources, landscape equipment, and evaporative emissions as the structures are repainted over the life of developments at the Project site. The majority of operational emissions would be associated with vehicle trips to and from the mixed-use development. The first year of operations for the Project was assumed to be 2025.

The CalEEMod modeling for operational emissions considered the design conditions listed below:

1. **Architectural coatings.** The use of low-VOC paint (50 g/L for interior and exterior coatings and 100 g/L for parking lot paint) as required by SDAPCD Rule 67.0.1, which became effective on January 1, 2022.
2. **Fireplaces and Woodstoves.** No fireplaces or woodstoves would be installed.

5.0 PROJECT AIR QUALITY IMPACT ANALYSIS

The mixed-use development would generate both construction and operational emissions. Initial construction emissions would include emissions associated with the site development and grading of the development. Operational emissions would include emissions from vehicle traffic. The construction and operational impacts are evaluated and compared to the City's significance criteria in this section.

5.1 Consistency with Air Quality Plans

The San Diego Association of Regional Government's (SANDAG)'s 2050 Regional Growth Forecast, adopted in December 2021 (SANDAG 2021b) estimates that the City will have 592,143 housing units in 2025 and 676,236 units in 2035, an increase of 84,093 units or about 8,409 units added per year. The proposed Project growth of 430 units is a small fraction of the projected increase in units in the region, and

therefore is not expected to be inconsistent with the regional growth plans. The commercial portion of the mixed-use development will create job growth, which further demonstrates consistency with the regional plan.

The RAQS is the applicable regional air quality plan that sets forth the SDAPCD's strategies for achieving the NAAQS and CAAQS. The SDAB is designated non-attainment for the federal and state ozone standard. Accordingly, the RAQS was developed to identify feasible emission control measures and provide expeditious progress toward attaining the standards for ozone. The two pollutants addressed in the RAQS are ROG and oxides of nitrogen (NO_x), which are precursors to the formation of ozone. Projected increases in motor vehicle usage, population, and growth create challenges in controlling emissions and by extension to maintaining and improving air quality. The RAQS, in conjunction with the transportation control measures (TCM), were most recently adopted in 2016 as the air quality plan for the region.

The growth projections used by the SDAPCD to develop the RAQS emissions budgets are based on the population, vehicle trends, and land use plans developed in general plans and used by SANDAG in the development of the regional transportation plans and sustainable communities strategy. As such, projects that propose development that is consistent with the growth anticipated by SANDAG's growth projections and/or the general plan would not conflict with the RAQS. In the event that a project would propose development that is less dense than anticipated by the growth projections, the project would likewise be consistent with the RAQS. In the event a project proposes development that is greater than anticipated in the growth projections, further analysis would be warranted to determine if the project would exceed the growth projections used in the RAQS for the specific subregional area.

The Project site is designated as Community Commercial, with an auto orientation and prohibited residential use (CC-2-3), which may include commercial employment, retail, and services in the City's General Plan and as Community Commercial in the Otay Mesa Community Plan. The Project would require a Community Plan Amendment (CPA) to allow for the construction of a mixed-use residential and commercial project, with a pedestrian orientation (CC-3-6). According to the Otay Mesa Community Plan (OMCP), the Community Commercial designation allows for shopping areas with retail, service, civic, and office uses with a floor area ratio of 0.3. Therefore, an approximately 176,000-square foot commercial use could be constructed under the adopted land use designations (OMCP 2014). Applying a trip generation rate of 70 trips per 1,000 square feet for a commercial land use, a retail use would generate 12,320 daily trips, which is significantly greater than the trips generated by the proposed Project (2,820 daily trips). Therefore, the Project would generate less emissions than the adopted land use designation upon which the current RAQS is based, and it can be concluded that the Project would not obstruct or conflict with the implementation of the RAQS.

The OMCP states that DUs for the year 2000 were 481 units (OMCP 2014). The OMCP estimates that the total number of residential units at buildout will be 18,774, an increase of 18,293 units since 2000. This includes 2,594 medium-high density units.

The proposed Project would add 430 units, about 16.6% of the medium-high density growth, or 2.3% of the total density growth projected in the Otay Mesa Community from 2000. The maximum residential growth anticipated by the proposed Project can be accommodated within the growth projected by the OMCP.

The OMCP defines the planned land use distribution to include 302 acres of commercial development. The proposed Project will contribute 6,000 sf of commercial space, which is consistent with the potential for future growth. Therefore, the proposed Project is expected to be consistent with the OMCP.

Site development would support the overall projected increase in the development potential within the OMCP area, consistent with SANDAG regional and OMCP growth projections and with the applicable environmental goals and objectives contained in the General Plan and the OMCP. Any development at the proposed Project site is expected to be required to implement policies, actions, and design guidelines that support General Plan concepts such as increased walkability, enhanced pedestrian and bicycle networks, improved connections to transit, and sustainable development and green building practices. Any development would be consistent with the SDAPCD's regional goals of improving the balance between jobs and housing, and integrating land uses near major transportation corridors such as the 905 freeway. Therefore, the proposed amendment to the General Plan and OMCP would be consistent with the RAQS and SIP. The impact on regional attainment planning would **be less than significant** under CEQA.

5.2 Compliance with Air Quality Standards

5.2.1 Construction Emissions

Construction of the development at the site would generate temporary air pollutant emissions. These impacts are associated with fugitive dust (PM₁₀ and PM_{2.5}) from soil disturbance and exhaust emissions (NO_x and CO) from heavy construction vehicles. For the purpose of estimating emissions, it was assumed that the 13.45-acre parcel would be disturbed and developed for overall construction. As noted, construction would generally consist of site preparation, grading, building construction, paving and application of architectural coatings (painting).

Site preparation and grading would involve the greatest concentration of heavy equipment use and the highest potential for fugitive dust emissions. Soil needed for cut and fill activities on the site due to site preparation and grading would require import of 63,274 cubic yards of soil. Any development would be required to comply with SDAPCD Rule 55, which identifies fugitive dust standards and is required to be implemented at all construction sites located within the SDAB.

Construction is assumed to begin in early 2023 with completion by mid-2024. Tables 6 and 7 show modeled maximum daily and annual emissions occurring during the construction period at the site, with a comparison of each year's daily and annual impacts to the City of San Diego CEQA screening level thresholds.

TABLE 6 MAXIMUM DAILY CONSTRUCTION EMISSIONS						
lb/day						
Year	ROG	NO_x	CO	SO₂	Total PM₁₀	Total PM_{2.5}
2023	3.97	70.4	38.1	0.221	10.2	5.14
2024	51.3	18.3	27.1	0.075	4.79	1.73
Screening Threshold (lb/day)	137	250	550	250	100	67
Exceeds Threshold (Yes/No)?	No	No	No	No	No	No

See Appendix A for CalEEMod ver. 2020.4.0 computer model output for the daily emissions shown. The higher lb/day value between Winter and Summer results is shown for each pollutant.

Table 7 shows modeled maximum annual impacts of criteria pollutants at the Project site by year throughout the assumed construction period, with a comparison of each year’s annual impacts to the City of San Diego CEQA screening level thresholds.

TABLE 7 MAXIMUM ANNUAL CONSTRUCTION EMISSIONS						
tons/year						
Year	ROG	NO_x	CO	SO₂	Total PM₁₀	Total PM_{2.5}
2023	0.36	3.12	3.41	0.011	0.674	0.269
2024	1.30	1.04	1.56	0.004	0.257	0.095
Screening Threshold (tons/yr)	15	40	100	40	15	10
Exceeds Threshold (Yes/No)?	No	No	No	No	No	No

See Appendix A for CalEEMod ver. 2020.4.0 computer model output for the annual emissions shown

All criteria pollutant emissions are below the daily and annual screening level thresholds, as analyzed for each year of construction. As such, air quality impacts from the construction of this development would be **less than significant**.

5.2.2 Mitigation Framework

Air quality impacts associated with the Otay Mesa Community Plan Update (CPU) were addressed in the Final Program Environmental Impact Report for the Otay Mesa Community Plan Update (Otay Mesa CPU FEIR; Project Number 30330/304032, SCH No. 2004651076) approved by the City in 2013 (City of San Diego 2013).

Since the Project does not exceed daily construction emission thresholds established by the City, best available control measures/technology are not required.

5.2.3 Operational Emissions

Operational emissions would include emissions from electricity consumption (energy sources), vehicle trips (mobile sources), area sources, landscape equipment and evaporative emissions as the structures are repainted over the life of the mixed-use development. The majority of operational emissions are associated with vehicle trips to and from the site. Average daily trips (ADTs) from the Traffic Analysis Memorandum (CRA 2022) were used in the CalEEMod modeling. Tables 8 and 9 summarize emissions associated with operation of the Project site.

TABLE 8 MAXIMUM DAILY OPERATIONAL EMISSIONS						
(lb/day)						
Category	ROG	NO_x	CO	SO₂	PM₁₀	PM_{2.5}
Area (Total)	11.2	0.406	35.3	0.002	0.195	0.195
Energy (Natural Gas)	0.096	0.822	0.363	0.005	0.066	0.066
Mobile (Total)	6.91	6.31	56.3	0.120	13.1	3.54
Total	18.2	7.54	91.9	0.127	13.3	3.80
Screening Threshold (lb/day)	137	250	550	250	100	67
Exceeds Threshold (Yes/No)?	No	No	No	No	No	No

See Appendix A for CalEEMod ver. 2020.4.0 computer model output. The higher lb/day value between Winter and Summer results is shown for each pollutant.

TABLE 9 MAXIMUM ANNUAL OPERATIONAL EMISSIONS						
(tons/year)						
Category	ROG	NO_x	CO	SO₂	PM₁₀	PM_{2.5}
Area (Total)	1.95	0.037	3.17	0.0002	0.018	0.018
Energy (Natural Gas)	0.175	0.150	0.066	0.001	0.012	0.012
Mobile (Total)	1.20	1.23	10.4	0.021	2.32	0.630
Total	3.17	1.42	13.6	0.022	2.35	0.660
Screening Threshold (tons/yr)	15	40	100	40	15	10
Exceeds Threshold (Yes/No)?	No	No	No	No	No	No

See Appendix A for CalEEMod ver. 2020.4.0 computer model output.

As shown in Tables 8 and 9, the operational emissions associated with this development would not exceed the City of San Diego CEQA screening level thresholds

for ROG, NO_x, CO, SO_x, PM₁₀ or PM_{2.5}. Therefore, the scenario's operational air quality impacts (including impacts related to criteria pollutants, sensitive receptors and violations of air quality standards) would be **less than significant** under CEQA.

5.3 Cumulative Impacts

Regarding short-term construction impacts, the SDAPCD thresholds of significance are used to determine whether the project may have a short-term cumulative impact. As shown in Tables 6 and 7, the Project would not exceed any criteria air pollutant thresholds during construction. Therefore, the scenario would have a less than significant cumulative impact during construction. Additionally, for the SDAB, the RAQS serves as the long-term regional air quality planning document for the purpose of assessing cumulative operational emissions in the basin to ensure that the SDAB continues to make progress toward NAAQS- and CAAQS-attainment status. As such, cumulative projects located in the San Diego region would have the potential to result in a cumulative impact to air quality if, in combination, they would conflict with or obstruct implementation of the RAQS. Similarly, individual projects that are inconsistent with the regional planning documents upon which the RAQS is based would have the potential to result in cumulative operational impacts if they represent development and population increases beyond regional projections.

Regarding long-term cumulative operational emissions in relation to consistency with local air quality plans, the SIP and RAQS serve as the primary air quality planning documents for the state and SDAB, respectively. The SIP and RAQS rely on SANDAG growth projections based on population, vehicle trends, and land use plans developed by the cities and the County as part of the development of their general plans. Therefore, projects that propose development that is consistent with the growth anticipated by local plans would be consistent with the SIP and RAQS and would not be considered to result in cumulatively considerable impacts from operational emissions. As stated previously, the Project would not result in significant regional growth that is not accounted for within the RAQS. As a result, the development would not result in a cumulatively considerable contribution to pollutant emissions and would result in a **less than significant** impact under CEQA.

5.4 Sensitive Receptor Exposure

The closest sensitive receptors to the Project site are an apartment complex within about 200 feet; San Ysidro High School, approximately 1/2 mile southeast; and a home-based childcare facility within about 0.8 miles to the northwest of the Project site.

Due to the short-term construction duration and the limited construction emissions, there is very low potential for fugitive dust or DPM due to construction activities to impact sensitive receptors. The scenario's total construction DPM emissions are not of a magnitude and duration that could create substantial concentrations or significant air toxic risks to the nearest sensitive receptors during construction. Compliance with the SDAPCD rules and regulations would reduce the fugitive dust emissions during construction and associated impacts to sensitive receptors. The

operating emissions would be negligible and would not have the potential to impact sensitive receptors. Therefore, the development's construction and operation air pollutant emissions would not expose sensitive receptors to substantial pollutant concentrations and would result in a **less than significant** impact under CEQA.

For new sensitive land uses that are sited within 500 feet of a freeway or urban roads with 100,000 or more vehicles per day, consideration is needed for the higher impacts that may occur near these freeways/roadways. The California Air Resources Board (CARB) provides guidance for strategies that can be implemented to reduce the exposure to air pollution near heavily traveled roadways (CARB 2017).

Since the risk at the multi-family buildings may exceed 10 in one million without reducing potential exposures, the Project would include design features, such as Minimum Efficiency Reporting Value 13 (MERV-13) filters that are required to comply with the 2019 Building Energy Efficiency Standards (CEC 2019). All units would be equipped with a heating, ventilation, and air conditioning (HVAC) unit with air filters capable of meeting MERV-13 or better. MERV-13 filters are capable of filtering particles ranging from 1.0 to 10.0 parts per million (ppm) in size by more than 90 percent (CARB 2017). With the provision of MERV-13 filters or better, the potential incremental increase in cancer risk would be expected to be reduced to below significant risk levels.

5.5 Objectionable Odors

Construction of the Project at the site would involve the use of diesel-powered construction equipment. Diesel exhaust odors may be noticeable temporarily at adjacent properties; however, construction activities would be temporary and are not considered significant. The proposed future residential and commercial designations of the site would not include industrial or agricultural uses that are typically associated with objectionable odors. Therefore, impacts associated with objectionable odors would be **less than significant** under CEQA.

5.6 Air Contaminant Emissions

As demonstrated in Tables 6, 7, 8, and 9 in Section 5.2, neither the construction nor the operation of the Project would result in substantial quantities of air contaminants being emitted beyond the boundaries of the premises. The proposed future residential and commercial designations of the site is in keeping with the land use designations of adjacent properties and would not add substantial quantities beyond the existing land use quantities into the region. Therefore, impacts associated with air contaminant emissions beyond the boundaries of the premises would be **less than significant** under CEQA.

6.0 CONCLUSIONS

The proposed Project will be consistent with the growth forecasts of the OMCP and the City of San Diego General Plan, and therefore will be consistent with the RAQS. Assuming the buildout of the residential units and commercial space at the Project

site, the air quality impact analysis demonstrates that short-term emissions from construction of the development would not exceed the City's air quality thresholds. Operational emissions include emissions from electricity consumption (energy sources), vehicle trips (mobile sources), area sources, landscape equipment and architectural coating emissions. The majority of operational emissions are associated with vehicle trips to and from the Project site. The net change in emissions between what currently operates on the site versus the proposed Project would not exceed the SDAPCD thresholds for the criteria pollutants evaluated, nor would the impact be cumulatively considerable. The Project would not cause substantial concentration impact to sensitive receptors, not objectionable odors to large numbers of persons. The mixed-use development will also be consistent with the regional and community plans. For these reasons, the Project this study finds that the Project air quality impacts will be less than significant.

7.0 REFERENCES

AEP 2021. *2021 CEQA Statute & Guidelines*, Association of Environmental Professionals, January 1, 2021. Available at:
www.califaep.org/statute_and_guidelines.php

CalEPA 1998. *Findings of the Scientific Review Panel on The Report on Diesel Exhaust*, California Environmental Protection Agency (CalEPA), Office of Environmental Health Hazard Assessment (OEHHA), as adopted at the Panel's April 22, 1998, meeting.

CAPCOA 2021. California Emission Estimator Model (CalEEMod) Users Guide, California Air Pollution Control Officers Association, May 2021. Available online at:
www.caleemod.com/

CARB 2000. *Diesel Risk Reduction Plan*, California Air Resources Board, September 2000. Available at:
ww2.arb.ca.gov/our-work/programs/diesel-risk-reduction-plan

CARB 2017. Technical Advisory: Strategies to Reduce Air Pollution Exposure Near High Volume Roadways. April 2017. Available at:
<https://ww2.arb.ca.gov/resources/fact-sheets/strategies-reduce-air-pollution-exposure-near-high-volume-roadways>

CARB 2021. *Overview: Diesel Exhaust & Health*, CARB, Accessed December 2021. Available at:
ww2.arb.ca.gov/resources/overview-diesel-exhaust-and-health

CARB 2022. iADAM Air Quality Data Statistics, CARB, Accessed on January 12, 2022. Available at:
www.arb.ca.gov/adam/topfour/topfour1.php

CEC 2019. *2019 Residential Compliance Manual Section 4: Building HVAC Requirements*, California Energy Commission, January 2019. Available at:
https://www.energy.ca.gov/sites/default/files/2021-03/2019_Chapter%204%20-%20Building%20HVAC%20Requirements_ADA.pdf

City of SD 2010. San Diego Municipal Code, Chapter 14, Article 2, Division 7, Section 142.0710, Air Contaminant Regulations, January 1, 2010. Available at:
docs.sandiego.gov/municode/MuniCodeChapter14/Ch14Art02Division07.pdf

City of SD 2013. Otay Mesa Community Plan Update FEIR. Available at:
<https://ceqanet.opr.ca.gov/2004051076/4>

City of SD 2022. *California Environmental Quality Act Significance Determination Thresholds*, City of San Diego, September 2022. Available at:
https://www.sandiego.gov/sites/default/files/september_2022_ceqa_thresholds_final.pdf

CRA 2022. *BDM Mixed Use – Traffic Analysis Memorandum, PTS# 673818*, CR Associates, March 10, 2022.

OMCP 2014. *Otay Mesa Community Plan Update*, City of San Diego, March 11, 2014. Available at:

https://www.sandiego.gov/sites/default/files/otay_mesa_cmnty_plan_update_final-central_village_cpa.pdf

SANDAG 2013. *Series 13: 2050 Regional Growth Forecast*, San Diego Association of Governments, October 15, 2013. Available at:

https://datasurfer.sandag.org/download/sandag_forecast_13_region_san-diego.pdf

SANDAG 2021a. *San Diego Forward: The Regional Plan*. SANDAG, December 2021. Available at:

<https://www.sdforward.com/mobility-planning/2021-regional-plan>

SANDAG 2021b. *Series 14: 2050 Regional Growth Forecast*, San Diego Association of Governments, December 2, 2021. Available at:

<https://www.sandag.org/index.asp?classid=12&subclassid=84&projectid=620&fuseaction=projects.detail>

SANDAG 2021c. *2021 Regional Transportation Improvement Program*, SANDAG, January 29, 2021. Available at:

www.sandag.org/uploads/publicationid/publicationid_4747_28774.pdf

SDAPCD 1976. *SDAPCD Regulation IV: Prohibitions; Rule 51: Nuisance*, SDAPCD, November 8, 1976. Available at:

<https://www.sdapcd.org/content/dam/sdapcd/documents/rules/current-rules/Rule-51.pdf>

SDAPCD 2005. *Measures to Reduce Particulate Matter in San Diego County*, SDAPCD, December 2005. Available at:

<https://www.sdapcd.org/content/dam/sdapcd/documents/grants/planning/PM-Measures.pdf>

SDAPCD 2009a. *2009 Regional Air Quality Strategy Revision*. SDAPCD, April 22, 2009. Available at:

<https://www.sdapcd.org/content/dam/sdapcd/documents/grants/planning/2009-RAQS.pdf>

SDAPCD 2009b. *SDAPCD Regulation IV: Prohibitions; Rule 55: Fugitive Dust*. SDAPCD, June 24, 2009. Available at:

<https://www.sdapcd.org/content/dam/sdapcd/documents/rules/current-rules/Rule-55.pdf>

SDAPCD 2016. *2016 Revision of the Regional Air Quality Strategy for San Diego County*, SDAPCD, December 2016. Available online at:

<https://www.sdapcd.org/content/sdapcd/planning.html>

SDAPCD 2020a. *2020 Plan for Attaining the NAAQS for Ozone in San Diego County*, SDAPCD, Updated October 2020. Available at:
[https://www.sdapcd.org/content/dam/sdapcd/documents/grants/planning/Att%20A%20\(Attainment%20Plan\)_ws.pdf](https://www.sdapcd.org/content/dam/sdapcd/documents/grants/planning/Att%20A%20(Attainment%20Plan)_ws.pdf)

SDAPCD 2020b. SDAPCD Regulation II: Permits; Rule 20.2: New Source Review – Non-Major Sources, SDAPCD, Adopted June 26, 2019, Effective October 16, 2020. Available at:
<https://www.sdapcd.org/content/dam/sdapcd/documents/rules/current-rules/Rule-20.2.pdf>

SDAPCD 2020c. SDAPCD 5-Year Air Quality Summary Annual Report (2016-2020). Available at:
<https://www.sdapcd.org/content/dam/sdapcd/documents/monitoring/5-Year-Air-Quality.pdf>

SDAPCD 2021a. San Diego County Attainment Status, SDAPCD, Accessed December 2021 at:
<https://www.sdapcd.org/content/sdapcd/planning/attainment-status.html>

SDAPCD 2021b. SDAPCD Regulation IV: Prohibitions; Rule 67.0.1: Architectural Coatings. SDAPCD, Effective January 1, 2022. Available at:
<https://www.sdapcd.org/content/dam/sdapcd/documents/rules/current-rules/Rule-67.0.1-eff010122.pdf>

APPENDIX A

CALEEMOD ANNUAL AND DAILY OUTPUT FILES

BDM Mixed-Use Project Otay Mesa - San Diego Air Basin, Annual

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

**BDM Mixed-Use Project Otay Mesa
San Diego Air Basin, Annual**

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	6.00	1000sqft	0.14	6,000.00	0
Parking Lot	688.00	Space	3.30	275,200.00	0
Apartments Mid Rise	430.00	Dwelling Unit	10.01	436,230.00	1230

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.6	Precipitation Freq (Days)	40
Climate Zone	13			Operational Year	2025
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MW hr)	539.98	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 - Project specifies 436,250 sf of apartments. Land Area 13.45 acres. Parking Spaces are conservative estimate of the total vehicle spaces and motorcycle spaces.

Construction Phase - No demolition. Architectural coating will occur as buildings are finished.

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - No demolition assumed.

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

BDM Mixed-Use Project Otay Mesa - San Diego Air Basin, Annual

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

Grading - Project specifies 63,274 CY of material import.

Architectural Coating - Use Low VOC Paint (50 g/L residential, 50 g/L non-residential, 100 g/L parking). Exterior of building is stucco, so 20% of exterior may be painted trim.

Vehicle Trips - Traffic Study from CR Associates:

Commercial: 40 trips/ksf, or 240 ADT

Multi-family: 6 trips/DU, or 2,580 ADT

Woodstoves - No wood stoves or hearths.

Area Coating - Building exterior is stucco, so only 20% of trim will be painted.

Construction Off-road Equipment Mitigation -

Area Mitigation - Use Low VOC Paint (50 g/L residential, 50 g/L non-residential, 100 g/L parking)

Energy Mitigation -

Water Mitigation -

Waste Mitigation - Recycling and Composting (per state standards - 3 streams - CA is aiming for 75% reduction. Assume minimum of 50% applied.

Mobile Land Use Mitigation -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Residential_Exterior	294,455.00	58,891.00
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	50.00
tblArchitecturalCoating	EF_Parking	250.00	100.00
tblArchitecturalCoating	EF_Residential_Exterior	250.00	50.00
tblArchitecturalCoating	EF_Residential_Interior	250.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	50
tblAreaCoating	Area_EF_Nonresidential_Interior	250	50
tblAreaCoating	Area_EF_Parking	250	100
tblAreaCoating	Area_EF_Residential_Exterior	250	50
tblAreaCoating	Area_EF_Residential_Interior	250	50
tblAreaCoating	Area_Residential_Exterior	294455	58891
tblAreaMitigation	UseLowVOCPaintParkingCheck	False	True
tblConstructionPhase	NumDays	20.00	45.00
tblFireplaces	FireplaceDayYear	82.00	0.00

BDM Mixed-Use Project Otay Mesa - San Diego Air Basin, Annual

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

tblFireplaces	FireplaceHourDay	3.00	0.00
tblFireplaces	FireplaceWoodMass	3,078.40	0.00
tblFireplaces	NumberGas	236.50	0.00
tblFireplaces	NumberNoFireplace	43.00	0.00
tblFireplaces	NumberWood	150.50	0.00
tblGrading	MaterialImported	0.00	63,274.00
tblLandUse	LandUseSquareFeet	430,000.00	436,230.00
tblLandUse	LotAcreage	6.19	3.30
tblLandUse	LotAcreage	11.32	10.01
tblVehicleTrips	ST_TR	4.91	6.00
tblVehicleTrips	ST_TR	2.21	40.00
tblVehicleTrips	SU_TR	4.09	6.00
tblVehicleTrips	SU_TR	0.70	40.00
tblVehicleTrips	WD_TR	5.44	6.00
tblVehicleTrips	WD_TR	9.74	40.00
tblWoodstoves	NumberCatalytic	21.50	0.00
tblWoodstoves	NumberNoncatalytic	21.50	0.00
tblWoodstoves	WoodstoveDayYear	82.00	0.00
tblWoodstoves	WoodstoveWoodMass	3,019.20	0.00

2.0 Emissions Summary

BDM Mixed-Use Project Otay Mesa - San Diego Air Basin, Annual

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

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2023	0.3564	3.1196	3.4052	0.0111	0.7152	0.1064	0.8215	0.2341	0.0996	0.3336	0.0000	1,025.690 2	1,025.690 2	0.1126	0.0721	1,049.997 7
2024	1.3005	1.0371	1.5642	4.1300e-003	0.2183	0.0389	0.2572	0.0587	0.0366	0.0953	0.0000	376.0883	376.0883	0.0411	0.0170	382.1850
Maximum	1.3005	3.1196	3.4052	0.0111	0.7152	0.1064	0.8215	0.2341	0.0996	0.3336	0.0000	1,025.690 2	1,025.690 2	0.1126	0.0721	1,049.997 7

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					
2023	0.3564	3.1196	3.4052	0.0111	0.5683	0.1064	0.6747	0.1694	0.0996	0.2690	0.0000	1,025.689 8	1,025.689 8	0.1126	0.0721	1,049.997 4
2024	1.3005	1.0371	1.5642	4.1300e-003	0.2183	0.0389	0.2572	0.0587	0.0366	0.0953	0.0000	376.0882	376.0882	0.0411	0.0170	382.1849
Maximum	1.3005	3.1196	3.4052	0.0111	0.5683	0.1064	0.6747	0.1694	0.0996	0.2690	0.0000	1,025.689 8	1,025.689 8	0.1126	0.0721	1,049.997 4

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	15.73	0.00	13.62	22.09	0.00	15.07	0.00	0.00	0.00	0.00	0.00	0.00

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-2-2023	4-1-2023	1.3304	1.3304
2	4-2-2023	7-1-2023	0.7118	0.7118
3	7-2-2023	10-1-2023	0.7198	0.7198
4	10-2-2023	1-1-2024	0.7308	0.7308
5	1-2-2024	4-1-2024	0.6832	0.6832
6	4-2-2024	7-1-2024	0.7692	0.7692
7	7-2-2024	9-30-2024	0.8640	0.8640
		Highest	1.3304	1.3304

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

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.9557	0.0368	3.1961	1.7000e-004		0.0177	0.0177		0.0177	0.0177	0.0000	5.2278	5.2278	5.0300e-003	0.0000	5.3535
Energy	0.0175	0.1501	0.0663	9.6000e-004		0.0121	0.0121		0.0121	0.0121	0.0000	620.4254	620.4254	0.0306	6.4900e-003	623.1255
Mobile	1.3535	1.4997	12.6450	0.0269	2.9702	0.0209	2.9910	0.7927	0.0195	0.8122	0.0000	2,487.1699	2,487.1699	0.1783	0.1132	2,525.3499
Waste						0.0000	0.0000		0.0000	0.0000	41.2843	0.0000	41.2843	2.4398	0.0000	102.2801
Water						0.0000	0.0000		0.0000	0.0000	9.2266	142.5928	151.8194	0.9564	0.0234	182.7116
Total	3.3267	1.6865	15.9075	0.0280	2.9702	0.0507	3.0208	0.7927	0.0493	0.8420	50.5109	3,255.4158	3,305.9267	3.6102	0.1431	3,438.8205

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

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.9543	0.0366	3.1731	1.7000e-004		0.0176	0.0176		0.0176	0.0176	0.0000	5.1806	5.1806	4.9500e-003	0.0000	5.3045
Energy	0.0175	0.1501	0.0663	9.6000e-004		0.0121	0.0121		0.0121	0.0121	0.0000	620.4254	620.4254	0.0306	6.4900e-003	623.1255
Mobile	1.1950	1.2300	10.3923	0.0210	2.3035	0.0166	2.3201	0.6148	0.0155	0.6303	0.0000	1,943.012 2	1,943.012 2	0.1501	0.0935	1,974.633 3
Waste						0.0000	0.0000		0.0000	0.0000	20.6422	0.0000	20.6422	1.2199	0.0000	51.1401
Water						0.0000	0.0000		0.0000	0.0000	7.3813	121.0022	128.3834	0.7655	0.0188	153.1231
Total	3.1669	1.4166	13.6317	0.0221	2.3035	0.0463	2.3498	0.6148	0.0452	0.6599	28.0234	2,689.620 3	2,717.643 7	2.1711	0.1188	2,807.326 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	4.81	16.00	14.31	20.99	22.45	8.64	22.21	22.45	8.32	21.62	44.52	17.38	17.79	39.86	16.96	18.36

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/28/2023	2/10/2023	5	10	
2	Grading	Grading	2/11/2023	3/24/2023	5	30	
3	Building Construction	Building Construction	3/25/2023	5/17/2024	5	300	

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4	Paving	Paving	5/18/2024	6/14/2024	5	20
5	Architectural Coating	Architectural Coating	6/15/2024	8/16/2024	5	45

Acres of Grading (Site Preparation Phase): 15

Acres of Grading (Grading Phase): 90

Acres of Paving: 3.3

Residential Indoor: 883,366; Residential Outdoor: 58,891; Non-Residential Indoor: 9,000; Non-Residential Outdoor: 3,000; Striped Parking Area: 16,512 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

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

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	7,909.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	427.00	92.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	85.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 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					0.0983	0.0000	0.0983	0.0505	0.0000	0.0505	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0133	0.1376	0.0912	1.9000e-004		6.3300e-003	6.3300e-003		5.8200e-003	5.8200e-003	0.0000	16.7254	16.7254	5.4100e-003	0.0000	16.8606
Total	0.0133	0.1376	0.0912	1.9000e-004	0.0983	6.3300e-003	0.1046	0.0505	5.8200e-003	0.0563	0.0000	16.7254	16.7254	5.4100e-003	0.0000	16.8606

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

3.2 Site Preparation - 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	2.4000e-004	1.7000e-004	2.0500e-003	1.0000e-005	7.2000e-004	0.0000	7.3000e-004	1.9000e-004	0.0000	2.0000e-004	0.0000	0.5711	0.5711	2.0000e-005	2.0000e-005	0.5763
Total	2.4000e-004	1.7000e-004	2.0500e-003	1.0000e-005	7.2000e-004	0.0000	7.3000e-004	1.9000e-004	0.0000	2.0000e-004	0.0000	0.5711	0.5711	2.0000e-005	2.0000e-005	0.5763

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					0.0383	0.0000	0.0383	0.0197	0.0000	0.0197	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0133	0.1376	0.0912	1.9000e-004		6.3300e-003	6.3300e-003		5.8200e-003	5.8200e-003	0.0000	16.7253	16.7253	5.4100e-003	0.0000	16.8606
Total	0.0133	0.1376	0.0912	1.9000e-004	0.0383	6.3300e-003	0.0447	0.0197	5.8200e-003	0.0255	0.0000	16.7253	16.7253	5.4100e-003	0.0000	16.8606

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

3.2 Site Preparation - 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	2.4000e-004	1.7000e-004	2.0500e-003	1.0000e-005	7.2000e-004	0.0000	7.3000e-004	1.9000e-004	0.0000	2.0000e-004	0.0000	0.5711	0.5711	2.0000e-005	2.0000e-005	0.5763
Total	2.4000e-004	1.7000e-004	2.0500e-003	1.0000e-005	7.2000e-004	0.0000	7.3000e-004	1.9000e-004	0.0000	2.0000e-004	0.0000	0.5711	0.5711	2.0000e-005	2.0000e-005	0.5763

3.3 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					0.1425	0.0000	0.1425	0.0555	0.0000	0.0555	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0498	0.5177	0.4208	9.3000e-004		0.0214	0.0214		0.0197	0.0197	0.0000	81.8028	81.8028	0.0265	0.0000	82.4642
Total	0.0498	0.5177	0.4208	9.3000e-004	0.1425	0.0214	0.1639	0.0555	0.0197	0.0751	0.0000	81.8028	81.8028	0.0265	0.0000	82.4642

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3.3 Grading - 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	8.7300e-003	0.5367	0.1428	2.3700e-003	0.0677	4.3900e-003	0.0721	0.0186	4.2000e-003	0.0228	0.0000	237.3275	237.3275	0.0119	0.0377	248.8734
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.1000e-004	5.6000e-004	6.8400e-003	2.0000e-005	2.4100e-003	1.0000e-005	2.4200e-003	6.4000e-004	1.0000e-005	6.5000e-004	0.0000	1.9037	1.9037	6.0000e-005	5.0000e-005	1.9209
Total	9.5400e-003	0.5373	0.1496	2.3900e-003	0.0701	4.4000e-003	0.0746	0.0193	4.2100e-003	0.0235	0.0000	239.2311	239.2311	0.0120	0.0378	250.7943

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					0.0556	0.0000	0.0556	0.0216	0.0000	0.0216	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0498	0.5177	0.4208	9.3000e-004		0.0214	0.0214		0.0197	0.0197	0.0000	81.8027	81.8027	0.0265	0.0000	82.4641
Total	0.0498	0.5177	0.4208	9.3000e-004	0.0556	0.0214	0.0769	0.0216	0.0197	0.0413	0.0000	81.8027	81.8027	0.0265	0.0000	82.4641

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

3.3 Grading - 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	8.7300e-003	0.5367	0.1428	2.3700e-003	0.0677	4.3900e-003	0.0721	0.0186	4.2000e-003	0.0228	0.0000	237.3275	237.3275	0.0119	0.0377	248.8734
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.1000e-004	5.6000e-004	6.8400e-003	2.0000e-005	2.4100e-003	1.0000e-005	2.4200e-003	6.4000e-004	1.0000e-005	6.5000e-004	0.0000	1.9037	1.9037	6.0000e-005	5.0000e-005	1.9209
Total	9.5400e-003	0.5373	0.1496	2.3900e-003	0.0701	4.4000e-003	0.0746	0.0193	4.2100e-003	0.0235	0.0000	239.2311	239.2311	0.0120	0.0378	250.7943

3.4 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	0.1573	1.4385	1.6244	2.6900e-003		0.0700	0.0700		0.0658	0.0658	0.0000	231.8048	231.8048	0.0551	0.0000	233.1833
Total	0.1573	1.4385	1.6244	2.6900e-003		0.0700	0.0700		0.0658	0.0658	0.0000	231.8048	231.8048	0.0551	0.0000	233.1833

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

3.4 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	0.0108	0.4085	0.1440	1.8800e-003	0.0611	2.4100e-003	0.0635	0.0176	2.3000e-003	0.0199	0.0000	184.5983	184.5983	5.5800e-003	0.0268	192.7088
Worker	0.1155	0.0799	0.9731	2.9500e-003	0.3424	1.8800e-003	0.3443	0.0910	1.7300e-003	0.0927	0.0000	270.9567	270.9567	8.0400e-003	7.5600e-003	273.4103
Total	0.1263	0.4884	1.1171	4.8300e-003	0.4035	4.2900e-003	0.4078	0.1086	4.0300e-003	0.1127	0.0000	455.5550	455.5550	0.0136	0.0343	466.1191

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	0.1573	1.4385	1.6244	2.6900e-003		0.0700	0.0700		0.0658	0.0658	0.0000	231.8045	231.8045	0.0551	0.0000	233.1830
Total	0.1573	1.4385	1.6244	2.6900e-003		0.0700	0.0700		0.0658	0.0658	0.0000	231.8045	231.8045	0.0551	0.0000	233.1830

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

3.4 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	0.0108	0.4085	0.1440	1.8800e-003	0.0611	2.4100e-003	0.0635	0.0176	2.3000e-003	0.0199	0.0000	184.5983	184.5983	5.5800e-003	0.0268	192.7088
Worker	0.1155	0.0799	0.9731	2.9500e-003	0.3424	1.8800e-003	0.3443	0.0910	1.7300e-003	0.0927	0.0000	270.9567	270.9567	8.0400e-003	7.5600e-003	273.4103
Total	0.1263	0.4884	1.1171	4.8300e-003	0.4035	4.2900e-003	0.4078	0.1086	4.0300e-003	0.1127	0.0000	455.5550	455.5550	0.0136	0.0343	466.1191

3.4 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	0.0736	0.6722	0.8083	1.3500e-003		0.0307	0.0307		0.0288	0.0288	0.0000	115.9246	115.9246	0.0274	0.0000	116.6099
Total	0.0736	0.6722	0.8083	1.3500e-003		0.0307	0.0307		0.0288	0.0288	0.0000	115.9246	115.9246	0.0274	0.0000	116.6099

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3.4 Building Construction - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.2000e-003	0.2028	0.0704	9.2000e-004	0.0306	1.2100e-003	0.0318	8.8200e-003	1.1600e-003	9.9800e-003	0.0000	90.6915	90.6915	2.8500e-003	0.0131	94.6785
Worker	0.0543	0.0359	0.4546	1.4300e-003	0.1712	8.9000e-004	0.1721	0.0455	8.2000e-004	0.0463	0.0000	131.0417	131.0417	3.6600e-003	3.5300e-003	132.1856
Total	0.0595	0.2388	0.5249	2.3500e-003	0.2018	2.1000e-003	0.2039	0.0543	1.9800e-003	0.0563	0.0000	221.7332	221.7332	6.5100e-003	0.0167	226.8641

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	0.0736	0.6722	0.8083	1.3500e-003		0.0307	0.0307		0.0288	0.0288	0.0000	115.9244	115.9244	0.0274	0.0000	116.6097
Total	0.0736	0.6722	0.8083	1.3500e-003		0.0307	0.0307		0.0288	0.0288	0.0000	115.9244	115.9244	0.0274	0.0000	116.6097

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3.4 Building Construction - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.2000e-003	0.2028	0.0704	9.2000e-004	0.0306	1.2100e-003	0.0318	8.8200e-003	1.1600e-003	9.9800e-003	0.0000	90.6915	90.6915	2.8500e-003	0.0131	94.6785
Worker	0.0543	0.0359	0.4546	1.4300e-003	0.1712	8.9000e-004	0.1721	0.0455	8.2000e-004	0.0463	0.0000	131.0417	131.0417	3.6600e-003	3.5300e-003	132.1856
Total	0.0595	0.2388	0.5249	2.3500e-003	0.2018	2.1000e-003	0.2039	0.0543	1.9800e-003	0.0563	0.0000	221.7332	221.7332	6.5100e-003	0.0167	226.8641

3.5 Paving - 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	9.8800e-003	0.0953	0.1463	2.3000e-004		4.6900e-003	4.6900e-003		4.3100e-003	4.3100e-003	0.0000	20.0265	20.0265	6.4800e-003	0.0000	20.1885
Paving	4.3200e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0142	0.0953	0.1463	2.3000e-004		4.6900e-003	4.6900e-003		4.3100e-003	4.3100e-003	0.0000	20.0265	20.0265	6.4800e-003	0.0000	20.1885

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3.5 Paving - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.8000e-004	2.5000e-004	3.1900e-003	1.0000e-005	1.2000e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	0.9207	0.9207	3.0000e-005	2.0000e-005	0.9287
Total	3.8000e-004	2.5000e-004	3.1900e-003	1.0000e-005	1.2000e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	0.9207	0.9207	3.0000e-005	2.0000e-005	0.9287

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	9.8800e-003	0.0953	0.1463	2.3000e-004		4.6900e-003	4.6900e-003		4.3100e-003	4.3100e-003	0.0000	20.0265	20.0265	6.4800e-003	0.0000	20.1884
Paving	4.3200e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0142	0.0953	0.1463	2.3000e-004		4.6900e-003	4.6900e-003		4.3100e-003	4.3100e-003	0.0000	20.0265	20.0265	6.4800e-003	0.0000	20.1884

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3.5 Paving - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	3.8000e-004	2.5000e-004	3.1900e-003	1.0000e-005	1.2000e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	0.9207	0.9207	3.0000e-005	2.0000e-005	0.9287
Total	3.8000e-004	2.5000e-004	3.1900e-003	1.0000e-005	1.2000e-003	1.0000e-005	1.2100e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	0.9207	0.9207	3.0000e-005	2.0000e-005	0.9287

3.6 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	1.1440					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.0700e-003	0.0274	0.0407	7.0000e-005		1.3700e-003	1.3700e-003		1.3700e-003	1.3700e-003	0.0000	5.7448	5.7448	3.2000e-004	0.0000	5.7529
Total	1.1481	0.0274	0.0407	7.0000e-005		1.3700e-003	1.3700e-003		1.3700e-003	1.3700e-003	0.0000	5.7448	5.7448	3.2000e-004	0.0000	5.7529

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3.6 Architectural Coating - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.8600e-003	3.2200e-003	0.0407	1.3000e-004	0.0153	8.0000e-005	0.0154	4.0800e-003	7.0000e-005	4.1500e-003	0.0000	11.7385	11.7385	3.3000e-004	3.2000e-004	11.8410
Total	4.8600e-003	3.2200e-003	0.0407	1.3000e-004	0.0153	8.0000e-005	0.0154	4.0800e-003	7.0000e-005	4.1500e-003	0.0000	11.7385	11.7385	3.3000e-004	3.2000e-004	11.8410

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	1.1440					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.0700e-003	0.0274	0.0407	7.0000e-005		1.3700e-003	1.3700e-003		1.3700e-003	1.3700e-003	0.0000	5.7448	5.7448	3.2000e-004	0.0000	5.7529
Total	1.1481	0.0274	0.0407	7.0000e-005		1.3700e-003	1.3700e-003		1.3700e-003	1.3700e-003	0.0000	5.7448	5.7448	3.2000e-004	0.0000	5.7529

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3.6 Architectural Coating - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.8600e-003	3.2200e-003	0.0407	1.3000e-004	0.0153	8.0000e-005	0.0154	4.0800e-003	7.0000e-005	4.1500e-003	0.0000	11.7385	11.7385	3.3000e-004	3.2000e-004	11.8410
Total	4.8600e-003	3.2200e-003	0.0407	1.3000e-004	0.0153	8.0000e-005	0.0154	4.0800e-003	7.0000e-005	4.1500e-003	0.0000	11.7385	11.7385	3.3000e-004	3.2000e-004	11.8410

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Density

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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	tons/yr										MT/yr					
Mitigated	1.1950	1.2300	10.3923	0.0210	2.3035	0.0166	2.3201	0.6148	0.0155	0.6303	0.0000	1,943.0122	1,943.0122	0.1501	0.0935	1,974.6333
Unmitigated	1.3535	1.4997	12.6450	0.0269	2.9702	0.0209	2.9910	0.7927	0.0195	0.8122	0.0000	2,487.1699	2,487.1699	0.1783	0.1132	2,525.3499

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	2,580.00	2,580.00	2580.00	7,366,683	5,713,153
General Office Building	240.00	240.00	240.00	573,541	444,803
Parking Lot	0.00	0.00	0.00		
Total	2,820.00	2,820.00	2,820.00	7,940,223	6,157,957

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 Mid Rise	10.80	7.30	7.50	41.60	18.80	39.60	86	11	3
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.561854	0.062428	0.177046	0.117565	0.023832	0.006317	0.008949	0.006298	0.000705	0.000577	0.028723	0.000955	0.004751
General Office Building	0.561854	0.062428	0.177046	0.117565	0.023832	0.006317	0.008949	0.006298	0.000705	0.000577	0.028723	0.000955	0.004751

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Parking Lot	0.561854	0.062428	0.177046	0.117565	0.023832	0.006317	0.008949	0.006298	0.000705	0.000577	0.028723	0.000955	0.004751
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5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	447.0527	447.0527	0.0273	3.3100e-003	448.7225
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	447.0527	447.0527	0.0273	3.3100e-003	448.7225
NaturalGas Mitigated	0.0175	0.1501	0.0663	9.6000e-004		0.0121	0.0121		0.0121	0.0121	0.0000	173.3727	173.3727	3.3200e-003	3.1800e-003	174.4030
NaturalGas Unmitigated	0.0175	0.1501	0.0663	9.6000e-004		0.0121	0.0121		0.0121	0.0121	0.0000	173.3727	173.3727	3.3200e-003	3.1800e-003	174.4030

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5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	3.1287e+006	0.0169	0.1442	0.0614	9.2000e-004		0.0117	0.0117		0.0117	0.0117	0.0000	166.9594	166.9594	3.2000e-003	3.0600e-003	167.9516
General Office Building	120180	6.5000e-004	5.8900e-003	4.9500e-003	4.0000e-005		4.5000e-004	4.5000e-004		4.5000e-004	4.5000e-004	0.0000	6.4133	6.4133	1.2000e-004	1.2000e-004	6.4514
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0175	0.1501	0.0663	9.6000e-004		0.0121	0.0121		0.0121	0.0121	0.0000	173.3727	173.3727	3.3200e-003	3.1800e-003	174.4030

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

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	3.1287e+006	0.0169	0.1442	0.0614	9.2000e-004		0.0117	0.0117		0.0117	0.0117	0.0000	166.9594	166.9594	3.2000e-003	3.0600e-003	167.9516
General Office Building	120180	6.5000e-004	5.8900e-003	4.9500e-003	4.0000e-005		4.5000e-004	4.5000e-004		4.5000e-004	4.5000e-004	0.0000	6.4133	6.4133	1.2000e-004	1.2000e-004	6.4514
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0175	0.1501	0.0663	9.6000e-004		0.0121	0.0121		0.0121	0.0121	0.0000	173.3727	173.3727	3.3200e-003	3.1800e-003	174.4030

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

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	1.65126e+006	404.4445	0.0247	3.0000e-003	405.9552
General Office Building	77640	19.0164	1.1600e-003	1.4000e-004	19.0875
Parking Lot	96320	23.5917	1.4400e-003	1.7000e-004	23.6799
Total		447.0527	0.0273	3.3100e-003	448.7226

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5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	1.65126e+006	404.4445	0.0247	3.0000e-003	405.9552
General Office Building	77640	19.0164	1.1600e-003	1.4000e-004	19.0875
Parking Lot	96320	23.5917	1.4400e-003	1.7000e-004	23.6799
Total		447.0527	0.0273	3.3100e-003	448.7226

6.0 Area Detail

6.1 Mitigation Measures Area

- Use Electric Lawnmower
- Use Electric Leafblower
- Use Electric Chainsaw
- Use Low VOC Paint - Residential Interior
- Use Low VOC Paint - Residential Exterior
- Use Low VOC Paint - Non-Residential Interior
- Use Low VOC Paint - Non-Residential Exterior
- No Hearths Installed

BDM Mixed-Use Project Otay Mesa - San Diego Air Basin, Annual

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.9543	0.0366	3.1731	1.7000e-004		0.0176	0.0176		0.0176	0.0176	0.0000	5.1806	5.1806	4.9500e-003	0.0000	5.3045
Unmitigated	1.9557	0.0368	3.1961	1.7000e-004		0.0177	0.0177		0.0177	0.0177	0.0000	5.2278	5.2278	5.0300e-003	0.0000	5.3535

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	0.1144					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.7449					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0964	0.0368	3.1961	1.7000e-004		0.0177	0.0177		0.0177	0.0177	0.0000	5.2278	5.2278	5.0300e-003	0.0000	5.3535
Total	1.9557	0.0368	3.1961	1.7000e-004		0.0177	0.0177		0.0177	0.0177	0.0000	5.2278	5.2278	5.0300e-003	0.0000	5.3535

BDM Mixed-Use Project Otay Mesa - San Diego Air Basin, Annual

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

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.1144					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.7449					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.0950	0.0366	3.1731	1.7000e-004		0.0176	0.0176		0.0176	0.0176	0.0000	5.1806	5.1806	4.9500e-003	0.0000	5.3045
Total	1.9543	0.0366	3.1731	1.7000e-004		0.0176	0.0176		0.0176	0.0176	0.0000	5.1806	5.1806	4.9500e-003	0.0000	5.3045

7.0 Water Detail

7.1 Mitigation Measures Water

- Install Low Flow Bathroom Faucet
- Install Low Flow Kitchen Faucet
- Install Low Flow Toilet
- Install Low Flow Shower
- Use Water Efficient Irrigation System

BDM Mixed-Use Project Otay Mesa - San Diego Air Basin, Annual

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

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	128.3834	0.7655	0.0188	153.1231
Unmitigated	151.8194	0.9564	0.0234	182.7116

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	28.0162 / 17.6624	146.3015	0.9213	0.0226	176.0611
General Office Building	1.0664 / 0.653602	5.5179	0.0351	8.6000e-004	6.6505
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		151.8194	0.9564	0.0234	182.7116

BDM Mixed-Use Project Otay Mesa - San Diego Air Basin, Annual

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

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	22.413 / 16.585	123.7219	0.7375	0.0181	147.5545
General Office Building	0.853122 / 0.613732	4.6616	0.0281	6.9000e-004	5.5685
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		128.3834	0.7655	0.0188	153.1231

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

BDM Mixed-Use Project Otay Mesa - San Diego Air Basin, Annual

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

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	20.6422	1.2199	0.0000	51.1401
Unmitigated	41.2843	2.4398	0.0000	102.2801

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	197.8	40.1516	2.3729	0.0000	99.4739
General Office Building	5.58	1.1327	0.0669	0.0000	2.8062
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		41.2843	2.4398	0.0000	102.2801

BDM Mixed-Use Project Otay Mesa - San Diego Air Basin, Annual

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

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	98.9	20.0758	1.1865	0.0000	49.7370
General Office Building	2.79	0.5663	0.0335	0.0000	1.4031
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		20.6422	1.2199	0.0000	51.1401

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
----------------	--------	----------------	-----------------	---------------	-----------

User Defined Equipment

Equipment Type	Number
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BDM Mixed-Use Project Otay Mesa - San Diego Air Basin, Annual

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

11.0 Vegetation

BDM Mixed-Use Project Otay Mesa - San Diego Air Basin, Summer

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

BDM Mixed-Use Project Otay Mesa

San Diego Air Basin, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	6.00	1000sqft	0.14	6,000.00	0
Parking Lot	688.00	Space	3.30	275,200.00	0
Apartments Mid Rise	430.00	Dwelling Unit	10.01	436,230.00	1230

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.6	Precipitation Freq (Days)	40
Climate Zone	13			Operational Year	2025
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	539.98	CH4 Intensity (lb/MWhr)	0.033	N2O Intensity (lb/MWhr)	0.004

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Project specifies 436,250 sf of apartments. Land Area 13.45 acres. Parking Spaces are conservative estimate of the total vehicle spaces and motorcycle spaces.

Construction Phase - No demolition. Architectural coating will occur as buildings are finished.

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - No demolition assumed.

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

BDM Mixed-Use Project Otay Mesa - San Diego Air Basin, Summer

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

Grading - Project specifies 63,274 CY of material import.

Architectural Coating - Use Low VOC Paint (50 g/L residential, 50 g/L non-residential, 100 g/L parking). Exterior of building is stucco, so 20% of exterior may be painted trim.

Vehicle Trips - Traffic Study from CR Associates:

Commercial: 40 trips/ksf, or 240 ADT

Multi-family: 6 trips/DU, or 2,580 ADT

Woodstoves - No wood stoves or hearths.

Area Coating - Building exterior is stucco, so only 20% of trim will be painted.

Construction Off-road Equipment Mitigation -

Area Mitigation - Use Low VOC Paint (50 g/L residential, 50 g/L non-residential, 100 g/L parking)

Energy Mitigation -

Water Mitigation -

Waste Mitigation - Recycling and Composting (per state standards - 3 streams - CA is aiming for 75% reduction. Assume minimum of 50% applied.

Mobile Land Use Mitigation -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Residential_Exterior	294,455.00	58,891.00
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	50.00
tblArchitecturalCoating	EF_Parking	250.00	100.00
tblArchitecturalCoating	EF_Residential_Exterior	250.00	50.00
tblArchitecturalCoating	EF_Residential_Interior	250.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	50
tblAreaCoating	Area_EF_Nonresidential_Interior	250	50
tblAreaCoating	Area_EF_Parking	250	100
tblAreaCoating	Area_EF_Residential_Exterior	250	50
tblAreaCoating	Area_EF_Residential_Interior	250	50
tblAreaCoating	Area_Residential_Exterior	294455	58891
tblAreaMitigation	UseLowVOCPaintParkingCheck	False	True
tblConstructionPhase	NumDays	20.00	45.00
tblFireplaces	FireplaceDayYear	82.00	0.00

BDM Mixed-Use Project Otay Mesa - San Diego Air Basin, Summer

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

tblFireplaces	FireplaceHourDay	3.00	0.00
tblFireplaces	FireplaceWoodMass	3,078.40	0.00
tblFireplaces	NumberGas	236.50	0.00
tblFireplaces	NumberNoFireplace	43.00	0.00
tblFireplaces	NumberWood	150.50	0.00
tblGrading	MaterialImported	0.00	63,274.00
tblLandUse	LandUseSquareFeet	430,000.00	436,230.00
tblLandUse	LotAcreage	6.19	3.30
tblLandUse	LotAcreage	11.32	10.01
tblVehicleTrips	ST_TR	4.91	6.00
tblVehicleTrips	ST_TR	2.21	40.00
tblVehicleTrips	SU_TR	4.09	6.00
tblVehicleTrips	SU_TR	0.70	40.00
tblVehicleTrips	WD_TR	5.44	6.00
tblVehicleTrips	WD_TR	9.74	40.00
tblWoodstoves	NumberCatalytic	21.50	0.00
tblWoodstoves	NumberNoncatalytic	21.50	0.00
tblWoodstoves	WoodstoveDayYear	82.00	0.00
tblWoodstoves	WoodstoveWoodMass	3,019.20	0.00

2.0 Emissions Summary

BDM Mixed-Use Project Otay Mesa - San Diego Air Basin, Summer

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

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	3.9734	69.0365	38.0048	0.2213	19.8049	1.7181	21.0717	10.1417	1.5914	11.3071	0.0000	23,591.68 55	23,591.68 55	2.8268	2.7760	24,489.61 21
2024	51.2438	18.0123	27.1149	0.0754	4.1308	0.6554	4.7862	1.1098	0.6165	1.7263	0.0000	7,583.690 8	7,583.690 8	0.7447	0.3623	7,710.268 3
Maximum	51.2438	69.0365	38.0048	0.2213	19.8049	1.7181	21.0717	10.1417	1.5914	11.3071	0.0000	23,591.68 55	23,591.68 55	2.8268	2.7760	24,489.61 21

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					
2023	3.9734	69.0365	38.0048	0.2213	8.4803	1.7181	10.1984	3.9792	1.5914	5.1446	0.0000	23,591.68 55	23,591.68 55	2.8268	2.7760	24,489.61 21
2024	51.2438	18.0123	27.1149	0.0754	4.1308	0.6554	4.7862	1.1098	0.6165	1.7263	0.0000	7,583.690 8	7,583.690 8	0.7447	0.3623	7,710.268 3
Maximum	51.2438	69.0365	38.0048	0.2213	8.4803	1.7181	10.1984	3.9792	1.5914	5.1446	0.0000	23,591.68 55	23,591.68 55	2.8268	2.7760	24,489.61 21

BDM Mixed-Use Project Otay Mesa - San Diego Air Basin, Summer

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

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	11.2587	0.4089	35.5126	1.8800e-003		0.1969	0.1969		0.1969	0.1969	0.0000	64.0294	64.0294	0.0616	0.0000	65.5685
Energy	0.0960	0.8222	0.3633	5.2400e-003		0.0663	0.0663		0.0663	0.0663		1,047.1818	1,047.1818	0.0201	0.0192	1,053.4047
Mobile	7.7606	7.6925	69.0540	0.1537	16.7146	0.1148	16.8294	4.4524	0.1071	4.5594		15,656.6223	15,656.6223	1.0415	0.6576	15,878.6272
Total	19.1152	8.9236	104.9299	0.1608	16.7146	0.3780	17.0926	4.4524	0.3703	4.8227	0.0000	16,767.8335	16,767.8335	1.1231	0.6768	16,997.6004

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	11.2436	0.4064	35.2565	1.8600e-003		0.1954	0.1954		0.1954	0.1954	0.0000	63.4519	63.4519	0.0607	0.0000	64.9690
Energy	0.0960	0.8222	0.3633	5.2400e-003		0.0663	0.0663		0.0663	0.0663		1,047.1818	1,047.1818	0.0201	0.0192	1,053.4047
Mobile	6.9056	6.3091	56.2570	0.1200	12.9628	0.0914	13.0542	3.4530	0.0852	3.5382		12,226.8495	12,226.8495	0.8709	0.5429	12,410.3950
Total	18.2452	7.5377	91.8767	0.1271	12.9628	0.3531	13.3159	3.4530	0.3469	3.7999	0.0000	13,337.4832	13,337.4832	0.9517	0.5621	13,528.7687

BDM Mixed-Use Project Otay Mesa - San Diego Air Basin, Summer

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	4.55	15.53	12.44	20.95	22.45	6.59	22.10	22.45	6.31	21.21	0.00	20.46	20.46	15.27	16.95	20.41

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/28/2023	2/10/2023	5	10	
2	Grading	Grading	2/11/2023	3/24/2023	5	30	
3	Building Construction	Building Construction	3/25/2023	5/17/2024	5	300	
4	Paving	Paving	5/18/2024	6/14/2024	5	20	
5	Architectural Coating	Architectural Coating	6/15/2024	8/16/2024	5	45	

Acres of Grading (Site Preparation Phase): 15

Acres of Grading (Grading Phase): 90

Acres of Paving: 3.3

Residential Indoor: 883,366; Residential Outdoor: 58,891; Non-Residential Indoor: 9,000; Non-Residential Outdoor: 3,000; Striped Parking Area: 16,512 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48

BDM Mixed-Use Project Otay Mesa - San Diego Air Basin, Summer

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

Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	7,909.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	427.00	92.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	85.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

BDM Mixed-Use Project Otay Mesa - San Diego Air Basin, Summer

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

3.2 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					19.6570	0.0000	19.6570	10.1025	0.0000	10.1025			0.0000			0.0000
Off-Road	2.6595	27.5242	18.2443	0.0381		1.2660	1.2660		1.1647	1.1647		3,687.308 1	3,687.308 1	1.1926		3,717.121 9
Total	2.6595	27.5242	18.2443	0.0381	19.6570	1.2660	20.9230	10.1025	1.1647	11.2672		3,687.308 1	3,687.308 1	1.1926		3,717.121 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	0.0000	0.0000	0.0000	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	0.0492	0.0306	0.4320	1.3100e-003	0.1479	7.9000e-004	0.1487	0.0392	7.3000e-004	0.0400		132.0595	132.0595	3.5800e-003	3.2900e-003	133.1300
Total	0.0492	0.0306	0.4320	1.3100e-003	0.1479	7.9000e-004	0.1487	0.0392	7.3000e-004	0.0400		132.0595	132.0595	3.5800e-003	3.2900e-003	133.1300

BDM Mixed-Use Project Otay Mesa - San Diego Air Basin, Summer

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

3.2 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					7.6662	0.0000	7.6662	3.9400	0.0000	3.9400			0.0000			0.0000
Off-Road	2.6595	27.5242	18.2443	0.0381		1.2660	1.2660		1.1647	1.1647	0.0000	3,687.308 1	3,687.308 1	1.1926		3,717.121 9
Total	2.6595	27.5242	18.2443	0.0381	7.6662	1.2660	8.9323	3.9400	1.1647	5.1047	0.0000	3,687.308 1	3,687.308 1	1.1926		3,717.121 9

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	0.0492	0.0306	0.4320	1.3100e-003	0.1479	7.9000e-004	0.1487	0.0392	7.3000e-004	0.0400		132.0595	132.0595	3.5800e-003	3.2900e-003	133.1300
Total	0.0492	0.0306	0.4320	1.3100e-003	0.1479	7.9000e-004	0.1487	0.0392	7.3000e-004	0.0400		132.0595	132.0595	3.5800e-003	3.2900e-003	133.1300

BDM Mixed-Use Project Otay Mesa - San Diego Air Basin, Summer

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

3.3 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					9.5000	0.0000	9.5000	3.6986	0.0000	3.6986			0.0000			0.0000
Off-Road	3.3217	34.5156	28.0512	0.0621		1.4245	1.4245		1.3105	1.3105		6,011.4777	6,011.4777	1.9442		6,060.0836
Total	3.3217	34.5156	28.0512	0.0621	9.5000	1.4245	10.9245	3.6986	1.3105	5.0092		6,011.4777	6,011.4777	1.9442		6,060.0836

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	0.5970	34.4870	9.4736	0.1577	4.6110	0.2927	4.9037	1.2639	0.2800	1.5439		17,433.4749	17,433.4749	0.8786	2.7724	18,281.6062
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	0.0547	0.0339	0.4800	1.4500e-003	0.1643	8.8000e-004	0.1652	0.0436	8.1000e-004	0.0444		146.7328	146.7328	3.9800e-003	3.6600e-003	147.9223
Total	0.6517	34.5209	9.9536	0.1592	4.7753	0.2936	5.0689	1.3075	0.2808	1.5883		17,580.2077	17,580.2077	0.8826	2.7760	18,429.5285

BDM Mixed-Use Project Otay Mesa - San Diego Air Basin, Summer

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

3.3 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					3.7050	0.0000	3.7050	1.4425	0.0000	1.4425			0.0000			0.0000
Off-Road	3.3217	34.5156	28.0512	0.0621		1.4245	1.4245		1.3105	1.3105	0.0000	6,011.4777	6,011.4777	1.9442		6,060.0836
Total	3.3217	34.5156	28.0512	0.0621	3.7050	1.4245	5.1295	1.4425	1.3105	2.7530	0.0000	6,011.4777	6,011.4777	1.9442		6,060.0836

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	0.5970	34.4870	9.4736	0.1577	4.6110	0.2927	4.9037	1.2639	0.2800	1.5439		17,433.4749	17,433.4749	0.8786	2.7724	18,281.6062
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	0.0547	0.0339	0.4800	1.4500e-003	0.1643	8.8000e-004	0.1652	0.0436	8.1000e-004	0.0444		146.7328	146.7328	3.9800e-003	3.6600e-003	147.9223
Total	0.6517	34.5209	9.9536	0.1592	4.7753	0.2936	5.0689	1.3075	0.2808	1.5883		17,580.2077	17,580.2077	0.8826	2.7760	18,429.5285

BDM Mixed-Use Project Otay Mesa - San Diego Air Basin, Summer

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

3.4 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	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584		2,555.2099	2,555.2099	0.6079		2,570.4061
Total	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584		2,555.2099	2,555.2099	0.6079		2,570.4061

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	0.1099	3.9438	1.4212	0.0188	0.6231	0.0240	0.6471	0.1794	0.0230	0.2024		2,033.6320	2,033.6320	0.0616	0.2945	2,122.9202
Worker	1.1669	0.7246	10.2476	0.0310	3.5077	0.0188	3.5265	0.9304	0.0173	0.9477		3,132.7454	3,132.7454	0.0849	0.0781	3,158.1401
Total	1.2768	4.6685	11.6688	0.0498	4.1308	0.0428	4.1736	1.1098	0.0403	1.1501		5,166.3774	5,166.3774	0.1465	0.3725	5,281.0603

BDM Mixed-Use Project Otay Mesa - San Diego Air Basin, Summer

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

3.4 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	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584	0.0000	2,555.2099	2,555.2099	0.6079		2,570.4061
Total	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584	0.0000	2,555.2099	2,555.2099	0.6079		2,570.4061

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	0.1099	3.9438	1.4212	0.0188	0.6231	0.0240	0.6471	0.1794	0.0230	0.2024		2,033.6320	2,033.6320	0.0616	0.2945	2,122.9202
Worker	1.1669	0.7246	10.2476	0.0310	3.5077	0.0188	3.5265	0.9304	0.0173	0.9477		3,132.7454	3,132.7454	0.0849	0.0781	3,158.1401
Total	1.2768	4.6685	11.6688	0.0498	4.1308	0.0428	4.1736	1.1098	0.0403	1.1501		5,166.3774	5,166.3774	0.1465	0.3725	5,281.0603

BDM Mixed-Use Project Otay Mesa - San Diego Air Basin, Summer

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

3.4 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769		2,555.6989	2,555.6989	0.6044		2,570.8077
Total	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769		2,555.6989	2,555.6989	0.6044		2,570.8077

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1058	3.9169	1.3880	0.0185	0.6231	0.0242	0.6472	0.1794	0.0231	0.2025		1,998.1762	1,998.1762	0.0630	0.2893	2,085.9648
Worker	1.0957	0.6516	9.5601	0.0300	3.5077	0.0179	3.5256	0.9304	0.0165	0.9469		3,029.8157	3,029.8157	0.0773	0.0730	3,053.4959
Total	1.2015	4.5685	10.9481	0.0485	4.1308	0.0421	4.1728	1.1098	0.0396	1.1494		5,027.9919	5,027.9919	0.1403	0.3623	5,139.4607

BDM Mixed-Use Project Otay Mesa - San Diego Air Basin, Summer

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

3.4 Building Construction - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769	0.0000	2,555.6989	2,555.6989	0.6044		2,570.8077
Total	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769	0.0000	2,555.6989	2,555.6989	0.6044		2,570.8077

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1058	3.9169	1.3880	0.0185	0.6231	0.0242	0.6472	0.1794	0.0231	0.2025		1,998.1762	1,998.1762	0.0630	0.2893	2,085.9648
Worker	1.0957	0.6516	9.5601	0.0300	3.5077	0.0179	3.5256	0.9304	0.0165	0.9469		3,029.8157	3,029.8157	0.0773	0.0730	3,053.4959
Total	1.2015	4.5685	10.9481	0.0485	4.1308	0.0421	4.1728	1.1098	0.0396	1.1494		5,027.9919	5,027.9919	0.1403	0.3623	5,139.4607

BDM Mixed-Use Project Otay Mesa - San Diego Air Basin, Summer

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

3.5 Paving - 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	0.9882	9.5246	14.6258	0.0228		0.4685	0.4685		0.4310	0.4310		2,207.547 2	2,207.547 2	0.7140		2,225.396 3
Paving	0.4323					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.4205	9.5246	14.6258	0.0228		0.4685	0.4685		0.4310	0.4310		2,207.547 2	2,207.547 2	0.7140		2,225.396 3

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	0.0385	0.0229	0.3358	1.0500e-003	0.1232	6.3000e-004	0.1239	0.0327	5.8000e-004	0.0333		106.4338	106.4338	2.7100e-003	2.5600e-003	107.2657
Total	0.0385	0.0229	0.3358	1.0500e-003	0.1232	6.3000e-004	0.1239	0.0327	5.8000e-004	0.0333		106.4338	106.4338	2.7100e-003	2.5600e-003	107.2657

BDM Mixed-Use Project Otay Mesa - San Diego Air Basin, Summer

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

3.5 Paving - 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	0.9882	9.5246	14.6258	0.0228		0.4685	0.4685		0.4310	0.4310	0.0000	2,207.547 2	2,207.547 2	0.7140		2,225.396 3
Paving	0.4323					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.4205	9.5246	14.6258	0.0228		0.4685	0.4685		0.4310	0.4310	0.0000	2,207.547 2	2,207.547 2	0.7140		2,225.396 3

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	0.0385	0.0229	0.3358	1.0500e-003	0.1232	6.3000e-004	0.1239	0.0327	5.8000e-004	0.0333		106.4338	106.4338	2.7100e-003	2.5600e-003	107.2657
Total	0.0385	0.0229	0.3358	1.0500e-003	0.1232	6.3000e-004	0.1239	0.0327	5.8000e-004	0.0333		106.4338	106.4338	2.7100e-003	2.5600e-003	107.2657

BDM Mixed-Use Project Otay Mesa - San Diego Air Basin, Summer

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

3.6 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	50.8450					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	51.0257	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	0.2181	0.1297	1.9031	5.9700e-003	0.6983	3.5600e-003	0.7018	0.1852	3.2800e-003	0.1885		603.1249	603.1249	0.0154	0.0145	607.8388
Total	0.2181	0.1297	1.9031	5.9700e-003	0.6983	3.5600e-003	0.7018	0.1852	3.2800e-003	0.1885		603.1249	603.1249	0.0154	0.0145	607.8388

BDM Mixed-Use Project Otay Mesa - San Diego Air Basin, Summer

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

3.6 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	50.8450					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	0.0000	281.4481	281.4481	0.0159		281.8443
Total	51.0257	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609	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	0.2181	0.1297	1.9031	5.9700e-003	0.6983	3.5600e-003	0.7018	0.1852	3.2800e-003	0.1885		603.1249	603.1249	0.0154	0.0145	607.8388
Total	0.2181	0.1297	1.9031	5.9700e-003	0.6983	3.5600e-003	0.7018	0.1852	3.2800e-003	0.1885		603.1249	603.1249	0.0154	0.0145	607.8388

BDM Mixed-Use Project Otay Mesa - San Diego Air Basin, Summer

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

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Density

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	6.9056	6.3091	56.2570	0.1200	12.9628	0.0914	13.0542	3.4530	0.0852	3.5382		12,226.84 95	12,226.84 95	0.8709	0.5429	12,410.39 50
Unmitigated	7.7606	7.6925	69.0540	0.1537	16.7146	0.1148	16.8294	4.4524	0.1071	4.5594		15,656.62 23	15,656.62 23	1.0415	0.6576	15,878.62 72

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	2,580.00	2,580.00	2580.00	7,366,683	5,713,153
General Office Building	240.00	240.00	240.00	573,541	444,803
Parking Lot	0.00	0.00	0.00		
Total	2,820.00	2,820.00	2,820.00	7,940,223	6,157,957

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 Mid Rise	10.80	7.30	7.50	41.60	18.80	39.60	86	11	3
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

BDM Mixed-Use Project Otay Mesa - San Diego Air Basin, Summer

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

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.561854	0.062428	0.177046	0.117565	0.023832	0.006317	0.008949	0.006298	0.000705	0.000577	0.028723	0.000955	0.004751
General Office Building	0.561854	0.062428	0.177046	0.117565	0.023832	0.006317	0.008949	0.006298	0.000705	0.000577	0.028723	0.000955	0.004751
Parking Lot	0.561854	0.062428	0.177046	0.117565	0.023832	0.006317	0.008949	0.006298	0.000705	0.000577	0.028723	0.000955	0.004751

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0960	0.8222	0.3633	5.2400e-003		0.0663	0.0663		0.0663	0.0663		1,047.1818	1,047.1818	0.0201	0.0192	1,053.4047
NaturalGas Unmitigated	0.0960	0.8222	0.3633	5.2400e-003		0.0663	0.0663		0.0663	0.0663		1,047.1818	1,047.1818	0.0201	0.0192	1,053.4047

BDM Mixed-Use Project Otay Mesa - San Diego Air Basin, Summer

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

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Mid Rise	8571.78	0.0924	0.7900	0.3362	5.0400e-003		0.0639	0.0639		0.0639	0.0639		1,008.4453	1,008.4453	0.0193	0.0185	1,014.4380
General Office Building	329.26	3.5500e-003	0.0323	0.0271	1.9000e-004		2.4500e-003	2.4500e-003		2.4500e-003	2.4500e-003		38.7365	38.7365	7.4000e-004	7.1000e-004	38.9667
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0960	0.8222	0.3633	5.2300e-003		0.0663	0.0663		0.0663	0.0663		1,047.1818	1,047.1818	0.0201	0.0192	1,053.4047

BDM Mixed-Use Project Otay Mesa - San Diego Air Basin, Summer

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

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Mid Rise	8.57178	0.0924	0.7900	0.3362	5.0400e-003		0.0639	0.0639		0.0639	0.0639		1,008.4453	1,008.4453	0.0193	0.0185	1,014.4380
General Office Building	0.32926	3.5500e-003	0.0323	0.0271	1.9000e-004		2.4500e-003	2.4500e-003		2.4500e-003	2.4500e-003		38.7365	38.7365	7.4000e-004	7.1000e-004	38.9667
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0960	0.8222	0.3633	5.2300e-003		0.0663	0.0663		0.0663	0.0663		1,047.1818	1,047.1818	0.0201	0.0192	1,053.4047

6.0 Area Detail

6.1 Mitigation Measures Area

- Use Electric Lawnmower
- Use Electric Leafblower
- Use Electric Chainsaw
- Use Low VOC Paint - Residential Interior
- Use Low VOC Paint - Residential Exterior
- Use Low VOC Paint - Non-Residential Interior
- Use Low VOC Paint - Non-Residential Exterior
- No Hearths Installed

BDM Mixed-Use Project Otay Mesa - San Diego Air Basin, Summer

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	11.2436	0.4064	35.2565	1.8600e-003		0.1954	0.1954		0.1954	0.1954	0.0000	63.4519	63.4519	0.0607	0.0000	64.9690
Unmitigated	11.2587	0.4089	35.5126	1.8800e-003		0.1969	0.1969		0.1969	0.1969	0.0000	64.0294	64.0294	0.0616	0.0000	65.5685

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	0.6269					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	9.5612					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.0706	0.4089	35.5126	1.8800e-003		0.1969	0.1969		0.1969	0.1969		64.0294	64.0294	0.0616		65.5685
Total	11.2587	0.4089	35.5126	1.8800e-003		0.1969	0.1969		0.1969	0.1969	0.0000	64.0294	64.0294	0.0616	0.0000	65.5685

BDM Mixed-Use Project Otay Mesa - San Diego Air Basin, Summer

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

6.2 Area by SubCategory

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	0.6269					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	9.5612					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.0555	0.4064	35.2565	1.8600e-003		0.1954	0.1954		0.1954	0.1954		63.4519	63.4519	0.0607		64.9690
Total	11.2436	0.4064	35.2565	1.8600e-003		0.1954	0.1954		0.1954	0.1954	0.0000	63.4519	63.4519	0.0607	0.0000	64.9690

7.0 Water Detail

7.1 Mitigation Measures Water

- Install Low Flow Bathroom Faucet
- Install Low Flow Kitchen Faucet
- Install Low Flow Toilet
- Install Low Flow Shower
- Use Water Efficient Irrigation System

BDM Mixed-Use Project Otay Mesa - San Diego Air Basin, Summer

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

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

9.0 Operational Offroad

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

BDM Mixed-Use Project Otay Mesa - San Diego Air Basin, Winter

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

BDM Mixed-Use Project Otay Mesa

San Diego Air Basin, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	6.00	1000sqft	0.14	6,000.00	0
Parking Lot	688.00	Space	3.30	275,200.00	0
Apartments Mid Rise	430.00	Dwelling Unit	10.01	436,230.00	1230

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.6	Precipitation Freq (Days)	40
Climate Zone	13			Operational Year	2025
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MW hr)	539.98	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 - Project specifies 436,250 sf of apartments. Land Area 13.45 acres. Parking Spaces are conservative estimate of the total vehicle spaces and motorcycle spaces.

Construction Phase - No demolition. Architectural coating will occur as buildings are finished.

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - No demolition assumed.

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

BDM Mixed-Use Project Otay Mesa - San Diego Air Basin, Winter

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

Grading - Project specifies 63,274 CY of material import.

Architectural Coating - Use Low VOC Paint (50 g/L residential, 50 g/L non-residential, 100 g/L parking). Exterior of building is stucco, so 20% of exterior may be painted trim.

Vehicle Trips - Traffic Study from CR Associates:

Commercial: 40 trips/ksf, or 240 ADT

Multi-family: 6 trips/DU, or 2,580 ADT

Woodstoves - No wood stoves or hearths.

Area Coating - Building exterior is stucco, so only 20% of trim will be painted.

Construction Off-road Equipment Mitigation -

Area Mitigation - Use Low VOC Paint (50 g/L residential, 50 g/L non-residential, 100 g/L parking)

Energy Mitigation -

Water Mitigation -

Waste Mitigation - Recycling and Composting (per state standards - 3 streams - CA is aiming for 75% reduction. Assume minimum of 50% applied.

Mobile Land Use Mitigation -

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Residential_Exterior	294,455.00	58,891.00
tblArchitecturalCoating	EF_Nonresidential_Exterior	250.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	50.00
tblArchitecturalCoating	EF_Parking	250.00	100.00
tblArchitecturalCoating	EF_Residential_Exterior	250.00	50.00
tblArchitecturalCoating	EF_Residential_Interior	250.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	50
tblAreaCoating	Area_EF_Nonresidential_Interior	250	50
tblAreaCoating	Area_EF_Parking	250	100
tblAreaCoating	Area_EF_Residential_Exterior	250	50
tblAreaCoating	Area_EF_Residential_Interior	250	50
tblAreaCoating	Area_Residential_Exterior	294455	58891
tblAreaMitigation	UseLowVOCPaintParkingCheck	False	True
tblConstructionPhase	NumDays	20.00	45.00
tblFireplaces	FireplaceDayYear	82.00	0.00

BDM Mixed-Use Project Otay Mesa - San Diego Air Basin, Winter

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

tblFireplaces	FireplaceHourDay	3.00	0.00
tblFireplaces	FireplaceWoodMass	3,078.40	0.00
tblFireplaces	NumberGas	236.50	0.00
tblFireplaces	NumberNoFireplace	43.00	0.00
tblFireplaces	NumberWood	150.50	0.00
tblGrading	MaterialImported	0.00	63,274.00
tblLandUse	LandUseSquareFeet	430,000.00	436,230.00
tblLandUse	LotAcreage	6.19	3.30
tblLandUse	LotAcreage	11.32	10.01
tblVehicleTrips	ST_TR	4.91	6.00
tblVehicleTrips	ST_TR	2.21	40.00
tblVehicleTrips	SU_TR	4.09	6.00
tblVehicleTrips	SU_TR	0.70	40.00
tblVehicleTrips	WD_TR	5.44	6.00
tblVehicleTrips	WD_TR	9.74	40.00
tblWoodstoves	NumberCatalytic	21.50	0.00
tblWoodstoves	NumberNoncatalytic	21.50	0.00
tblWoodstoves	WoodstoveDayYear	82.00	0.00
tblWoodstoves	WoodstoveWoodMass	3,019.20	0.00

2.0 Emissions Summary

BDM Mixed-Use Project Otay Mesa - San Diego Air Basin, Winter

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

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2023	3.9423	70.4317	38.0989	0.2214	19.8049	1.7186	21.0717	10.1417	1.5919	11.3071	0.0000	23,600.56 11	23,600.56 11	2.8250	2.7791	24,499.36 67
2024	51.2628	18.2586	26.6997	0.0738	4.1308	0.6555	4.7863	1.1098	0.6166	1.7264	0.0000	7,420.460 7	7,420.460 7	0.7496	0.3689	7,549.128 7
Maximum	51.2628	70.4317	38.0989	0.2214	19.8049	1.7186	21.0717	10.1417	1.5919	11.3071	0.0000	23,600.56 11	23,600.56 11	2.8250	2.7791	24,499.36 67

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					
2023	3.9423	70.4317	38.0989	0.2214	8.4803	1.7186	10.1989	3.9792	1.5919	5.1446	0.0000	23,600.56 11	23,600.56 11	2.8250	2.7791	24,499.36 67
2024	51.2628	18.2586	26.6997	0.0738	4.1308	0.6555	4.7863	1.1098	0.6166	1.7264	0.0000	7,420.460 7	7,420.460 7	0.7496	0.3689	7,549.128 7
Maximum	51.2628	70.4317	38.0989	0.2214	8.4803	1.7186	10.1989	3.9792	1.5919	5.1446	0.0000	23,600.56 11	23,600.56 11	2.8250	2.7791	24,499.36 67

BDM Mixed-Use Project Otay Mesa - San Diego Air Basin, Winter

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

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	11.2587	0.4089	35.5126	1.8800e-003		0.1969	0.1969		0.1969	0.1969	0.0000	64.0294	64.0294	0.0616	0.0000	65.5685
Energy	0.0960	0.8222	0.3633	5.2400e-003		0.0663	0.0663		0.0663	0.0663		1,047.1818	1,047.1818	0.0201	0.0192	1,053.4047
Mobile	7.5746	8.3334	70.9065	0.1470	16.7146	0.1149	16.8294	4.4524	0.1071	4.5595		14,980.6250	14,980.6250	1.1003	0.6923	15,214.4474
Total	18.9293	9.5645	106.7824	0.1541	16.7146	0.3781	17.0926	4.4524	0.3703	4.8227	0.0000	16,091.8362	16,091.8362	1.1819	0.7115	16,333.4206

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	11.2436	0.4064	35.2565	1.8600e-003		0.1954	0.1954		0.1954	0.1954	0.0000	63.4519	63.4519	0.0607	0.0000	64.9690
Energy	0.0960	0.8222	0.3633	5.2400e-003		0.0663	0.0663		0.0663	0.0663		1,047.1818	1,047.1818	0.0201	0.0192	1,053.4047
Mobile	6.6943	6.8428	58.4351	0.1148	12.9628	0.0915	13.0543	3.4530	0.0853	3.5383		11,704.1908	11,704.1908	0.9283	0.5728	11,898.0790
Total	18.0339	8.0714	94.0549	0.1219	12.9628	0.3532	13.3160	3.4530	0.3470	3.8000	0.0000	12,814.8245	12,814.8245	1.0091	0.5920	13,016.4526

BDM Mixed-Use Project Otay Mesa - San Diego Air Basin, Winter

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	4.73	15.61	11.92	20.87	22.45	6.59	22.10	22.45	6.31	21.21	0.00	20.36	20.36	14.62	16.81	20.31

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/28/2023	2/10/2023	5	10	
2	Grading	Grading	2/11/2023	3/24/2023	5	30	
3	Building Construction	Building Construction	3/25/2023	5/17/2024	5	300	
4	Paving	Paving	5/18/2024	6/14/2024	5	20	
5	Architectural Coating	Architectural Coating	6/15/2024	8/16/2024	5	45	

Acres of Grading (Site Preparation Phase): 15

Acres of Grading (Grading Phase): 90

Acres of Paving: 3.3

Residential Indoor: 883,366; Residential Outdoor: 58,891; Non-Residential Indoor: 9,000; Non-Residential Outdoor: 3,000; Striped Parking Area: 16,512 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48

BDM Mixed-Use Project Otay Mesa - San Diego Air Basin, Winter

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

Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	7,909.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	427.00	92.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	85.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

BDM Mixed-Use Project Otay Mesa - San Diego Air Basin, Winter

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

3.2 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					19.6570	0.0000	19.6570	10.1025	0.0000	10.1025			0.0000			0.0000
Off-Road	2.6595	27.5242	18.2443	0.0381		1.2660	1.2660		1.1647	1.1647		3,687.308 1	3,687.308 1	1.1926		3,717.121 9
Total	2.6595	27.5242	18.2443	0.0381	19.6570	1.2660	20.9230	10.1025	1.1647	11.2672		3,687.308 1	3,687.308 1	1.1926		3,717.121 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	0.0000	0.0000	0.0000	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	0.0533	0.0344	0.4105	1.2300e-003	0.1479	7.9000e-004	0.1487	0.0392	7.3000e-004	0.0400		124.8010	124.8010	3.8100e-003	3.5600e-003	125.9573
Total	0.0533	0.0344	0.4105	1.2300e-003	0.1479	7.9000e-004	0.1487	0.0392	7.3000e-004	0.0400		124.8010	124.8010	3.8100e-003	3.5600e-003	125.9573

BDM Mixed-Use Project Otay Mesa - San Diego Air Basin, Winter

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

3.2 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					7.6662	0.0000	7.6662	3.9400	0.0000	3.9400			0.0000			0.0000
Off-Road	2.6595	27.5242	18.2443	0.0381		1.2660	1.2660		1.1647	1.1647	0.0000	3,687.308 1	3,687.308 1	1.1926		3,717.121 9
Total	2.6595	27.5242	18.2443	0.0381	7.6662	1.2660	8.9323	3.9400	1.1647	5.1047	0.0000	3,687.308 1	3,687.308 1	1.1926		3,717.121 9

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	0.0533	0.0344	0.4105	1.2300e-003	0.1479	7.9000e-004	0.1487	0.0392	7.3000e-004	0.0400		124.8010	124.8010	3.8100e-003	3.5600e-003	125.9573
Total	0.0533	0.0344	0.4105	1.2300e-003	0.1479	7.9000e-004	0.1487	0.0392	7.3000e-004	0.0400		124.8010	124.8010	3.8100e-003	3.5600e-003	125.9573

BDM Mixed-Use Project Otay Mesa - San Diego Air Basin, Winter

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

3.3 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					9.5000	0.0000	9.5000	3.6986	0.0000	3.6986			0.0000			0.0000
Off-Road	3.3217	34.5156	28.0512	0.0621		1.4245	1.4245		1.3105	1.3105		6,011.4777	6,011.4777	1.9442		6,060.0836
Total	3.3217	34.5156	28.0512	0.0621	9.5000	1.4245	10.9245	3.6986	1.3105	5.0092		6,011.4777	6,011.4777	1.9442		6,060.0836

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	0.5613	35.8779	9.5917	0.1579	4.6110	0.2933	4.9043	1.2639	0.2806	1.5445		17,450.4156	17,450.4156	0.8765	2.7752	18,299.3306
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	0.0593	0.0382	0.4561	1.3700e-003	0.1643	8.8000e-004	0.1652	0.0436	8.1000e-004	0.0444		138.6678	138.6678	4.2400e-003	3.9600e-003	139.9526
Total	0.6206	35.9161	10.0478	0.1593	4.7753	0.2941	5.0695	1.3075	0.2814	1.5889		17,589.0834	17,589.0834	0.8807	2.7791	18,439.2831

BDM Mixed-Use Project Otay Mesa - San Diego Air Basin, Winter

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

3.3 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					3.7050	0.0000	3.7050	1.4425	0.0000	1.4425			0.0000			0.0000
Off-Road	3.3217	34.5156	28.0512	0.0621		1.4245	1.4245		1.3105	1.3105	0.0000	6,011.4777	6,011.4777	1.9442		6,060.0836
Total	3.3217	34.5156	28.0512	0.0621	3.7050	1.4245	5.1295	1.4425	1.3105	2.7530	0.0000	6,011.4777	6,011.4777	1.9442		6,060.0836

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	0.5613	35.8779	9.5917	0.1579	4.6110	0.2933	4.9043	1.2639	0.2806	1.5445		17,450.4156	17,450.4156	0.8765	2.7752	18,299.3306
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	0.0593	0.0382	0.4561	1.3700e-003	0.1643	8.8000e-004	0.1652	0.0436	8.1000e-004	0.0444		138.6678	138.6678	4.2400e-003	3.9600e-003	139.9526
Total	0.6206	35.9161	10.0478	0.1593	4.7753	0.2941	5.0695	1.3075	0.2814	1.5889		17,589.0834	17,589.0834	0.8807	2.7791	18,439.2831

BDM Mixed-Use Project Otay Mesa - San Diego Air Basin, Winter

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

3.4 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	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584		2,555.2099	2,555.2099	0.6079		2,570.4061
Total	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584		2,555.2099	2,555.2099	0.6079		2,570.4061

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	0.1068	4.1098	1.4642	0.0189	0.6231	0.0242	0.6472	0.1794	0.0231	0.2025		2,036.5232	2,036.5232	0.0613	0.2951	2,126.0093
Worker	1.2654	0.8149	9.7376	0.0293	3.5077	0.0188	3.5265	0.9304	0.0173	0.9477		2,960.5572	2,960.5572	0.0904	0.0845	2,987.9873
Total	1.3722	4.9247	11.2018	0.0482	4.1308	0.0430	4.1737	1.1098	0.0404	1.1502		4,997.0804	4,997.0804	0.1518	0.3796	5,113.9966

BDM Mixed-Use Project Otay Mesa - San Diego Air Basin, Winter

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

3.4 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	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584	0.0000	2,555.2099	2,555.2099	0.6079		2,570.4061
Total	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584	0.0000	2,555.2099	2,555.2099	0.6079		2,570.4061

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	0.1068	4.1098	1.4642	0.0189	0.6231	0.0242	0.6472	0.1794	0.0231	0.2025		2,036.5232	2,036.5232	0.0613	0.2951	2,126.0093
Worker	1.2654	0.8149	9.7376	0.0293	3.5077	0.0188	3.5265	0.9304	0.0173	0.9477		2,960.5572	2,960.5572	0.0904	0.0845	2,987.9873
Total	1.3722	4.9247	11.2018	0.0482	4.1308	0.0430	4.1737	1.1098	0.0404	1.1502		4,997.0804	4,997.0804	0.1518	0.3796	5,113.9966

BDM Mixed-Use Project Otay Mesa - San Diego Air Basin, Winter

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

3.4 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769		2,555.6989	2,555.6989	0.6044		2,570.8077
Total	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769		2,555.6989	2,555.6989	0.6044		2,570.8077

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1026	4.0821	1.4308	0.0185	0.6231	0.0243	0.6474	0.1794	0.0232	0.2026		2,001.0983	2,001.0983	0.0627	0.2900	2,089.0793
Worker	1.1911	0.7327	9.1022	0.0283	3.5077	0.0179	3.5256	0.9304	0.0165	0.9469		2,863.6635	2,863.6635	0.0825	0.0789	2,889.2418
Total	1.2937	4.8148	10.5329	0.0468	4.1308	0.0422	4.1730	1.1098	0.0397	1.1495		4,864.7618	4,864.7618	0.1452	0.3689	4,978.3211

BDM Mixed-Use Project Otay Mesa - San Diego Air Basin, Winter

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

3.4 Building Construction - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769	0.0000	2,555.6989	2,555.6989	0.6044		2,570.8077
Total	1.4716	13.4438	16.1668	0.0270		0.6133	0.6133		0.5769	0.5769	0.0000	2,555.6989	2,555.6989	0.6044		2,570.8077

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.1026	4.0821	1.4308	0.0185	0.6231	0.0243	0.6474	0.1794	0.0232	0.2026		2,001.0983	2,001.0983	0.0627	0.2900	2,089.0793
Worker	1.1911	0.7327	9.1022	0.0283	3.5077	0.0179	3.5256	0.9304	0.0165	0.9469		2,863.6635	2,863.6635	0.0825	0.0789	2,889.2418
Total	1.2937	4.8148	10.5329	0.0468	4.1308	0.0422	4.1730	1.1098	0.0397	1.1495		4,864.7618	4,864.7618	0.1452	0.3689	4,978.3211

BDM Mixed-Use Project Otay Mesa - San Diego Air Basin, Winter

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

3.5 Paving - 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	0.9882	9.5246	14.6258	0.0228		0.4685	0.4685		0.4310	0.4310		2,207.547 2	2,207.547 2	0.7140		2,225.396 3
Paving	0.4323					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.4205	9.5246	14.6258	0.0228		0.4685	0.4685		0.4310	0.4310		2,207.547 2	2,207.547 2	0.7140		2,225.396 3

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	0.0418	0.0257	0.3198	1.0000e-003	0.1232	6.3000e-004	0.1239	0.0327	5.8000e-004	0.0333		100.5971	100.5971	2.9000e-003	2.7700e-003	101.4956
Total	0.0418	0.0257	0.3198	1.0000e-003	0.1232	6.3000e-004	0.1239	0.0327	5.8000e-004	0.0333		100.5971	100.5971	2.9000e-003	2.7700e-003	101.4956

BDM Mixed-Use Project Otay Mesa - San Diego Air Basin, Winter

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

3.5 Paving - 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	0.9882	9.5246	14.6258	0.0228		0.4685	0.4685		0.4310	0.4310	0.0000	2,207.547 2	2,207.547 2	0.7140		2,225.396 3
Paving	0.4323					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.4205	9.5246	14.6258	0.0228		0.4685	0.4685		0.4310	0.4310	0.0000	2,207.547 2	2,207.547 2	0.7140		2,225.396 3

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	0.0418	0.0257	0.3198	1.0000e-003	0.1232	6.3000e-004	0.1239	0.0327	5.8000e-004	0.0333		100.5971	100.5971	2.9000e-003	2.7700e-003	101.4956
Total	0.0418	0.0257	0.3198	1.0000e-003	0.1232	6.3000e-004	0.1239	0.0327	5.8000e-004	0.0333		100.5971	100.5971	2.9000e-003	2.7700e-003	101.4956

BDM Mixed-Use Project Otay Mesa - San Diego Air Basin, Winter

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

3.6 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	50.8450					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	51.0257	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	0.2371	0.1459	1.8119	5.6400e-003	0.6983	3.5600e-003	0.7018	0.1852	3.2800e-003	0.1885		570.0501	570.0501	0.0164	0.0157	575.1418
Total	0.2371	0.1459	1.8119	5.6400e-003	0.6983	3.5600e-003	0.7018	0.1852	3.2800e-003	0.1885		570.0501	570.0501	0.0164	0.0157	575.1418

BDM Mixed-Use Project Otay Mesa - San Diego Air Basin, Winter

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

3.6 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	50.8450					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	0.0000	281.4481	281.4481	0.0159		281.8443
Total	51.0257	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609	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	0.2371	0.1459	1.8119	5.6400e-003	0.6983	3.5600e-003	0.7018	0.1852	3.2800e-003	0.1885		570.0501	570.0501	0.0164	0.0157	575.1418
Total	0.2371	0.1459	1.8119	5.6400e-003	0.6983	3.5600e-003	0.7018	0.1852	3.2800e-003	0.1885		570.0501	570.0501	0.0164	0.0157	575.1418

BDM Mixed-Use Project Otay Mesa - San Diego Air Basin, Winter

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

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Density

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	6.6943	6.8428	58.4351	0.1148	12.9628	0.0915	13.0543	3.4530	0.0853	3.5383		11,704.1908	11,704.1908	0.9283	0.5728	11,898.0790
Unmitigated	7.5746	8.3334	70.9065	0.1470	16.7146	0.1149	16.8294	4.4524	0.1071	4.5595		14,980.6250	14,980.6250	1.1003	0.6923	15,214.4474

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	2,580.00	2,580.00	2580.00	7,366,683	5,713,153
General Office Building	240.00	240.00	240.00	573,541	444,803
Parking Lot	0.00	0.00	0.00		
Total	2,820.00	2,820.00	2,820.00	7,940,223	6,157,957

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 Mid Rise	10.80	7.30	7.50	41.60	18.80	39.60	86	11	3
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
Parking Lot	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0

BDM Mixed-Use Project Otay Mesa - San Diego Air Basin, Winter

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

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.561854	0.062428	0.177046	0.117565	0.023832	0.006317	0.008949	0.006298	0.000705	0.000577	0.028723	0.000955	0.004751
General Office Building	0.561854	0.062428	0.177046	0.117565	0.023832	0.006317	0.008949	0.006298	0.000705	0.000577	0.028723	0.000955	0.004751
Parking Lot	0.561854	0.062428	0.177046	0.117565	0.023832	0.006317	0.008949	0.006298	0.000705	0.000577	0.028723	0.000955	0.004751

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0960	0.8222	0.3633	5.2400e-003		0.0663	0.0663		0.0663	0.0663		1,047.1818	1,047.1818	0.0201	0.0192	1,053.4047
NaturalGas Unmitigated	0.0960	0.8222	0.3633	5.2400e-003		0.0663	0.0663		0.0663	0.0663		1,047.1818	1,047.1818	0.0201	0.0192	1,053.4047

BDM Mixed-Use Project Otay Mesa - San Diego Air Basin, Winter

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

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Mid Rise	8571.78	0.0924	0.7900	0.3362	5.0400e-003		0.0639	0.0639		0.0639	0.0639		1,008.4453	1,008.4453	0.0193	0.0185	1,014.4380
General Office Building	329.26	3.5500e-003	0.0323	0.0271	1.9000e-004		2.4500e-003	2.4500e-003		2.4500e-003	2.4500e-003		38.7365	38.7365	7.4000e-004	7.1000e-004	38.9667
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0960	0.8222	0.3633	5.2300e-003		0.0663	0.0663		0.0663	0.0663		1,047.1818	1,047.1818	0.0201	0.0192	1,053.4047

BDM Mixed-Use Project Otay Mesa - San Diego Air Basin, Winter

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

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Mid Rise	8.57178	0.0924	0.7900	0.3362	5.0400e-003		0.0639	0.0639		0.0639	0.0639		1,008.4453	1,008.4453	0.0193	0.0185	1,014.4380
General Office Building	0.32926	3.5500e-003	0.0323	0.0271	1.9000e-004		2.4500e-003	2.4500e-003		2.4500e-003	2.4500e-003		38.7365	38.7365	7.4000e-004	7.1000e-004	38.9667
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		0.0960	0.8222	0.3633	5.2300e-003		0.0663	0.0663		0.0663	0.0663		1,047.1818	1,047.1818	0.0201	0.0192	1,053.4047

6.0 Area Detail

6.1 Mitigation Measures Area

- Use Electric Lawnmower
- Use Electric Leafblower
- Use Electric Chainsaw
- Use Low VOC Paint - Residential Interior
- Use Low VOC Paint - Residential Exterior
- Use Low VOC Paint - Non-Residential Interior
- Use Low VOC Paint - Non-Residential Exterior
- No Hearths Installed

BDM Mixed-Use Project Otay Mesa - San Diego Air Basin, Winter

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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	11.2436	0.4064	35.2565	1.8600e-003		0.1954	0.1954		0.1954	0.1954	0.0000	63.4519	63.4519	0.0607	0.0000	64.9690
Unmitigated	11.2587	0.4089	35.5126	1.8800e-003		0.1969	0.1969		0.1969	0.1969	0.0000	64.0294	64.0294	0.0616	0.0000	65.5685

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	0.6269					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	9.5612					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.0706	0.4089	35.5126	1.8800e-003		0.1969	0.1969		0.1969	0.1969		64.0294	64.0294	0.0616		65.5685
Total	11.2587	0.4089	35.5126	1.8800e-003		0.1969	0.1969		0.1969	0.1969	0.0000	64.0294	64.0294	0.0616	0.0000	65.5685

BDM Mixed-Use Project Otay Mesa - San Diego Air Basin, Winter

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

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.6269					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	9.5612					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.0555	0.4064	35.2565	1.8600e-003		0.1954	0.1954		0.1954	0.1954		63.4519	63.4519	0.0607		64.9690
Total	11.2436	0.4064	35.2565	1.8600e-003		0.1954	0.1954		0.1954	0.1954	0.0000	63.4519	63.4519	0.0607	0.0000	64.9690

7.0 Water Detail

7.1 Mitigation Measures Water

Install Low Flow Bathroom Faucet

Install Low Flow Kitchen Faucet

Install Low Flow Toilet

Install Low Flow Shower

Use Water Efficient Irrigation System

BDM Mixed-Use Project Otay Mesa - San Diego Air Basin, Winter

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

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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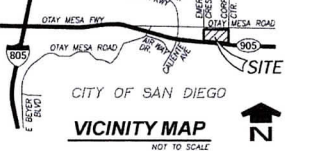
11.0 Vegetation

APPENDIX B

SITE PLAN AND VESTING TENTATIVE MAP

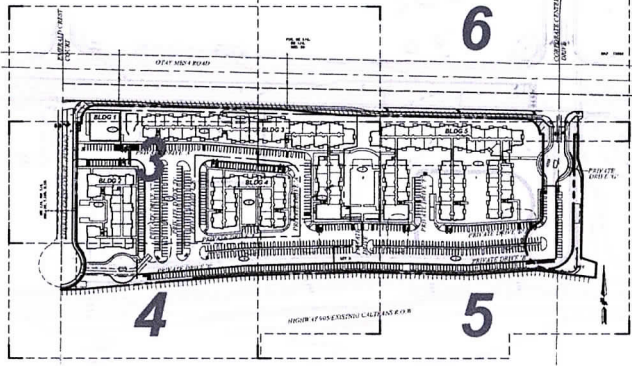
VESTING TENTATIVE MAP & SITE DEVELOPMENT PERMIT

BDM MIXED USE CITY OF SAN DIEGO, CALIFORNIA



- LEGEND
PROPERTY LINE/ TM BOUNDARY
PROPOSED BUILDING NUMBER WITH PAD ELEVATION
PROPOSED LOT NUMBER
PROPOSED EASEMENT LINE
EXISTING PUBLIC SEWER MAIN WITH MANHOLE
PROPOSED PRIVATE SEWER MAIN WITH MANHOLE
PROPOSED SEWER FORCE MAIN (PRIVATE OFFSITE, PUBLIC OFFSITE)
EXISTING PUBLIC WATER MAIN / FIRE HYDRANT
PROPOSED PRIVATE WATER MAIN (1" UNLESS OTHERWISE NOTED)
PROPOSED PRIVATE FIRE MAIN / FIRE HYDRANT & SEWER (UNLESS OTHERWISE NOTED)
PROPOSED PRIVATE WATER LATERAL
PROPOSED CENTERLINE STREET ELEVATION
PROPOSED SPOT ELEVATION
EXISTING CONTOURS
PROPOSED SLOPE BANK (2:1 MAX)
PROPOSED RETAINING WALL
PROPOSED % OF STREET CENTERLINE GRADE
EXISTING STREET LIGHT
PROPOSED STORM DRAIN (PRIVATE UNLESS OTHERWISE NOTED)
EXISTING PUBLIC STORM DRAIN SYSTEM
PROPOSED TRASH ENCLOSURE
LIMITS OF PROPOSED GRADING
SCALE

LEGAL DESCRIPTION
LOTS 1, 2, 3, 4, 5, A AND C OF HANDLER COMMUNITY, IN THE CITY OF SAN DIEGO, COUNTY OF SAN DIEGO, STATE OF CALIFORNIA, AS BEING ACCORDING TO MAP THREE(9) NO. 16340, FILED IN THE OFFICE OF THE COUNTY RECORDER OF SAN DIEGO COUNTY, MAY 7, 2019.
TOPOGRAPHY SOURCE
THE TOPOGRAPHY COMPAILED BY BRP CONSULTING, DATED JULY 27, 2017 SUPPLEMENTAL FIELD SURVEY WAS PERFORMED ON NOVEMBER 7, 2017 BY RICK ENGINEERING COMPANY.
BENCHMARK
ELEVATIONS SHOWN HEREON ARE IN TERMS OF THE NATIONAL GEODETIC VERTICAL DATUM OF 1929 (INDICATED) BASED LOCALLY UPON THE FOLLOWING BY THE AS PUBLISHED BY THE CITY OF SAN DIEGO. CENTERLINE MOUNTAIN SECTION CORNER AT THE INTERSECTION OF OTAY MESA ROAD AND HERITAGE ROAD ELEVATION = 504.588 M.S.L.
UTILITIES & SERVICES
ON-SITE WATER - PRIVATE
OFF-SITE WATER - CITY OF SAN DIEGO (PUBLIC)
ON-SITE SEWER - PRIVATE
OFF-SITE SEWER - CITY OF SAN DIEGO (PUBLIC)
FIRE AND POLICE - CITY OF SAN DIEGO
SOON & ELECTRICITY - SOON
SCHOOL DISTRICT - SAN DIEGO UNIFIED SCHOOL DIST
STREET TREES: ALL UTILITIES, LANDSCAPE AND OTHER SITE IMPROVEMENTS (PER LDC TABLE 142-0) THE MINIMUM TREE SEPARATION DISTANCE AND PER LDC 142-020(A)(6) WITH 40-FOOT TREE ROOT ZONE) SHALL BE DESIGNED TO NOT VIOLATE THE REQUIRED PLACEMENT AND QUANTITY OF REQUIRED STREET TREES.
MINIMUM TREE SEPARATION DISTANCE, TRAFFIC SIGNALS & STOP SIGNS - 20 FEET UNDERPASSING UTILITY LINE - 5 FEET (10' FOR SEWER) ABOVE GROUND UTILITY STRUCTURES TO FEET DRIVEWAY (ENTRANCE) - 10 FEET (5' FOR RESIDENTIAL STREET < 25 MPH) INTERSECTIONS (INTERSECTING CURB LINES OF TWO STREETS < 25 MPH



PROJECT MAP SCALE: 1" = 150'

BASIS OF BEARINGS

THE BASIS OF BEARINGS FOR THIS MAP IS THE SOUTHWEST QUARTER OF OTAY MESA ROAD AS SHOWN ON MAP NO. 16340 (98S748W)

EXISTING EASEMENTS

REFER TO SHEET CB: BOUNDARY, MONUMENTS, ENCUMBRANCES & EXISTING TOPO.

PROPOSED EASEMENTS

REFER TO SHEET C3-C6 FOR THE LOCATION AND LIMITS OF ALL NEW PROPOSED EASEMENTS.

EARTHWORK NOTES

TOTAL GRADING VOLUME: AMOUNT OF CUT: APPROX. 2,193 CUBIC YARDS AMOUNT OF FILL: APPROX. 65,482 CUBIC YARDS AMOUNT OF IMPOST: APPROX. 63,274 CUBIC YARDS

PARKING SUMMARY

Table with columns for Non-Residential, Residential, and Mixed Use categories, including sub-categories like Commercial, Office, and Multifamily. Rows include 'TOTAL NON-RESIDENTIAL + RESIDENTIAL' and 'TOTAL' with corresponding unit counts.

GENERAL DESIGN NOTES

- 1. CUT/FILL SLOPES ARE 2:1 OR FLATTER UNLESS OTHERWISE SPECIFIED
2. EXISTING SLOPES ARE TO BE MAINTAINED AND PROTECTED TO THE MAXIMUM EXTENT POSSIBLE
3. THE OWNER/PERMITTEE SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE CITY ENGINEER AND THE CITY OF SAN DIEGO BEFORE COMMENCING CONSTRUCTION
4. PRIOR TO THE ISSUANCE OF ANY CONSTRUCTION PERMIT THE SUBSOBER SHALL ENTER INTO A MAINTENANCE AGREEMENT FOR THE DRAINAGE AND EROSION CONTROL WITH THE CITY ENGINEER
5. PRIOR TO THE ISSUANCE OF ANY CONSTRUCTION PERMIT THE SUBSOBER SHALL INCORPORATE ANY CONSTRUCTION SCHEDULE AND FINISH DATES NECESSARY TO THE CITY ENGINEER'S REVIEW AND APPROVAL OF THE PERMIT APPLICATION AND THE CITY ENGINEER'S REVIEW OF THE SAN DIEGO MUNICIPAL CODE INTO THE CONSTRUCTION PLANS OR SPECIFICATIONS
6. DRAINAGE EASEMENTS SHALL BE PROVIDED AS REQUIRED
7. ALL UTILITIES SHALL BE UNDERGROUND AND CEMENTED UNLESS OTHERWISE SPECIFIED
8. ALL UTILITIES SHALL BE UNDERGROUND AND CEMENTED UNLESS OTHERWISE SPECIFIED
9. ALL UTILITIES SHALL BE UNDERGROUND AND CEMENTED UNLESS OTHERWISE SPECIFIED
10. ALL UTILITIES SHALL BE UNDERGROUND AND CEMENTED UNLESS OTHERWISE SPECIFIED
11. ALL UTILITIES SHALL BE UNDERGROUND AND CEMENTED UNLESS OTHERWISE SPECIFIED
12. ALL UTILITIES SHALL BE UNDERGROUND AND CEMENTED UNLESS OTHERWISE SPECIFIED
13. ALL UTILITIES SHALL BE UNDERGROUND AND CEMENTED UNLESS OTHERWISE SPECIFIED
14. ALL UTILITIES SHALL BE UNDERGROUND AND CEMENTED UNLESS OTHERWISE SPECIFIED
15. ALL UTILITIES SHALL BE UNDERGROUND AND CEMENTED UNLESS OTHERWISE SPECIFIED
16. ALL UTILITIES SHALL BE UNDERGROUND AND CEMENTED UNLESS OTHERWISE SPECIFIED
17. IMPROVEMENTS SUCH AS DRIVEWAYS, UTILITIES, DRAINS AND WATER AND SEWER LATERALS SHALL BE DESIGNED SO AS TO NOT PROMOTE THE PLACEMENT OF STREETS TO THE SATISFACTION OF THE CITY ENGINEER
18. CALIFORNIA BUILDING CODE CONSTRUCTION TYPE I FULLY SPRINKLED
19. CALIFORNIA BUILDING CODE CONSTRUCTION TYPE I FULLY SPRINKLED
20. MINIMUM 24 INCH OR 3/8 INCH BOY SIZE TREES SHALL BE INSTALLED WITHIN 10' OF THE FACE OF CURB AND IN OPENINGS BEING A MINIMUM 40 SQUARE FEET OF AIR AND WATER - PERMEABLE AREA AS INDICATED ON THE LANDSCAPE PLAN (SEE LANDSCAPE PLAN FOR DETAILS)
21. IMPROVEMENT PLANS SHALL SHOW LABEL AND DIMENSION A 40 SQUARE FOOT AREA FOR EACH STREET TREE WHICH IS UNCOMMONLY USED (SEE LANDSCAPE PLAN FOR DETAILS)
22. NO TREES OR SHRUBS EXCEEDING THREE FEET IN HEIGHT AT MATURITY SHALL BE INSTALLED WITHIN TEN FEET OF ANY NEW UTILITY OR THE FIVE FEET OF ANY WATER
23. ALL RESIDENTIAL BUILDINGS REQUIRE A FIRE SPRINKLER SYSTEM
24. FIRE ACCESS ROADWAY SIGNS OR RED CURBS WILL BE PROVIDED IN ACCORDANCE WITH BPLS POLICY A-96-1
25. TEMPORARY STREETS TO BE PROVIDED AS SPECIFIED IN SECTION 14.03 OF THE SDP
26. ALL DRAIN SYSTEMS NOT LOCATED IN A PUBLIC STREET SHALL BE PRIVATE
27. WATER EASEMENTS INCLUDING LANDSCAPING, FINISHED PAVING, PRIVATE UTILITIES, OR STRUCTURES OF ANY KIND THAT COULD INHIBIT THE MAINTENANCE, REPAIR OR REPLACEMENT OF PUBLIC UTILITIES, MAY BE INSTALLED, CONSTRUCTED, OR LOCATED WITHIN THE CURB RIGHTS OF WAY OF A PUBLIC WATER OR SEWER GENERAL UTILITY EASEMENT WITHOUT A CITY APPROVED AND COUNTY RECORDED ENCROACHMENT AND MAINTENANCE AGREEMENT (EWA)
28. ALL WATER LINES SERVING THIS DEVELOPMENT (INCLUDING DRAINAGE, IRRIGATION, AND FIRE) MUST PASS THROUGH A PERMITTED, PRIVATE, JOB-SITE GROUND SHOCK/PROTECTION DEVICE (GPD)
29. THE OWNER/PERMITTEE SHALL BE RESPONSIBLE FOR ANY DAMAGE CAUSED TO CITY OF SAN DIEGO WATER AND SEWER FACILITIES IN THE VICINITY OF THE PROJECT SITE, DUE TO THE CONSTRUCTION ACTIVITIES ASSOCIATED WITH THIS PROJECT IN ACCORDANCE WITH MUNICIPAL CODE SECTION 142.000 IN THE EVENT ANY SUCH DAMAGE DOES OCCUR, THE OWNER/PERMITTEE SHALL REPAIR OR RECONSTRUCT ANY DAMAGED PUBLIC WATER AND SEWER FACILITY IN A MANNER SATISFACTORY TO THE CITY OF SAN DIEGO
30. NO PUBLIC WATER, SEWER OR GENERAL UTILITY EASEMENTS CURRENTLY EXIST ON THE SUBJECT PROPERTY
31. NO ADJACENT STORMWATER INFILTRATION ASSOCIATED WITH THIS PROJECT EXTEND BEYOND THE PROJECT BOUNDARY INTO THE CITY OPEN SPACE PRESERVE LOCATED ADJACENT TO THE EAST
32. THE PROPOSED PROJECT WILL COMPLY WITH ALL THE REQUIREMENTS OF THE CURRENT CITY OF SAN DIEGO STORM WATER STANDARDS MANUAL BEFORE A GRADING OR BUILDING PERMIT IS ISSUED BY THE CITY OF SAN DIEGO
33. THE OWNER/PERMITTEE/APPLICANT TO ENSURE THAT THE CURRENT STORM WATER PERMANENT BMP DESIGN STANDARDS ARE INCORPORATED INTO THE PROJECT
34. THIS PROJECT WILL REQUIRE TO ADHERE TO THE CITY OF SAN DIEGO STORM WATER STANDARDS IN EFFECT AT THE TIME OF APPROVAL OF MINISTRIAL PERMIT. THE CURRENT STORM WATER DEVELOPMENT REGULATIONS BECAME EFFECTIVE ON FEBRUARY 16, 2016 AND THIS PROJECT WILL BE SUBJECT TO THESE REGULATIONS.
35. ALL STORM WATER RUN-OFF FROM THE PROPOSED DEVELOPMENT SHALL BE DIRECTED TO PROPOSED LANDSCAPE LOW-IMPACT DEVELOPMENT BARRIERS
36. SEE ARCHITECTURAL SET FOR ADDITIONAL DETAILS REGARDING THE RESIDENTIAL PROJECT
37. EXISTING MAINTENANCE ASSESSMENT DISTRICT (MAD) OWNED IRRIGATION SHALL BE CAPPED AND TERMINATED AT THE LOT LINE TO THE SATISFACTION OF THE PARKS AND RECREATION DEPARTMENT
38. ALL OFF-SITE SEWER IS PRIVATE AND AS SUCH PRIVATE SEWER WILL REQUIRE A PRIVATE PLUMBING PERMIT. DUAL PERPENDICULAR CURB BARRIERS PER CITY ENGINEER SHALL BE PROVIDED FOR ALL STORMWATER INFILTRATION.
39. A FINAL MAP SHALL BE FILED IN THE CITY RECORDER'S OFFICE PRIOR TO THE EXPARATION OF THE VESTING TENTATIVE MAP IF PROCEEDING WITH THE PROJECT. THE FINAL MAP SHALL BE FILED WITHIN THE 4 MONTH PERIOD AND ALL PROPERTY CORNERS SHALL BE MARKED WITH DURABLE SURVEY MONUMENTS. PLEASE REFER TO SHEET CB FOR A DETAILED DESCRIPTION OF THE LOCATION AND AREAS PROPOSED TO BE MARKED AND TO BE DEMOLISHED ON THIS MAP
40. EXISTING TRAFFIC SIGNALS AT INTERSECTION OF OTAY MESA ROAD AND CORPORATE CENTER DRIVE TO BE MODIFIED TO SIGNALIZE THE INTERSECTION OF THE PARKS AND RECREATION DEPARTMENT
41. THIS PROJECT IS A MULTIPLE UNIT SUBDIVISION; IT IS THE INTENT THAT MULTIPLE FINAL MAPS BE FILED PURSUANT TO SECTION 54.5.1 OF THE SUBDIVISION LAW. THE FINAL MAP MAY CONSIST OF ONE OR MORE MULTIPLE LOTS AS SHOWN ON THIS TENTATIVE MAP.
42. PRIOR TO RECORDATION, EACH INDIVIDUAL RECORDED UNIT SHALL INSURE THAT ADEQUATE ACCESS AND UTILITY SERVICES ARE PROVIDED EITHER BY THE OWNERSHIP OR BY GOVERNMENT OF EASEMENT TO THE SATISFACTION OF THE CITY ENGINEER.

ENGINEER: ALISA S. VIALPANDO R.C.E. 47945 DATE

DEVELOPMENT SUMMARY

THE BDM MIXED-USE PROJECT IS PROPOSED FOR A 13.45-ACRE SITE LOCATED ON THE SOUTH SIDE OF OTAY MESA ROAD, EAST OF EMBRALD CREST COURT, WEST OF CORPORATE CENTER DRIVE, AND NORTH OF STATE ROUTE 56, WITH THE OTAY MESA COMMUNITY PLAN AREA OF THE CITY OF SAN DIEGO. THE PROJECT SITE HAS BEEN GRADED IN ACCORDANCE WITH A PREVIOUSLY APPROVED VESTING TENTATIVE MAP.
THE PROJECT PROPOSES 430 TOTAL MULTI-FAMILY RESIDENTIAL DWELLING UNITS AND APPROXIMATELY 8,000 SQUARE FEET OF COMMERCIAL USE. THE MULTI-FAMILY RESIDENTIAL USE INCLUDES 378 MARKET-RATE DWELLING UNITS, SITUATED IN THE NORTHERN PORTION OF THE SITE, AND 52 AFFORDABLE DWELLING UNITS (AFFORDABLE TO LOW-INCOME HOUSEHOLDS) SITUATED IN THE WESTERN PORTION OF THE SITE. COMMERCIAL USES WOULD BE LOCATED IN THE NORTHERN PORTION OF THE SITE. ACCESS TO THE OTAY MESA PLAN TO CHANGE THE LAND USE DESIGNATION FROM COMMUNITY COMMERCIAL TO COMMUNITY RESIDENTIAL WILL BE PROVIDED IN SURFACE PARKING AREAS LOCATED THROUGHOUT THE PROJECT. THE PROJECT REQUIRES AN AMENDMENT TO THE OTAY MESA PLAN TO CHANGE THE LAND USE DESIGNATION FROM COMMUNITY COMMERCIAL TO COMMUNITY RESIDENTIAL. COMMUNITY COMMERCIAL - RESIDENTIAL PERMITTED. COMMUNITY RESIDENTIAL - RESIDENTIAL PERMITTED. COMMUNITY RESIDENTIAL - RESIDENTIAL PERMITTED. COMMUNITY RESIDENTIAL - RESIDENTIAL PERMITTED. COMMUNITY RESIDENTIAL - RESIDENTIAL PERMITTED. COMMUNITY RESIDENTIAL - RESIDENTIAL PERMITTED.

GENERAL NOTES

- 1. SITE AREA DATA: GROSS SITE AREA: 12.74 ACRES NET SITE AREA: 13.45 ACRES (GROSS + VACATION - DEDICATION)
2. TOTAL NUMBER OF EXISTING/PROPOSED LOTS: EXISTING LOTS: 7 (LOT 1: COMMERCIAL, LOT 2: AFFORDABLE RESIDENTIAL, LOTS 3, 4 & 5: MARKET-RATE RESIDENTIAL)
3. TOTAL NUMBER OF PROPOSED LOTS: 430 (378 MARKET RATE & 52 AFFORDABLE)
4. COMMUNITY PLAN: OTAY MESA EXISTING COMMUNITY PLAN LAND USE: COMMUNITY COMMERCIAL - RESIDENTIAL (PROHIBITED (O DU)/C) PROPOSED COMMUNITY PLAN LAND USE: COMMUNITY COMMERCIAL - RESIDENTIAL PERMITTED
5. ZONING: EXISTING: CC-3-1 PROPOSED: CC-3-1
6. THE SITE IS ALSO WITHIN THE AIRPORT LANDSCAPE COMPATIBILITY OVERLAY ZONE, THE AIRPORT INFLUENCE AREAS OVERLAY ZONE, THE RESIDENTIAL TANDEN PARKING OVERLAY ZONE, THE PARKING STANDARDS TRANSIT PROMOTION AREAS, THE TRANSIT PROMOTION AREAS OVERLAY ZONE, AND THE CRYSTAL OVERLAY ZONE.
7. DENSITY: PROPOSED GROSS SITE DENSITY: 31.97/AC (430 UNITS/13.45 AC)
8. APN #: 645-410-03 THRU 09
9. AVERAGE DAILY TRIPS: 4,497
10. GED HAUSDZ: 53 & 12
11. TOTAL FLOOR AREA: 44,232 SQUARE FEET
12. FLOOR AREA RATIO: 0.75
13. NO TRANSIT STOPS ARE PROPOSED WITH THIS PROJECT
14. LAMBERT COORDINATES: 1646-1765
15. CC553 COORDINATES: 1786-6325

PROJECT TEAM

- ENGINEER: HUNSAKER & ASSOCIATES SO, INC. CONTACT: DAN RICE, PROJECT MANAGER, 9701 MARLES STREET, SAN DIEGO, CA 92121
ARCHITECT: JOSEPH WONG DESIGN ASSOC. CONTACT: SOPHIA DEL MAR, ARCHITECT, 3259 FORTINA AVE, SAN DIEGO, CA 92101
LANDSCAPE ARCHITECT: IN-SITE LANDSCAPE ARCHITECTURE, CONTACT: TIM JACKLEWICH, 2850 MIDDLE RD, SUITE 100-403, SAN DIEGO, CA 92106
ENVIRONMENTAL CONSULTANT: KIER PLANNING, CONTACT: KAREN RUGGELS, 10159 MAGALEY DR, SAN DIEGO, CA 92131
DRY UTILITIES: ENGINEERING PARTNERS INC., CONTACT: STEVE SPICER, 10159 MAGALEY DR, SAN DIEGO, CA 92131
APPLICANT: BDM MIXED USE, CONTACT: MICHAEL SHOEMAKER, 6850 2455-5252, M.H.SHOEMAKER52@GMAIL.COM

Table with columns: PREPARED BY (HUNSAKER & ASSOCIATES), # REVISIONS, DATE BY. Shows 4 revisions from 09/14/2018 to 01/17/2022.

VESTING TENTATIVE MAP & SITE DEVELOPMENT PERMIT BDM MIXED USE CITY OF SAN DIEGO, CALIFORNIA

SHEET 1 OF C8