AIR QUALITY STUDY

3450 CLAIREMONT DRIVE PROJECT

Prepared for*:*

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GLOSSARY OF TERMS AND ACRONYMS

Acronym	Description
AB 2588	Air Toxics "Hot Spots" Information and Assessment Act
APCD	Air Pollution Control District
AQIA	Air Quality Impact Analysis
ARB	California Air Resources Board
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CalEEMod	California Emissions Estimator Model
CARB	California Air Resources Board
CEQA	California Environmental Quality Act
CO	Carbon Monoxide
EPA	Environmental Protection Agency
HAP	Hazardous Air Pollutants
HRA	Health Risk Assessment
lb/day	Pounds per Day
lb/yr	Pounds per Year
NAAQS	National Ambient Air Quality Standards
NO_2	Nitrogen Dioxide
NO_x	Oxides of Nitrogen
OEHHA	Office of Environmental Health Hazard Assessment
O_3	Ozone
PM	Particulate Matter
PM_{10}	Particulate Matter less than or equivalent to 10 microns in diameter
$PM_{2.5}$	Particulate Matter less than or equivalent to 2.5 microns in diameter
ppm	Parts per million
RAQS	Regional Air Quality Strategy
REL	Reference Exposure Level
SANDAG	San Diego Association of Governments
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
TACs	Toxic Air Contaminants
TPY	Tons Per Year
US	United States
VMT	Vehicle Miles Travelled
VOC	Volatile Organic Compounds
yr	Year

1.0 AIR QUALITY STUDY

This report is an analysis of the potential air quality impacts associated with the proposed 3450 Clairemont Drive Project (Project), in the City of San Diego. This report has been prepared by BlueScape Environmental, under contract to K L R Planning, to support preparation of the environmental documentation pursuant to the California Environmental Quality Act (CEQA). This study analyzes the potential for permanent impacts associated with operation of the proposed project and temporary impacts associated with construction activity within proximity to the construction area.

1.1 Project Description

The Clairemont Drive project encompasses approximately 3.28 acres and is located at 3450 Clairemont Drive in the Clairemont community of the City of San Diego. The project site is currently developed with the Holy Cross Lutheran Church and Banyan Tree Educational Services. The site consists of two buildings, small paved parking areas, and other associated improvements such as a playground, basketball court, and landscaping. The site is bounded on the east by Clairemont Drive, on the north by an existing church facility, on the south by an asphalt paved parking area and open canyon space, and on the west by open canyon space. Surrounding land uses include St. Mark's United Methodist Church to the north, single-family residences to the west and south past the canyon space, and Whittier Special Education Center to the east across Clairemont Drive.

The project site is in the Clairemont Mesa Community Plan Area, which designates the site as Low-Medium Residential. The City of San Diego General Plan designates the project site as Residential. The site is zoned RM-1-1 (Residential—Multiple Unit). The RM-1-1 zone allows residential development at a density of one dwelling unit per 3,000 square feet of site area. Under the RM-1-1 zone, a total of 47 dwelling units is permitted on the project site.

The Clairemont Drive project proposes redevelopment of the existing site as a townhome project. The project involves the demolition of 15,172 square feet of buildings, surface parking, and related facilities, and would redevelop the project site with 40 multi-family residential units across eight buildings. Buildings would be three stories with a maximum height of 30 feet, per the Clairemont Mesa height limit overlay. Parking would be provided as tuck-under garages with surface guest parking. Landscaped areas include the perimeter of the project site as well as walkways in order to provide sitewide coverage, parkway shade, and to accentuate the entry into the site. In addition, the project would also add street trees to the parkway along Clairemont Drive.

Access to the townhome development would be via one driveway off Clairemont Drive. The project would require the following discretionary actions: Tentative Map and Site Development Permit.

2.0 REGULATORY SETTING

Air pollutants are regulated at the national, state, and air basin level; each agency has a different degree of control. The United States Environmental Protection Agency (USEPA) regulates at the national level; the California Air Resources Control Board (CARB) regulates at the state level; and the San Diego Air Pollution Control District (SDAPCD) regulates air quality in San Diego County.

The federal and state governments have been empowered by the federal and state Clean Air Acts to regulate the emission of airborne pollutants and have established ambient air quality standards for the protection of public health. The USEPA is the federal agency designated to administer national air quality regulations, while CARB is the state equivalent in the California Environmental Protection Agency (CalEPA). Local control over air quality management is provided by CARB through multi-county and county-level Air Pollution Control Districts (APCDs) (also referred to as Air Quality Management Districts). CARB establishes statewide air quality standards and is responsible for the control of mobile emission sources, while the local APCDs are responsible for enforcing standards and regulating stationary sources. CARB has established 15 air basins statewide. The City of San Diego is located in the San Diego Air Basin (SDAB), which is under the jurisdiction of the SDAPCD.

2.1 California Air Resources Board

CARB, which became part of the CalEPA in 1991, is responsible for ensuring implementation of the California Clean Air Act (CCAA), meeting state requirements of the federal Clean Air Act and establishing the California Ambient Air Quality Standards (CAAQS). It is also responsible for setting emission standards for vehicles sold in California and for other emission sources such as consumer products and certain off-road equipment. CARB also established passenger vehicle fuel specifications and oversees the functions of local air pollution control districts and air quality management districts, which in turn administer air quality activities at the regional and county level. The CCAA is administered by CARB at the state level and by the Air Quality Management Districts at the regional level. Both state and federal standards are summarized in Table 1. The federal "primary" standards have been established to protect the public health. The federal "secondary" standards are intended to protect the nation's welfare and account for air pollutant effects on soil, water, visibility, materials, vegetation, and other aspects of the general welfare.

2.2 San Diego Air Pollution Control District

The SDAPCD was created to protect the public from the harmful effects of air pollution, achieve and maintain air quality standards, foster community involvement and develop and implement cost-effective programs that meet state and federal mandates while considering environmental and economic impacts.

Specifically, the SDAPCD is responsible for monitoring air quality and planning, implementing, and enforcing programs designed to attain and maintain state and federal ambient air quality standards in the district. Programs developed include air

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 (PM10)[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 (PM2.5)[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	15 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 Flouresscence; 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 $\mu g/m^3$ 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 $\mu g/m^3$ to 12.0 $\mu g/m^3$. The existing national 24-hour PM2.5 standards (primary and secondary) were retained at 35 $\mu g/m^3$, as was the annual secondary standard of 15 $\mu g/m^3$. The existing 24-hour PM10 standards (primary and secondary) of 150 $\mu g/m^3$ 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 $\mu g/m^3$ 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.

quality rules and regulations that regulate stationary source emissions, including area sources, point sources, and certain mobile source emissions. The SDAPCD is also responsible for establishing permitting requirements for stationary sources and ensuring that new, modified or relocated stationary sources do not create net emissions increases; and thus, are consistent with the region's air quality goals. The SDAPCD provides significance thresholds in Regulation II, Rule 20.2, Table 20-2-1. "AQIA Trigger Levels." These trigger levels were established for stationary sources of air pollution and are commonly used for environmental evaluations. The SDAPCD enforces air quality rules and regulations through a variety of means, including inspections, educational or training programs, or fines, when necessary.

2.3 State Implementation Plan / Regional Air Quality Strategy

The federal Clean Air Act Amendments (CAAA) mandate that states submit and implement a State Implementation Plan (SIP) for areas not meeting air quality standards. SIPs are comprehensive plans that describe how an area will attain national and state ambient air quality standards. SIPs are a compilation of new and previously submitted plans, programs (i.e., monitoring, modeling and permitting programs), district rules, state regulations and federal controls and include pollution control measures that demonstrate how the standards will be met through those measures.

State law makes CARB the lead agency for all purposes related to the SIP. Local air districts and other agencies prepare SIP elements and submit them to CARB for review and approval. CARB forwards SIP revisions to the USEPA for approval and publication in the Federal Register.

Thus, the Regional Air Quality Strategy (RAQS) and Air Quality Management Plan (AQMP) prepared by SDAPCD and referenced herein become part of the SIP as the material relates to efforts ongoing in San Diego to achieve the national and state ambient air quality standards. The most recent SIP element for San Diego County was submitted in November 2020 (SDAPCD, 2020). The document defines the plan for attaining the NAAQS for ozone in San Diego County.

The San Diego RAQS was developed pursuant to California Clean Air Act (CCAA) requirements. The RAQS was initially adopted in 1991 and was updated in 1995, 1998, 2001, 2004, 2009 and 2016. The RAQS can be found at the following: www.sdapcd.org/content/dam/sdc/apcd/PDF/Air%20Quality%20Planning/2016%20RAQS.pdf

The RAQS identifies feasible emission control measures to provide progress in San Diego County toward attaining the state ozone standard. The pollutants addressed in the RAQS are volatile organic compounds (VOC) and oxides of nitrogen (NO_x), precursors to the photochemical formation of ozone (the primary component of smog). The RAQS was initially adopted by the San Diego County Air Pollution Control Board on June 30, 1992, and amended on March 2, 1993, in response to ARB comments. At present, no attainment plan for particulate matter less than 10 microns in diameter (PM_{10}) or particulate matter less than 2.5 microns in diameter ($PM_{2.5}$) is

required by the state regulations; however, SDAPCD has adopted measures to reduce particulate matter in San Diego County. These measures range from regulation against open burning to incentive programs that introduce cleaner technology. These measures can be found in a report titled "*Measures to Reduce Particulate Matter in San Diego County"* December 2005 and can be found at: www.sdapcd.org/content/dam/sdc/apcd/PDF/Air%20Quality%20Planning/PM-Measures.pdf.

The RAQS relies on information from CARB and San Diego Association of Governments (SANDAG), including mobile and area source emissions, as well as information regarding projected growth in the county, to estimate future emissions and then determine strategies necessary for the reduction of emissions through regulatory controls. CARB mobile source emission projections and SANDAG growth projections are based on population and vehicle trends as well as land use plans developed by the cities and the county as part of the development of the individual General Plans. As such, projects that propose development consistent with the growth anticipated by the general plans would be consistent with the RAQS. If a project proposes development which is less dense than anticipated within the General Plan, the project would likewise be consistent with the RAQS. If a project proposes development that is greater than that anticipated in the General Plan and SANDAG's growth projections, the project might conflict with the RAQS and SIP; and thus, have a potentially significant impact on air quality.

Under state law, the SDAPCD is required to prepare an Air Quality Management Plan (AQMP) for pollutants for which the SDAB is designated non-attainment. Each iteration of the SDAPCD's AQMP is an update of the previous plan and has a 20-year horizon. Currently the SDAPCD has implemented a 2012 8-hour National Ozone Implementation/Maintenance Plan, a 2007 8-hour Ozone Plan, and a 2004 Carbon Monoxide Plan. The SDAPCD adopted the 2008 8-hour Ozone Attainment Plan for San Diego County on December 16, 2016. CARB adopted the ozone plan as a revision to the California SIP on March 23, 2017. The ozone plan was submitted to the USEPA for review on April 12, 2017. Comments from the USEPA are pending. These plans are available for download on the ARB website located at the following URL: www.arb.ca.gov/planning/sip/planarea/sansip.htm.

2.3.1 Air Pollutants of Concern

2.3.1.1 Criteria Air Pollutants

The seven criteria air pollutants regulated under the National Ambient Air Quality Standards (NAAQS) are as follows: ozone (O_3), carbon monoxide (CO), nitrogen dioxide (NO_2), respirable particulate matter (or particulate matter with an aerodynamic diameter of 10 microns or less, PM_{10}), fine particulate matter (or particulate matter with an aerodynamic diameter of 2.5 microns or less, $PM_{2.5}$), sulfur dioxide (SO_2), and lead (Pb). Primary standards are designed to protect human health with an adequate margin of safety. Secondary standards are designed to protect property and the public welfare from air pollutants in the atmosphere. Areas that do

not meet the NAAQS for a particular pollutant are considered to be "non-attainment areas" for that pollutant.

The California Air Resources Board (CARB) is the state regulatory agency with authority to enforce regulations to both achieve and maintain air quality in the state. CARB is responsible for the development, adoption, and enforcement of the state's motor vehicle emissions program, as well as the adoption of the California Ambient Air Quality Standards (CAAQS). CARB also reviews operations and programs of the local air districts, and requires each air district with jurisdiction over a non-attainment area to develop its own strategy for achieving the NAAQS and CAAQS. The California Clean Air Act of 1988 (CAA) provides the state with the ability to adopt ambient air quality standards and other regulations provided they are at least as stringent as federal standards, or more stringent.

Through the CAA, CARB has established the CAAQS for six criteria air pollutants also regulated by the NAAQS, and also has established CAAQS for additional pollutants, including sulfates, hydrogen sulfide, vinyl chloride and visibility-reducing particles. The San Diego Air Basin (SDAB) is currently classified as a non-attainment area under the CAAQS for O_3, PM_{10}, and $PM_{2.5}$. It should be noted that CARB does not differentiate between attainment of the 1-hour and 8-hour CAAQS for O_3; therefore, if an air basin records an exceedance of either standard, the area is considered non-attainment for the CAAQS for O_3. The SDAB has recorded exceedances of both the 1-hour and 8-hour CAAQS for O_3.

The SDAPCD is required to monitor air pollutant levels to ensure that air quality standards are met and, if they are not met, to develop strategies to meet the standards. Depending on whether the standards are met or exceeded, the local air basin is classified as being in "attainment" or "non-attainment." San Diego County is listed as a federal non-attainment area for ozone (8-hour) and a state non-attainment area for ozone (1-hour and 8-hour standards), PM_{10} and $PM_{2.5}$. As shown in Table 2, the SDAB is in attainment for the state and federal standards for nitrogen dioxide, carbon monoxide, sulfur dioxide and lead. Characteristics of ozone, carbon monoxide, nitrogen dioxide, and suspended particulates are described below.

Table 2 presents the current attainment status for the SDAB.

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 nonattainment, the area is designated as unclassifiable.

2.3.1.2 Toxic Air Contaminants

Toxic air contaminants (TACs) are controlled under a different regulatory process than criteria pollutants. Because no safe level of emissions can be established for TACs region-wide, the regulation of TACs is based on the levels of cancer risk and other health risks posed to persons who may be exposed. Joint federal, state and local regulations aimed at lessening public exposure to TACs are constantly revisited and updated.

Under federal law, 188 substances are listed as Hazardous Air Pollutants (HAPs) that are TACs. Major sources of specific HAPs are subject to the requirements of the National Emissions Standards for Hazardous Air Pollutants (NESHAP) program. The USEPA establishes regulatory schemes for specific source categories and requires implementation of Maximum Achievable Control Technologies (MACTs) for major sources of HAPs in each source category.

State law has established the framework for California's TAC identification and control program, which is generally more stringent than the federal program, and is aimed at HAPs that are a concern in California. The state has formally identified more than 200 substances as TACs, and has adopted appropriate control measures for each. Once adopted at the state level, each air district is required to adopt a measure that is equally or more stringent. In addition, the California Air Toxics "Hot Spots" Information and Assessment Act (AB 2588) enacted in 1987 requires certain applicable facilities in San Diego County to quantify the emissions of TACs, and in some cases, conduct a health risk assessment (HRA), and to notify the public, while developing risk reduction strategies. In San Diego County, SDAPCD Rule 1210 implements the public notification and risk reduction requirements of AB 2588, and requires facilities to reduce risks to acceptable levels within 5 years. In addition, SDAPCD Rule 1200 establishes acceptable risk levels, and emission control requirements for new and modified facilities that may emit TACs.

As an example of TAC emissions from the proposed Project, development projects generate diesel emissions from construction vehicles during the construction and operational phases. Diesel exhaust is mainly composed of particulate matter and gases, which contain potential cancer-causing substances in addition to some noncancer hazards. Emissions from diesel engines currently include over 40 substances that are listed by EPA as HAPs and by CARB as TACs. On August 27, 1998, CARB and the Office of Environmental Health Hazard Assessment (OEHHA) identified particulate matter in diesel exhaust as a TAC, based on data linking diesel particulate emissions to increased risks of lung cancer and respiratory disease.

2.3.2 Background 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. For this analysis, data from the San Diego Kearney Villa Road monitoring station north of the site were used to characterize existing ozone, PM_{10} and $PM_{2.5}$ conditions in the vicinity of the project site. This is the closest monitoring location generally northeast of the site with a current and comprehensive data set. A summary of the data recorded at the Kearney Villa Road monitoring station from 2017 through 2019 is presented in Table 3.

TABLE 3
AMBIENT AIR BACKGROUND POLLUTANT
CONCENTRATIONS/EXCEEDANCES/STANDARDS

Pollutant	2017	2018	2019
Ozone (O_3)			
State maximum 1-hour concentration (ppm)	**0.097**	**0.102**	0.083
National maximum 8-hour concentration (ppm)	**0.083**	**0.077**	**0.075**
State maximum 8-hour concentration (ppm)	**0.084**	**0.077**	**0.076**
Number of Days Standard Exceeded			
CAAQS 1-hour (>0.09 ppm)	2	1	0
CAAQS 8- hour (>0.070 ppm)/NAAQS 8-hour (>0.070 ppm)	6 / 6	5 / 5	1 / 1
Respirable Particulate Matter (PM_{10})			
National maximum 24-hour concentration (µg/m^3)	46.0	38.0	38.7
State maximum 24-hour concentration (µg/m^3)	47.0	38.0	37.4
State annual average concentration (µg/m^3)	17.6	18.4	23.0
Annual or Days Standard Exceeded *			
NAAQS 24-hour (>150 µg/m^3)	0	0	0
CAAQS 24-hour (>50 µg/m^3)/Annual (>20 µg/m^3)	0 / 0	0 / 0	0 / 0
Fine Particulate Matter ($PM_{2.5}$)			
National Maximum 24-hour concentration (µg/m^3)	27.5	32.2	16.2
State maximum 24-hour concentration (µg/m^3)	27.5	32.2	15.0
Annual average concentration (µg/m^3)	7.9	8.3	7.0
Annual or Days Standard Exceeded *			
NAAQS 24-hour (>35 µg/m^3)/Annual (>12.0 µg/m^3)	0 / No	0 / No	0 / No
CAAQS Annual (>12 µg/m^3)	No	No	No

Notes:
µg/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.
PM_{10}, O_3, and $PM_{2.5}$ measured at the Kearny Villa Road monitoring station (6125A Kearny Villa Road, approximately 5 miles northeast of the project site)
Since 2019 values were not available for PM_{10}, data from the El Cajon monitoring station, approximately 15 miles to the east of the project site was substituted.
* In the case of an Annual standard a No or Yes response is provided.
Sources: CARB 2020; https://www.arb.ca.gov/adam/topfour/topfourdisplay.php

3.0 SIGNIFICANCE CRITERIA AND ANALYSIS METHODOLOGY

3.1 Significance Criteria Methodology

Air quality modeling was performed in general accordance with the methodologies outlined in the SDAPCD 2009 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 2016.3.2 which incorporates current air emission data, planning methods and protocol approved by CARB.

As referenced, construction activities would include demolition of existing buildings, 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 used would be diesel-powered. Construction emissions associated with development of the proposed project were quantified by estimating the types of equipment, including the number of individual pieces of equipment, that would be used on-site during each of the construction phases as well as off-site haul trips to remove demolition debris. Construction emissions are analyzed using the regional thresholds established by the SDAPCD and published within the City of San Diego Significance Determination Thresholds Guidelines (City of San Diego, 2016).

Operational emissions include mobile source emissions, energy emissions and area source emissions. Mobile source emissions are generated by motor vehicle trips associated with operation of the project. Emissions attributable to energy use include electricity and natural gas consumption for space and water heating. Area source emissions are generated by landscape maintenance equipment, use of consumer products and painting. To determine whether a regional air quality impact would occur, the increase in emissions would be compared with the SDAPCD-recommended regional thresholds for operational emissions.

3.1.1 Thresholds of Significance

Based on City of San Diego Significance Determination Thresholds Guidelines, a project would have a significant air quality impact if it would:

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

b) 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 is in non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors);

d) Expose sensitive receptors to substantial pollutant concentrations;

e) Create objectionable odors affecting a substantial number of people. or

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.

3.1.2 Air Quality Impact Analysis

As referenced, the SDAPCD has established thresholds in Rule 20.2 for new or modified stationary sources (SDAPCD, 2015). With the exception of Volatile Organic Compounds (VOCs) and $PM_{2.5}$ thresholds, the City of San Diego screening quantities shown in the California Environmental Quality Act Significance Determination Thresholds, Table A-2, incorporate screening level thresholds from Rule 20.2 for use in air quality reports and for determining CEQA air quality impacts. The City does not show a standard for $PM_{2.5}$ but does include a threshold for Reactive Organic Gas/Volatile Organic Compounds (ROG/VOC) emissions. Collectively, the standards shown in Table A-2 of the City's 2016 CEQA Determination Thresholds and the $PM_{2.5}$ threshold shown in Table 20.2-1 of SDAPCD Rule 20.2, are used herein to determine whether project emissions would cause a significant air quality impact. The daily construction and operational emission thresholds for pollutants evaluated are as follows:

- Carbon Monoxide (CO) - 550 pounds/day;
- Nitrogen Oxides (NOx) - 250 pounds/day;
- Particulate Matter (PM_{10}) - 100 pounds/day;
- Particulate Matter ($PM_{2.5}$) - 67 pounds/day;
- Sulfur Oxides (SOx) - 250 pounds/day; and
- Volatile Organic Compounds (VOCs) - 137 pounds/day.

3.2 Construction Emissions

Project construction would generate temporary air pollutant emissions. These impacts are associated with fugitive dust (PM_{10} 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 3.28-acre site would be disturbed and developed for overall construction. The number of haul trips to remove demolition debris were estimated based on cubic yards. As noted, construction would generally consist of asphalt and building material removal, site preparation, construction of the buildings and related improvements and the application of architectural coating (painting).

Demolition, site preparation and grading would involve the greatest concentration of heavy equipment use and the highest potential for fugitive dust emissions. The project would be required to comply with SDAPCD Rule 55, which identify fugitive dust standards and is required to be implemented at all construction sites located within the SDAB. Therefore, the following conditions, which generally reduce fugitive dust emissions, were included in CalEEMod for site preparation and grading phases 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 twice daily, preferably in the late morning and after work is done for the day. For modeling purposes, it was assumed that watering would occur twice 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.

Construction is assumed to begin in late 2021, with completion in mid-2023. In addition to SDAPCD Rule 55 requirements, emissions modeling also accounts for the use of low-VOC paint (50 g/L for interior coatings and 100 g/L for exterior coatings) as required by SDAPCD Rule 67. Table 4 summarizes the estimated maximum daily emissions of pollutants occurring during the construction period.

As shown in Table 4, construction of the proposed project would not exceed the SDAPCD regional construction emission thresholds for daily emissions. Thus, the project construction would not conflict with the SIP, RAQS or AQMP, violate an air quality standard or contribute to an existing or projected violation, result in a cumulatively considerable increase in ozone or particulate matter emissions or expose receptors to substantial pollutant concentrations (thresholds a-f).

TABLE 4
ESTIMATED MAXIMUM DAILY CONSTRUCTION EMISSIONS

Construction Phase		Maximum Emissions (lbs/day)				
	ROG	**NO_x**	**CO**	**SO_x**	**PM_{10}**	**$PM_{2.5}$**
2021 Maximum lbs/day	7.18	72.6	43.7	0.081	18.9	11.5
2022 Maximum lbs/day	1.81	16.1	17.2	0.030	1.08	0.834
2023 Maximum lbs/day	13.5	23.6	29.6	0.051	1.57	1.18
City of San Diego Screening Thresholds	*137*	*250*	*550*	*250*	*100*	67
Threshold Exceeded?	**No**	**No**	**No**	**No**	**No**	**No**

See *Appendix for CalEEMod ver. 2016.3.2 computer model output for the demolition of existing development, daily emissions shown.*

3.3 Operational (Regional) Emissions

Operational emissions 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 project. The majority of operational emissions are associated with vehicle trips to and from the project site. As shown in Table 5, the net change in emissions would not exceed the SDAPCD thresholds for ROG, NO_x, CO, SO_x, PM_{10} or $PM_{2.5}$. Therefore, the project's regional air quality impacts (including impacts related to criteria pollutants, sensitive receptors and violations of air quality standards, and defined by thresholds c-f) would be less than significant. Table 5 summarizes emissions associated with operation of the proposed project.

TABLE 5
ESTIMATED OPERATIONAL EMISSIONS

	Estimated Emissions (lbs/day)					
	ROG	**NOx**	**CO**	**SOx**	**PM_{10}**	**$PM_{2.5}$**
Proposed Project						
Area	1.72	0.038	3.30	<0.001	0.018	0.018
Energy	0.017	0.145	0.062	<0.001	0.012	0.012
Mobile	0.464	1.733	5.514	0.021	1.95	0.532
Maximum lbs/day	**2.20**	**1.92**	**8.87**	**0.022**	**1.98**	**0.562**
SDAPCD Thresholds	*137*	*250*	*550*	*250*	*100*	67
Exceeds Threshold?	**No**	**No**	**No**	**No**	**No**	**No**

See Appendix for CalEEMod ver. 2016.3.2 computer model output. Summer emissions shown.

3.4 Objectionable Odors

The proposed project would involve the use of diesel-powered construction equipment. Diesel exhaust may be noticeable temporarily at adjacent properties; however, construction activities would be temporary. The project does not include industrial or agricultural uses that are typically associated with objectionable odors. Therefore, impacts associated with objectionable odors (significance threshold e) would be less than significant.

3.5 Local Carbon Monoxide Emissions and CO Hotspots

Carbon monoxide is a colorless, odorless, poisonous gas that may be found in high concentrations near areas of high traffic volumes. CO emissions are a function of vehicle idling time, meteorological conditions, and traffic flow. The SDAB is in attainment of state and federal CO standards. The El Cajon monitoring site is the closest station to the project site that provides CO data. The maximum 8-hour CO level recorded in 2019 was 1.0 part per million (ppm). Concentrations are below 9 ppm, the state and federal 8-hour standard. The maximum 1-hour CO level recorded in 2019 was 1.3 ppm. Concentrations are below 20 ppm and 35 ppm, the state and federal 1-hour standards, respectively.

Although CO is not a regional air quality concern in SDAB, elevated CO levels can occur at or near intersections that experience severe traffic congestion. A localized air quality impact is considered significant if the additional CO emissions resulting from the project create a "hotspot" where the California 1-hour standard of 20.0 ppm or the 8-hour standard of 9 ppm is exceeded. This can occur at severely congested intersections during cold winter temperatures. Screening for elevated CO levels is recommended for severely congested intersections experiencing levels of service E or F with project traffic where a significant project traffic impact may occur. The

potential for CO hotspots is based on the University of California Davis CO Protocol defined in the Transportation Project-Level Carbon Monoxide Protocol Revised December 1997 UCD-ITS-RR-97. Section 4.7 of the protocol provides specific criteria for performing a screening level CO review for projects within a CO attainment area. Specifically, project-related traffic that would worsen the LOS at intersections operating at LOS E or F, would be subject to a detailed evaluation. If not, no further review is necessary.

The Traffic Impact Analysis prepared for the project (LLG Ref. 3-20-3292) indicated that the project VMT per resident is less than 85% of the regional average, so the project is calculated to result in less-than-significant transportation impact. Receptors would not be exposed to substantial pollutant concentrations (threshold d and f) related to CO hotspots. No further evaluation with respect to CO hotspots is required.

4.0 SIP/AQMP/RAQS CONSISTENCY

As noted, the RAQS relies on information from CARB and SANDAG, including projected growth in the county, mobile, area and all other source emissions to project future emissions and determine from that the strategies necessary for the reduction of stationary source emissions through regulatory controls. Projects that propose development that is consistent with the growth anticipated by the general plan is consistent with the SIP, AQMP and RAQS.

The proposed project site is located in the planning area of Clairemont Mesa Community Plan (City of San Diego, 2020). The proposed project includes the construction of one and two story 40-unit residential townhome buildings. The project also proposes a density of approximately 20.51 dwelling units per net acre (du/ac) and will include a 2-story residential building with four (4) Americans with Disabilities ACT (ADA) accessible units.

The site is zoned RM-1-1. This designation is intended to accommodate multiple dwelling unit development at varying densities. The RM-1-1 Zone permits a maximum density of one dwelling unit for each 3,000 square feet of lot area. The proposed residential density will be 0.84 dwelling units per 3,000 square feet of lot area. With 40 dwelling units over 3.28 acres, the density range will fall within the low-medium residential density designation, consistent with Table 4 of the Clairemont Mesa Community Plan.

The project would not induce growth or otherwise add more units than allowed under current zoning. Operation of the proposed project would provide housing for existing residents and is not expected to increase the local population. The project would be consistent with the SIP, AQMP and RAQS and significance threshold (a - air quality plans) referenced above. Impacts related to this threshold would be less than significant.

5.0 FINDINGS AND CONCLUSIONS

The project-specific evaluation presented in the preceding analysis demonstrates that project short-term emissions from construction of the project are below all applicable City of San Diego daily thresholds of significance. Therefore, emissions from project construction are considered less than significant.

Emissions of all criteria pollutants from project operation are below all applicable daily thresholds of significance. Since the main source of project emissions are from project-generated traffic (mobile sources), no localized threshold analysis is needed. Additionally, no CO hot spots will be created as a result of project operation. Therefore, emissions from project operation are considered less than significant.

6.0 REFERENCES

California Air Resources Board. Ambient Air Quality Standards. Updated May 2016. www.arb.ca.gov/research/aaqs/aaqs2.pdf

California Air Resources Board, San Diego Air Quality Management Plans, December 2016. www.arb.ca.gov/planning/sip/planarea/sansip.htm

California Air Resources Board. 2017, 2018, & 2019 Annual Air Quality Data Summaries. www.arb.ca.gov/adam/topfour/topfour1.php Accessed November 23, 2020.

California Emission Estimator Model (CalEEMod) Users Guide. September 2016.

City of San Diego, California Environmental Quality Act Significance Determination Thresholds, Planning Department, July 2016.
www.sandiego.gov/sites/default/files/july_2016_ceqa_thresholds_final_0.pdf

City of San Diego Planning Department, *Clairemont Mesa Community Plan*, February 2020. www.sandiego.gov/sites/default/files/clairemont_mesa_cp_2-14-201.pdf

LLG Engineers, Transportation Impact Analysis and Trip Rate Summary Table, October 12, 2020.

San Diego Air Pollution Control District. Regional Air Quality Strategy, December 2016.
www.sdapcd.org/content/dam/sdc/apcd/PDF/Air%20Quality%20Planning/2016%20RAQS.pdf

San Diego Air Pollution Control District. 2020 Plan for Attaining the National Ambient Air Quality Standards for Ozone in San Diego County, October 2020. www.sdapcd.org/content/sdc/apcd/en/air-quality-planning.html

University of California Davis, Transportation Project-Level Carbon Monoxide Protocol Revised, December 1997.

APPENDIX A

CALEEMOD AIR EMISSION MODEL RESULTS
DAILY SUMMER EMISSIONS FOR CONSTRUCTION AND OPERATION

3450 Clairemont Drive

San Diego Air Basin, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Condo/Townhouse	40.00	Dwelling Unit	3.28	71,291.00	114

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2024
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Lot Acreage and Building Area defined in the Civil Architectural Design Plans

Construction Phase - Default construction phase days were ratio'd to extend the phase from late 2021, for up to 22-month duration.

Demolition -

Grading - Acres graded equivalent to total site acreage.

Architectural Coating - The building exterior is composed of stucco and fiber cement siding. Therefore, approximately 10% of the building exterior requires exterior coating. Rule 52/54 50 g/L interior and 100 g/L exterior VOC.

Vehicle Trips - Weekday trip rate changed to 8/DU, as defined in the LLG Trip generation rate table.

Woodstoves - No fireplace or woodstove associated with this residential project.

Area Coating - Approx. 10% of building exterior trim area requires paint reapplication. Paint EF is 50 g/L VOC interior and 100 g/L VOC exterior.

Construction Off-road Equipment Mitigation -

Area Mitigation - Arch coatings: 50 g/L VOC interior and 100 g/L VOC exterior

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Residential_Exterior	48,121.00	4,812.00
tblArchitecturalCoating	EF_Residential_Exterior	250.00	100.00
tblArchitecturalCoating	EF_Residential_Interior	250.00	50.00
tblAreaCoating	Area_EF_Parking	250	100
tblAreaCoating	Area_EF_Residential_Exterior	250	100
tblAreaCoating	Area_EF_Residential_Interior	250	50
tblAreaCoating	Area_Residential_Exterior	48121	4812
tblAreaMitigation	UseLowVOCPaintParkingCheck	False	True
tblAreaMitigation	UseLowVOCPaintParkingValue	250	100
tblAreaMitigation	UseLowVOCPaintResidentialExteriorValue	250	100
tblAreaMitigation	UseLowVOCPaintResidentialInteriorValue	250	50
tblConstructionPhase	NumDays	20.00	32.00
tblConstructionPhase	NumDays	5.00	8.00
tblConstructionPhase	NumDays	8.00	13.00

tblConstructionPhase	NumDays	230.00	368.00
tblConstructionPhase	NumDays	18.00	29.00
tblConstructionPhase	NumDays	18.00	29.00
tblConstructionPhase	PhaseEndDate	10/29/2021	11/16/2021
tblConstructionPhase	PhaseEndDate	11/5/2021	11/25/2021
tblConstructionPhase	PhaseEndDate	11/17/2021	12/13/2021
tblConstructionPhase	PhaseEndDate	10/5/2022	5/10/2023
tblConstructionPhase	PhaseEndDate	10/31/2022	6/19/2023
tblConstructionPhase	PhaseEndDate	11/24/2022	7/27/2023
tblConstructionPhase	PhaseStartDate	10/30/2021	11/16/2021
tblConstructionPhase	PhaseStartDate	11/6/2021	11/25/2021
tblConstructionPhase	PhaseStartDate	11/18/2021	12/13/2021
tblConstructionPhase	PhaseStartDate	10/6/2022	5/10/2023
tblConstructionPhase	PhaseStartDate	11/1/2022	6/19/2023
tblFireplaces	FireplaceDayYear	82.00	0.00
tblFireplaces	FireplaceHourDay	3.00	0.00
tblFireplaces	NumberGas	22.00	0.00
tblFireplaces	NumberNoFireplace	4.00	0.00
tblFireplaces	NumberWood	14.00	0.00
tblGrading	AcresOfGrading	10.00	3.28
tblLandUse	LandUseSquareFeet	40,000.00	71,291.00
tblLandUse	LotAcreage	2.50	3.28
tblVehicleTrips	WD_TR	5.81	8.00
tblWoodstoves	NumberCatalytic	2.00	0.00
tblWoodstoves	NumberNoncatalytic	2.00	0.00
tblWoodstoves	WoodstoveDayYear	82.00	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	7.1834	72.5647	43.7298	0.0812	34.6445	3.5994	37.8508	18.8481	3.3253	21.7979	0.0000	7,884.7171	7,884.7171	2.2707	0.0000	7,941.4844
2022	1.8123	16.0600	17.1770	0.0303	0.2653	0.8114	1.0767	0.0710	0.7633	0.8343	0.0000	2,897.3014	2,897.3014	0.6262	0.0000	2,912.9563
2023	13.4960	23.5699	29.6471	0.0506	0.4296	1.1384	1.5680	0.1146	1.0637	1.1783	0.0000	4,842.9050	4,842.9050	1.1921	0.0000	4,872.7067
Maximum	**13.4960**	**72.5647**	**43.7298**	**0.0812**	**34.6445**	**3.5994**	**37.8508**	**18.8481**	**3.3253**	**21.7979**	**0.0000**	**7,884.7171**	**7,884.7171**	**2.2707**	**0.0000**	**7,941.4844**

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					
2021	7.1834	72.5646	43.7298	0.0812	15.7391	3.5994	18.9454	8.5212	3.3253	11.4710	0.0000	7,884.7171	7,884.7171	2.2707	0.0000	7,941.4844
2022	1.8123	16.0600	17.1770	0.0303	0.2653	0.8114	1.0767	0.0710	0.7633	0.8343	0.0000	2,897.3014	2,897.3014	0.6262	0.0000	2,912.9563
2023	13.4960	23.5699	29.6471	0.0506	0.4296	1.1384	1.5680	0.1146	1.0637	1.1783	0.0000	4,842.9050	4,842.9050	1.1921	0.0000	4,872.7067
Maximum	**13.4960**	**72.5646**	**43.7298**	**0.0812**	**15.7391**	**3.5994**	**18.9454**	**8.5212**	**3.3253**	**11.4710**	**0.0000**	**7,884.7171**	**7,884.7171**	**2.2707**	**0.0000**	**7,941.4844**

3450 Clairemont Drive - San Diego Air Basin, Summer

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	53.50	0.00	46.69	54.26	0.00	43.37	0.00	0.00	0.00	0.00	0.00	0.00

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.7226	0.0380	3.2987	1.7000e-004		0.0183	0.0183		0.0183	0.0183	0.0000	5.9421	5.9421	5.7000e-003	0.0000	6.0846
Energy	0.0170	0.1453	0.0618	9.3000e-004		0.0117	0.0117		0.0117	0.0117		185.4356	185.4356	3.5500e-003	3.4000e-003	186.5376
Mobile	0.4636	1.7328	5.5138	0.0208	1.9371	0.0155	1.9525	0.5176	0.0144	0.5320		2,114.7457	2,114.7457	0.1009		2,117.2693
Total	**2.2032**	**1.9161**	**8.8743**	**0.0219**	**1.9371**	**0.0455**	**1.9825**	**0.5176**	**0.0444**	**0.5620**	**0.0000**	**2,306.1234**	**2,306.1234**	**0.1102**	**3.4000e-003**	**2,309.8915**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.7226	0.0380	3.2987	1.7000e-004		0.0183	0.0183		0.0183	0.0183	0.0000	5.9421	5.9421	5.7000e-003	0.0000	6.0846
Energy	0.0170	0.1453	0.0618	9.3000e-004		0.0117	0.0117		0.0117	0.0117		185.4356	185.4356	3.5500e-003	3.4000e-003	186.5376
Mobile	0.4636	1.7328	5.5138	0.0208	1.9371	0.0155	1.9525	0.5176	0.0144	0.5320		2,114.7457	2,114.7457	0.1009		2,117.2693
Total	**2.2032**	**1.9161**	**8.8743**	**0.0219**	**1.9371**	**0.0455**	**1.9825**	**0.5176**	**0.0444**	**0.5620**	**0.0000**	**2,306.1234**	**2,306.1234**	**0.1102**	**3.4000e-003**	**2,309.8915**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	10/4/2021	11/16/2021	5	32	
2	Site Preparation	Site Preparation	11/16/2021	11/25/2021	5	8	
3	Grading	Grading	11/25/2021	12/13/2021	5	13	
4	Building Construction	Building Construction	12/13/2021	5/10/2023	5	368	
5	Paving	Paving	5/10/2023	6/19/2023	5	29	
6	Architectural Coating	Architectural Coating	6/19/2023	7/27/2023	5	29	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 3.28

Acres of Paving: 0

Residential Indoor: 144,364; Residential Outdoor: 4,812; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Tractors/Loaders/Backhoes	3	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	Cement and Mortar Mixers	2	6.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	2	6.00	132	0.36
Paving	Rollers	2	6.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	69.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	29.00	4.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	20.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	6.00	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 Demolition - 2021

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					0.4725	0.0000	0.4725	0.0716	0.0000	0.0716			0.0000			0.0000
Off-Road	3.1651	31.4407	21.5650	0.0388		1.5513	1.5513		1.4411	1.4411		3,747.9449	3,747.9449	1.0549		3,774.3174
Total	**3.1651**	**31.4407**	**21.5650**	**0.0388**	**0.4725**	**1.5513**	**2.0239**	**0.0716**	**1.4411**	**1.5127**		**3,747.9449**	**3,747.9449**	**1.0549**		**3,774.3174**

3.2 Demolition - 2021

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	0.0160	0.5527	0.1352	1.6600e-003	0.0377	1.6900e-003	0.0394	0.0103	1.6100e-003	0.0119		182.3498	182.3498	0.0161		182.7525
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0519	0.0337	0.3979	1.2300e-003	0.1232	8.5000e-004	0.1241	0.0327	7.8000e-004	0.0335		122.1661	122.1661	3.4900e-003		122.2533
Total	**0.0679**	**0.5864**	**0.5331**	**2.8900e-003**	**0.1609**	**2.5400e-003**	**0.1634**	**0.0430**	**2.3900e-003**	**0.0454**		**304.5159**	**304.5159**	**0.0196**		**305.0058**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.2126	0.0000	0.2126	0.0322	0.0000	0.0322			0.0000			0.0000
Off-Road	3.1651	31.4407	21.5650	0.0388		1.5513	1.5513		1.4411	1.4411	0.0000	3,747.9449	3,747.9449	1.0549		3,774.3174
Total	**3.1651**	**31.4407**	**21.5650**	**0.0388**	**0.2126**	**1.5513**	**1.7640**	**0.0322**	**1.4411**	**1.4733**	**0.0000**	**3,747.9449**	**3,747.9449**	**1.0549**		**3,774.3174**

3.2 Demolition - 2021

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	0.0160	0.5527	0.1352	1.6600e-003	0.0377	1.6900e-003	0.0394	0.0103	1.6100e-003	0.0119		182.3498	182.3498	0.0161		182.7525
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0519	0.0337	0.3979	1.2300e-003	0.1232	8.5000e-004	0.1241	0.0327	7.8000e-004	0.0335		122.1661	122.1661	3.4900e-003		122.2533
Total	**0.0679**	**0.5864**	**0.5331**	**2.8900e-003**	**0.1609**	**2.5400e-003**	**0.1634**	**0.0430**	**2.3900e-003**	**0.0454**		**304.5159**	**304.5159**	**0.0196**		**305.0058**

3.3 Site Preparation - 2021

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					24.8411	0.0000	24.8411	13.6547	0.0000	13.6547			0.0000			0.0000
Off-Road	3.8882	40.4971	21.1543	0.0380		2.0445	2.0445		1.8809	1.8809		3,685.6569	3,685.6569	1.1920		3,715.4573
Total	**3.8882**	**40.4971**	**21.1543**	**0.0380**	**24.8411**	**2.0445**	**26.8856**	**13.6547**	**1.8809**	**15.5356**		**3,685.6569**	**3,685.6569**	**1.1920**		**3,715.4573**

3.3 Site Preparation - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0623	0.0405	0.4774	1.4700e-003	0.1479	1.0200e-003	0.1489	0.0392	9.4000e-004	0.0402		146.5994	146.5994	4.1800e-003		146.7040
Total	**0.0623**	**0.0405**	**0.4774**	**1.4700e-003**	**0.1479**	**1.0200e-003**	**0.1489**	**0.0392**	**9.4000e-004**	**0.0402**		**146.5994**	**146.5994**	**4.1800e-003**		**146.7040**

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					11.1785	0.0000	11.1785	6.1446	0.0000	6.1446			0.0000			0.0000
Off-Road	3.8882	40.4971	21.1543	0.0380		2.0445	2.0445		1.8809	1.8809	0.0000	3,685.6569	3,685.6569	1.1920		3,715.4573
Total	**3.8882**	**40.4971**	**21.1543**	**0.0380**	**11.1785**	**2.0445**	**13.2230**	**6.1446**	**1.8809**	**8.0255**	**0.0000**	**3,685.6569**	**3,685.6569**	**1.1920**		**3,715.4573**

3.3 Site Preparation - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0623	0.0405	0.4774	1.4700e-003	0.1479	1.0200e-003	0.1489	0.0392	9.4000e-004	0.0402		146.5994	146.5994	4.1800e-003		146.7040
Total	**0.0623**	**0.0405**	**0.4774**	**1.4700e-003**	**0.1479**	**1.0200e-003**	**0.1489**	**0.0392**	**9.4000e-004**	**0.0402**		**146.5994**	**146.5994**	**4.1800e-003**		**146.7040**

3.4 Grading - 2021

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					9.5323	0.0000	9.5323	5.1216	0.0000	5.1216			0.0000			0.0000
Off-Road	2.2903	24.7367	15.8575	0.0296		1.1599	1.1599		1.0671	1.0671		2,871.9285	2,871.9285	0.9288		2,895.1495
Total	**2.2903**	**24.7367**	**15.8575**	**0.0296**	**9.5323**	**1.1599**	**10.6922**	**5.1216**	**1.0671**	**6.1887**		**2,871.9285**	**2,871.9285**	**0.9288**		**2,895.1495**

3.4 Grading - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0519	0.0337	0.3979	1.2300e-003	0.1232	8.5000e-004	0.1241	0.0327	7.8000e-004	0.0335		122.1661	122.1661	3.4900e-003		122.2533
Total	**0.0519**	**0.0337**	**0.3979**	**1.2300e-003**	**0.1232**	**8.5000e-004**	**0.1241**	**0.0327**	**7.8000e-004**	**0.0335**		**122.1661**	**122.1661**	**3.4900e-003**		**122.2533**

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					4.2895	0.0000	4.2895	2.3047	0.0000	2.3047			0.0000			0.0000
Off-Road	2.2903	24.7367	15.8575	0.0296		1.1599	1.1599		1.0671	1.0671	0.0000	2,871.9285	2,871.9285	0.9288		2,895.1495
Total	**2.2903**	**24.7367**	**15.8575**	**0.0296**	**4.2895**	**1.1599**	**5.4495**	**2.3047**	**1.0671**	**3.3718**	**0.0000**	**2,871.9285**	**2,871.9285**	**0.9288**		**2,895.1495**

3.4 Grading - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0519	0.0337	0.3979	1.2300e-003	0.1232	8.5000e-004	0.1241	0.0327	7.8000e-004	0.0335		122.1661	122.1661	3.4900e-003		122.2533
Total	**0.0519**	**0.0337**	**0.3979**	**1.2300e-003**	**0.1232**	**8.5000e-004**	**0.1241**	**0.0327**	**7.8000e-004**	**0.0335**		**122.1661**	**122.1661**	**3.4900e-003**		**122.2533**

3.5 Building Construction - 2021

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	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013		2,553.3639	2,553.3639	0.6160		2,568.7643
Total	**1.9009**	**17.4321**	**16.5752**	**0.0269**		**0.9586**	**0.9586**		**0.9013**	**0.9013**		**2,553.3639**	**2,553.3639**	**0.6160**		**2,568.7643**

3.5 Building Construction - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0121	0.4073	0.1038	1.0800e-003	0.0271	8.6000e-004	0.0279	7.8000e-003	8.2000e-004	8.6100e-003		116.5408	116.5408	8.3300e-003		116.7490
Worker	0.1003	0.0652	0.7692	2.3700e-003	0.2382	1.6500e-003	0.2399	0.0632	1.5200e-003	0.0647		236.1879	236.1879	6.7400e-003		236.3564
Total	**0.1124**	**0.4725**	**0.8730**	**3.4500e-003**	**0.2653**	**2.5100e-003**	**0.2678**	**0.0710**	**2.3400e-003**	**0.0733**		**352.7286**	**352.7286**	**0.0151**		**353.1053**

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	1.9009	17.4321	16.5752	0.0269		0.9586	0.9586		0.9013	0.9013	0.0000	2,553.3639	2,553.3639	0.6160		2,568.7643
Total	**1.9009**	**17.4321**	**16.5752**	**0.0269**		**0.9586**	**0.9586**		**0.9013**	**0.9013**	**0.0000**	**2,553.3639**	**2,553.3639**	**0.6160**		**2,568.7643**

3.5 Building Construction - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0121	0.4073	0.1038	1.0800e-003	0.0271	8.6000e-004	0.0279	7.8000e-003	8.2000e-004	8.6100e-003		116.5408	116.5408	8.3300e-003		116.7490
Worker	0.1003	0.0652	0.7692	2.3700e-003	0.2382	1.6500e-003	0.2399	0.0632	1.5200e-003	0.0647		236.1879	236.1879	6.7400e-003		236.3564
Total	**0.1124**	**0.4725**	**0.8730**	**3.4500e-003**	**0.2653**	**2.5100e-003**	**0.2678**	**0.0710**	**2.3400e-003**	**0.0733**		**352.7286**	**352.7286**	**0.0151**		**353.1053**

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612		2,554.3336	2,554.3336	0.6120		2,569.6322
Total	**1.7062**	**15.6156**	**16.3634**	**0.0269**		**0.8090**	**0.8090**		**0.7612**	**0.7612**		**2,554.3336**	**2,554.3336**	**0.6120**		**2,569.6322**

3.5 Building Construction - 2022

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0113	0.3849	0.0983	1.0700e-003	0.0271	7.4000e-004	0.0278	7.8000e-003	7.0000e-004	8.5000e-003		115.4455	115.4455	8.0700e-003		115.6473
Worker	0.0948	0.0594	0.7153	2.2800e-003	0.2382	1.6100e-003	0.2398	0.0632	1.4800e-003	0.0647		227.5223	227.5223	6.1800e-003		227.6768
Total	**0.1061**	**0.4444**	**0.8136**	**3.3500e-003**	**0.2653**	**2.3500e-003**	**0.2677**	**0.0710**	**2.1800e-003**	**0.0732**		**342.9678**	**342.9678**	**0.0143**		**343.3241**

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	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612	0.0000	2,554.3336	2,554.3336	0.6120		2,569.6322
Total	**1.7062**	**15.6156**	**16.3634**	**0.0269**		**0.8090**	**0.8090**		**0.7612**	**0.7612**	**0.0000**	**2,554.3336**	**2,554.3336**	**0.6120**		**2,569.6322**

3.5 Building Construction - 2022

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0113	0.3849	0.0983	1.0700e-003	0.0271	7.4000e-004	0.0278	7.8000e-003	7.0000e-004	8.5000e-003		115.4455	115.4455	8.0700e-003		115.6473
Worker	0.0948	0.0594	0.7153	2.2800e-003	0.2382	1.6100e-003	0.2398	0.0632	1.4800e-003	0.0647		227.5223	227.5223	6.1800e-003		227.6768
Total	**0.1061**	**0.4444**	**0.8136**	**3.3500e-003**	**0.2653**	**2.3500e-003**	**0.2677**	**0.0710**	**2.1800e-003**	**0.0732**		**342.9678**	**342.9678**	**0.0143**		**343.3241**

3.5 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5728	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**

3.5 Building Construction - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	8.6700e-003	0.3030	0.0901	1.0400e-003	0.0271	3.6000e-004	0.0274	7.7900e-003	3.4000e-004	8.1400e-003		112.5268	112.5268	7.3900e-003		112.7116
Worker	0.0898	0.0543	0.6644	2.1900e-003	0.2382	1.5800e-003	0.2398	0.0632	1.4500e-003	0.0646		218.8245	218.8245	5.6600e-003		218.9659
Total	**0.0985**	**0.3573**	**0.7545**	**3.2300e-003**	**0.2653**	**1.9400e-003**	**0.2673**	**0.0710**	**1.7900e-003**	**0.0728**		**331.3513**	**331.3513**	**0.0131**		**331.6774**

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**

3.5 Building Construction - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	8.6700e-003	0.3030	0.0901	1.0400e-003	0.0271	3.6000e-004	0.0274	7.7900e-003	3.4000e-004	8.1400e-003		112.5268	112.5268	7.3900e-003		112.7116
Worker	0.0898	0.0543	0.6644	2.1900e-003	0.2382	1.5800e-003	0.2398	0.0632	1.4500e-003	0.0646		218.8245	218.8245	5.6600e-003		218.9659
Total	**0.0985**	**0.3573**	**0.7545**	**3.2300e-003**	**0.2653**	**1.9400e-003**	**0.2673**	**0.0710**	**1.7900e-003**	**0.0728**		**331.3513**	**331.3513**	**0.0131**		**331.6774**

3.6 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9181	8.7903	12.1905	0.0189		0.4357	0.4357		0.4025	0.4025		1,805.4304	1,805.4304	0.5673		1,819.6122
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9181**	**8.7903**	**12.1905**	**0.0189**		**0.4357**	**0.4357**		**0.4025**	**0.4025**		**1,805.4304**	**1,805.4304**	**0.5673**		**1,819.6122**

3.6 Paving - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0619	0.0374	0.4582	1.5100e-003	0.1643	1.0900e-003	0.1654	0.0436	1.0000e-003	0.0446		150.9134	150.9134	3.9000e-003		151.0109
Total	**0.0619**	**0.0374**	**0.4582**	**1.5100e-003**	**0.1643**	**1.0900e-003**	**0.1654**	**0.0436**	**1.0000e-003**	**0.0446**		**150.9134**	**150.9134**	**3.9000e-003**		**151.0109**

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	0.9181	8.7903	12.1905	0.0189		0.4357	0.4357		0.4025	0.4025	0.0000	1,805.4304	1,805.4304	0.5673		1,819.6122
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9181**	**8.7903**	**12.1905**	**0.0189**		**0.4357**	**0.4357**		**0.4025**	**0.4025**	**0.0000**	**1,805.4304**	**1,805.4304**	**0.5673**		**1,819.6122**

3.6 Paving - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0619	0.0374	0.4582	1.5100e-003	0.1643	1.0900e-003	0.1654	0.0436	1.0000e-003	0.0446		150.9134	150.9134	3.9000e-003		151.0109
Total	**0.0619**	**0.0374**	**0.4582**	**1.5100e-003**	**0.1643**	**1.0900e-003**	**0.1654**	**0.0436**	**1.0000e-003**	**0.0446**		**150.9134**	**150.9134**	**3.9000e-003**		**151.0109**

3.7 Architectural Coating - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	12.3058					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708		281.4481	281.4481	0.0168		281.8690
Total	**12.4974**	**1.3030**	**1.8111**	**2.9700e-003**		**0.0708**	**0.0708**		**0.0708**	**0.0708**		**281.4481**	**281.4481**	**0.0168**		**281.8690**

3.7 Architectural Coating - 2023

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0186	0.0112	0.1375	4.5000e-004	0.0493	3.3000e-004	0.0496	0.0131	3.0000e-004	0.0134		45.2740	45.2740	1.1700e-003		45.3033
Total	**0.0186**	**0.0112**	**0.1375**	**4.5000e-004**	**0.0493**	**3.3000e-004**	**0.0496**	**0.0131**	**3.0000e-004**	**0.0134**		**45.2740**	**45.2740**	**1.1700e-003**		**45.3033**

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	12.3058					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708	0.0000	281.4481	281.4481	0.0168		281.8690
Total	**12.4974**	**1.3030**	**1.8111**	**2.9700e-003**		**0.0708**	**0.0708**		**0.0708**	**0.0708**	**0.0000**	**281.4481**	**281.4481**	**0.0168**		**281.8690**

3.7 Architectural Coating - 2023

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0186	0.0112	0.1375	4.5000e-004	0.0493	3.3000e-004	0.0496	0.0131	3.0000e-004	0.0134		45.2740	45.2740	1.1700e-003		45.3033
Total	**0.0186**	**0.0112**	**0.1375**	**4.5000e-004**	**0.0493**	**3.3000e-004**	**0.0496**	**0.0131**	**3.0000e-004**	**0.0134**		**45.2740**	**45.2740**	**1.1700e-003**		**45.3033**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.4636	1.7328	5.5138	0.0208	1.9371	0.0155	1.9525	0.5176	0.0144	0.5320		2,114.7457	2,114.7457	0.1009		2,117.2693
Unmitigated	0.4636	1.7328	5.5138	0.0208	1.9371	0.0155	1.9525	0.5176	0.0144	0.5320		2,114.7457	2,114.7457	0.1009		2,117.2693

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Condo/Townhouse	320.00	226.80	193.60	824,122	824,122
Total	320.00	226.80	193.60	824,122	824,122

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Condo/Townhouse	10.80	7.30	7.50	41.60	18.80	39.60	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Condo/Townhouse	0.606234	0.039465	0.179154	0.102641	0.014368	0.005395	0.016820	0.024508	0.001929	0.001857	0.005869	0.000761	0.000998

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	0.0170	0.1453	0.0618	9.3000e-004		0.0117	0.0117		0.0117	0.0117		185.4356	185.4356	3.5500e-003	3.4000e-003	186.5376
NaturalGas Unmitigated	0.0170	0.1453	0.0618	9.3000e-004		0.0117	0.0117		0.0117	0.0117		185.4356	185.4356	3.5500e-003	3.4000e-003	186.5376

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Condo/Townhouse	1576.2	0.0170	0.1453	0.0618	9.3000e-004		0.0117	0.0117		0.0117	0.0117		185.4356	185.4356	3.5500e-003	3.4000e-003	186.5376
Total		**0.0170**	**0.1453**	**0.0618**	**9.3000e-004**		**0.0117**	**0.0117**		**0.0117**	**0.0117**		**185.4356**	**185.4356**	**3.5500e-003**	**3.4000e-003**	**186.5376**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Condo/Townhouse	1.5762	0.0170	0.1453	0.0618	9.3000e-004		0.0117	0.0117		0.0117	0.0117		185.4356	185.4356	3.5500e-003	3.4000e-003	186.5376
Total		**0.0170**	**0.1453**	**0.0618**	**9.3000e-004**		**0.0117**	**0.0117**		**0.0117**	**0.0117**		**185.4356**	**185.4356**	**3.5500e-003**	**3.4000e-003**	**186.5376**

6.0 Area Detail

6.1 Mitigation Measures Area

Use Low VOC Paint - Residential Interior

Use Low VOC Paint - Residential Exterior

No Hearths Installed

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	1.7226	0.0380	3.2987	1.7000e-004		0.0183	0.0183		0.0183	0.0183	0.0000	5.9421	5.9421	5.7000e-003	0.0000	6.0846
Unmitigated	1.7226	0.0380	3.2987	1.7000e-004		0.0183	0.0183		0.0183	0.0183	0.0000	5.9421	5.9421	5.7000e-003	0.0000	6.0846

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	0.0978					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.5256					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	0.0992	0.0380	3.2987	1.7000e-004		0.0183	0.0183		0.0183	0.0183		5.9421	5.9421	5.7000e-003		6.0846
Total	**1.7226**	**0.0380**	**3.2987**	**1.7000e-004**		**0.0183**	**0.0183**		**0.0183**	**0.0183**	**0.0000**	**5.9421**	**5.9421**	**5.7000e-003**	**0.0000**	**6.0846**

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	0.0978					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	1.5256					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	0.0992	0.0380	3.2987	1.7000e-004		0.0183	0.0183		0.0183	0.0183		5.9421	5.9421	5.7000e-003		6.0846
Total	**1.7226**	**0.0380**	**3.2987**	**1.7000e-004**		**0.0183**	**0.0183**		**0.0183**	**0.0183**	**0.0000**	**5.9421**	**5.9421**	**5.7000e-003**	**0.0000**	**6.0846**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation