Air Quality Assessment
425 S. Winchester Boulevard Project
City of San José, California

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LIST OF ABBREVIATED TERMS

AQMP	air quality management plan
AB	Assembly Bill
ADT	average daily traffic
BAAQMD	Bay Area Air Quality Management District
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CAAQS	California Ambient Air Quality Standards
CCAA	California Clean Air Act
CalEEMod	California Emissions Estimator Model
CEQA	California Environmental Quality Act
CO	carbon monoxide
cy	cubic yards
DPM	diesel particulate matter
EPA	Environmental Protection Agency
FCAA	Federal Clean Air Act
H_2S	hydrogen sulfide
Pb	Lead
LST	local significance threshold
µg/m^3	micrograms per cubic meter
mg/m^3	milligrams per cubic meter
NAAQS	National Ambient Air Quality Standards
NO_2	nitrogen dioxide
NO_x	nitrogen oxide
O_3	Ozone
PM_{10}	particulate matter less than 10 microns in diameter
$PM_{2.5}$	particulate matter less than 2.5 microns in diameter
ppm	parts per million
ROG	reactive organic gases
RTP/SCS	Regional Transportation Plan/Sustainable Communities Strategy
SB	Senate Bill
SRA	source receptor area
SF	square foot
SO_{4-2}	Sulfates
SO_2	sulfur dioxide
TAC	toxic air contaminant
C_2H_3Cl	vinyl chloride
VOC	volatile organic compound

1 INTRODUCTION

This section describes effects on air quality conditions in the Project area. The current condition and quality of air quality was used as the baseline against which to compare potential impacts of the Project. The purpose of this Air Quality is to evaluate potential short- and long-term noise impacts resulting from implementation of the proposed 425 S. Winchester Project in the City of San José.

1.1 PROJECT LOCATION

The proposed Project is located on 425 S. Winchester Boulevard on the northwest corner of Winchester Boulevard and Olin Avenue in western San José. Figure 1: Regional Vicinity and Figure 2: Site Vicinity, depict the Project site in a regional and local context.

Currently, the Project site is developed as an existing gas station that is still in operation. The existing gas station has a single-story building. There are currently four pumping stations in the center of the Project site and surface parking along the northern and western boundaries of the Project site. There is existing landscaping along the western, northern and eastern (Winchester Boulevard) frontages of the Project site.

1.2 PROJECT DESCRIPTION

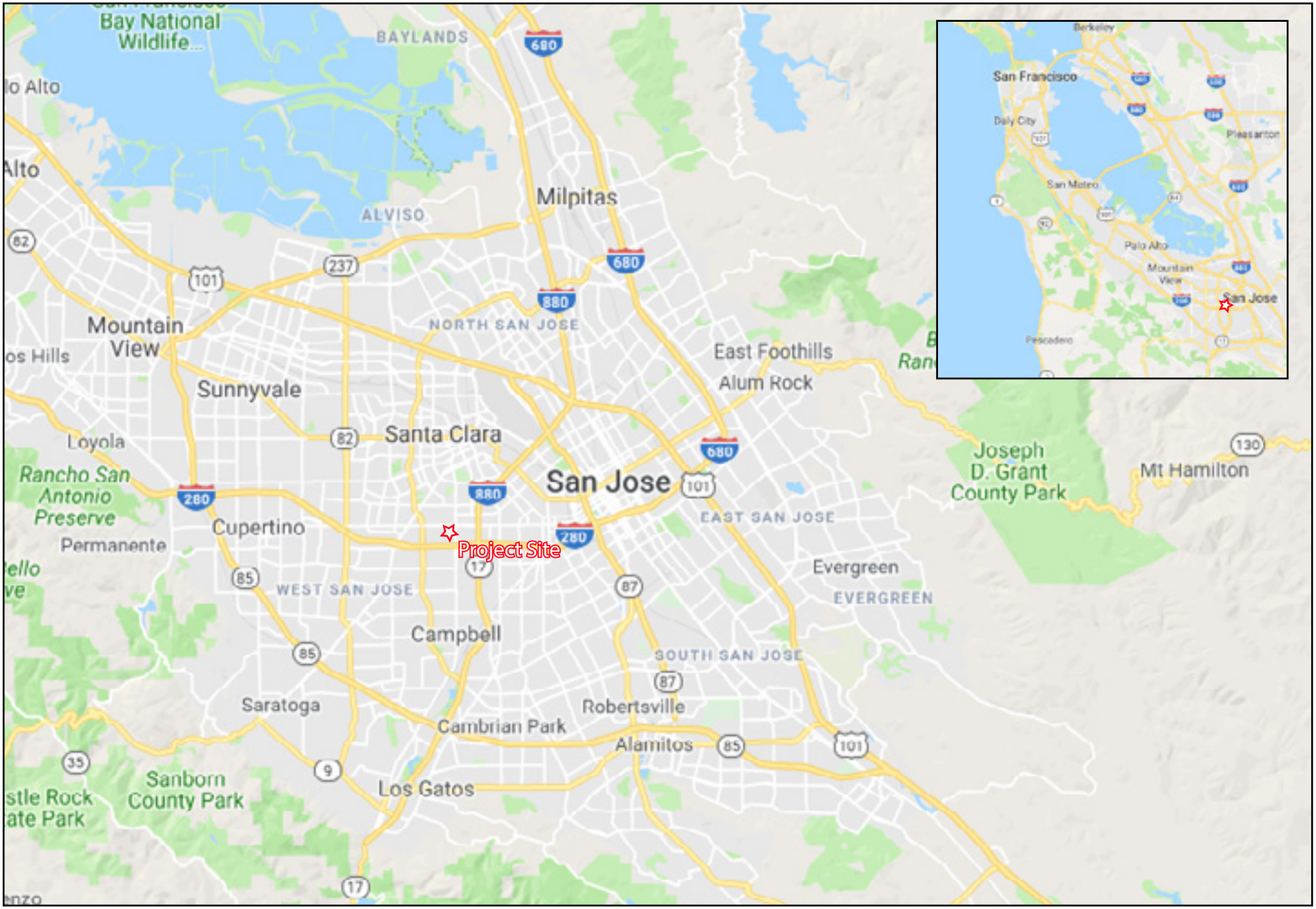
The Project site is located in an urban area with a mix of uses including commercial, office, and medium to high density residential uses. The proposed Project's existing land use designation is Mixed Use Commercial (MUC) and existing zoning designation is Commercial General (CG). The Project site is within the City of San José Santana Row/Valley Fair Urban Village Plan area, which is characterized by a wide range of commercial, residential, retail, and restaurant uses. The commercial area is home to two large retail commercial centers, Westfield Valley Fair Mall and Santana Row. The Project site is located approximately 114 feet west of Santana Row, immediately across South Winchester Boulevard.

The proposed Project would include approximately 9,181 square feet of retail/commercial space, approximately 5,000 square feet of 2nd floor office space, and 27 dwelling units on an approximate 0.55–acre site. The mixed-use building would include approximately 7,662 square feet of private open space and approximately 1,232 square feet of open space common to the Project residents. See Figure 3: Project Site Plan for more details. Total on-site parking would include approximately 93 stalls. The proposed Project includes two levels of underground parking. Each underground parking level would have 55 stalls, total of 110 stalls, and five stalls would be on the surface level. Additionally, 24 bicycle racks would be located on the ground floor in a secured bike parking room with access from the lobby. The proposed building would be LEED certified as required by City Council policy. The Project would achieve LEED NC v4 certification through the USGBC.

Currently, one driveway allows access to the Project site from Winchester Boulevard and another driveway allows access to the Project site from Olin Avenue. For vehicles exiting the Project site onto Winchester Boulevard, vehicles must make a right turn to exit onto Winchester Boulevard. There is existing utility access (water, sewer, electricity, gas) to the Project site and no native habitat exists on the site.

In addition, the proposed Project is located adjacent to major bus Routes, therefore the residents of the proposed Project and the employment opportunities would have direct accessibility to local transit, furthering the City's General Plan goals to support a healthy community, reduce traffic congestion and decrease greenhouse gas emissions and energy consumption.

Construction is anticipated to begin in early Spring 2021 and last approximately 19 months until Fall of 2022. Construction methods would include demolition of the existing gas station and associated uses, site preparation, grading, paving, building construction, and architectural coating. Construction of the Project would be required to be consistent with the City's Best Management Practices and California Building Code.



Source: Google Earth, 2019

Figure 1: Regional Location

425 S. Winchester Blvd. Project

Not to scale

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Source: Nearmap, 2019

Figure 2: Project Vicinity Map

425 S. Winchester Blvd. Project

Not to scale

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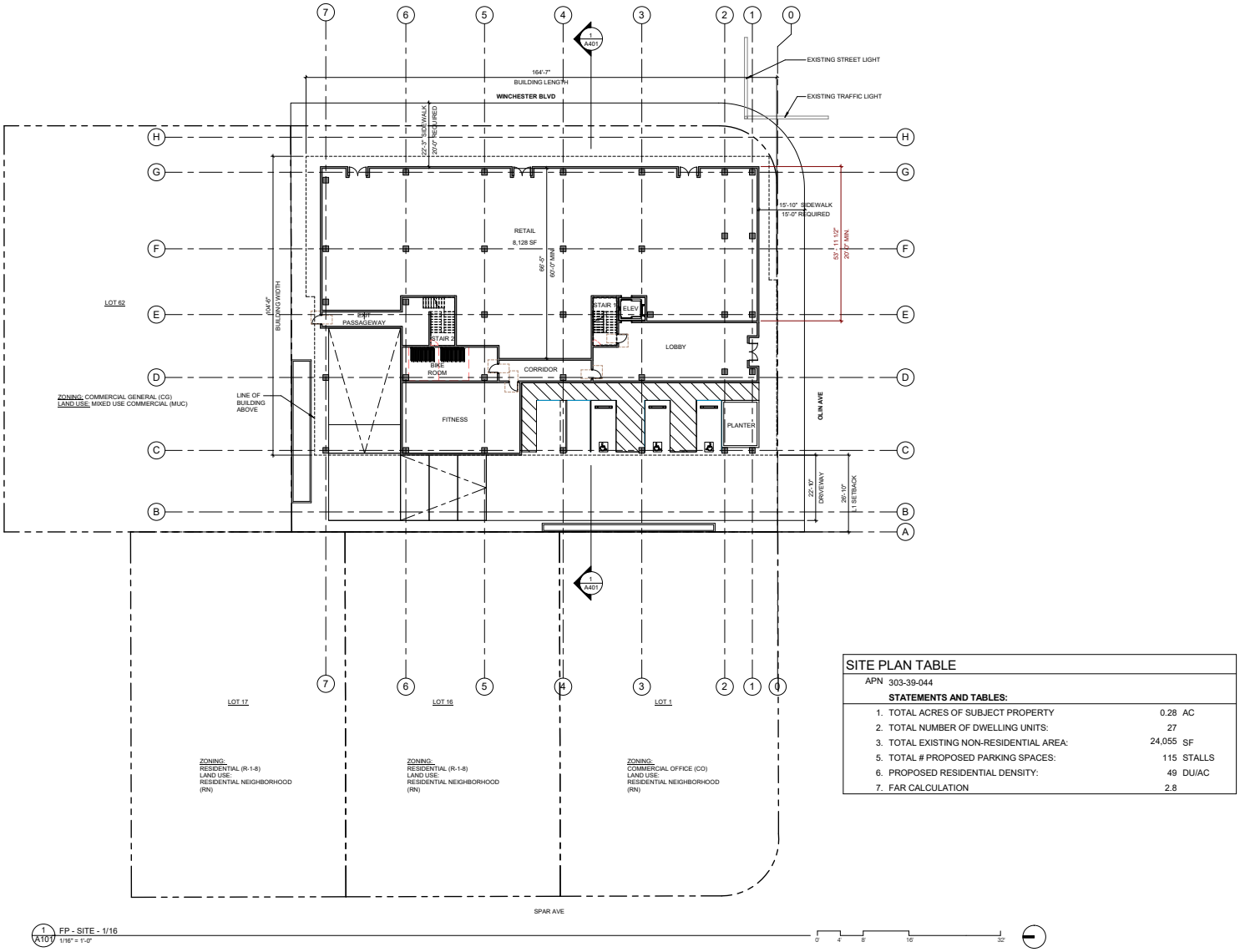

SITE PLAN TABLE		
APN	303-39-044	
	STATEMENTS AND TABLES:	
1.	TOTAL ACRES OF SUBJECT PROPERTY	0.28 AC
2.	TOTAL NUMBER OF DWELLING UNITS:	27
3.	TOTAL EXISTING NON-RESIDENTIAL AREA:	24,055 SF
5.	TOTAL # PROPOSED PARKING SPACES:	115 STALLS
6.	PROPOSED RESIDENTIAL DENSITY:	49 DU/AC
7.	FAR CALCULATION	2.8

Source: C2K Architecture, 2019

Figure 3: Project Site Plan

425 S. Winchester Blvd. Project

Not to scale

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2 ENVIRONMENTAL SETTING

2.1 CLIMATE AND METEOROLOGY

The California Air Resources Board (CARB) divides the State into 15 air basins that share similar meteorological and topographical features. The Project is located within the San Francisco Bay Area Air Basin (Basin). This Basin comprises all of Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, and Santa Clara counties, the southern portion of Sonoma County, and the southwestern portion of Solano County. Air quality in this area is determined by such natural factors as topography, meteorology, and climate, in addition to the presence of existing air pollution sources and ambient conditions. These factors along with applicable regulations are discussed below. The Bay Area Air Quality Management District (BAAQMD) is responsible for local control and monitoring of criteria air pollutants throughout the Basin.

Climate, or the average weather condition, affects air quality in several ways. Wind patterns can remove or add air pollutants emitted by stationary or mobile sources. Inversion, a condition where warm air traps cooler air underneath it, can hold pollutants near the ground by limiting upward mixing (dilution). Topography also affects the local climate, as valleys often trap emissions by limiting lateral dispersal.

The inversions typical of winter, called radiation inversions, are formed as heat quickly radiates from the earth's surface after sunset, causing the air in contact with it to rapidly cool. Radiation inversions are strongest on clear, low-wind, cold winter nights, allowing the build-up of such pollutants as carbon monoxide and particulate matter. When wind speeds are low, there is little mechanical turbulence to mix the air, resulting in a layer of warm air over a layer of cooler air next to the ground. During radiation inversions downwind transport is slow, the mixing depths are shallow, and turbulence is minimal, all factors which contribute to ozone formation.

The frequency of hot, sunny days during the summer months in the Basin is another important factor that affects air pollution potential. It is at the higher temperatures that ozone is formed. In the presence of ultraviolet sunlight and warm temperatures, reactive organic gases and oxides of nitrogen react to form secondary photochemical pollutants, including ozone.

The climate is dominated by the location and strength of a semi-permanent, subtropical high-pressure cell. In the summer, the Pacific cell is centered over the northeastern Pacific Ocean, resulting in stable meteorological conditions and a steady northwesterly wind flow. Upwelling of cold ocean water from below the surface because of the northwesterly flow produces a band of cold water off the coast which results in condensation and the presence of fog and stratus clouds along the coast. In the winter, the high-pressure cell weakens and shifts southward, resulting in increased wind flow offshore, the absence of upwelling, and the occurrence of storms.

The Basin is characterized by moderately wet winters (November through March) and dry summers. The rainfall in the mountains reaches 40 inches while the valley sees less than 16 inches. Generally, coastal temperatures can be 35 degrees Fahrenheit cooler than temperatures 15 to 20 miles inland. At night, this contrast usually decreases to less than 10 degrees Fahrenheit. In the winter, the relationship of minimum and maximum temperatures is reversed.

The Project site is located in the City of San José and Santa Clara County; on the southern perimeter of the San Francisco Bay. The City of San José has a generally mild climate, with average temperatures in the low 80's Fahrenheit in the summer and high 50's Fahrenheit in the winter. The annual rainfall is approximately 15 inches in the City, primarily between November and April. The regulatory section below discusses the various buffer zones around sources of air pollution sufficient to avoid adverse health and nuisance impacts on nearby receptors.

2.2 AIR POLLUTANTS OF PRIMARY CONCERN

The air pollutants emitted into the ambient air by stationary and mobile sources are regulated by federal and state laws. These regulated air pollutants are known as "criteria air pollutants" and are categorized into primary and secondary pollutants. Primary air pollutants are those that are emitted directly from sources. Carbon monoxide (CO), reactive organic gases (ROG), nitrogen oxide (NO_X), sulfur dioxide (SO_2), coarse particulate matter (PM_{10}), fine particulate matter ($PM_{2.5}$), and lead are primary air pollutants. Of these, CO, NO_X, SO_2, PM_{10}, and $PM_{2.5}$ are criteria pollutants. ROG and NO_X are criteria pollutant precursors and go on to form secondary criteria pollutants through chemical and photochemical reactions in the atmosphere. For example, the criteria pollutant ozone (O_3) is formed by a chemical reaction between ROG and NO_X in the presence of sunlight. O_3 and nitrogen dioxide (NO_2) are the principal secondary pollutants. Sources and health effects commonly associated with criteria pollutants are summarized in Table 1: Air Contaminants and Associated Public Health Concerns.

Ozone, or smog, is not emitted directly into the environment, but is formed in the atmosphere by complex chemical reactions between ROG and NO_X in the presence of sunlight. Ozone formation is greatest on warm, windless, sunny days. The main sources of NO_X and ROG, often referred to as ozone precursors, are combustion processes (including motor vehicle engines) the evaporation of solvents, paints, and fuels, and biogenic sources. Automobiles are the single largest source of ozone precursors in the Basin. Tailpipe emissions of ROG are highest during cold starts, hard acceleration, stop-and-go conditions, and slow speeds. They decline as speeds increase up to about 50 miles per hour (mph), then increase again at high speeds and high engine loads. ROG emissions associated with evaporation of unburned fuel depend on vehicle and ambient temperature cycles. Nitrogen oxide emissions exhibit a different curve; emissions decrease as the vehicle approaches 30 mph and then begin to increase with increasing speeds.

Ozone levels usually build up during the day and peak in the afternoon hours. Short-term exposure can irritate the eyes and cause constriction of the airways. Besides causing shortness of breath, it can aggravate existing respiratory diseases such as asthma, bronchitis and emphysema. Chronic exposure to high ozone levels can permanently damage lung tissue. Ozone can also damage plants and trees, and materials such as rubber and fabrics.

Table 1: Air Contaminants and Associated Public Health Concerns

Pollutant	Major Man-Made Sources	Human Health Effects
Particulate Matter (PM_{10} and $PM_{2.5}$)	Power plants, steel mills, chemical plants, unpaved roads and parking lots, wood-burning stoves and fireplaces, automobiles and others.	Increased respiratory symptoms, such as irritation of the airways, coughing, or difficulty breathing; asthma; chronic bronchitis; irregular heartbeat; nonfatal heart attacks; and premature death in people with heart or lung disease. Impairs visibility.
Ozone (O_3)	Formed by a chemical reaction between reactive organic gases/volatile organic compounds (ROG or VOC)[1] and nitrogen oxides (NO_X) in the presence of sunlight. Motor vehicle exhaust industrial emissions, gasoline storage and transport, solvents, paints and landfills.	Irritates and causes inflammation of the mucous membranes and lung airways; causes wheezing, coughing, and pain when inhaling deeply; decreases lung capacity; aggravates lung and heart problems. Damages plants; reduces crop yield.
Sulfur Dioxide (SO_2)	A colorless gas formed when fuel containing sulfur is burned and when gasoline is extracted from oil. Examples are petroleum refineries, cement manufacturing, metal processing facilities, locomotives, and ships.	Respiratory irritant. Aggravates lung and heart problems. In the presence of moisture and oxygen, sulfur dioxide converts to sulfuric acid which can damage marble, iron and steel. Damages crops and natural vegetation. Impairs visibility. Precursor to acid rain.
Carbon Monoxide (CO)	An odorless, colorless gas formed when carbon in fuel is not burned completely; a component of motor vehicle exhaust.	Reduces the ability of blood to deliver oxygen to vital tissues, affecting the cardiovascular and nervous system. Impairs vision, causes dizziness, and can lead to unconsciousness or death.
Nitrogen Dioxide (NO_2)	A reddish-brown gas formed during fuel combustion for motor vehicles and industrial sources. Sources include motor vehicles, electric utilities, and other sources that burn fuel.	Respiratory irritant; aggravates lung and heart problems. Precursor to ozone. Contributes to global warming and nutrient overloading which deteriorates water quality. Causes brown discoloration of the atmosphere.
Lead (Pb)	Lead is a metal found naturally in the environment as well as in manufactured products. The major sources of lead emissions have historically been motor vehicles (such as cars and trucks) and industrial sources. Due to the phase out of leaded gasoline, metals processing is the major source of lead emissions to the air today. The highest levels of lead in air are generally found near lead smelters. Other stationary sources are waste incinerators, utilities, and lead-acid battery manufacturers.	Exposure to lead occurs mainly through inhalation of air and ingestion of lead in food, water, soil, or dust. It accumulates in the blood, bones, and soft tissues and can adversely affect the kidneys, liver, nervous system, and other organs. Excessive exposure to lead may cause neurological impairments such as seizures, mental retardation, and behavioral disorders. Even at low doses, lead exposure is associated with damage to the nervous systems of fetuses and young children, resulting in learning deficits and lowered IQ.

[1] Volatile Organic Compounds (VOCs or Reactive Organic Gases [ROG]) are hydrocarbons/organic gases that are formed solely of hydrogen and carbon. There are several subsets of organic gases including ROGs and VOCs. Both ROGs and VOCs are emitted from the incomplete combustion of hydrocarbons or other carbon-based fuels. The major sources of hydrocarbons are combustion engine exhaust, oil refineries, and oil-fueled power plants; other common sources are petroleum fuels, solvents, dry cleaning solutions, and paint (via evaporation).

Source: California Air Pollution Control Officers Association (CAPCOA), *Health Effects*, capcoa.org/health-effects/, accessed October 4, 2019.

Toxic Air Contaminants

Toxic air contaminants (TACs) are airborne substances that can cause short-term (acute) or long-term (chronic or carcinogenic, i.e., cancer causing) adverse human health effects (i.e., injury or illness). TACs include both organic and inorganic chemical substances. They may be emitted from a variety of common sources including gasoline stations, automobiles, dry cleaners, industrial operations, and painting operations. The current California list of TACs includes more than 200 compounds, including particulate emissions from diesel-fueled engines.

CARB identified diesel particulate matter (DPM) as a toxic air contaminant. DPM differs from other TACs in that it is not a single substance but rather a complex mixture of hundreds of substances. Diesel exhaust is a complex mixture of particles and gases produced when an engine burns diesel fuel. DPM is a concern because it causes lung cancer; many compounds found in diesel exhaust are carcinogenic. DPM includes the particle-phase constituents in diesel exhaust. The chemical composition and particle sizes of DPM vary between different engine types (heavy-duty, light-duty), engine operating conditions (idle, accelerate, decelerate), fuel formulations (high/low sulfur fuel), and the year of the engine. Some short-term (acute) effects of diesel exhaust include eye, nose, throat, and lung irritation, and diesel exhaust can cause coughs, headaches, light-headedness, and nausea. DPM poses the greatest health risk among the TACs. Almost all diesel exhaust particle mass is 10 microns or less in diameter. Because of their extremely small size, these particles can be inhaled and eventually trapped in the bronchial and alveolar regions of the lung.

2.3 AMBIENT AIR QUALITY

CARB monitors ambient air quality at approximately 250 air monitoring stations across the state. Air quality monitoring stations usually measure pollutant concentrations ten feet above ground level; therefore, air quality is often referred to in terms of ground-level concentrations. Existing levels of ambient air quality, historical trends, and projections near the Project site are documented by measurements made by the Bay Area Air Quality Management District (BAAAQMD)'s air pollution regulatory agency that maintains air quality monitoring stations, which process ambient air quality measurements.

Ozone (O_3) and particulate matter (PM_{10} and $PM_{2.5}$) are pollutants of concern in the BAAQMD. The closest air monitoring station to the Project site that monitors ambient concentrations of these pollutants is the Los Gatos Monitoring Station (located approximately 6.75 miles southeast of the Project site). The second closest is the San Jose-Jackson Street Monitoring Station located approximately 3.6 miles northeast of the Project site. Local air quality data from 2016 to 2018 is provided in Table 2: Ambient Air Quality Data lists the monitored maximum concentrations and number of exceedances of federal or state air quality standards for each year. Particulate matter (PM_{10} and $PM_{2.5}$) were both exceeded in 2018 at one of the closest monitoring stations.

Table 2: Ambient Air Quality Data

Pollutant	Los Gatos [1]			San Jose- Jackson Street[2]		
	2016	2017	2018	2016	2017	2018
Ozone (O_3)						
1-hour Maximum Concentration (ppm)	0.091	0.093	0.082	0.087	0.121	0.078
8-hour Maximum Concentration (ppm)	0.065	0.075	0.067	0.066	0.098	0.061
Number of Days Standard Exceeded						
CAAQS 1-hour (>0.09 ppm)	0	0	0	0	3	0
NAAQS 8-hour (>0.070 ppm)	0	3	0	0	4	0
Carbon Monoxide (CO)						
1-hour Maximum Concentration (ppm)	--	--	--	1.95	2.15	2.51
Number of Days Standard Exceeded						
NAAQS 1-hour (>35 ppm)	--	--	--	0	0	0
CAAQS 1 hour (>20 ppm)	--	--	--	0	0	0
Nitrogen Dioxide (NO_2)						
1-hour Maximum Concentration (ppm)	--	--	--	51.1	67.5	86.1
Number of Days Standard Exceeded						
NAAQS 1-hour (>100 ppm)	--	--	--	0	0	0
CAAQS 1-hour (>0.18 ppm)	--	--	--	0	0	0
Particulate Matter Less Than 2.5 Microns ($PM_{2.5}$)						
National 24-hour Maximum Concentration	--	--	--	22.6	49.7	133.9
State 24-hour Maximum Concentration	--	--	--	22.7	49.7	133.9
Number of Days Standard Exceeded						
NAAQS 24-hour (>150 µg/m^3)	--	--	--	0	6	15
CAAQS 24-hour (>50 µg/m^3)	--	--	--	11	11	13
Particulate Matter Less Than 10 Microns (PM_{10})						
National 24-hour Maximum Concentration	--	--	--	40.0	69.4	155.8
State 24-hour Maximum Concentration	--	--	--	41.0	69.8	121.8
Number of Days Standard Exceeded						
NAAQS 24-hour (>150 µg/m^3)	--	--	--	0	0	1
CAAQS 24-hour (>50 µg/m^3)	--	--	--	0	6	4

NAAQS = National Ambient Air Quality Standards; CAAQS = California Ambient Air Quality Standards; ppm = parts per million; µg/m^3 = micrograms per cubic meter; NM = not measured

[1] Measurements taken at the Los Gatos Monitoring Station located at 306 University Avenue, Los Gatos, California 95030 (CARB# 43380).

[2] Measurements taken at the San Jose-Jackson Street Monitoring Station located at 156B Jackson Street, San Jose, California 95112 (CARB# 43383).

Source: All pollutant measurements are from the CARB Aerometric Data Analysis and Management system database (arb.ca.gov/adam).

2.4 SENSITIVE RECEPTORS

Sensitive populations are more susceptible to the effects of air pollution than the general population. Sensitive receptors in proximity to localized sources of toxics are of particular concern. Land uses considered sensitive receptors include residences, schools, playgrounds, childcare centers, long-term health care facilities, rehabilitation centers, convalescent centers, and retirement homes.

The Project site is located in an urban area in City of San José. The surrounding land uses are predominantly commercial, with some residences to the west. The eastern boundary of the site is

Winchester Boulevard. Table 3: Sensitive Receptors, lists the distances and locations of nearby sensitive receptors, which primarily include single- family residences.

Table 3: Sensitive Receptors

Receptor Description	Distance and Direction from the Project Site
Single-family residential community	20 feet west
Mix use residential (under construction)	150 feet southeast
Hotel Valencia Santana Row	700 feet east
Assisted Living Guidance	750 feet south
Winchester Mystery House	800 feet south
Shein Medicine Pediatrics and Associates	1,300 feet northwest
National University – San Jose	1,300 feet southeast
Single-family residential community	1,400 feet east
Santana Park	1,600 feet southeast
West Valley Alliance Church	1,800 feet southeast
Orion Montessori School	0.5 miles west
Christ Church of India	0.5 miles west

3 REGULATORY SETTING

3.1 FEDERAL

Federal Clean Air Act

Air quality is federally protected by the Federal Clean Air Act (FCAA) and its amendments. Under the FCAA, the EPA developed the primary and secondary National Ambient Air Quality Standards (NAAQS) for the criteria air pollutants including ozone, NO_2, CO, SO_2, PM_{10}, $PM_{2.5}$, and lead. Depending on whether the standards are met or exceeded, the local air basin is classified as in "attainment" or "nonattainment." Some areas are unclassified, which means no monitoring data are available. Unclassified areas are considered to be in attainment. Proposed projects in or near nonattainment areas could be subject to more stringent air-permitting requirements. The FCAA requires that each state prepare a State Implementation Plan (SIP) to demonstrate how it will attain the NAAQS within the federally imposed deadlines.

The U.S. Environmental Protection Agency (EPA) has designated enforcement of air pollution control regulations to the individual states. Applicable federal standards are summarized in Table 4: State of California.

California Air Resources Board

CARB administers California's air quality policy. The California Ambient Air Quality Standards (CAAQS) were established in 1969 pursuant to the Mulford-Carrell Act. These standards, included with the NAAQS in Table 4, are generally more stringent and apply to more pollutants than the NAAQS. In addition to the criteria pollutants, CAAQS have been established for visibility reducing particulates, hydrogen sulfide, and sulfates. In general, the Bay Area experiences low concentrations of most pollutants when compared to federal standards, except for O_3 and PM, for which standards are exceeded periodically. With respect to federal standards, the Bay Area's attainment status for 8-hour ozone is classified as "marginal nonattainment" and "nonattainment" for $PM_{2.5}$. The region is also considered to be in nonattainment with the CAAQS for PM_{10} and $PM_{2.5}$. Area sources generate the majority of these airborne particulate emissions. The Basin is considered in attainment or unclassified with respect to the CO, NO_2 and SO_2 NAAQS and CAAQS.

The California Clean Air Act (CCAA), which was approved in 1988, requires that each local air district prepare and maintain an Air Quality Management Plan (AQMP) to achieve compliance with CAAQS. These AQMPs also serve as the basis for the preparation of the SIP for meeting federal clean air standards for the State of California. Like the EPA, CARB also designates areas within California as either attainment or nonattainment for each criteria pollutant based on whether the CAAQS have been achieved. Under the CCAA, areas are designated as nonattainment for a pollutant if air quality data shows that a state standard for the pollutant was violated at least once during the previous three calendar years. Exceedances that are affected by highly irregular or infrequent events such as wildfires, volcanoes, etc. are not considered violations of a State standard, and are not used as a basis for designating areas as nonattainment. The applicable State standards are summarized in Table 4.

Table 4: State and Federal Ambient Air Quality Standards

Pollutant	Averaging Time	State Standards[1]		Federal Standards[2]	
		Concentration	Attainment Status	Concentration[3]	Attainment Status
Ozone (O_3)	8 Hour	0.070 ppm (137 µg/m³)	N[9]	0.070 ppm	N[4]
	1 Hour	0.09 ppm (180 µg/m³)	N	NA	N/A[5]
Carbon Monoxide (CO)	8 Hour	9.0 ppm (10 mg/m³)	A	9 ppm (10 mg/m³)	A[6]
	1 Hour	20 ppm (23 mg/m³)	A	35 ppm (40 mg/m³)	A
Nitrogen Dioxide (NO_2)	1 Hour	0.18 ppm (339 µg/m³)	A	0.10 ppm[11]	U
	Annual Arithmetic Mean	0.030 ppm (57 µg/m³)	-	0.053 ppm (100 µg/m³)	A
Sulfur Dioxide[12] (SO_2)	24 Hour	0.04 ppm (105 µg/m³)	A	0.14 ppm (365 µg/m³)	A
	1 Hour	0.25 ppm (655 µg/m³)	A	0.075 ppm (196 µg/m³)	A
	Annual Arithmetic Mean	NA	-	0.03 ppm (80 µg/m³)	A
Particulate Matter (PM_{10})	24-Hour	50 µg/m³	N	150 µg/m³	-U
	Annual Arithmetic Mean	20 µg/m³	N[7]	NA	-
Fine Particulate Matter ($PM_{2.5}$) [15]	24-Hour	NA	-	35 µg/m³	U/A
	Annual Arithmetic Mean	12 µg/m³	N[7]	12 µg/m³	N
Sulfates (SO_{4-2})	24 Hour	25 µg/m³	A	NA	-
Lead (Pb)[13, 14]	30-Day Average	1.5 µg/m³	-	NA	A
	Calendar Quarter	NA	-	1.5 µg/m³	A
	Rolling 3-Month Average	NA	-	0.15 µg/m³	-
Hydrogen Sulfide (H_2S)	1 Hour	0.03 ppm (0.15 µg/m³)	U	NA	-
Vinyl Chloride (C_2H_3Cl)	24 Hour	0.01 ppm (26 µg/m³)	-	NA	-
Visibility Reducing Particles[8]	8 Hour (10:00 to 18:00 PST)	-	U	-	-

A = attainment; N = nonattainment; U = unclassified; N/A = not applicable or no applicable standard; ppm = parts per million; µg/m³ = micrograms per cubic meter; mg/m³ = milligrams per cubic meter; – = not indicated or no information available.

1. California standards for ozone, carbon monoxide (except Lake Tahoe), sulfur dioxide (1-hour and 24-hour), nitrogen dioxide, suspended particulate matter - PM_{10}, and visibility reducing particles are values that are not to be exceeded. The standards for sulfates, Lake Tahoe carbon monoxide, lead, hydrogen sulfide, and vinyl chloride are not to be equaled or exceeded. If the standard is for a 1-hour, 8-hour or 24-hour average (i.e., all standards except for lead and the PM_{10} annual standard), then some measurements may be excluded. In particular, measurements are excluded that CARB determines would occur less than once per year on the average. The Lake Tahoe CO standard is 6.0 ppm, a level one-half the national standard and two-thirds the state standard.
2. National standards shown are the "primary standards" designed to protect public health. National standards other than for ozone, particulates and those based on annual averages are not to be exceeded more than once a year. The 1-hour ozone standard is attained if, during the most recent three-year period, the average number of days per year with maximum hourly concentrations above the standard is equal to or less than one. The 8-hour ozone standard is attained when the 3-year average of the 4th highest daily concentrations is 0.070 ppm (70 ppb) or less. The 24-hour PM_{10} standard is attained when the 3-year average of the 99th percentile of monitored concentrations is less than 150 µg/m_3. The 24-hour $PM_{2.5}$ standard is attained when the 3-year average of 98th percentiles is less than 35 µg/m³.
   Except for the national particulate standards, annual standards are met if the annual average falls below the standard at every site. The national annual particulate standard for PM_{10} is met if the 3-year average falls below the standard at every site. The annual $PM_{2.5}$ standard is met if the 3-year average of annual averages spatially-averaged across officially designed clusters of sites falls below the standard.
3. National air quality standards are set by the EPA at levels determined to be protective of public health with an adequate margin of safety.

4. On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm. An area will meet the standard if the fourth-highest maximum daily 8-hour ozone concentration per year, averaged over three years, is equal to or less than 0.070 ppm. EPA will make recommendations on attainment designations by October 1, 2016, and issue final designations October 1, 2017. Nonattainment areas will have until 2020 to late 2037 to meet the health standard, with attainment dates varying based on the ozone level in the area.
5. The national 1-hour ozone standard was revoked by U.S. EPA on June 15, 2005.
6. In April 1998, the Bay Area was redesignated to attainment for the national 8-hour carbon monoxide standard.
7 In June 2002, CARB established new annual standards for $PM_{2.5}$ and PM_{10}.
8 Statewide VRP Standard (except Lake Tahoe Air Basin): Particles in sufficient amount to produce an extinction coefficient of 0.23 per kilometer when the relative humidity is less than 70 percent. This standard is intended to limit the frequency and severity of visibility impairment due to regional haze and is equivalent to a 10-mile nominal visual range.
9. The 8-hour CA ozone standard was approved by the Air Resources Board on April 28, 2005 and became effective on May 17, 2006.
10. On January 9, 2013, EPA issued a final rule to determine that the Bay Area attains the 24-hour $PM_{2.5}$ national standard. This EPA rule suspends key SIP requirements as long as monitoring data continues to show that the Bay Area attains the standard. Despite this EPA action, the Bay Area will continue to be designated as "nonattainment" for the national 24-hour $PM_{2.5}$ standard until such time as the Air District submits a "redesignation request" and a "maintenance plan" to EPA, and EPA approves the proposed redesignation.
11. To attain this standard, the 3-year average of the 98th percentile of the daily maximum 1-hour average at each monitor within an area must not exceed 0.100ppm (effective January 22, 2010). The US Environmental Protection Agency (EPA) expects to make a designation for the Bay Area by the end of 2017.
12. On June 2, 2010, the U.S. EPA established a new 1-hour SO_2 standard, effective August 23, 2010, which is based on the 3-year average of the annual 99th percentile of 1-hour daily maximum concentrations. The existing 0.030 ppm annual and 0.14 ppm 24-hour SO_2 NAAQS however must continue to be used until one year following U.S. EPA initial designations of the new 1-hour SO_2 NAAQS.
13. CARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure below which there are no adverse health effects determined.
14. National lead standard, rolling 3-month average: final rule signed October 15, 2008. Final designations effective December 31, 2011.
15. In December 2012, EPA strengthened the annual $PM_{2.5}$ National Ambient Air Quality Standards (NAAQS) from 15.0 to 12.0 micrograms per cubic meter ($\mu g/m^3$). In December 2014, EPA issued final area designations for the 2012 primary annual $PM_{2.5}$ NAAQS. Areas designated "unclassifiable/attainment" must continue to take steps to prevent their air quality from deteriorating to unhealthy levels. The effective date of this standard is April 15, 2015.

Source: Bay Area Air Quality Management District, *Air Quality Standards and Attainment Status*, 2017 http://www.baaqmd.gov/research-and-data/air-quality-standards-and-attainment-status.

3.2 REGIONAL

Bay Area Air Quality Management District

The BAAQMD is the regional agency with jurisdiction over the nine-county region located in the Basin. The Association of Bay Area Governments (ABAG), Metropolitan Transportation Commission (MTC), county transportation agencies, cities and counties, and various nongovernmental organizations also join in the efforts to improve air quality through a variety of programs. These programs include the adoption of regulations and policies, as well as implementation of extensive education and public outreach programs.

Clean Air Plan

Air quality plans developed to meet federal requirements are referred to as State Implementation Plans. The federal and state Clean Air Acts require plans to be developed for areas designated as nonattainment (with the exception of areas designated as nonattainment for the state PM_{10} standard). The BAAQMD is responsible for developing a Clean Air Plan, which guides the region's air quality planning efforts to attain the CAAQS. The BAAQMD adopted the 2017 Clean Air Plan: Spare the Air, Cool the Climate on April 19, 2019, by the BAAQMD.

BAAQMD periodically develops air quality plans that outline the regional strategy to improve air quality and protect the climate. The most recent plan, 2017 Bay Area Clean Air Plan, includes a wide range of control measures designed to reduce emissions of air pollutants and GHGs, including the following

examples that may be relevant to this project: reduce emissions of toxic air contaminants by adopting more stringent limits and methods for evaluating toxic risks; implement pricing measures to reduce travel demand; accelerate the widespread adoption of electric vehicles; promote the use of clean fuels; promote energy efficiency in both new and existing buildings; and promote the switch from natural gas to electricity for space and water heating in Bay Area buildings.

The 2017 Clean Air Plan provides a regional strategy to protect public health and protect the climate. To protect public health, the plan describes how the BAAQMD will continue progress toward attaining all state and federal air quality standards and eliminating health risk disparities from exposure to air pollution among Bay Area communities. To protect the climate, the 2017 Clean Air Plan defines a vision for transitioning the region to a post-carbon economy needed to achieve ambitious greenhouse gas (GHG) reduction targets for 2030 and 2050 and provides a regional climate protection strategy that will put the Bay Area on a pathway to achieve those GHG reduction targets. The 2017 Clean Air Plan contains district-wide control measures to reduce ozone precursor emissions (i.e., ROG and NO_X), particulate matter, TACs, and greenhouse gas emissions. The Bay Area 2017 Clean Air Plan updates the Bay Area 2010 Clean Air Plan in accordance with the requirements of the California Clean Air Act to implement "all feasible measures" to reduce ozone; provides a control strategy to reduce ozone, PM, TACs, and greenhouse gases in a single, integrated plan; reviews progress in improving air quality in recent years; and establishes emission control measures to be adopted or implemented in both the short term and through 2050.

The 2017 Clean Air Plan includes a wide range of control measures designed to decrease emissions of the air pollutants that are most harmful to Bay Area residents, such as particulate matter, ozone, and toxic air contaminants; to reduce emissions of methane and other "super-GHGs" that are potent climate pollutants in the near-term; and to decrease emissions of carbon dioxide by reducing fossil fuel combustion.

The following BAAQMD rules would limit emissions of air pollutants from construction and operation of the Project:

- Regulation 6, Rule 3 – Wood-Burning Devices. The purpose of this rule is to limit emissions of particulate matter and visible emissions from wood-burning devices used for primary heat, supplemental heat or ambiance.

- Regulation 8, Rule 3 – Architectural Coatings. This rule governs the manufacture, distribution, and sale of architectural coatings and limits the reactive organic gases content in paints and paint solvents. Although this rule does not directly apply to the project, it does dictate the ROG content of paint available for use during the construction.

- Regulation 8, Rule 15 – Emulsified and Liquid Asphalts. This rule dictates the reactive organic gases content of asphalt available for use during construction through regulating the sale and use of asphalt and limits the ROG content in asphalt. Although this rule does not directly apply to the project, it does dictate the ROG content of asphalt for use during the construction.

- Regulation 9, Rule 8 – Organic Compounds. This rule limits the emissions of nitrogen oxides and carbon monoxide from stationary internal combustion engines with an output rated by the manufacturer at more than 50 brake horsepower.

BAAQMD prepared an Ozone Attainment Demonstration Plan to satisfy the federal 1-hour ozone planning requirement because of the Air Basin's nonattainment for federal and State ozone standards. The U.S. EPA revoked the 1-hour ozone standard and adopted an 8-hour ozone standard. The BAAQMD will address the new federal 8-hour ozone planning requirements once they are established.

3.3 LOCAL

City of San José General Plan

The San José General Plan includes the following policies intended to control or reduce air pollution impacts:

Goal MS – 10: Minimize air pollutants from new and existing development.

Policy MS-10.1: Assess projected air emissions from new development in conformance with the BAAQMD CEQA Guidelines and relative to state and federal standards. Identify and implement feasible air emissions reduction measures.

Policy MS – 10.2: States that the City should take into consideration the cumulative air quality impacts from proposed developments for proposed land use designation changes and new development, consistent with the region's Clean Air Plan and State law.

MS-10.4: Encourage effective regulation of mobile and stationary sources of air pollution, both inside and outside of San José. In particular, support Federal and State regulations to improve automobile emission controls.

Policy MS – 10.6: Encourage mixed land use development near transit lines and provide retail and other types of service-oriented uses within walking distance to minimize automobile dependent development.

Policy MS – 10.7: Encourage regional and statewide air pollutant emission reduction through energy conservation to improve air quality.

Action MS – 10.11: Enforce the City's wood-burning appliance ordinance to limit air pollutant emissions from residential and commercial buildings.

Goal MS – 11: Minimize exposure of people to air pollution and toxic air contaminants such as ozone, carbon monoxide, lead, and particulate matter

Policy MS – 11.1: Require completion of air quality modeling for sensitive land uses such as new residential developments that are located near sources of pollution such as freeways and industrial uses. Require new residential development projects and projects categorized as sensitive receptors to incorporate effective mitigation into project designs or be located an adequate distance from sources of toxic air contaminants (TACs) to avoid significant risks to health and safety.

Policy MS-11.2: For projects that emit toxic air contaminants, require project proponents to prepare health risk assessments in accordance with BAAQMD-recommended procedures as part of environmental review and employ effective mitigation to reduce possible health risks to a less than significant level. Alternatively, require new projects (such as, but not limited to, industrial, manufacturing, and processing facilities) that are sources of TACs to be located an adequate distance from residential areas and other sensitive receptors.

Policy MS-11.6: Develop and adopt a comprehensive Community Risk Reduction Plan that includes: baseline inventory of toxic air contaminants (TACs) and particulate matter smaller than 2.5 microns (PM2.5), emissions from all sources, emissions reduction targets, and enforceable emission reduction strategies and performance measures. The Community Risk Reduction Plan will include enforcement and monitoring tools to ensure regular review of progress toward the emission reduction targets, progress reporting to the public and responsible agencies, and periodic updates of the plan, as appropriate.

Policy MS-11.7: Consult with BAAQMD to identify stationary and mobile TAC sources and determine the need for and requirements of a health risk assessment for proposed developments.

Policy MS-11.8: For new projects that generate truck traffic, require signage which reminds drivers that the State truck idling law limits truck idling to five minutes.

Goal MS – 12: Minimize and avoid exposure of residents to objectionable odors.

Policy MS-12.2: Require new residential development projects and projects categorized as sensitive receptors to be located an adequate distance from facilities that are existing and potential sources of odor. An adequate separation distance will be determined based upon the type, size and operations of the facility

Goal MS – 13: Minimize air pollutants during demolition and construction activities.

Policy MS-13.1: Include dust, particulate matter, and construction equipment exhaust control measures as conditions of approval for subdivision maps, site development and planned development permits, grading permits, and demolition permits. At minimum, conditions shall conform to construction mitigation measures recommended in the current BAAQMD CEQA Guidelines for the relevant project size and type.

Policy MS-13.3: Construction and/or demolition projects that have the potential to disturb asbestos (from soil or building material) shall comply with all the requirements of the California Air Resources Board's air toxic control measures (ATCMs) for Construction, Grading, Quarrying, and Surface Mining Operations.

Action MS-13.4: Adopt and periodically update dust, particulate, and exhaust control standard measures for demolition and grading activities to include on project plans as

conditions of approval based upon construction mitigation measures in the BAAQMD CEQA Guidelines.

Action MS-13.5: Prevent silt loading on roadways that generates particulate matter air pollution by prohibiting unpaved or unprotected access to public roadways from construction sites.

4 SIGNIFICANCE CRITERIA AND METHODOLOGY

4.1 AIR QUALITY THRESHOLDS

State CEQA Guidelines Appendix G

Based upon the criteria derived from State CEQA Guidelines Appendix G, a project normally would have a significant effect on the environment if it would:

AQ-1 Conflict with or obstruct implementation of the applicable air quality plan?

AQ-2 Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?

AQ-3 Expose sensitive receptors to substantial pollutant concentrations?

AQ-4 Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

Air Quality Thresholds

Under the California Environmental Quality Act (CEQA), the Bay Area Air Quality Management District (BAAQMD) is an expert commenting agency on air quality within its jurisdiction or impacting its jurisdiction. Under the Federal Clean Air Act (FCAA), the BAAQMD has adopted Federal attainment plans for O_3 and $PM_{2.5}$. The BAAQMD reviews projects to ensure that they would not: (1) cause or contribute to any new violation of any air quality standard; (2) increase the frequency or severity of any existing violation of any air quality standard; or (3) delay timely attainment of any air quality standard or any required interim emission reductions or other milestones of any Federal attainment plan.

The BAAQMD Options and Justification Report (dated October 2009) establishes thresholds based on substantial evidence, and the thresholds are consistent with the thresholds outlined within the 2010/2011 BAAQMD CEQA Air Quality Guidelines (and current 2017 CEQA Air Quality Guidelines). The thresholds have been developed by the BAAQMD in order to attain State and Federal ambient air quality standards. Therefore, projects below these thresholds would not violate an air quality standard and would not contribute substantially to an existing or projected air quality violation.

The BAAQMD's CEQA Air Quality Guidelines provides significance thresholds for both construction and operation of projects. Ultimately the lead agency determines the thresholds of significance for impacts. However, if a project proposes development in excess of the established thresholds, as outlined in Table 5: Bay Area Air Quality Management District Emissions Thresholds, a significant air quality impact may occur and additional analysis is warranted to fully assess the significance of impacts.

Table 5: Bay Area Air Quality Management District Emissions Thresholds

Criteria Air Pollutants and Precursors (Regional)	Construction-Related	Operational-Related	
	Average Daily Emissions (pounds/day)	Average Daily Emission (pounds/day)	Annual Average Emission (tons/year)
Reactive Organic Gases (ROG)	54	54	10
Nitrogen Oxides (NO_X)	54	54	10
Coarse Particulates (PM_{10})	82 (exhaust)	82	15
Fine Particulates ($PM_{2.5}$)	54 (exhaust)	54	10
PM_{10} / $PM_{2.5}$ (fugitive dust)	Best Management Practices	None	
Local CO	None	9.0 ppm (8-hour average) 20.0 ppm (1-hour average)	
Source: Bay Area Air Quality Management District, 2017 CEQA Air Quality Guidelines, 2017.			

4.2 METHODOLOGY

This air quality impact analysis considers construction and operational impacts associated with the Project. Construction equipment, trucks, worker vehicles, and ground-disturbing activities associated with Project construction would generate emissions of criteria air pollutants and precursors. Air quality impacts were assessed according to CARB and BAAQMD recommended methodologies. Where criteria air pollutant quantification was required, emissions were modeled using the California Emissions Estimator Model (CalEEMod). CalEEMod is a statewide land use emissions computer model designed to quantify potential criteria pollutant emissions associated with both construction and operations from a variety of land use projects.

5 POTENTIAL IMPACTS AND MITIGATION

5.1 AIR QUALITY ANALYSIS

Threshold AQ-1: Would the Project conflict with or obstruct implementation of the applicable air quality plan?

The most recently adopted plan, the Clean Air Plan, in the Basin outlines how the San Francisco area will attain air quality standards, reduce population exposure and protect public health, and reduce GHG emissions.

The Clean Air Plan assumptions for projected air emissions and pollutants in the City of San José are based on the Envision San José 2040 General Plan Land Use Designation Map which designates the Project site use as "Mixed Use Commercial". The Project site is zoned "Commercial General". The CG Zoning District allows for mixed-use residential/commercial in an urban village area. The Project would be consistent with the development assumptions for the land use. Therefore, the Project is consistent with the General Plan assumptions. The proposed Project consists of 27 residential units consistent with the Envision San José 2040 General Plan Supplemental Program EIR land use designation and would not increase the regional population growth or cause changes in vehicle traffic that would obstruct implementation of the Clean Air Plan in the San Francisco Bay Area Basin.

As described below, construction and operational air quality emissions generated by the proposed Project would not exceed the BAAQMD's emissions thresholds. Since the proposed Project will not exceed these thresholds, the proposed Project would not be considered by the BAAQMD to be a substantial emitter of criteria air pollutants, and would not contribute to any non-attainment areas in the Basin.

The California Department of Finance estimates 3.21 residents per household in San José. The project proposes 27 residential units, which would result in approximately 86 residents. The City calculates one job per 300 SF of retail/commercial/office space. Therefore, 14,181 SF of retail/commercial/office space would result in 47.27 jobs within the City. ABAG predicts that job opportunities in the City of San José will grow from 387,510 in 2010 to 554,875 by 2040. As of 2015, there are 359,128 job opportunities in the City[1]. The Project is consistent with the City General Plan, therefore the addition of 47 new jobs would be within the ABAG growth projections for the City of approximately 554,875 job by 2040 and would not exceed the ABAG growth projections for the City As identified in the General Plan FEIR, the City currently has an existing ratio of jobs per resident of 0.8. The General Plan FEIR identified that at full buildout of the General Plan, the existing ratio of jobs per employed resident would be increased to a job per employed resident ratio of 1.3. The increase in jobs will incrementally decrease the overall jobs/housing imbalance within the City. The Project would not exceed the level of population or housing in regional planning efforts. Additionally, the proposed Project would not significantly affect regional vehicle miles travelled pursuant to the CEQA Guidelines (Section 15206). Therefore, population growth from the Project would be consistent with ABAG's projections for the City and with the City's General Plan.

A project would be consistent with the 2017 Clean Air Plan Progress Report if it would not exceed the growth assumptions in the plan. The primary method of determining consistency with the 2017 Clean Air

1 City of San José. Envision San José 2040 General Plan DEIR.

Plan growth assumptions is consistency with the General Plan land use designations and zoning designations for the site. It should be noted that the Clean Air Plan does not make a specific assumption for development on the site, but bases assumptions on growth in population, travel, and business, based on socioeconomic forecasts. As noted above, the Project would not exceed the growth assumptions in the General Plan. Therefore, the growth assumptions in the Clean Air Plan would not be exceeded.

Given that approval of a project would not result in significant and unavoidable air quality impacts after the application of all feasible project conditions, the Project is considered consistent with the 2017 Clean Air Plan. In addition, projects are considered consistent with the 2017 Clean Air Plan if they incorporate all applicable and feasible control measures from the 2017 Clean Air Plan and would not disrupt or hinder implementation of any 2017 Clean Air Plan control measures.

The Project is consistent with the 2017 Clean Air Plan policies that are applicable to the Project site. As discussed in Table 6: Project Consistency with Applicable Clean Air Plan Control Measures, the Project would comply with City, State, and regional requirements.

Table 6: Project Consistency with Applicable Clean Air Plan Control Measures

Control Measure	Project Consistency
Stationary Source Control Measures	
SS21: New Source Review of Toxic Air Contaminants	**Consistent**. The Project would not include uses that would generate new sources of TAC to impacts to the nearby sensitive receptors.
SS25: Coatings, Solvents, Lubricants, Sealants and Adhesives	**Consistent**. The Project would comply with Regulation 8, Rule 3: Architectural Coatings, which would dictate the ROG content of paint available for use during construction (also required per City of San José Environmental Standard Conditions).
SS26: Surface Prep and Cleaning Solvent	
SS29: Asphaltic Concrete	**Consistent**. Paving activities associated with the Project would be required to utilize asphalt that does not exceed BAAQMD emission standards in Regulation 8, Rule 15.
SS30: Residential Fan Type Furnaces	**Consistent**. BAAQMD is the responsible party for implementation of this regulation. The Project would use the latest central furnaces that comply with the applicable regulations. The Project would not conflict with BAAQMD's implementation of that measure.
SS31: General Particulate Matter Emissions Limitation	**Consistent**. This control measure is implemented by the BAAQMD through Regulation 6, Rule 1. This Rule Limits the quantity of particulate matter in the atmosphere by controlling emission rates, concentration, visible emissions and opacity. The Project would be required to comply with applicable BAAQMD rules.
SS32: Emergency Back-up Generators	**Consistent**. Use of back-up generators by the Project is currently not anticipated. However, if emergency generators were to be installed they would be required to meet the BAAQMD's emissions standards for back-up generators.
SS33: Commercial Cooking Equipment	**Consistent**. The Project does include the potential development of additional restaurant facilities. However, if any kitchen facilities or restaurants occur and they install a charbroiler, a catalytic oxidizer system must also be installed pursuant to BAAQMD Rule 6-2.
SS34: Wood Smoke	**Consistent**. The Project would comply with BAAQMD Regulation 6, Rule 3 and prohibit the construction of wood burning appliances/ fireplaces.

Control Measure	Project Consistency
SS36: Particulate Matter from Trackout	**Consistent**. Mud and dirt that may be tracked out onto the nearby public roads during construction activities would be removed promptly by the contractor based on BAAQMD's requirements.
SS37: Particulate Matter from Asphalt Operations	**Consistent**. Paving and roofing activities associated with the Project would be required to utilize best management practices to minimize the particulate matter created from the transport and application of road and roofing asphalt.
SS38: Fugitive Dust	**Consistent**. Material stockpiling and track out during grading activities as well as smoke and fumes from paving and roofing asphalt operations would be required to utilize best management practices, such as watering exposed surfaces twice a day, covering haul trucks, keeping vehicle speeds on unpaved roads under 15 mph, to minimize the creation of fugitive dust. See City of San José Environmental Standard Conditions for a more detailed list.
SS40: Odors	**Consistent**. The Project would comply with BAAQMD Regulation 7 to strengthen odor standards and enhance enforceability.
Transportation Control Measures	
TR2: Trip Reduction Programs	**Consistent**. The Project would include a number of travel demand measures (TDM) such as mix of land uses and increased residential density. These TDM Programs would help reduce vehicle miles traveled (VMT) and mobile greenhouse gas emissions.
TR8: Ridesharing and Last-Mile Connections	
TR9: Bicycle and Pedestrian Access Facilities	**Consistent**. There is currently pedestrian access to/from the Project site via sidewalks along Olin Avenue and Winchester Boulevard. Pedestrian activities within Santana Row/Valley Fair Urban Village area is substantial. Bicyclist facilities in the area include Winchester Boulevard and Monroe Street which both provide Class II bike lanes with buffered striping to separate vehicle and bike travel. On Stevens Creek Boulevard bicyclists either share the traffic lane or ride on the sidewalk. The proposed Project would include 24 bicycle parking spaces as well as bicycle and pedestrian access on the driveway.
TR10: Land Use Strategies	**Consistent**. This measure is a BAAQMD funding tool to maintain and disseminate information on current climate action plans and other local best practices and collaborate with regional partners to identify innovative funding mechanisms to help local governments address air quality and climate change in their general plans. In addition, the proposed Project site is located within 2,000 feet of transit stops at Stevens Creek Boulevard/Winchester Boulevard and Winchester Boulevard/Olsen Drive intersections. Therefore, these employment opportunities would be easily accessible via transit, furthering the City's General Plan goals to support a healthy community, reduce traffic congestion and decrease greenhouse gas emissions and energy consumption. The Project would not conflict with implementation of this measure.
TR13: Parking Policies	**Consistent**. The proposed Project would create approximately 93 new parking spaces. The proposed parking is sufficient for the proposed uses.

Control Measure	Project Consistency
TR19: Medium and Heavy Duty Trucks	**Not Applicable**. The project does not involve warehousing or industrial uses that would generate substantial truck trips. The Project would not conflict with the implementation of this measure.
TR22: Construction, Freight and Farming Equipment	**Consistent**. The Project would comply through implementation of mitigation measure AQ-1, which requires construction equipment (graders and scrapers) to meet the CARB Tier 4 emissions standards.
Energy and Climate Control Measures	
EN1: Decarbonize Electricity Generation	**Consistent**. The Project would be constructed in accordance with the latest California Building Code and green building regulations/CalGreen and with the City of San Jose's California Green Building Standards Code. Additionally, the building would be LEED certified as required by City Council policy. The Project would achieve LEED NC v4 certification through the USGBC.
EN2: Decrease Electricity Demand	
Buildings Control Measures	
BL1: Green Buildings	**Consistent**. The Project would be constructed in accordance with the latest California Building Code and green building regulations/CalGreen. Additionally, the building would achieve LEED NC v4 certification through the USGBC.
L2: Decarbonize Buildings	
BL4: Urban Heat Island Mitigation	**Consistent**. The Project would demolish an existing gas station and associated asphalt surfaces. The Project would include some open space and landscaping for passive recreational uses serving the Project.
Natural and Working Lands Control Measures	
NW2: Urban Tree Planting	**Not Applicable**. The Project site is in an existing gas station. The Project includes landscaping with native vegetation and trees.
Waste Management Control Measures	
WA1: Landfills	**Consistent**. The waste service provider for the Project would be required to meet the AB 341 and SB 939, 1374, and 1383 requirements that require waste service providers to divert and recycle waste. Per Cal Green requirements the Project would recycle construction waste.
WA3: Green Waste Diversion	
WA4: Recycling and Waste Reduction	
Water Control Measures	
WR2: Support Water Conservation	**Consistent**. The Project would implement water conservation measures and low flow fixtures as required by Title 24, CalGreen, and the City of San Jose's Municipal Code Section 15-11 Water Efficient Landscaping Ordinance, which includes various specifications for plant types, water features, and irrigation design etc.

Source: BAAQMD, Clean Air Plan, 2017 and Kimley-Horn & Associates, 2019.

The addition of 47 new jobs as a result of the proposed Project would be within the ABAG growth projections for the City of approximately 554,875 jobs by 2040. Therefore, population growth from the Project would be consistent with ABAG's projections for the City and with the City's General Plan. In addition, the City of San José is "housing-rich", and the increase of jobs would promote a jobs/housing balance that is closer to 1 to 1. Population growth from the Project would be consistent with ABAG's projections for the City and with the City's General Plan. Thus, the Project not exceed the assumptions in the General Plan or the Clean Air Plan.

Mitigation Measures: No mitigation is required.

Level of Significance: Less than significant impact.

Threshold AQ-2: Would the Project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?

Construction Emissions

Project construction activities would generate short-term emissions of criteria air pollutants. The criteria pollutants of primary concern within the Project area include ozone-precursor pollutants (i.e., ROG and NO_x) and PM_{10} and $PM_{2.5}$. Construction-generated emissions are short term and temporary, lasting only while construction activities occur, but would be considered a significant air quality impact if the volume of pollutants generated exceeds the BAAQMD's thresholds of significance.

Construction results in the temporary generation of emissions during demolition, site preparation, site grading, road paving, motor vehicle exhaust associated with construction equipment and worker trips, and the movement of construction equipment, especially on unpaved surfaces. Emissions of airborne particulate matter are largely dependent on the amount of ground disturbance associated with site preparation activities, as well as weather conditions and the appropriate application of water.

The duration of construction activities associated with the Project are estimated to last approximately 19 months. The Project's construction-related emissions were calculated using the BAAQMD-approved CalEEMod computer program, which is designed to model emissions for land use development projects, based on typical construction requirements. Project demolition, site preparation, and grading are anticipated to begin in Spring 2021 and last approximately four months. The Project would export approximately 25,000 cubic yards (cy) of soil. Paving was modeled to be completed by end of Summer 2021 and Architectural Coating to be completed Summer 2022. Building construction was estimated to begin Summer 2021 and last approximately 13 months to Fall 2022. The exact construction timeline is unknown, however to be conservative, earlier dates were utilized in the modeling. This approach is conservative given that emissions factors decrease in future years due to regulatory and technological improvements and fleet turnover. See Appendix A: Air Quality Data for additional information regarding the construction assumptions used in this analysis. The Project's predicted maximum daily construction-related emissions are summarized in Table 7: Construction-Related Emissions.

Table 7: Construction-Related Emissions

Construction Year	Pollutant (maximum pounds per day)[1]					
	Reactive Organic Gases (ROG)	Nitrogen Oxide (NO_x)	Exhaust		Fugitive Dust	
			Coarse Particulate Matter (PM_{10})	Fine Particulate Matter ($PM_{2.5}$)	Coarse Particulate Matter (PM_{10})	Fine Particulate Matter ($PM_{2.5}$)
Unmitigated Scenario[1]						
2021	2.46	40.72	1.05	0.98	8.07	3.77
2022	10.39	17.45	0.79	0.76	0.55	0.15
Maximum Daily Construction	**10.39**	**40.72**	**1.05**	**0.98**	**8.07**	**3.77**
BAAQMD Significance Threshold [2, 3]	*54*	*54*	*82*	*54*	*N/A*	*N/A*

Construction Year	Pollutant (maximum pounds per day)[1]					
	Reactive Organic Gases (ROG)	Nitrogen Oxide (NO_x)	Exhaust		Fugitive Dust	
			Coarse Particulate Matter (PM_{10})	Fine Particulate Matter ($PM_{2.5}$)	Coarse Particulate Matter (PM_{10})	Fine Particulate Matter ($PM_{2.5}$)
Unmitigated Scenario[1]						
Exceed BAAQMD Threshold?	**No**	**No**	**No**	**No**	**N/A**	**N/A**
Mitigated Scenario[2]						
2021	1.31	22.08	0.25	0.25	4.21	1.82
2022	9.40	6.84	0.22	0.22	0.51	0.14
Maximum Daily Construction	**9.40**	**22.08**	**0.25**	**0.25**	**4.21**	**1.82**
BAAQMD Significance Threshold [2, 3]	*54*	*54*	*82*	*54*	*N/A*	*N/A*
Exceed BAAQMD Threshold?	**No**	**No**	**No**	**No**	**N/A**	**N/A**

1. Emissions were calculated using CalEEMod. Mitigated emissions include compliance with the BAAQMD's Basic Construction Mitigation Measures Recommended for All Projects and the City of San José Environmental Standard Conditions. These measures include the following: water exposed surfaces two times daily; cover haul trucks; clean track outs with wet powered vacuum street sweepers; limit speeds on unpaved roads to 15 miles per hour; complete paving as soon as possible after grading; limit idle times to 5 minutes; properly maintain mobile and other construction equipment; and post a publicly visible sign with contact information to register dust complaints and take corrective action within 48 hours. Additionally, the mitigated scenario would implement Mitigation Measure AQ-1, which would require all off-road diesel powered construction equipment meet CARB Tier 4 Final emissions standards.
2. Bay Area Air Quality Management District, California Environmental Quality Act Air Quality Guidelines, updated May 2017.
3. BMPs = Best Management Practices. The BAAQMD recommends the implementation of all Basic Construction Mitigation Measures, whether or not construction-related emissions exceed applicable significance thresholds. Implementation of Basic Construction Mitigation measures are considered to mitigate fugitive dust emissions to be less than significant.

Source: Refer to the CalEEMod outputs provided in Appendix A, *Air Quality Modeling Data*.

Fugitive Dust Emissions. Fugitive dust emissions are associated with land clearing, ground excavation, cut-and-fill operations, demolition, and truck travel on unpaved roadways. Dust emissions also vary substantially from day to day, depending on the level of activity, the specific operations, and weather conditions. Fugitive dust emissions may have a substantial, temporary impact on local air quality. In addition, fugitive dust may be a nuisance to those living and working in the Project vicinity. Uncontrolled dust from construction can become a nuisance and potential health hazard to those living and working nearby. The BAAQMD recommends the implementation of all Basic Construction Control Measures, whether or not construction-related emissions exceed applicable significance and the project will implement the BAAQMD Basic Construction Control Measures as a Standard Permit Condition to control dust at the project site during all phases of construction.

Standard Permit Condition

These measures would be placed on the project plan documents prior to the issuance of any grading permits for the proposed project.

i. Water active construction areas at least twice daily or as often as needed to control dust emissions.
ii. Cover trucks hauling soil, sand, and other loose materials and/or ensure that all trucks hauling such materials maintain at least two feet of freeboard.

iii. Remove visible mud or dirt track-out onto adjacent public roads using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited.
iv. Enclose, cover, water twice daily or apply non-toxic soil binders to exposed stockpiles (dirt, sand, etc.).
v. Pave new or improved roadways, driveways, and sidewalks as soon as possible.
vi. Lay building pads as soon as possible after grading unless seeding or soil binders are used.
vii. Replant vegetation in disturbed areas as quickly as possible.
viii. Install sandbags or other erosion control measures to prevent silt runoff to public roadways.
ix. Minimizing idling times either by shutting off equipment when not in use, or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations). Provide clear signage for construction workers at all access points.
x. Maintain and properly tune construction equipment in accordance with manufacturer's specifications. Check all equipment by a certified mechanic and record a determination of running in proper condition prior to operation.
xi. Post a publicly visible sign with the telephone number and person to contact at the lead agency regarding dust complaints.

Construction Equipment and Worker Vehicle Exhaust. Exhaust emission factors for typical diesel-powered heavy equipment are based on the CalEEMod program defaults. Variables factored into estimating the total construction emissions include: level of activity, length of construction period, number of pieces/types of equipment in use, site characteristics, weather conditions, number of construction personnel, and the amount of materials to be transported onsite or offsite. Exhaust emissions from construction activities include emissions associated with the transport of machinery and supplies to and from the Project site, emissions produced on site as the equipment is used, and emissions from trucks transporting materials and workers to and from the site. Emitted pollutants would include ROG, NO_X, PM_{10}, and $PM_{2.5}$. The BAAQMD recommends the implementation of all Basic Construction Control Measures, whether or not construction-related emissions exceed applicable significance thresholds. The See the above listed Standard Permit Conditions. As detailed in Table 7, unmitigated project construction emissions would be below BAAQMD thresholds and construction emissions would result in a less than significant impact. However, the proposed project would be required to use construction equipment that would meet CARB Tier 4 Final emissions standards in order to reduce a potentially significant impact associated with health risks from $PM_{2.5}$ diesel exhaust construction emissions, detailed in Impact 4.3(c) below. Implementation of Mitigation Measure AQ-1, detailed in Threshold AQ-3 below, would further reduce construction emissions, as detailed in Table 7. Regardless of Mitigation Measure AQ-1, construction air quality impacts would be less than significant.

ROG Emissions. In addition to gaseous and particulate emissions, the application of asphalt and surface coatings creates ROG emissions, which are O_3 precursors. In accordance with the methodology prescribed by the BAAQMD, the ROG emissions associated with paving have been quantified with CalEEMod.

The highest concentration of ROG emissions would be generated from architectural coating beginning in summer 2021 and lasting approximately three months. This phase includes the interior and exterior painting as well as striping of all paved parking areas and driveways. Paints would be required to comply

with BAAQMD Regulation 8, Rule 3: Architectural Coating. Regulation 8, Rule 3 provides specifications on painting practices and regulates the ROG content of paint.

Summary. As shown in Table 7 all criteria pollutant emissions would remain below their respective thresholds. BAAQMD considers fugitive dust emissions to be potentially significant without implementation of the Construction Control Measures which help control fugitive dust. NO_X emissions are primarily generated by engine combustion in construction equipment, haul trucks, and employee commuting, requiring the use of newer construction equipment with better emissions controls would reduce construction-related NO_X emissions. With implementation of the Standard Permit Condition and project condition of approval, listed above, the proposed Project's construction would not worsen ambient air quality, create additional violations of federal and state standards, or delay the Basin's goal for meeting attainment standards. Impacts would be less than significant.

Operational Emissions

Operational emissions for mixed-use developments are typically generated from mobile sources (burning of fossil fuels in cars); energy sources (cooling, heating, and cooking); and area sources (landscape equipment and household products). Table 8: Maximum Daily Project Operational Emissions shows that the Project's maximum emissions would not exceed BAAQMD operational thresholds.

Table 8: Maximum Daily Project Operational Emissions

Emissions Source	Pollutant (maximum pounds per day)[1]					
	Reactive Organic Gases (ROG)	Nitrogen Oxides (NO_X)	Exhaust		Fugitive Dust	
			Coarse Particulate Matter (PM_{10})	Fine Particulate Matter ($PM_{2.5}$)	Coarse Particulate Matter (PM_{10})	Fine Particulate Matter ($PM_{2.5}$)
Area	1.11	0.19	0.03	0.03	0.00	0.00
Energy	0.01	0.07	0.01	0.01	0.00	0.00
Mobile	0.59	1.76	0.01	0.01	1.39	0.37
Total Project Emissions	**1.70**	**2.01**	**0.04**	**0.04**	**1.39**	**0.37**
BAAQMD Significance Threshold[2]	*54*	*54*	*82*	*54*	*N/A*	*N/A*
BAAQMD Threshold Exceeded?	**No**	**No**	**No**	**No**	**N/A**	**N/A**

1. Emissions were calculated using CalEEMod.
2. Bay Area Air Quality Management District, *California Environmental Quality Act Air Quality Guidelines*, 2017.

Source: Refer to the CalEEMod outputs provided in Appendix A, *Air Quality and GHG Data*.

Area Source Emissions Area source emissions would be generated due to an increased demand for consumer products, architectural coating, hearths, and landscaping. As shown in Table 8, area source emissions from the Project would not exceed BAAQMD thresholds.

Energy Source Emissions. Energy source emissions would be generated as a result of electricity and natural gas (non-hearth) usage associated with the Project. The primary use of electricity and natural gas by the project would be for space heating and cooling, water heating, ventilation, lighting, appliances, and

electronics. As shown in Table 8, energy source emissions from the Project would not exceed BAAQMD thresholds for ROG, NO_X, PM_{10}, and $PM_{2.5}$.

Mobile Sources. Mobile sources are emissions from motor vehicles, including tailpipe and evaporative emissions. Depending upon the pollutant being discussed, the potential air quality impact may be of either regional or local concern. For example, ROG, NO_X, PM_{10}, and $PM_{2.5}$ are all pollutants of regional concern (NO_X and ROG react with sunlight to form O_3 [photochemical smog], and wind currents readily transport PM_{10} and $PM_{2.5}$). However, CO tends to be a localized pollutant, dispersing rapidly at the source.

Project-generated vehicle emissions have been estimated using CalEEMod. Trip generation rates associated with the Project were based on the Project Transportation Analysis prepared by Kimley-Horn (2019). Based on the Transportation Analysis, the Project would result in a gross total of 582 daily vehicle trips. However, with applicable trip reductions including internal capture and location-based mode-share the Project would result in 501 new trips. The Transportation Analysis takes further credit for the existing land uses on the Project site which anticipates the proposed Project to generate a net total of 187 additional daily trips to the roadway network. However, to be conservative this Study used the 501 vehicle trips for the Air Quality analysis. Table 8 shows the net project emissions generated by vehicle traffic associated with the Project would not exceed established BAAQMD regional thresholds.

Total Operational Emissions. As indicated in Table 8, net project operational emissions would not exceed BAAQMD thresholds. As noted above, the BAAQMD has set its CEQA significance threshold based on the trigger levels for the federal NSR Program and BAAQMD's Regulation 2, Rule 2 for new or modified sources. The NSR Program was created to ensure projects are consistent with attainment of health-based federal ambient air quality standards. The federal ambient air quality standards establish the levels of air quality necessary, with an adequate margin of safety, to protect the public health. Therefore, the Project would not violate any air quality standards or contribute substantially to an existing or projected air quality violation and no criteria pollutant health impacts would occur. Project operational emissions would be less than significant.

Cumulative Short-Term Emissions

The SFBAAB is designated nonattainment for O_3, PM_{10}, and $PM_{2.5}$ for State standards and nonattainment for O_3 and $PM_{2.5}$ for Federal standards. As discussed above, the Project's construction-related emissions by themselves would not have the potential to exceed the BAAQMD significance thresholds for criteria pollutants.

Since these thresholds indicate whether an individual project's emissions have the potential to affect cumulative regional air quality, it can be expected that the Project-related construction emissions would not be cumulatively considerable. The BAAQMD recommends Basic Construction Control Measures for all projects whether or not construction-related emissions exceed the thresholds of significance. Compliance with BAAQMD construction-related mitigation requirements are considered to reduce cumulative impacts at a Basin-wide level. As a result, construction emissions associated with the Project would not result in a cumulatively considerable contribution to significant cumulative air quality impacts.

Cumulative Long-Term Impacts

The BAAQMD has not established separate significance thresholds for cumulative operational emissions. The nature of air emissions is largely a cumulative impact. As a result, no single project is sufficient in size, by itself, to result in nonattainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. The BAAQMD developed the operational thresholds of significance based on the level above which a project's individual emissions would result in a cumulatively considerable contribution to the Basin's existing air quality conditions. Therefore, a project that exceeds the BAAQMD operational thresholds would also be a cumulatively considerable contribution to a significant cumulative impact.

As shown in Table 8, the Project's operational emissions would not exceed BAAQMD thresholds. As a result, operational emissions associated with the Project would not result in a cumulatively considerable contribution to significant cumulative air quality impacts.

Mitigation Measures: No mitigation is required.

Level of Significance: Less than significant impact with compliance with standard conditions and City policies.

Threshold AQ-3: Would the Project expose sensitive receptors to substantial pollutant concentrations?

Sensitive land uses are defined as facilities or land uses that include members of the population that are particularly sensitive to the effects of air pollutants, such as children, the elderly, and people with illnesses. Examples of these sensitive receptors are residences, schools, hospitals, and daycare centers. Sensitive receptors in the area include single-family residences approximately 20 feet to the west on Olin Avenue and mixed-use approximately 150 feet east across Winchester Boulevard.

Toxic Air Contaminants

Construction equipment and associated heavy-duty truck traffic generate diesel exhaust, which is a known toxic air contaminants (TAC). Diesel exhaust from construction equipment operating at the site poses a health risk to nearby sensitive receptors. The closest sensitive receptor to the Project site are the residences to the west of the Project site. BAAQMD provides guidance for evaluating impacts from TACs in its CEQA Air Quality Guidelines document. As noted therein, an incremental cancer risk of greater than 10 cases per million at the Maximally Exposed Individual (MEI) will result in a significant impact. The BAAQMD considers exposure to annual $PM_{2.5}$ concentrations that exceed 0.3 $\mu g/m^3$ from a single source to be significant. The BAAQMD significance threshold for non-cancer hazards is 1.0.

Stationary sources within a 1,000-foot radius of the Project site were identified using BAAQMD's Stationary Source Screening Analysis Tools and consultation with the BAAQMD. BAAQMD confirmed four sources exist within 1,000-feet of the Project site and are further evaluated in the Health Risk Assessment (HRA) prepared by Kimley-Horn 2019.

Construction-Related Diesel Particulate Matter

Project construction would generate diesel particulate matter (DPM) emissions from the use of off-road diesel equipment required for grading and excavation, paving, and other construction activities. For

construction activity, DPM is the primary toxic air contaminant of concern. On-road diesel-powered haul trucks traveling to and from the construction area to deliver materials and equipment are less of a concern because they would not stay on the site for long durations. Diesel exhaust from construction equipment operating at the site poses a health risk to nearby sensitive receptors. The closest sensitive receptor are single-family residences approximately 20 feet west of the Project site.

The amount to which the receptors are exposed (a function of concentration and duration of exposure) is the primary factor used to determine health risk (i.e., potential exposure to TAC emission levels that exceed applicable standards). On-road diesel-powered haul trucks traveling to and from the construction area to deliver materials and equipment are less of a concern because they would not stay on the site for long durations.

Health-related risks associated with diesel-exhaust emissions are primarily linked to long-term exposure and the associated risk of contracting cancer. The use of diesel-powered construction equipment would be episodic and would occur in various phases throughout the Project site. Additionally, construction activities would limit idling to no more than five minutes (per City and State standards, see Standard Permit Condition in impact section above), which would further reduce nearby sensitive receptors' exposure to temporary and variable DPM emissions. Furthermore, even during the most intense year of construction, emissions of DPM would be generated from different locations on the Project site rather than in a single location because different types of construction activities (e.g., site preparation and building construction) would not occur at the same place at the same time.

$PM_{2.5}$ construction emissions rates in grams per second were calculated from the total annual mitigated on-site exhaust emissions reported in CalEEMod (0.09 tons unmitigated and 0.02 tons per year mitigated) total during construction. It should be noted that although construction would span over a couple of years, the modeling conservatively uses the year with the highest emission for each phase. Annual emissions were converted to grams per second and these emissions rates were input into AERSCREEN.

As noted above, maximum (worst case) $PM_{2.5}$ exhaust construction emissions over the entire construction period were used in AERSCREEN to approximate construction DPM emissions. Risk levels were calculated based on the California Office of Environmental Health Hazard Assessment (OEHHA) guidance document, Air Toxics Hot Spots Program Risk Assessment Guidelines (February 2015). Results of this assessment are summarized in Table 9: Construction Risk.

Table 9: Construction Risk

Exposure Scenario	Pollutant Concentration (µg/m³)	Maximum Cancer Risk (Risk per Million)	Chronic Noncancer Hazard	Acute Noncancer Hazard
Unmitigated Scenario				
Construction	0.096	30.70	0.020	0.40
Threshold	*0.3*	*10 in one million*	*1.0*	*1.0*
Threshold Exceeded	**No**	**Yes**	**No**	**No**
Mitigated Scenario				
Construction[1]	0.023	7.29	0.005	0.09
Threshold	*0.3*	*10 in one million*	*1.0*	*1.0*
Threshold Exceeded	**No**	**No**	**No**	**No**

1. Heavy-duty off-road construction equipment would also meet CARB Tier 4 Final emissions standards per Mitigation Measure AQ-1. Refer to Appendix A: Modeling Data.

Results of this assessment indicate that the maximum unmitigated concentration of $PM_{2.5}$ during construction would be 0.096 µg/m^3, which would not exceed the BAAQMD threshold of 0.3 µg/m^3. Incorporation of Mitigation Measure AQ-1, detailed below, would further reduce the project $PM_{2.5}$ concentration to 0.02 µg/m^3. The highest calculated carcinogenic risk from project construction, without implementation of Mitigation Measure AQ-1, would be 30.70 per million, which would exceed the BAAQMD threshold of 10 in one million. However, Mitigation Measure AQ-1 would reduce the project's maximum cancer risk to 7.29 per million, which is below the BAAQMD threshold of 10 in one million. Non-cancer hazards for DPM would be below BAAQMD threshold, with a chronic hazard index computed at 0.020 and an acute hazard index of 0.40 for unmitigated and 0.005 and an acute hazard index of 0.09 for mitigated. Acute and chronic hazards would be below the BAAQMD significance threshold of 1.0. As described above, worst-case construction risk levels based on screening-level modeling (AERSCREEN) and conservative assumptions would be below the BAAQMD's thresholds for mitigated construction with Mitigation Measure AQ-1. Therefore, construction risk levels would be less than significant with implementation of the identified Mitigation Measure AQ-1.

Mitigation Measures:

AQ-1 All mobile diesel-powered off-road equipment operating on-site for more than two days and larger than 50 horsepower shall, at a minimum, meet U.S. Environmental Protection Agency (EPA) particulate matter emissions standards for Tier 4 engines or equivalent. Prior to the issuance of any demolition permits, the project applicant shall submit a construction operations plan to the Supervising Planner of the Environmental Review Division of the Department of Planning, Building and Code Enforcement, which includes specifications of the equipment to be used during construction and confirmation this requirement is met. Such equipment could include concrete/industrial saws, graders, scrapers, rollers, cranes, forklifts, generator sets, and air compressors.

The construction contractor may use other measures to minimize construction period Diesel Particulate Matter (DPM) emissions to reduce the estimated cancer risk below the thresholds. The use of equipment that includes CARB-certified Level 4 Diesel Particulate Filters or alternatively-fueled equipment (i.e., non-diesel), added exhaust devices, or a combination of these measures could meet this requirement. If any of these alternative measures are proposed, the construction operations plans must include specifications of the equipment to be used during construction prior to the issuance of any demolition permits. If any of these alternative measures are proposed, the plan shall be accompanied by a letter signed by a qualified air quality specialist, verifying the equipment included in the plan meets the standards set forth in this mitigation measure.

Mobile Sources

The Project would place sensitive receptors within 1,000-feet of two major roadways (mobile TAC source). The $PM_{2.5}$ and total organic gases (TOG) for two nearby roadways (Winchester Boulevard and Stevens Creek Boulevard) were modeled in AERMOD. Based on the AERMOD outputs, the highest expected annual

average diesel PM_{10} emission concentrations from diesel truck traffic at the Project site would be 0.025 µg/m³ from Winchester Boulevard. The highest indoor concentration would be 0.008 µg/m³. As noted in Section 3 above, CCR Title 24 Part 6 requires new development to use MERV 13 air filtration on space conditioning systems and ventilation systems that provide outside air to the occupiable space of a dwelling. A MERV 13 filter has a particle removal efficiency in the range of 80-90 percent. A 80 percent removal efficiency was conservatively used for the purposes of this study. According to the U.S. EPA's *Exposure Factor Handbook* (2011), on average, people spend 90 percent of their time indoors. As residents are not always indoors, the filtration's overall effectiveness accounts for the time spent outdoors, which equates to approximately three hours per day. It is noted that this is a conservative assumption for this Project, as all of the time spent outdoors would not occur at the Project site. SC-1 below includes details on the ventilation requirements.

Project Condition of Approval:

The ventilation system shall be provided with air filter(s) having a designated efficiency equal to or greater than MERV 13 when tested in accordance with ASHRAE Standard 52.2, or a particle size efficiency rating equal to or greater than 50 percent in the 0.30-1.0 µm range and equal to or greater than 85 percent in the 1.0-3.0 µm range, when tested in accordance with Air-Conditioning, Heating, and Refrigeration Institute (AHRI) Standard 680 (California Energy Commission, 2019 Building Energy Efficiency Standards for Residential and Nonresidential Buildings, Section 150.0[m][12]).

As shown in Table 10: On-Site Health Risk, the highest calculated carcinogenic risk at the Project site would be 6.53 per million for future residents. The risk calculations are based on the pollutant concentration at the worst-case location and conservatively assume: no cleaner technology or lower emissions in future years, and 95th percentile breathing rates. Table 10 shows the cancer risk at the Project site would be under the 10 in one million threshold and would be less than significant.

Table 10: On-Site Health Risk

Exposure Scenario	Pollutant Concentration (µg/m³)	Maximum Cancer Risk (Risk per Million)	Chronic Noncancer Hazard	Acute Noncancer Hazard
Winchester Boulevard ($PM_{2.5}$)	0.008	6.53	0.0015	0.0101
Winchester (TOG)	0.121	0.63	0.0007	0.0002
Stevens Creek ($PM_{2.5}$)	0.001	0.96	0.0002	0.0021
Stevens Creek (TOG)	0.015	0.08	0.0001	0.00004
Total	**0.145**	**8.2**	**0.0025**	**0.01244**
Threshold	*NA*	*10 in one million*	*1.0*	*1.0*
Threshold Exceeded	**NA**	**No**	**No**	**No**

Refer to Appendix A: Modeling Data.

Carbon Monoxide Hotspots

Intersection Hotspots. The primary mobile-source criteria pollutant of local concern is carbon monoxide. Concentrations of CO are a direct function of the number of vehicles, length of delay, and traffic flow conditions. Transport of this criteria pollutant is extremely limited; CO disperses rapidly with distance

from the source under normal meteorological conditions. Under certain meteorological conditions, however, CO concentrations close to congested intersections that experience high levels of traffic and elevated background concentrations may reach unhealthy levels, affecting nearby sensitive receptors. Areas of high CO concentrations, or "hot spots," are typically associated with intersections that are projected to operate at unacceptable levels of service during the peak commute hours. CO concentration modeling is therefore typically conducted for intersections that are projected to operate at unacceptable levels of service during peak commute hours.

The SFBAAB is designated as in attainment for carbon monoxide (CO). Emissions and ambient concentrations of CO have decreased dramatically in the SFBAAB with the introduction of the catalytic converter in 1975. No exceedances of the CAAQS or NAAQS for CO have been recorded at nearby monitoring stations since 1991. As a result, the BAAQMD screening criteria notes that CO impacts may be determined to be less than significant if a project would not increase traffic volumes at local intersections to more than 44,000 vehicles per hour, or 24,000 vehicles per hour for locations in heavily urban areas, where "urban canyons" formed by buildings tend to reduce air circulation. Traffic would increase along surrounding roadways during long-term operational activities.

According to the Traffic Impact Analysis prepared for the Project (2019), the Project would generate 501 daily trips (187 net daily vehicle trips). The Project's effects to existing vehicle distribution and travel speeds would be nominal. Therefore, the project would not involve intersections with more than 24,000 or 44,000 vehicles per hour. As a result, the Project would not have the potential to create a CO hotspot and impacts would be less than significant.

Parking Structure Hotspots. Carbon Monoxide concentrations are a function of vehicle idling time, meteorological conditions, and traffic flow. Therefore, parking structures (and particularly subterranean parking structures) tend to be of concern regarding CO hotspots, as they are enclosed spaces with frequent cars operating in cold start mode. The proposed Project includes approximately 93 parking spaces which would be constructed within the underground parking garage. The proposed Project would be required to comply with the ventilation requirements of the International Mechanical Code (Section 404 [Enclosed Parking Garages]), which requires that mechanical ventilation systems for enclosed parking garages operate automatically by means of carbon monoxide detectors in conjunction with nitrogen dioxide detectors. Section 404.2 requires a minimum air flow rate of 0.05 cubic feet per second per square foot and the system shall be capable of producing a ventilation airflow rate of 0.75 cubic per second per square foot of floor plan area. Impacts in regards to parking structure CO hotspots would be less than significant.

Cumulative On-Site Health Impacts

In addition to mobile sources, stationary sources within a 1,000-foot-radius of the Project site were identified using BAAQMD's Stationary Source Screening Analysis Tools and consultation with the BAAQMD. As indicated in Table 11: Cumulative On-Site Health Risk, TACs generated from the stationary and roadway sources within a 1,000-foot-radius would not exceed BAAQMD thresholds.

Table 11: Cumulative On-Site Health Risk

Emissions Sources	$PM_{2.5}$ ($\mu g/m^3$)	Cancer Risk (per million	Chronic Hazard	Acute Hazard
Roadway Sources	0.145	8.2	0.0025	0.0124

Emissions Sources	$PM_{2.5}$ ($\mu g/m^3$)	Cancer Risk (per million	Chronic Hazard	Acute Hazard
Stationary Sources				
FRIT	0.047	1.777	0.003	0.0188
BelmontCorp	0.001	1.033	0.002	0.0004
Hotel Valencia	0.001	0.541	0.001	0.0004
Santana Row Gas Mart	0.0	0.490	0.002	0.000
Cumulative Health Risk Values	**0.19**	**12.04**	**0.011**	**0.032**
BAAQMD Cumulative Threshold	*0.8*	*100*	*10*	*10*
Threshold Exceeded?	**No**	**No**	**No**	**No**

As described above, cumulative impacts related to residential cancer risk, $PM_{2.5}$, chronic hazard, and acute hazard would be less than cumulatively considerable and within acceptable limits.

Level of Significance: Less than significant impact with mitigation incorporated.

Threshold AQ-4: Would the Project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

Construction

According to the BAAQMD, land uses associated with odor complaints typically include wastewater treatment plants, landfills, confined animal facilities, composting stations, food manufacturing plants, refineries, and chemical plants. The Project does not include any uses identified by the BAAQMD as being associated with odors.

Construction activities associated with the Project may generate detectable odors from heavy duty equipment (i.e., diesel exhaust), as well as from architectural coatings and asphalt off-gassing. Odors generated from the referenced sources are common in the man-made environment and are not known to be substantially offensive to adjacent receptors. Any construction-related odors would be short-term in nature and cease upon Project completion. As a result, impacts to existing adjacent land uses from construction-related odors would be short-term in duration and therefore would be less than significant.

Operational

BAAQMD has established odor screening thresholds for land uses that have the potential to generate substantial odor complaints, including wastewater treatment plants, landfills or transfer stations, composting facilities, confined animal facilities, food manufacturing, and chemical plants. BAAQMD's thresholds for odors are qualitative based on BAAQMD's Regulation 7, Odorous Substances. This rule places general limitations on odorous substances and specific emission limitations on certain odorous compounds.

The Project includes 27 dwelling units, commercial and office uses. None of these uses are anticipated to generate odors. With respect to odor impacts from adjacent and nearby properties that could affect project residents and visitors, land uses typically producing objectionable odors include agricultural uses,

wastewater treatment facilities, waste-disposal facilities, food processing plants, chemical plants, composting, refineries, landfills, dairies, and fiberglass molding. None of these uses are located near the Project site. Impacts would be less than significant.

Mitigation Measures: No mitigation is required.

Level of Significance: No impact.

5.2 CUMULATIVE SETTING, IMPACTS, AND MITIGATION MEASURES

Cumulative Setting

The cumulative setting for air quality includes the City and the Air Basin. The Air Basin is designated as a nonattainment area for state standards of ozone, PM_{10}, and $PM_{2.5}$ and federal standards of ozone and $PM_{2.5,}$ attainment and serious maintenance for federal PM_{10} standards, and is designated as unclassified or attainment for all other pollutants. Cumulative growth in population and vehicle use could inhibit efforts to improve regional air quality and attain the ambient air quality standards.

Cumulative Impacts and Mitigation Measures

The BAAQMD CEQA Air Quality Guidelines do not include separate significance thresholds for cumulative operational emissions. However, with respect to regional air pollution, the development of the Project would result in population growth that is consistent with ABAG projections and the City General Plan. Therefore, the Project would be consistent with the 2017 Clean Air Plan that uses ABAG population forecasts.

As described in threshold AQ-1 above, the Project would also be consistent with the appropriate 2017 Clean Air Plan control measures, which are provided to reduce air quality emissions for the entire Bay Area region. Additionally, the discussion in threshold AQ-2 addresses cumulative impacts and demonstrates that the Project would not exceed the applicable BAAQMD thresholds for construction or operations. The BAAQMD CEQA Air Quality Guidelines note that the nature of air emissions is largely a cumulative impact. As a result, no single project is sufficient in size by itself to result in nonattainment of ambient air quality standards. Instead, a project's individual emissions contribute to existing cumulatively significant adverse air quality impacts. Consistency with the 2017 Clean Air Plan control measures would ensure that the Project would not cumulatively contribute to air quality impacts in the Basin. Therefore, impacts would be less than significant.

Mitigation Measures: No mitigation is required.

Level of Significance: Less than significant impact.

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Appendix A

Air Quality Modeling Data

425 Winchester Project

Santa Clara County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	4.74	1000sqft	0.11	4,737.00	0
Enclosed Parking with Elevator	115.00	Space	1.03	46,000.00	0
Other Non-Asphalt Surfaces	6.86	1000sqft	0.16	6,857.00	0
Apartments Mid Rise	27.00	Dwelling Unit	0.71	27,000.00	77
Strip Mall	8.13	1000sqft	0.19	8,128.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	58
Climate Zone	4			**Operational Year**	2023
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	171	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Adjusted per PG&E 2019 CRSR

Land Use - Per Project site plans

Construction Phase - Anticipated construction schedule

Off-road Equipment - Anticipated construction equipment

Demolition - Includes building demolition, existing pavement

Grading - 25,000 cy for two floor underground garage

Vehicle Trips - Adjusted trip rate per TIA

Woodstoves - No woodburning per BAAQMD Reg 6, rule 3

Construction Off-road Equipment Mitigation - Per BAAQMD basic control measures

Mobile Land Use Mitigation -

Area Mitigation -

Energy Mitigation -

Water Mitigation -

Waste Mitigation - Per AB939

Energy Use -

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	6
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	8.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final

tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	3.00	30.00
tblConstructionPhase	NumDays	6.00	40.00
tblConstructionPhase	NumDays	10.00	30.00
tblConstructionPhase	NumDays	220.00	280.00
tblConstructionPhase	NumDays	10.00	66.00
tblFireplaces	NumberGas	4.05	8.64
tblFireplaces	NumberWood	4.59	0.00
tblGrading	MaterialExported	0.00	25,000.00
tblLandUse	LandUseSquareFeet	4,740.00	4,737.00
tblLandUse	LandUseSquareFeet	6,860.00	6,857.00
tblLandUse	LandUseSquareFeet	8,130.00	8,128.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	171
tblVehicleTrips	ST_TR	6.39	6.32
tblVehicleTrips	ST_TR	2.46	14.00
tblVehicleTrips	ST_TR	42.04	32.54
tblVehicleTrips	SU_TR	5.86	6.32
tblVehicleTrips	SU_TR	1.05	14.00
tblVehicleTrips	SU_TR	20.43	32.54
tblVehicleTrips	WD_TR	6.65	6.32
tblVehicleTrips	WD_TR	11.03	14.00

tblVehicleTrips	WD_TR	44.32	32.54
tblWoodstoves	NumberCatalytic	0.54	0.00
tblWoodstoves	NumberNoncatalytic	0.54	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	2.4649	40.7213	16.0808	0.0825	8.0707	1.0466	9.0517	3.7743	0.9770	4.6792	0.0000	8,605.2181	8,605.2181	0.9357	0.0000	8,628.6112
2022	10.3932	17.4530	17.7818	0.0359	0.5466	0.7893	1.3359	0.1471	0.7599	0.9070	0.0000	3,383.3050	3,383.3050	0.4848	0.0000	3,395.4252
Maximum	**10.3932**	**40.7213**	**17.7818**	**0.0825**	**8.0707**	**1.0466**	**9.0517**	**3.7743**	**0.9770**	**4.6792**	**0.0000**	**8,605.2181**	**8,605.2181**	**0.9357**	**0.0000**	**8,628.6112**

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	1.2989	21.6005	17.1193	0.0825	4.2128	0.2542	4.3117	1.8240	0.2539	1.9200	0.0000	8,605.2181	8,605.2181	0.9357	0.0000	8,628.6112
2022	9.3912	6.8164	18.9798	0.0359	0.5190	0.2275	0.7465	0.1403	0.2271	0.3675	0.0000	3,383.3050	3,383.3050	0.4848	0.0000	3,395.4252
Maximum	**9.3912**	**21.6005**	**18.9798**	**0.0825**	**4.2128**	**0.2542**	**4.3117**	**1.8240**	**0.2539**	**1.9200**	**0.0000**	**8,605.2181**	**8,605.2181**	**0.9357**	**0.0000**	**8,628.6112**

	ROG	NOx	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	**16.86**	**51.15**	**-6.60**	**0.00**	**45.09**	**73.76**	**51.31**	**49.91**	**72.31**	**59.05**	**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	1.1067	0.1930	2.3129	1.1900e-003		0.0259	0.0259		0.0259	0.0259	0.0000	217.4992	217.4992	8.0300e-003	3.9100e-003	218.8661
Energy	9.7500e-003	0.0849	0.0469	5.3000e-004		6.7400e-003	6.7400e-003		6.7400e-003	6.7400e-003		106.3894	106.3894	2.0400e-003	1.9500e-003	107.0217
Mobile	0.6420	1.9597	6.2652	0.0221	2.0309	0.0164	2.0473	0.5421	0.0153	0.5573		2,228.9128	2,228.9128	0.0700		2,230.6639
Total	**1.7585**	**2.2376**	**8.6251**	**0.0238**	**2.0309**	**0.0490**	**2.0799**	**0.5421**	**0.0479**	**0.5900**	**0.0000**	**2,552.8014**	**2,552.8014**	**0.0801**	**5.8600e-003**	**2,556.5516**

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	1.1067	0.1930	2.3129	1.1900e-003		0.0259	0.0259		0.0259	0.0259	0.0000	217.4992	217.4992	8.0300e-003	3.9100e-003	218.8661
Energy	7.5800e-003	0.0659	0.0356	4.1000e-004		5.2400e-003	5.2400e-003		5.2400e-003	5.2400e-003		82.7372	82.7372	1.5900e-003	1.5200e-003	83.2288
Mobile	0.5894	1.6911	4.7536	0.0157	1.3932	0.0121	1.4053	0.3719	0.0112	0.3831		1,586.7336	1,586.7336	0.0537		1,588.0751
Total	**1.7037**	**1.9500**	**7.1022**	**0.0173**	**1.3932**	**0.0432**	**1.4364**	**0.3719**	**0.0424**	**0.4142**	**0.0000**	**1,886.9699**	**1,886.9699**	**0.0633**	**5.4300e-003**	**1,890.1700**

	ROG	NOx	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	**3.12**	**12.85**	**17.66**	**27.28**	**31.40**	**11.87**	**30.94**	**31.40**	**11.54**	**29.79**	**0.00**	**26.08**	**26.08**	**21.01**	**7.34**	**26.07**

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	3/1/2021	3/26/2021	5	20	
2	Site Preparation	Site Preparation	3/27/2021	5/7/2021	5	30	
3	Grading	Grading	5/8/2021	7/2/2021	5	40	
4	Paving	Paving	7/3/2021	8/13/2021	5	30	
5	Building Construction	Building Construction	8/14/2021	9/9/2022	5	280	
6	Architectural Coating	Architectural Coating	7/1/2022	9/30/2022	5	66	

Acres of Grading (Site Preparation Phase): 45

Acres of Grading (Grading Phase): 20

Acres of Paving: 1.19

Residential Indoor: 54,675; Residential Outdoor: 18,225; Non-Residential Indoor: 19,298; Non-Residential Outdoor: 6,433; Striped

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Scrapers	1	8.00	367	0.48
Site Preparation	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40

Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Building Construction	Cranes	1	8.00	231	0.29
Building Construction	Forklifts	2	7.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	5	13.00	0.00	123.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	3,125.00	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
Building Construction	8	46.00	14.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	9.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Replace Ground Cover

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

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					1.3300	0.0000	1.3300	0.2014	0.0000	0.2014			0.0000			0.0000
Off-Road	1.9930	19.6966	14.4925	0.0241		1.0409	1.0409		0.9715	0.9715		2,322.7171	2,322.7171	0.5940		2,337.5658
Total	**1.9930**	**19.6966**	**14.4925**	**0.0241**	**1.3300**	**1.0409**	**2.3709**	**0.2014**	**0.9715**	**1.1728**		**2,322.7171**	**2,322.7171**	**0.5940**		**2,337.5658**

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	0.0477	1.6129	0.3475	4.8200e-003	0.1075	5.1000e-003	0.1126	0.0295	4.8800e-003	0.0343		514.1837	514.1837	0.0227		514.7516
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	0.0419	0.0248	0.3276	1.0100e-003	0.1068	6.5000e-004	0.1074	0.0283	6.0000e-004	0.0289		101.1414	101.1414	2.3000e-003		101.1989
Total	**0.0895**	**1.6377**	**0.6751**	**5.8300e-003**	**0.2143**	**5.7500e-003**	**0.2200**	**0.0578**	**5.4800e-003**	**0.0633**		**615.3252**	**615.3252**	**0.0250**		**615.9504**

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					0.5686	0.0000	0.5686	0.0861	0.0000	0.0861			0.0000			0.0000
Off-Road	0.2811	1.2179	14.7184	0.0241		0.0375	0.0375		0.0375	0.0375	0.0000	2,322.7171	2,322.7171	0.5940		2,337.5658
Total	**0.2811**	**1.2179**	**14.7184**	**0.0241**	**0.5686**	**0.0375**	**0.6060**	**0.0861**	**0.0375**	**0.1236**	**0.0000**	**2,322.7171**	**2,322.7171**	**0.5940**		**2,337.5658**

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	0.0477	1.6129	0.3475	4.8200e-003	0.1026	5.1000e-003	0.1077	0.0283	4.8800e-003	0.0331		514.1837	514.1837	0.0227		514.7516
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	0.0419	0.0248	0.3276	1.0100e-003	0.1012	6.5000e-004	0.1019	0.0270	6.0000e-004	0.0276		101.1414	101.1414	2.3000e-003		101.1989
Total	**0.0895**	**1.6377**	**0.6751**	**5.8300e-003**	**0.2038**	**5.7500e-003**	**0.2096**	**0.0552**	**5.4800e-003**	**0.0607**		**615.3252**	**615.3252**	**0.0250**		**615.9504**

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					1.5908	0.0000	1.5908	0.1718	0.0000	0.1718			0.0000			0.0000

Off-Road	1.5463	18.2862	10.7496	0.0245		0.7019	0.7019		0.6457	0.6457		2,372.8832	2,372.8832	0.7674		2,392.0692
Total	**1.5463**	**18.2862**	**10.7496**	**0.0245**	**1.5908**	**0.7019**	**2.2926**	**0.1718**	**0.6457**	**0.8175**		**2,372.8832**	**2,372.8832**	**0.7674**		**2,392.0692**

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	0.0258	0.0153	0.2016	6.2000e-004	0.0657	4.0000e-004	0.0661	0.0174	3.7000e-004	0.0178		62.2409	62.2409	1.4100e-003		62.2762
Total	**0.0258**	**0.0153**	**0.2016**	**6.2000e-004**	**0.0657**	**4.0000e-004**	**0.0661**	**0.0174**	**3.7000e-004**	**0.0178**		**62.2409**	**62.2409**	**1.4100e-003**		**62.2762**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.6801	0.0000	0.6801	0.0734	0.0000	0.0734			0.0000			0.0000
Off-Road	0.3008	1.3034	11.8595	0.0245		0.0401	0.0401		0.0401	0.0401	0.0000	2,372.8832	2,372.8832	0.7674		2,392.0692
Total	**0.3008**	**1.3034**	**11.8595**	**0.0245**	**0.6801**	**0.0401**	**0.7202**	**0.0734**	**0.0401**	**0.1135**	**0.0000**	**2,372.8832**	**2,372.8832**	**0.7674**		**2,392.0692**

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	0.0258	0.0153	0.2016	6.2000e-004	0.0623	4.0000e-004	0.0627	0.0166	3.7000e-004	0.0170		62.2409	62.2409	1.4100e-003		62.2762
Total	**0.0258**	**0.0153**	**0.2016**	**6.2000e-004**	**0.0623**	**4.0000e-004**	**0.0627**	**0.0166**	**3.7000e-004**	**0.0170**		**62.2409**	**62.2409**	**1.4100e-003**		**62.2762**

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					6.6230	0.0000	6.6230	3.3782	0.0000	3.3782			0.0000			0.0000
Off-Road	1.8271	20.2135	9.7604	0.0206		0.9158	0.9158		0.8425	0.8425		1,995.6114	1,995.6114	0.6454		2,011.7470
Total	**1.8271**	**20.2135**	**9.7604**	**0.0206**	**6.6230**	**0.9158**	**7.5388**	**3.3782**	**0.8425**	**4.2207**		**1,995.6114**	**1,995.6114**	**0.6454**		**2,011.7470**

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	0.6056	20.4887	4.4148	0.0612	1.3655	0.0648	1.4303	0.3743	0.0620	0.4362		6,531.8056	6,531.8056	0.2885		6,539.0189
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	0.0322	0.0191	0.2520	7.8000e-004	0.0822	5.0000e-004	0.0827	0.0218	4.6000e-004	0.0223		77.8011	77.8011	1.7700e-003		77.8453
Total	**0.6378**	**20.5078**	**4.6668**	**0.0620**	**1.4477**	**0.0653**	**1.5130**	**0.3961**	**0.0624**	**0.4585**		**6,609.6067**	**6,609.6067**	**0.2903**		**6,616.8642**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.8313	0.0000	2.8313	1.4442	0.0000	1.4442			0.0000			0.0000
Off-Road	0.2522	1.0927	10.9071	0.0206		0.0336	0.0336		0.0336	0.0336	0.0000	1,995.6114	1,995.6114	0.6454		2,011.7470
Total	**0.2522**	**1.0927**	**10.9071**	**0.0206**	**2.8313**	**0.0336**	**2.8650**	**1.4442**	**0.0336**	**1.4778**	**0.0000**	**1,995.6114**	**1,995.6114**	**0.6454**		**2,011.7470**

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	0.6056	20.4887	4.4148	0.0612	1.3036	0.0648	1.3683	0.3591	0.0620	0.4210		6,531.8056	6,531.8056	0.2885		6,539.0189
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	0.0322	0.0191	0.2520	7.8000e-004	0.0779	5.0000e-004	0.0784	0.0207	4.6000e-004	0.0212		77.8011	77.8011	1.7700e-003		77.8453
Total	**0.6378**	**20.5078**	**4.6668**	**0.0620**	**1.3814**	**0.0653**	**1.4467**	**0.3798**	**0.0624**	**0.4422**		**6,609.6067**	**6,609.6067**	**0.2903**		**6,616.8642**

3.5 Paving - 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	1.0633	10.6478	11.7756	0.0178		0.5826	0.5826		0.5371	0.5371		1,709.1107	1,709.1107	0.5417		1,722.6524
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0633**	**10.6478**	**11.7756**	**0.0178**		**0.5826**	**0.5826**		**0.5371**	**0.5371**		**1,709.1107**	**1,709.1107**	**0.5417**		**1,722.6524**

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	0.0483	0.0286	0.3780	1.1700e-003	0.1232	7.5000e-004	0.1240	0.0327	6.9000e-004	0.0334		116.7016	116.7016	2.6500e-003		116.7679
Total	**0.0483**	**0.0286**	**0.3780**	**1.1700e-003**	**0.1232**	**7.5000e-004**	**0.1240**	**0.0327**	**6.9000e-004**	**0.0334**		**116.7016**	**116.7016**	**2.6500e-003**		**116.7679**

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	0.2104	0.9117	12.9737	0.0178		0.0281	0.0281		0.0281	0.0281	0.0000	1,709.1107	1,709.1107	0.5417		1,722.6524
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.2104**	**0.9117**	**12.9737**	**0.0178**		**0.0281**	**0.0281**		**0.0281**	**0.0281**	**0.0000**	**1,709.1107**	**1,709.1107**	**0.5417**		**1,722.6524**

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	0.0483	0.0286	0.3780	1.1700e-003	0.1168	7.5000e-004	0.1175	0.0311	6.9000e-004	0.0318		116.7016	116.7016	2.6500e-003		116.7679
Total	**0.0483**	**0.0286**	**0.3780**	**1.1700e-003**	**0.1168**	**7.5000e-004**	**0.1175**	**0.0311**	**6.9000e-004**	**0.0318**		**116.7016**	**116.7016**	**2.6500e-003**		**116.7679**

3.6 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	2.0451	16.0275	14.5629	0.0250		0.8173	0.8173		0.7831	0.7831		2,288.9355	2,288.9355	0.4503		2,300.1935

Total	**2.0451**	**16.0275**	**14.5629**	**0.0250**		**0.8173**	**0.8173**		**0.7831**	**0.7831**		**2,288.9355**	**2,288.9355**	**0.4503**		**2,300.1935**

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	0.0446	1.4232	0.3587	3.8200e-003	0.0948	3.1500e-003	0.0979	0.0273	3.0100e-003	0.0303		404.0670	404.0670	0.0168		404.4880
Worker	0.1481	0.0878	1.1592	3.5900e-003	0.3779	2.3000e-003	0.3802	0.1002	2.1100e-003	0.1024		357.8850	357.8850	8.1300e-003		358.0883
Total	**0.1928**	**1.5110**	**1.5179**	**7.4100e-003**	**0.4727**	**5.4500e-003**	**0.4781**	**0.1275**	**5.1200e-003**	**0.1327**		**761.9520**	**761.9520**	**0.0250**		**762.5762**

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	1.1061	5.3852	15.6014	0.0250		0.2488	0.2488		0.2488	0.2488	0.0000	2,288.9355	2,288.9355	0.4503		2,300.1935
Total	**1.1061**	**5.3852**	**15.6014**	**0.0250**		**0.2488**	**0.2488**		**0.2488**	**0.2488**	**0.0000**	**2,288.9355**	**2,288.9355**	**0.4503**		**2,300.1935**

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	0.0446	1.4232	0.3587	3.8200e-003	0.0907	3.1500e-003	0.0939	0.0263	3.0100e-003	0.0293		404.0670	404.0670	0.0168		404.4880
Worker	0.1481	0.0878	1.1592	3.5900e-003	0.3582	2.3000e-003	0.3605	0.0954	2.1100e-003	0.0975		357.8850	357.8850	8.1300e-003		358.0883
Total	**0.1928**	**1.5110**	**1.5179**	**7.4100e-003**	**0.4489**	**5.4500e-003**	**0.4544**	**0.1217**	**5.1200e-003**	**0.1268**		**761.9520**	**761.9520**	**0.0250**		**762.5762**

3.6 Building Construction - 2022

Unmitigated Construction On-Site

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

Unmitigated Construction Off-Site

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

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0416	1.3463	0.3378	3.7800e-003	0.0948	2.7300e-003	0.0975	0.0273	2.6100e-003	0.0299		400.2292	400.2292	0.0161		400.6313
Worker	0.1380	0.0788	1.0682	3.4600e-003	0.3779	2.2500e-003	0.3801	0.1002	2.0700e-003	0.1023		344.8716	344.8716	7.3000e-003		345.0541
Total	**0.1797**	**1.4251**	**1.4060**	**7.2400e-003**	**0.4727**	**4.9800e-003**	**0.4777**	**0.1275**	**4.6800e-003**	**0.1322**		**745.1008**	**745.1008**	**0.0234**		**745.6855**

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	1.0283	5.2472	15.5324	0.0250		0.2181	0.2181		0.2181	0.2181	0.0000	2,289.2813	2,289.2813	0.4417		2,300.3230
Total	**1.0283**	**5.2472**	**15.5324**	**0.0250**		**0.2181**	**0.2181**		**0.2181**	**0.2181**	**0.0000**	**2,289.2813**	**2,289.2813**	**0.4417**		**2,300.3230**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0416	1.3463	0.3378	3.7800e-003	0.0907	2.7300e-003	0.0935	0.0263	2.6100e-003	0.0289		400.2292	400.2292	0.0161		400.6313
Worker	0.1380	0.0788	1.0682	3.4600e-003	0.3582	2.2500e-003	0.3604	0.0954	2.0700e-003	0.0975		344.8716	344.8716	7.3000e-003		345.0541
Total	**0.1797**	**1.4251**	**1.4060**	**7.2400e-003**	**0.4489**	**4.9800e-003**	**0.4539**	**0.1217**	**4.6800e-003**	**0.1264**		**745.1008**	**745.1008**	**0.0234**		**745.6855**

3.7 Architectural Coating - 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					
Archit. Coating	8.1265					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.9062
Total	**8.3310**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**		**281.4481**	**281.4481**	**0.0183**		**281.9062**

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	0.0270	0.0154	0.2090	6.8000e-004	0.0739	4.4000e-004	0.0744	0.0196	4.0000e-004	0.0200		67.4749	67.4749	1.4300e-003		67.5106
Total	**0.0270**	**0.0154**	**0.2090**	**6.8000e-004**	**0.0739**	**4.4000e-004**	**0.0744**	**0.0196**	**4.0000e-004**	**0.0200**		**67.4749**	**67.4749**	**1.4300e-003**		**67.5106**

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	8.1265					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0297	0.1288	1.8324	2.9700e-003		3.9600e-003	3.9600e-003		3.9600e-003	3.9600e-003	0.0000	281.4481	281.4481	0.0183		281.9062
Total	**8.1562**	**0.1288**	**1.8324**	**2.9700e-003**		**3.9600e-003**	**3.9600e-003**		**3.9600e-003**	**3.9600e-003**	**0.0000**	**281.4481**	**281.4481**	**0.0183**		**281.9062**

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	0.0270	0.0154	0.2090	6.8000e-004	0.0701	4.4000e-004	0.0705	0.0187	4.0000e-004	0.0191		67.4749	67.4749	1.4300e-003		67.5106
Total	**0.0270**	**0.0154**	**0.2090**	**6.8000e-004**	**0.0701**	**4.4000e-004**	**0.0705**	**0.0187**	**4.0000e-004**	**0.0191**		**67.4749**	**67.4749**	**1.4300e-003**		**67.5106**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Density

Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.5894	1.6911	4.7536	0.0157	1.3932	0.0121	1.4053	0.3719	0.0112	0.3831		1,586.7336	1,586.7336	0.0537		1,588.0751
Unmitigated	0.6420	1.9597	6.2652	0.0221	2.0309	0.0164	2.0473	0.5421	0.0153	0.5573		2,228.9128	2,228.9128	0.0700		2,230.6639

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	170.64	170.64	170.64	394,111	270,360
Enclosed Parking with Elevator	0.00	0.00	0.00		
General Office Building	66.36	66.36	66.36	158,584	108,789
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Strip Mall	264.55	264.55	264.55	407,416	279,487
Total	501.55	501.55	501.55	960,111	658,636

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-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Enclosed Parking with Elevator	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
Other Non-Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Strip Mall	9.50	7.30	7.30	16.60	64.40	19.00	45	40	15

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.612822	0.036208	0.182365	0.105071	0.013933	0.005011	0.012748	0.021514	0.002168	0.001529	0.005280	0.000629	0.000720

Enclosed Parking with Elevator	0.612822	0.036208	0.182365	0.105071	0.013933	0.005011	0.012748	0.021514	0.002168	0.001529	0.005280	0.000629	0.000720
General Office Building	0.612822	0.036208	0.182365	0.105071	0.013933	0.005011	0.012748	0.021514	0.002168	0.001529	0.005280	0.000629	0.000720
Other Non-Asphalt Surfaces	0.612822	0.036208	0.182365	0.105071	0.013933	0.005011	0.012748	0.021514	0.002168	0.001529	0.005280	0.000629	0.000720
Strip Mall	0.612822	0.036208	0.182365	0.105071	0.013933	0.005011	0.012748	0.021514	0.002168	0.001529	0.005280	0.000629	0.000720

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	7.5800e-003	0.0659	0.0356	4.1000e-004		5.2400e-003	5.2400e-003		5.2400e-003	5.2400e-003		82.7372	82.7372	1.5900e-003	1.5200e-003	83.2288
NaturalGas Unmitigated	9.7500e-003	0.0849	0.0469	5.3000e-004		6.7400e-003	6.7400e-003		6.7400e-003	6.7400e-003		106.3894	106.3894	2.0400e-003	1.9500e-003	107.0217

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	639.083	6.8900e-003	0.0589	0.0251	3.8000e-004		4.7600e-003	4.7600e-003		4.7600e-003	4.7600e-003		75.1862	75.1862	1.4400e-003	1.3800e-003	75.6330

Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
General Office Building	212.451	2.2900e-003	0.0208	0.0175	1.2000e-004		1.5800e-003	1.5800e-003		1.5800e-003	1.5800e-003		24.9943	24.9943	4.8000e-004	4.6000e-004	25.1428
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Strip Mall	52.7763	5.7000e-004	5.1700e-003	4.3500e-003	3.0000e-005		3.9000e-004	3.9000e-004		3.9000e-004	3.9000e-004		6.2090	6.2090	1.2000e-004	1.1000e-004	6.2459
Total		**9.7500e-003**	**0.0849**	**0.0469**	**5.3000e-004**		**6.7300e-003**	**6.7300e-003**		**6.7300e-003**	**6.7300e-003**		**106.3894**	**106.3894**	**2.0400e-003**	**1.9500e-003**	**107.0217**

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	0.517373	5.5800e-003	0.0477	0.0203	3.0000e-004		3.8500e-003	3.8500e-003		3.8500e-003	3.8500e-003		60.8674	60.8674	1.1700e-003	1.1200e-003	61.2291
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
General Office Building	0.148949	1.6100e-003	0.0146	0.0123	9.0000e-005		1.1100e-003	1.1100e-003		1.1100e-003	1.1100e-003		17.5235	17.5235	3.4000e-004	3.2000e-004	17.6276
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Strip Mall	0.0369434	4.0000e-004	3.6200e-003	3.0400e-003	2.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004		4.3463	4.3463	8.0000e-005	8.0000e-005	4.3721
Total		**7.5900e-003**	**0.0659**	**0.0356**	**4.1000e-004**		**5.2400e-003**	**5.2400e-003**		**5.2400e-003**	**5.2400e-003**		**82.7372**	**82.7372**	**1.5900e-003**	**1.5200e-003**	**83.2288**

6.0 Area Detail

6.1 Mitigation Measures Area

Use only Natural Gas Hearths

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	1.1067	0.1930	2.3129	1.1900e-003		0.0259	0.0259		0.0259	0.0259	0.0000	217.4992	217.4992	8.0300e-003	3.9100e-003	218.8661
Unmitigated	1.1067	0.1930	2.3129	1.1900e-003		0.0259	0.0259		0.0259	0.0259	0.0000	217.4992	217.4992	8.0300e-003	3.9100e-003	218.8661

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	0.1469					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.8718					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0196	0.1672	0.0712	1.0700e-003		0.0135	0.0135		0.0135	0.0135	0.0000	213.4588	213.4588	4.0900e-003	3.9100e-003	214.7273
Landscaping	0.0684	0.0258	2.2418	1.2000e-004		0.0124	0.0124		0.0124	0.0124		4.0404	4.0404	3.9300e-003		4.1388
Total	**1.1067**	**0.1930**	**2.3129**	**1.1900e-003**		**0.0259**	**0.0259**		**0.0259**	**0.0259**	**0.0000**	**217.4992**	**217.4992**	**8.0200e-003**	**3.9100e-003**	**218.8661**

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	0.1469					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.8718					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0196	0.1672	0.0712	1.0700e-003		0.0135	0.0135		0.0135	0.0135	0.0000	213.4588	213.4588	4.0900e-003	3.9100e-003	214.7273
Landscaping	0.0684	0.0258	2.2418	1.2000e-004		0.0124	0.0124		0.0124	0.0124		4.0404	4.0404	3.9300e-003		4.1388
Total	**1.1067**	**0.1930**	**2.3129**	**1.1900e-003**		**0.0259**	**0.0259**		**0.0259**	**0.0259**	**0.0000**	**217.4992**	**217.4992**	**8.0200e-003**	**3.9100e-003**	**218.8661**

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

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

425 Winchester Project - Santa Clara County, Winter

425 Winchester Project

Santa Clara County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	4.74	1000sqft	0.11	4,737.00	0
Enclosed Parking with Elevator	115.00	Space	1.03	46,000.00	0
Other Non-Asphalt Surfaces	6.86	1000sqft	0.16	6,857.00	0
Apartments Mid Rise	27.00	Dwelling Unit	0.71	27,000.00	77
Strip Mall	8.13	1000sqft	0.19	8,128.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	58
Climate Zone	4			**Operational Year**	2023
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	171	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Adjusted per PG&E 2019 CRSR

Land Use - Per Project site plans

Construction Phase - Anticipated construction schedule

Off-road Equipment - Anticipated construction equipment

Demolition - Includes building demolition, existing pavement

Grading - 25,000 cy for two floor underground garage

Vehicle Trips - Adjusted trip rate per TIA

Woodstoves - No woodburning per BAAQMD Reg 6, rule 3

Construction Off-road Equipment Mitigation - Per BAAQMD basic control measures

Mobile Land Use Mitigation -

Area Mitigation -

Energy Mitigation -

Water Mitigation -

Waste Mitigation - Per AB939

Energy Use -

Table Name	Column Name	Default Value	New Value
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	6
tblConstDustMitigation	WaterUnpavedRoadMoistureContent	0	12
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	8.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final

tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstructionPhase	NumDays	3.00	30.00
tblConstructionPhase	NumDays	6.00	40.00
tblConstructionPhase	NumDays	10.00	30.00
tblConstructionPhase	NumDays	220.00	280.00
tblConstructionPhase	NumDays	10.00	66.00
tblFireplaces	NumberGas	4.05	8.64
tblFireplaces	NumberWood	4.59	0.00
tblGrading	MaterialExported	0.00	25,000.00
tblLandUse	LandUseSquareFeet	4,740.00	4,737.00
tblLandUse	LandUseSquareFeet	6,860.00	6,857.00
tblLandUse	LandUseSquareFeet	8,130.00	8,128.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	171
tblVehicleTrips	ST_TR	6.39	6.32
tblVehicleTrips	ST_TR	2.46	14.00
tblVehicleTrips	ST_TR	42.04	32.54
tblVehicleTrips	SU_TR	5.86	6.32
tblVehicleTrips	SU_TR	1.05	14.00
tblVehicleTrips	SU_TR	20.43	32.54
tblVehicleTrips	WD_TR	6.65	6.32
tblVehicleTrips	WD_TR	11.03	14.00

tblVehicleTrips	WD_TR	44.32	32.54
tblWoodstoves	NumberCatalytic	0.54	0.00
tblWoodstoves	NumberNoncatalytic	0.54	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	2.4837	41.2009	16.0438	0.0814	8.0707	1.0467	9.0528	3.7743	0.9770	4.6802	0.0000	8,487.3926	8,487.3926	0.9488	0.0000	8,511.1118
2022	10.4070	17.4844	17.7280	0.0355	0.5466	0.7894	1.3360	0.1471	0.7600	0.9071	0.0000	3,339.5476	3,339.5476	0.4854	0.0000	3,351.6825
Maximum	**10.4070**	**41.2009**	**17.7280**	**0.0814**	**8.0707**	**1.0467**	**9.0528**	**3.7743**	**0.9770**	**4.6802**	**0.0000**	**8,487.3926**	**8,487.3926**	**0.9488**	**0.0000**	**8,511.1118**

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	1.3112	22.0800	17.0823	0.0814	4.2128	0.2543	4.3127	1.8240	0.2540	1.9211	0.0000	8,487.3926	8,487.3926	0.9488	0.0000	8,511.1118
2022	9.4050	6.8478	18.9260	0.0355	0.5190	0.2276	0.7466	0.1403	0.2272	0.3676	0.0000	3,339.5476	3,339.5476	0.4854	0.0000	3,351.6825
Maximum	**9.4050**	**22.0800**	**18.9260**	**0.0814**	**4.2128**	**0.2543**	**4.3127**	**1.8240**	**0.2540**	**1.9211**	**0.0000**	**8,487.3926**	**8,487.3926**	**0.9488**	**0.0000**	**8,511.1118**

	ROG	NOx	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	**16.87**	**50.71**	**-6.62**	**0.00**	**45.09**	**73.76**	**51.30**	**49.91**	**72.30**	**59.04**	**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	1.1067	0.1930	2.3129	1.1900e-003		0.0259	0.0259		0.0259	0.0259	0.0000	217.4992	217.4992	8.0300e-003	3.9100e-003	218.8661
Energy	9.7500e-003	0.0849	0.0469	5.3000e-004		6.7400e-003	6.7400e-003		6.7400e-003	6.7400e-003		106.3894	106.3894	2.0400e-003	1.9500e-003	107.0217
Mobile	0.5479	2.0604	6.2928	0.0206	2.0309	0.0165	2.0474	0.5421	0.0154	0.5574		2,078.0020	2,078.0020	0.0712		2,079.7823
Total	**1.6644**	**2.3384**	**8.6526**	**0.0223**	**2.0309**	**0.0491**	**2.0800**	**0.5421**	**0.0480**	**0.5901**	**0.0000**	**2,401.8907**	**2,401.8907**	**0.0813**	**5.8600e-003**	**2,405.6700**

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	1.1067	0.1930	2.3129	1.1900e-003		0.0259	0.0259		0.0259	0.0259	0.0000	217.4992	217.4992	8.0300e-003	3.9100e-003	218.8661
Energy	7.5800e-003	0.0659	0.0356	4.1000e-004		5.2400e-003	5.2400e-003		5.2400e-003	5.2400e-003		82.7372	82.7372	1.5900e-003	1.5200e-003	83.2288
Mobile	0.4965	1.7595	4.9694	0.0146	1.3932	0.0122	1.4053	0.3719	0.0113	0.3832		1,478.4565	1,478.4565	0.0557		1,479.8484
Total	**1.6108**	**2.0184**	**7.3179**	**0.0162**	**1.3932**	**0.0433**	**1.4365**	**0.3719**	**0.0425**	**0.4143**	**0.0000**	**1,778.6929**	**1,778.6929**	**0.0653**	**5.4300e-003**	**1,781.9432**

	ROG	NOx	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	**3.22**	**13.68**	**15.43**	**27.17**	**31.40**	**11.87**	**30.94**	**31.40**	**11.54**	**29.79**	**0.00**	**25.95**	**25.95**	**19.67**	**7.34**	**25.93**

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	3/1/2021	3/26/2021	5	20	
2	Site Preparation	Site Preparation	3/27/2021	5/7/2021	5	30	
3	Grading	Grading	5/8/2021	7/2/2021	5	40	
4	Paving	Paving	7/3/2021	8/13/2021	5	30	
5	Building Construction	Building Construction	8/14/2021	9/9/2022	5	280	
6	Architectural Coating	Architectural Coating	7/1/2022	9/30/2022	5	66	

Acres of Grading (Site Preparation Phase): 45

Acres of Grading (Grading Phase): 20

Acres of Paving: 1.19

Residential Indoor: 54,675; Residential Outdoor: 18,225; Non-Residential Indoor: 19,298; Non-Residential Outdoor: 6,433; Striped

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Scrapers	1	8.00	367	0.48
Site Preparation	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40

Grading	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Paving	Cement and Mortar Mixers	1	8.00	9	0.56
Paving	Pavers	1	8.00	130	0.42
Paving	Paving Equipment	1	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Building Construction	Cranes	1	8.00	231	0.29
Building Construction	Forklifts	2	7.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	5	13.00	0.00	123.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	3,125.00	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
Building Construction	8	46.00	14.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	9.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Replace Ground Cover

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

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					1.3300	0.0000	1.3300	0.2014	0.0000	0.2014			0.0000			0.0000
Off-Road	1.9930	19.6966	14.4925	0.0241		1.0409	1.0409		0.9715	0.9715		2,322.7171	2,322.7171	0.5940		2,337.5658
Total	**1.9930**	**19.6966**	**14.4925**	**0.0241**	**1.3300**	**1.0409**	**2.3709**	**0.2014**	**0.9715**	**1.1728**		**2,322.7171**	**2,322.7171**	**0.5940**		**2,337.5658**

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	0.0490	1.6503	0.3731	4.7300e-003	0.1075	5.1800e-003	0.1127	0.0295	4.9600e-003	0.0344		505.4064	505.4064	0.0238		506.0001
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	0.0446	0.0303	0.3024	9.3000e-004	0.1068	6.5000e-004	0.1074	0.0283	6.0000e-004	0.0289		92.9199	92.9199	2.1300e-003		92.9732
Total	**0.0936**	**1.6806**	**0.6756**	**5.6600e-003**	**0.2143**	**5.8300e-003**	**0.2201**	**0.0578**	**5.5600e-003**	**0.0633**		**598.3262**	**598.3262**	**0.0259**		**598.9733**

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					0.5686	0.0000	0.5686	0.0861	0.0000	0.0861			0.0000			0.0000
Off-Road	0.2811	1.2179	14.7184	0.0241		0.0375	0.0375		0.0375	0.0375	0.0000	2,322.7171	2,322.7171	0.5940		2,337.5658
Total	**0.2811**	**1.2179**	**14.7184**	**0.0241**	**0.5686**	**0.0375**	**0.6060**	**0.0861**	**0.0375**	**0.1236**	**0.0000**	**2,322.7171**	**2,322.7171**	**0.5940**		**2,337.5658**

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	0.0490	1.6503	0.3731	4.7300e-003	0.1026	5.1800e-003	0.1078	0.0283	4.9600e-003	0.0332		505.4064	505.4064	0.0238		506.0001
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	0.0446	0.0303	0.3024	9.3000e-004	0.1012	6.5000e-004	0.1019	0.0270	6.0000e-004	0.0276		92.9199	92.9199	2.1300e-003		92.9732
Total	**0.0936**	**1.6806**	**0.6756**	**5.6600e-003**	**0.2038**	**5.8300e-003**	**0.2097**	**0.0552**	**5.5600e-003**	**0.0608**		**598.3262**	**598.3262**	**0.0259**		**598.9733**

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					1.5908	0.0000	1.5908	0.1718	0.0000	0.1718			0.0000			0.0000

Off-Road	1.5463	18.2862	10.7496	0.0245		0.7019	0.7019		0.6457	0.6457		2,372.8832	2,372.8832	0.7674		2,392.0692
Total	**1.5463**	**18.2862**	**10.7496**	**0.0245**	**1.5908**	**0.7019**	**2.2926**	**0.1718**	**0.6457**	**0.8175**		**2,372.8832**	**2,372.8832**	**0.7674**		**2,392.0692**

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	0.0275	0.0186	0.1861	5.7000e-004	0.0657	4.0000e-004	0.0661	0.0174	3.7000e-004	0.0178		57.1815	57.1815	1.3100e-003		57.2143
Total	**0.0275**	**0.0186**	**0.1861**	**5.7000e-004**	**0.0657**	**4.0000e-004**	**0.0661**	**0.0174**	**3.7000e-004**	**0.0178**		**57.1815**	**57.1815**	**1.3100e-003**		**57.2143**

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					0.6801	0.0000	0.6801	0.0734	0.0000	0.0734			0.0000			0.0000
Off-Road	0.3008	1.3034	11.8595	0.0245		0.0401	0.0401		0.0401	0.0401	0.0000	2,372.8832	2,372.8832	0.7674		2,392.0692
Total	**0.3008**	**1.3034**	**11.8595**	**0.0245**	**0.6801**	**0.0401**	**0.7202**	**0.0734**	**0.0401**	**0.1135**	**0.0000**	**2,372.8832**	**2,372.8832**	**0.7674**		**2,392.0692**

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	0.0275	0.0186	0.1861	5.7000e-004	0.0623	4.0000e-004	0.0627	0.0166	3.7000e-004	0.0170		57.1815	57.1815	1.3100e-003		57.2143
Total	**0.0275**	**0.0186**	**0.1861**	**5.7000e-004**	**0.0623**	**4.0000e-004**	**0.0627**	**0.0166**	**3.7000e-004**	**0.0170**		**57.1815**	**57.1815**	**1.3100e-003**		**57.2143**

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					6.6230	0.0000	6.6230	3.3782	0.0000	3.3782			0.0000			0.0000
Off-Road	1.8271	20.2135	9.7604	0.0206		0.9158	0.9158		0.8425	0.8425		1,995.6114	1,995.6114	0.6454		2,011.7470
Total	**1.8271**	**20.2135**	**9.7604**	**0.0206**	**6.6230**	**0.9158**	**7.5388**	**3.3782**	**0.8425**	**4.2207**		**1,995.6114**	**1,995.6114**	**0.6454**		**2,011.7470**

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	0.6223	20.9641	4.7399	0.0601	1.3655	0.0659	1.4314	0.3743	0.0630	0.4373		6,420.3043	6,420.3043	0.3017		6,427.8469
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	0.0343	0.0233	0.2326	7.2000e-004	0.0822	5.0000e-004	0.0827	0.0218	4.6000e-004	0.0223		71.4768	71.4768	1.6400e-003		71.5178
Total	**0.6566**	**20.9874**	**4.9725**	**0.0608**	**1.4477**	**0.0664**	**1.5140**	**0.3961**	**0.0635**	**0.4595**		**6,491.7811**	**6,491.7811**	**0.3034**		**6,499.3648**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.8313	0.0000	2.8313	1.4442	0.0000	1.4442			0.0000			0.0000
Off-Road	0.2522	1.0927	10.9071	0.0206		0.0336	0.0336		0.0336	0.0336	0.0000	1,995.6114	1,995.6114	0.6454		2,011.7470
Total	**0.2522**	**1.0927**	**10.9071**	**0.0206**	**2.8313**	**0.0336**	**2.8650**	**1.4442**	**0.0336**	**1.4778**	**0.0000**	**1,995.6114**	**1,995.6114**	**0.6454**		**2,011.7470**

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	0.6223	20.9641	4.7399	0.0601	1.3036	0.0659	1.3694	0.3591	0.0630	0.4221		6,420.3043	6,420.3043	0.3017		6,427.8469
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	0.0343	0.0233	0.2326	7.2000e-004	0.0779	5.0000e-004	0.0784	0.0207	4.6000e-004	0.0212		71.4768	71.4768	1.6400e-003		71.5178
Total	**0.6566**	**20.9874**	**4.9725**	**0.0608**	**1.3814**	**0.0664**	**1.4478**	**0.3798**	**0.0635**	**0.4433**		**6,491.7811**	**6,491.7811**	**0.3034**		**6,499.3648**

3.5 Paving - 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	1.0633	10.6478	11.7756	0.0178		0.5826	0.5826		0.5371	0.5371		1,709.1107	1,709.1107	0.5417		1,722.6524
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0633**	**10.6478**	**11.7756**	**0.0178**		**0.5826**	**0.5826**		**0.5371**	**0.5371**		**1,709.1107**	**1,709.1107**	**0.5417**		**1,722.6524**

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	0.0515	0.0350	0.3490	1.0800e-003	0.1232	7.5000e-004	0.1240	0.0327	6.9000e-004	0.0334		107.2152	107.2152	2.4600e-003		107.2768
Total	**0.0515**	**0.0350**	**0.3490**	**1.0800e-003**	**0.1232**	**7.5000e-004**	**0.1240**	**0.0327**	**6.9000e-004**	**0.0334**		**107.2152**	**107.2152**	**2.4600e-003**		**107.2768**

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	0.2104	0.9117	12.9737	0.0178		0.0281	0.0281		0.0281	0.0281	0.0000	1,709.1107	1,709.1107	0.5417		1,722.6524
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.2104**	**0.9117**	**12.9737**	**0.0178**		**0.0281**	**0.0281**		**0.0281**	**0.0281**	**0.0000**	**1,709.1107**	**1,709.1107**	**0.5417**		**1,722.6524**

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	0.0515	0.0350	0.3490	1.0800e-003	0.1168	7.5000e-004	0.1175	0.0311	6.9000e-004	0.0318		107.2152	107.2152	2.4600e-003		107.2768
Total	**0.0515**	**0.0350**	**0.3490**	**1.0800e-003**	**0.1168**	**7.5000e-004**	**0.1175**	**0.0311**	**6.9000e-004**	**0.0318**		**107.2152**	**107.2152**	**2.4600e-003**		**107.2768**

3.6 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	2.0451	16.0275	14.5629	0.0250		0.8173	0.8173		0.7831	0.7831		2,288.9355	2,288.9355	0.4503		2,300.1935

Total	**2.0451**	**16.0275**	**14.5629**	**0.0250**		**0.8173**	**0.8173**		**0.7831**	**0.7831**		**2,288.9355**	**2,288.9355**	**0.4503**		**2,300.1935**

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	0.0473	1.4359	0.4107	3.7200e-003	0.0948	3.2500e-003	0.0980	0.0273	3.1100e-003	0.0304		393.7787	393.7787	0.0182		394.2324
Worker	0.1578	0.1072	1.0702	3.3000e-003	0.3779	2.3000e-003	0.3802	0.1002	2.1100e-003	0.1024		328.7933	328.7933	7.5500e-003		328.9821
Total	**0.2051**	**1.5431**	**1.4809**	**7.0200e-003**	**0.4727**	**5.5500e-003**	**0.4782**	**0.1275**	**5.2200e-003**	**0.1327**		**722.5720**	**722.5720**	**0.0257**		**723.2144**

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	1.1061	5.3852	15.6014	0.0250		0.2488	0.2488		0.2488	0.2488	0.0000	2,288.9355	2,288.9355	0.4503		2,300.1935
Total	**1.1061**	**5.3852**	**15.6014**	**0.0250**		**0.2488**	**0.2488**		**0.2488**	**0.2488**	**0.0000**	**2,288.9355**	**2,288.9355**	**0.4503**		**2,300.1935**

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	0.0473	1.4359	0.4107	3.7200e-003	0.0907	3.2500e-003	0.0940	0.0263	3.1100e-003	0.0294		393.7787	393.7787	0.0182		394.2324
Worker	0.1578	0.1072	1.0702	3.3000e-003	0.3582	2.3000e-003	0.3605	0.0954	2.1100e-003	0.0975		328.7933	328.7933	7.5500e-003		328.9821
Total	**0.2051**	**1.5431**	**1.4809**	**7.0200e-003**	**0.4489**	**5.5500e-003**	**0.4545**	**0.1217**	**5.2200e-003**	**0.1269**		**722.5720**	**722.5720**	**0.0257**		**723.2144**

3.6 Building Construction - 2022

Unmitigated Construction On-Site

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

Unmitigated Construction Off-Site

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

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0441	1.3569	0.3868	3.6900e-003	0.0948	2.8300e-003	0.0976	0.0273	2.7000e-003	0.0300		389.9728	389.9728	0.0173		390.4059
Worker	0.1475	0.0962	0.9822	3.1800e-003	0.3779	2.2500e-003	0.3801	0.1002	2.0700e-003	0.1023		316.8526	316.8526	6.7600e-003		317.0216
Total	**0.1916**	**1.4530**	**1.3690**	**6.8700e-003**	**0.4727**	**5.0800e-003**	**0.4777**	**0.1275**	**4.7700e-003**	**0.1323**		**706.8254**	**706.8254**	**0.0241**		**707.4274**

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	1.0283	5.2472	15.5324	0.0250		0.2181	0.2181		0.2181	0.2181	0.0000	2,289.2813	2,289.2813	0.4417		2,300.3230
Total	**1.0283**	**5.2472**	**15.5324**	**0.0250**		**0.2181**	**0.2181**		**0.2181**	**0.2181**	**0.0000**	**2,289.2813**	**2,289.2813**	**0.4417**		**2,300.3230**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0441	1.3569	0.3868	3.6900e-003	0.0907	2.8300e-003	0.0936	0.0263	2.7000e-003	0.0290		389.9728	389.9728	0.0173		390.4059
Worker	0.1475	0.0962	0.9822	3.1800e-003	0.3582	2.2500e-003	0.3604	0.0954	2.0700e-003	0.0975		316.8526	316.8526	6.7600e-003		317.0216
Total	**0.1916**	**1.4530**	**1.3690**	**6.8700e-003**	**0.4489**	**5.0800e-003**	**0.4540**	**0.1217**	**4.7700e-003**	**0.1265**		**706.8254**	**706.8254**	**0.0241**		**707.4274**

3.7 Architectural Coating - 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					
Archit. Coating	8.1265					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2045	1.4085	1.8136	2.9700e-003		0.0817	0.0817		0.0817	0.0817		281.4481	281.4481	0.0183		281.9062
Total	**8.3310**	**1.4085**	**1.8136**	**2.9700e-003**		**0.0817**	**0.0817**		**0.0817**	**0.0817**		**281.4481**	**281.4481**	**0.0183**		**281.9062**

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	0.0289	0.0188	0.1922	6.2000e-004	0.0739	4.4000e-004	0.0744	0.0196	4.0000e-004	0.0200		61.9929	61.9929	1.3200e-003		62.0260
Total	**0.0289**	**0.0188**	**0.1922**	**6.2000e-004**	**0.0739**	**4.4000e-004**	**0.0744**	**0.0196**	**4.0000e-004**	**0.0200**		**61.9929**	**61.9929**	**1.3200e-003**		**62.0260**

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	8.1265					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0297	0.1288	1.8324	2.9700e-003		3.9600e-003	3.9600e-003		3.9600e-003	3.9600e-003	0.0000	281.4481	281.4481	0.0183		281.9062
Total	**8.1562**	**0.1288**	**1.8324**	**2.9700e-003**		**3.9600e-003**	**3.9600e-003**		**3.9600e-003**	**3.9600e-003**	**0.0000**	**281.4481**	**281.4481**	**0.0183**		**281.9062**

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	0.0289	0.0188	0.1922	6.2000e-004	0.0701	4.4000e-004	0.0705	0.0187	4.0000e-004	0.0191		61.9929	61.9929	1.3200e-003		62.0260
Total	**0.0289**	**0.0188**	**0.1922**	**6.2000e-004**	**0.0701**	**4.4000e-004**	**0.0705**	**0.0187**	**4.0000e-004**	**0.0191**		**61.9929**	**61.9929**	**1.3200e-003**		**62.0260**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Increase Density

Improve Pedestrian Network

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.4965	1.7595	4.9694	0.0146	1.3932	0.0122	1.4053	0.3719	0.0113	0.3832		1,478.4565	1,478.4565	0.0557		1,479.8484
Unmitigated	0.5479	2.0604	6.2928	0.0206	2.0309	0.0165	2.0474	0.5421	0.0154	0.5574		2,078.0020	2,078.0020	0.0712		2,079.7823

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	170.64	170.64	170.64	394,111	270,360
Enclosed Parking with Elevator	0.00	0.00	0.00		
General Office Building	66.36	66.36	66.36	158,584	108,789
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Strip Mall	264.55	264.55	264.55	407,416	279,487
Total	501.55	501.55	501.55	960,111	658,636

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-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	10.80	4.80	5.70	31.00	15.00	54.00	86	11	3
Enclosed Parking with Elevator	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4
Other Non-Asphalt Surfaces	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
Strip Mall	9.50	7.30	7.30	16.60	64.40	19.00	45	40	15

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.612822	0.036208	0.182365	0.105071	0.013933	0.005011	0.012748	0.021514	0.002168	0.001529	0.005280	0.000629	0.000720

Enclosed Parking with Elevator	0.612822	0.036208	0.182365	0.105071	0.013933	0.005011	0.012748	0.021514	0.002168	0.001529	0.005280	0.000629	0.000720
General Office Building	0.612822	0.036208	0.182365	0.105071	0.013933	0.005011	0.012748	0.021514	0.002168	0.001529	0.005280	0.000629	0.000720
Other Non-Asphalt Surfaces	0.612822	0.036208	0.182365	0.105071	0.013933	0.005011	0.012748	0.021514	0.002168	0.001529	0.005280	0.000629	0.000720
Strip Mall	0.612822	0.036208	0.182365	0.105071	0.013933	0.005011	0.012748	0.021514	0.002168	0.001529	0.005280	0.000629	0.000720

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	7.5800e-003	0.0659	0.0356	4.1000e-004		5.2400e-003	5.2400e-003		5.2400e-003	5.2400e-003		82.7372	82.7372	1.5900e-003	1.5200e-003	83.2288
NaturalGas Unmitigated	9.7500e-003	0.0849	0.0469	5.3000e-004		6.7400e-003	6.7400e-003		6.7400e-003	6.7400e-003		106.3894	106.3894	2.0400e-003	1.9500e-003	107.0217

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	639.083	6.8900e-003	0.0589	0.0251	3.8000e-004		4.7600e-003	4.7600e-003		4.7600e-003	4.7600e-003		75.1862	75.1862	1.4400e-003	1.3800e-003	75.6330

Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
General Office Building	212.451	2.2900e-003	0.0208	0.0175	1.2000e-004		1.5800e-003	1.5800e-003		1.5800e-003	1.5800e-003		24.9943	24.9943	4.8000e-004	4.6000e-004	25.1428
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Strip Mall	52.7763	5.7000e-004	5.1700e-003	4.3500e-003	3.0000e-005		3.9000e-004	3.9000e-004		3.9000e-004	3.9000e-004		6.2090	6.2090	1.2000e-004	1.1000e-004	6.2459
Total		**9.7500e-003**	**0.0849**	**0.0469**	**5.3000e-004**		**6.7300e-003**	**6.7300e-003**		**6.7300e-003**	**6.7300e-003**		**106.3894**	**106.3894**	**2.0400e-003**	**1.9500e-003**	**107.0217**

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	0.517373	5.5800e-003	0.0477	0.0203	3.0000e-004		3.8500e-003	3.8500e-003		3.8500e-003	3.8500e-003		60.8674	60.8674	1.1700e-003	1.1200e-003	61.2291
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
General Office Building	0.148949	1.6100e-003	0.0146	0.0123	9.0000e-005		1.1100e-003	1.1100e-003		1.1100e-003	1.1100e-003		17.5235	17.5235	3.4000e-004	3.2000e-004	17.6276
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Strip Mall	0.0369434	4.0000e-004	3.6200e-003	3.0400e-003	2.0000e-005		2.8000e-004	2.8000e-004		2.8000e-004	2.8000e-004		4.3463	4.3463	8.0000e-005	8.0000e-005	4.3721
Total		**7.5900e-003**	**0.0659**	**0.0356**	**4.1000e-004**		**5.2400e-003**	**5.2400e-003**		**5.2400e-003**	**5.2400e-003**		**82.7372**	**82.7372**	**1.5900e-003**	**1.5200e-003**	**83.2288**

6.0 Area Detail

6.1 Mitigation Measures Area

Use only Natural Gas Hearths

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	1.1067	0.1930	2.3129	1.1900e-003		0.0259	0.0259		0.0259	0.0259	0.0000	217.4992	217.4992	8.0300e-003	3.9100e-003	218.8661
Unmitigated	1.1067	0.1930	2.3129	1.1900e-003		0.0259	0.0259		0.0259	0.0259	0.0000	217.4992	217.4992	8.0300e-003	3.9100e-003	218.8661

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	0.1469					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.8718					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0196	0.1672	0.0712	1.0700e-003		0.0135	0.0135		0.0135	0.0135	0.0000	213.4588	213.4588	4.0900e-003	3.9100e-003	214.7273
Landscaping	0.0684	0.0258	2.2418	1.2000e-004		0.0124	0.0124		0.0124	0.0124		4.0404	4.0404	3.9300e-003		4.1388
Total	**1.1067**	**0.1930**	**2.3129**	**1.1900e-003**		**0.0259**	**0.0259**		**0.0259**	**0.0259**	**0.0000**	**217.4992**	**217.4992**	**8.0200e-003**	**3.9100e-003**	**218.8661**

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	0.1469					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.8718					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0196	0.1672	0.0712	1.0700e-003		0.0135	0.0135		0.0135	0.0135	0.0000	213.4588	213.4588	4.0900e-003	3.9100e-003	214.7273
Landscaping	0.0684	0.0258	2.2418	1.2000e-004		0.0124	0.0124		0.0124	0.0124		4.0404	4.0404	3.9300e-003		4.1388
Total	**1.1067**	**0.1930**	**2.3129**	**1.1900e-003**		**0.0259**	**0.0259**		**0.0259**	**0.0259**	**0.0000**	**217.4992**	**217.4992**	**8.0200e-003**	**3.9100e-003**	**218.8661**

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

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation