HELIX Environmental Planning

Spring Valley Shopping Center Project

Air Quality Technical Report

March 2021 | MCE-01

Prepared for:

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ACRONYMS AND ABBREVIATIONS

$\mu g/m^3$	micrograms per cubic meter
ADT	average daily trips
AQIA	Air Quality Impact Assessment
BMPs	best management practices
CAA	Clean Air Act (Federal)
CAAQS	California Ambient Air Quality Standard
CalEEMod	California Emission Estimator Model
CalEPA	California Environmental Protection Agency
CALGreen	California Green Building Standards Code
CARB	California Air Resources Board
CCAA	California Clean Air Act
CEQA	California Environmental Quality Act
CO	carbon monoxide
County	County of San Diego
CY	cubic yard
DPM	diesel particulate matter
ºF	degrees Fahrenheit
g/L	grams per liter
H_2S	hydrogen sulfide
lbs	pounds
LOS	level of service
mph	miles per hour
NAAQS	National Ambient Air Quality Standard
NO	nitric oxide
NO_X	oxides of nitrogen
NO_2	nitrogen dioxide
O_3	Ozone
Pb	lead
PCE	perchloroethylene

ACRONYMS AND ABBREVIATIONS (cont.)

PM_{10}	respirable particulate matter (particulate matter with an aerodynamic diameter of 10 microns or less
$PM_{2.5}$	fine particulate matter (particulate matter with an aerodynamic diameter of 2.5 microns or less
ppm	parts per million
PVC	polyvinyl chloride
RAQS	Regional Air Quality Strategy
SAFE	Safer Affordable Fuel Efficient
SANDAG	San Diego Association of Governments
SCAQMD	South Coast Air Quality Management District
SDAB	San Diego Air Basin
SF	square foot/square feet
SDAPCD	San Diego Air Pollution Control District
SIP	State Implementation Plan
SO_2	sulfur dioxide
TACs	Toxic Air Contaminants
T-BACT	Toxics Best Available Control Technology
VOCs	volatile organic compounds
WRCC	Western Regional Climate Center
USEPA	U.S. Environmental Protection Agency

EXECUTIVE SUMMARY

This report presents an assessment of potential air quality impacts associated with the proposed Spring Valley Shopping Center Project (Project). The evaluation addresses the potential for air pollutant emissions during construction and after full buildout of the Project.

The Project would result in emissions of air pollutants during the construction phase and operational phase of the Project. Construction best management practices (BMPs) would be implemented for the Project, including measures to minimize fugitive dust emissions, such as watering twice per day during grading and stabilizing storage piles. With the inclusion of these BMPs, emissions of all criteria pollutants would be below the daily thresholds during construction, and short-term construction impacts would be less than significant.

Operational emissions associated with the Project would include vehicular traffic, onsite energy use, and area sources such as reapplication of architectural coatings, landscaping, and the use of consumer products. The Project would incorporate energy-efficiency features that would meet 2019 California Title 24 Energy Efficiency Standards. Criteria pollutant emissions would not exceed the daily screening level thresholds during Project operation.

Development of the Project would be consistent with the San Diego Air Pollution Control District (SDAPCD) Regional Air Quality Strategy (RAQS) and would not result in any cumulatively considerable emissions of nonattainment air pollutants that would exceed the screening level thresholds.

The Project would not result in the exposure of sensitive receptors to substantial emissions of pollutants or toxic air contaminants. Implementation of the Project would not result in emissions of carbon monoxide (CO) that would exceed state or federal standards or result in a CO hotspot. An evaluation of potential odors from construction activities and Project operation indicated that the Project would not expose substantial numbers of people to objectionable odors.

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1.0 INTRODUCTION AND PROJECT DESCRIPTION

1.1 PURPOSE OF THE REPORT

This report analyzes potential air quality impacts associated with the proposed Spring Valley Shopping Center Project (Project) and includes an evaluation of existing conditions in the Project vicinity, an assessment of potential impacts associated with Project construction, and an evaluation of Project operational impacts. The analysis of impacts and report is prepared in accordance with the County of San Diego (County) Guidelines for Determining Significance and Report Content and Format Requirement for Air Quality (County 2007).

1.2 PROJECT LOCATION AND DESCRIPTION

The Project site is located within the unincorporated community of Spring Valley within the south-central portion of the County of San Diego (Figure 1, *Regional Location*). The site is located at the southeast corner of the intersection of Jamacha Road and Sweetwater Road (Figure 2, *Aerial Photograph*).

The Project would be constructed on three noncontiguous pads totaling 2.65 acres within an existing 13.21-acre shopping center. The shopping center is currently occupied by a drive-thru restaurant, grocery store, and retail stores, none of which would be demolished for the Project. There is also an existing unused 3,165-SF storage structure within the shopping center that would be demolished as part of the project. The proposed Project would construct a new 17,379-square foot (SF) drug store, a 4,490-SF fast food restaurant, and a 4,500-SF coffee shop. The drug store, coffee shop, and fast food restaurant would each have a drive-thru. The Project would be served by 640 parking spaces, with vehicular access provided via existing shopping center driveways along Sweetwater Road, Jamacha Road, and St. George Street. Refer to Figure 3, *Site Plan*.

Overall construction would take place over the course of approximately 10 months, beginning in January 2021. Construction would require the demolition of the existing storage structure. Approximately 13,000 cubic yards (CY) of cut and 12,000 CY of fill would be required. 1,000 CY of material export would be removed from the site.

The site is subject to and consistent with the General Plan Land Use General Commercial designation, and is zoned C36 (General Commercial).

1.3 PROJECT CONTROL MEASURES

The Project would implement control measures that would include (1) measures to comply with the regulatory requirements and (2) additional best management practices (BMPs) during construction.

1.3.1 Regulatory Requirements

1.3.1.1 Construction Measures

The Project would incorporate best management practices (BMPs) during construction to reduce emissions of fugitive dust. San Diego County Air Pollution Control District (SDAPCD) Rule 55 – Fugitive

Dust Control states that no airborne dust shall be visible beyond the property line for more than three minutes in any 60-minute period. SDAPCD Rule 55 requires the following:

1. **Airborne Dust Beyond the Property Line:** No person shall engage in construction or demolition activity subject to this rule in a manner that discharges visible dust emissions into the atmosphere beyond the property line for a period or periods aggregating more than 3 minutes in any 60-minute period.

2. **Track-Out/Carry-Out:** Visible roadway dust as a result of active operations, spillage from transport trucks, erosion, or track-out/carry-out shall:

   (i) be minimized by the use of any of the following or equally effective track-out/carry-out and erosion control measures that apply to the Project or operation:

      (a) track-out grates or gravel beds at each egress point;

      (b) wheel-washing at each egress during muddy conditions, soil binders, chemical soil stabilizers, geotextiles, mulching, or seeding; and for outbound transport trucks;

      (c) using secured tarps or cargo covering, watering, or treating of transported material; and

   (ii) be removed at the conclusion of each work day when active operations cease, or every 24 hours for continuous operations. If a street sweeper is used to remove any track-out/ carry-out, only respirable particulate matter (PM_{10}) -efficient street sweepers certified to meet the most current South Coast Air Quality Management District (SCAQMD) Rule 1186 requirements shall be used. The use of blowers for removal of track-out/carry-out is prohibited under any circumstances.

1.3.1.2 Area Source Reductions

- Use of low-volatile organic compound (VOC) coatings in accordance with, or exceeding, SDAPCD Rule 67.

1.3.1.3 Energy Efficiencies

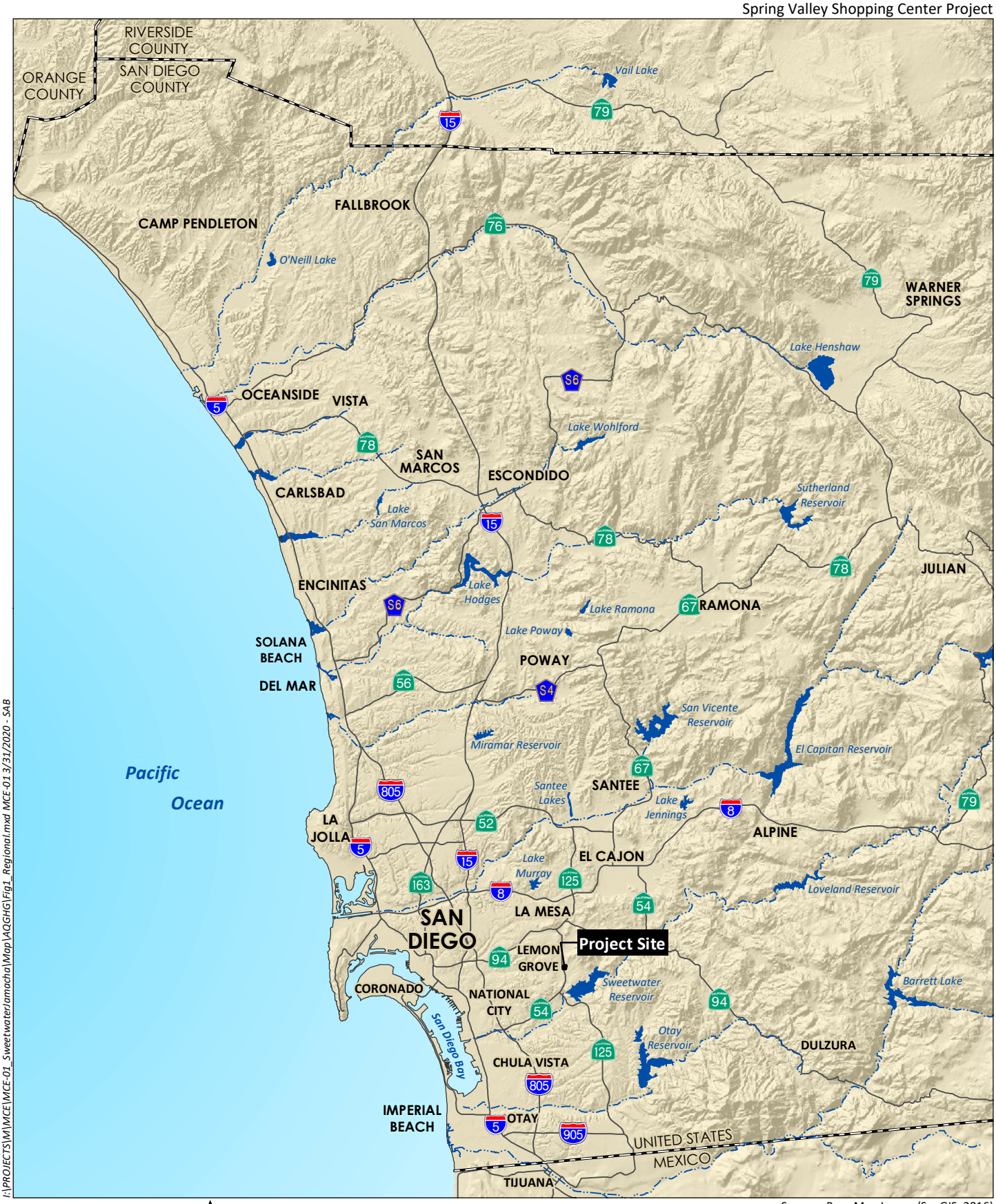
- The Project will be designed to meet 2019 Title 24 energy efficiency standards.

1.3.1.4 Water and Waste Reduction

- In accordance with Part 11 of Title 24, California Green Building Standards Code (CALGreen) criteria and state and local laws, at least 50 percent of operational waste would be diverted from landfills through reuse and recycling.

- Provide areas for storage and collection of recyclables and yard waste in accordance with 2019 CALGreen.

- The Project would provide a 20 percent water reduction from the statewide average in accordance with 2019 CALGreen.



I:\PROJECTS\M\MCE\MCE-01_SweetwaterLamacha\Map\AQGHG\Fig1_Regional.mxd MCE-01 3/31/2020 - SAB

0 8 Miles

Source: Base Map Layers (SanGIS, 2016)

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Regional Location

Figure 1

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0 200 Feet

Source: Aerial (SanGIS, 2017)

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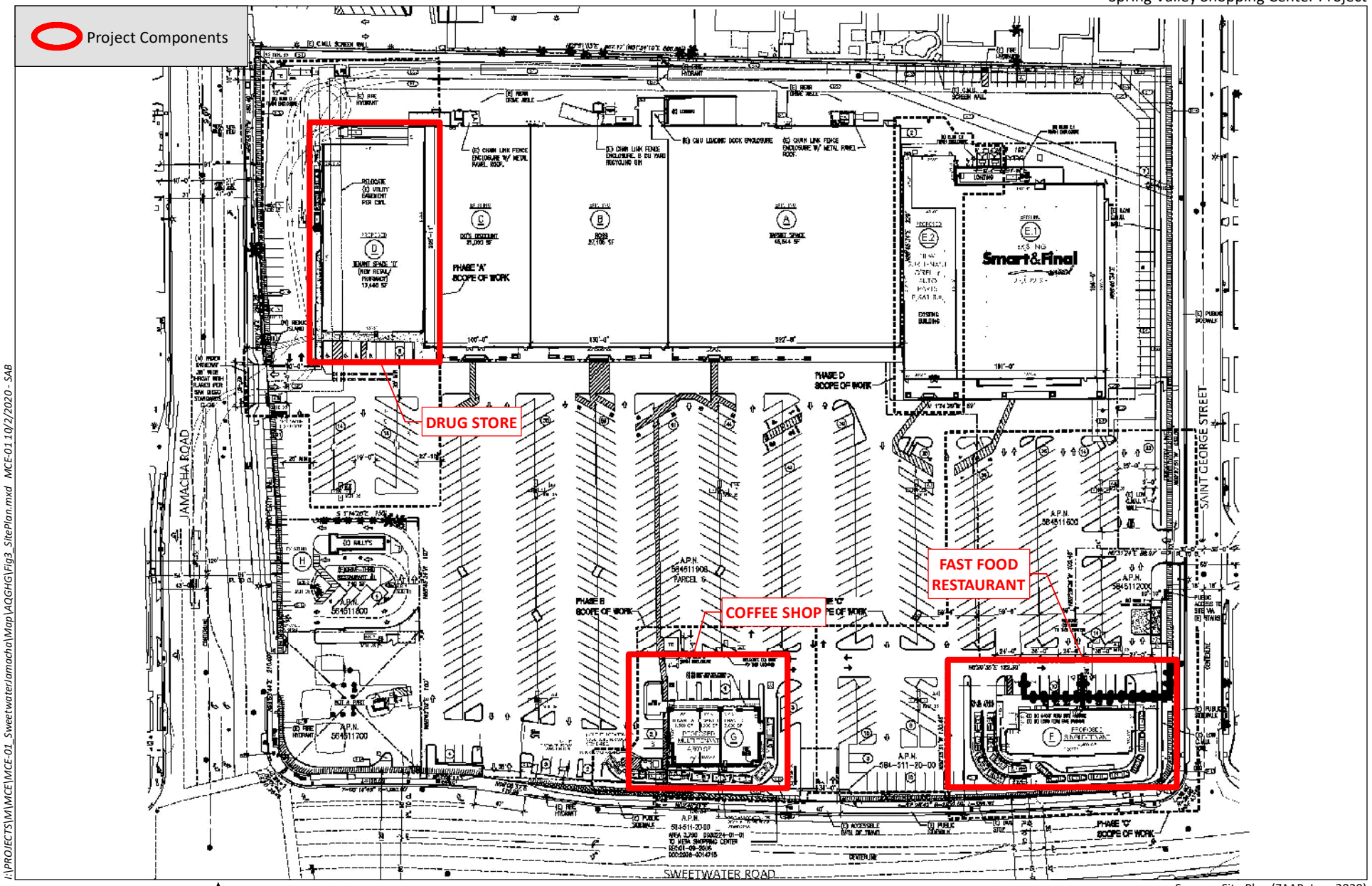
Project Vicinity

Figure 2



Source: Site Plan (ZAAP, Inc., 2020)

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Spring Valley Shopping Center Project

Figure 3

1.3.2 Construction Best Management Practices

In addition to the measures included above that comply with applicable regulatory requirements, the Project would implement the following BMPs:

- The Project applicant will require the contractor(s) to implement paving, chip sealing, or chemical stabilization of internal roadways after completion of grading.
- Dirt storage piles will be stabilized by chemical binders, tarps, fencing or other erosion control.
- A 15-mile per hour (mph) speed limit will be enforced on unpaved surfaces.
- On dry days (i.e., days without rainfall), dirt and debris spilled onto paved surfaces shall be swept up immediately to reduce resuspension of particulate matter caused by vehicle movement. Approach routes to construction sites shall be cleaned daily of construction-related dirt in dry weather.
- Haul trucks hauling dirt, sand, soil, or other loose materials will be covered or two feet of freeboard will be maintained.
- Disturbed areas shall be hydroseeded, landscaped, or developed as quickly as possible and as directed by the County and/or SDAPCD to reduce dust generation.
- Grading will be terminated if winds exceed 25 mph.
- Water will be applied a minimum of twice daily during grading activities.

2.0 EXISTING CONDITIONS

2.1 EXISTING SETTING

The Project site is currently an existing shopping center that would remain in use during and following Project construction. The Project construction site is currently developed with a parking lot and 3,165-SF storage structure. Surrounding uses adjacent to the shopping center include commercial uses to the north and west, a church and single-family residences to the east, and single-family residences to the south. State Route 125 is located west of the Project site across Sweetwater Road.

Sensitive receptors are people that have an increased sensitivity to air quality contaminants. Sensitive receptor locations include schools, parks, hospitals, and residential areas. The closest existing sensitive receptors include residential uses located approximately 100 feet south of the Project's proposed fast food restaurant component.

2.2 CLIMATE / METEOROLOGY AND TEMPERATURE INVERSIONS

The climate in southern California, including the San Diego Air Basin (SDAB), is controlled largely by the strength and position of the subtropical high-pressure cell over the Pacific Ocean. Areas within 30 miles of the coast, including the Project site, experience moderate temperatures and comfortable humidity.

The annual average maximum temperature in the Project area is approximately 75 degrees Fahrenheit (ºF), and the average minimum temperature is approximately 52ºF. Total precipitation in the Project area averages approximately 12.9 inches per year. Precipitation occurs mostly during the winter and relatively infrequently during the summer (Western Regional Climate Center [WRCC] 2020).

Due to its climate, the SDAB experiences frequent temperature inversions (temperature increases as altitude increases, which is the opposite of general patterns). Temperature inversions prevent air close to the ground from mixing with the air above it. As a result, air pollutants are trapped near the ground. During the summer, air quality problems are created due to the interaction between the ocean surface and the lower layer of the atmosphere, creating a moist marine layer. An upper layer of warm air mass forms over the cool marine layer, preventing air pollutants from dispersing upward. Additionally, hydrocarbons and nitrogen dioxide (NO_2) react under strong sunlight, creating smog. Light, daytime winds, predominantly from the west, further aggravate the condition by driving the air pollutants inland, toward the foothills. During the fall and winter, air quality problems are created due to carbon monoxide (CO) and NO_2 emissions. High NO_2 levels usually occur during autumn or winter, on days with summer-like conditions (SDAPCD 2016).

2.3 AIR POLLUTANTS OF CONCERN

2.3.1 Criteria Air Pollutants

Federal and state laws regulate air pollutants emitted into the ambient air by stationary and mobile sources. These regulated air pollutants are known as “criteria air pollutants” and are categorized as primary and secondary standards. Primary standards are a set of limits based on human health. Another set of limits intended to prevent environmental and property damage is called secondary standards. Criteria pollutants are defined by state and federal law as a risk to the health and welfare of the general public.

The following specific descriptions of health effects for each air pollutant associated with Project construction and operation are based on information available through United States Environmental Protection Agency (USEPA; 2018) and California Air Resources Board (CARB; 2020a).

Ozone. Ozone (O_3) is considered a photochemical oxidant, which is a chemical that is formed when VOCs and oxides of nitrogen (NO_X), both by-products of fuel combustion, react in the presence of ultraviolet light. Ozone is considered a respiratory irritant and prolonged exposure can reduce lung function, aggravate asthma, and increase susceptibility to respiratory infections. Children and those with existing respiratory diseases are at greatest risk from exposure to ozone.

Carbon Monoxide. CO is a product of fuel combustion, and the main source of CO in the SDAB is from motor vehicle exhaust. CO is an odorless, colorless gas. CO affects red blood cells in the body by binding to hemoglobin and reducing the amount of oxygen that can be carried to the body’s organs and tissues. CO can cause health effects to those with cardiovascular disease and can also affect mental alertness and vision.

Nitrogen Dioxide. NO_2 is also a by-product of fuel combustion and is formed both directly as a product of combustion and in the atmosphere through the reaction of nitric oxide (NO) with oxygen. NO_2 is a respiratory irritant and may affect those with existing respiratory illness, including asthma. NO_2 can also increase the risk of respiratory illness.

Respirable Particulate Matter and Fine Particulate Matter. Respirable particulate matter, or PM_{10}, refers to particulate matter with an aerodynamic diameter of 10 microns or less. Fine particulate matter, or $PM_{2.5}$, refers to particulate matter with an aerodynamic diameter of 2.5 microns or less. Particulate matter in these size ranges have been determined to have the potential to lodge in the lungs and contribute to respiratory problems. PM_{10} and $PM_{2.5}$ arise from a variety of sources, including road dust, diesel exhaust, fuel combustion, tire and brake wear, construction operations and windblown dust. PM_{10} and $PM_{2.5}$ can increase susceptibility to respiratory infections and can aggravate existing respiratory diseases such as asthma and chronic bronchitis. $PM_{2.5}$ is considered to have the potential to lodge deeper in the lungs.

Sulfur dioxide. Sulfur dioxide (SO_2) is a colorless, reactive gas that is produced from the burning of sulfur-containing fuels such as coal and oil, and by other industrial processes. Generally, the highest concentrations of SO_2 are found near large industrial sources. SO_2 is a respiratory irritant that can cause narrowing of the airways leading to wheezing and shortness of breath. Long-term exposure to SO_2 can cause respiratory illness and aggravate existing cardiovascular disease.

Lead. Lead (Pb) in the atmosphere occurs as particulate matter. Lead has historically been emitted from vehicles combusting leaded gasoline, as well as from industrial sources. With the phase-out of leaded gasoline, large manufacturing facilities are the sources of the largest amounts of lead emissions. Lead has the potential to cause gastrointestinal, central nervous system, kidney and blood diseases upon prolonged exposure. Lead is also classified as a probable human carcinogen.

Sulfates. Sulfates are the fully oxidized ionic form of sulfur. In California, emissions of sulfur compounds occur primarily from the combustion of petroleum-derived fuels (e.g., gasoline and diesel fuel) that contain sulfur. This sulfur is oxidized to SO_2 during the combustion process and subsequently converted to sulfate compounds in the atmosphere. The conversion of SO_2 to sulfates takes place comparatively rapidly and completely in urban areas of California due to regional meteorological features. CARB's sulfates standard is designed to prevent aggravation of respiratory symptoms. Effects of sulfate exposure at levels above the standard include a decrease in ventilatory function, aggravation of asthmatic symptoms and an increased risk of cardio-pulmonary disease. Sulfates are particularly effective in degrading visibility, and due to fact that they are usually acidic, can harm ecosystems and damage materials and property.

Hydrogen Sulfide. Hydrogen sulfide (H_2S) is a colorless gas with the odor of rotten eggs. It is formed during bacterial decomposition of sulfur-containing organic substances. Also, it can be present in sewer gas and some natural gas, and can be emitted as the result of geothermal energy exploitation. Breathing H_2S at levels above the standard would result in exposure to a very disagreeable odor. In 1984, a CARB committee concluded that the ambient standard for H_2S is adequate to protect public health and to significantly reduce odor annoyance.

Vinyl Chloride. Vinyl chloride, a chlorinated hydrocarbon, is a colorless gas with a mild, sweet odor. Most vinyl chloride is used to make polyvinyl chloride (PVC) plastic and vinyl products. Vinyl chloride has been detected near landfills, sewage plants, and hazardous waste sites, due to microbial breakdown of chlorinated solvents. Short-term exposure to high levels of vinyl chloride in air causes central nervous system effects, such as dizziness, drowsiness, and headaches. Long-term exposure to vinyl chloride through inhalation and oral exposure causes liver damage. Cancer is a major concern from exposure to vinyl chloride via inhalation. Vinyl chloride exposure has been shown to increase the risk of angiosarcoma, a rare form of liver cancer, in humans.

Visibility-Reducing Particles. Visibility-reducing particles consist of suspended particulate matter, which is a complex mixture of tiny particles that consists of dry solid fragments, solid cores with liquid coatings, and small droplets of liquid. These particles vary greatly in shape, size and chemical composition, and can be made up of many different materials such as metals, soot, soil, dust, and salt. These particles in the atmosphere would obstruct the range of visibility. This standard is intended to limit the frequency and severity of visibility impairment due to regional haze.

2.3.2 Toxic Air Contaminants

The Health and Safety Code (§39655, subd. (a).) defines a toxic air contaminant (TAC) as "an air pollutant which may cause or contribute to an increase in mortality or in serious illness, or which may pose a present or potential hazard to human health." A substance that is listed as a hazardous air pollutant pursuant to subsection (b) of Section 112 of the Federal Clean Air Act (CAA) (42 United States Code Section 7412[b]) is a TAC. Under State law, the California Environmental Protection Agency (CalEPA), acting through CARB, is authorized to identify a substance as a TAC if it determines the substance is an air pollutant that may cause or contribute to an increase in mortality or an increase in serious illness, or that may pose a present or potential hazard to human health.

Diesel engines emit a complex mixture of air pollutants, composed of gaseous and solid material. The solid emissions in diesel exhaust are known as diesel particulate matter (DPM). In 1998, California identified DPM as a TAC based on its potential to cause cancer, premature death, and other health problems (e.g., asthma attacks and other respiratory symptoms). Those most vulnerable are children whose lungs are still developing and the elderly who may have other serious health problems. Overall, diesel engine emissions are responsible for the majority of California's known cancer risk from outdoor air pollutants. Diesel engines also contribute to California's $PM_{2.5}$ air quality problems. In addition, diesel soot causes visibility reduction (CARB 2020b).

2.4 REGULATORY SETTING

Air quality is defined by ambient air concentrations of specific pollutants identified by the USEPA to be of concern with respect to health and welfare of the general public. The USEPA is responsible for enforcing the Federal CAA of 1970 and its 1977 and 1990 Amendments. The CAA required the USEPA to establish National Ambient Air Quality Standards (NAAQS), which identify concentrations of pollutants in the ambient air below which no adverse effects on the public health and welfare are anticipated. In response, the USEPA established both primary and secondary standards for several pollutants (called "criteria" pollutants, specifically, ozone, particulate matter, carbon monoxide, nitrogen oxides, sulfur dioxide, and lead). Primary standards are designed to protect human health with an adequate margin of safety. Secondary standards are designed to protect property and the public welfare from air pollutants in the atmosphere. The CAA allows states to adopt ambient air quality standards and other regulations provided they are at least as stringent as federal standards. CARB has established the California Ambient Air Quality Standards (CAAQS) for the six criteria pollutants through the California Clean Air Act of 1988 (CCAA), and has established CAAQS for additional pollutants, including sulfates, H_2S, vinyl chloride, and visibility-reducing particles. Similar to the NAAQS, the CAAQS incorporate a margin of safety to protect sensitive individuals from adverse health effects related to air pollutants. Table 1, *California and National Ambient Air Quality Standards*, shows the federal and state ambient air quality standards.

Table 1
CALIFORNIA AND NATIONAL AMBIENT AIR QUALITY STANDARDS

Pollutant	Averaging Time	California Standards	Federal Standards Primary[a]	Federal Standards Secondary[b]
O_3	1 Hour	0.09 ppm (180 µg/m^3)	–	–
	8 Hour	0.070 ppm (137 µg/m^3)	0.070 ppm (147 µg/m^3)	Same as Primary
PM_{10}	24 Hour	50 µg/m^3	150 µg/m^3	Same as Primary
	AAM	20 µg/m^3	–	Same as Primary
$PM_{2.5}$	24 Hour	–	35 µg/m^3	Same as Primary
	AAM	12 µg/m^3	12.0 µg/m^3	Same as Primary
CO	1 Hour	20 ppm (23 mg/m^3)	35 ppm (40 mg/m^3)	–
	8 Hour	9.0 ppm (10 mg/m^3)	9 ppm (10 mg/m^3)	–
	8 Hour (Lake Tahoe)	6 ppm (7 mg/m^3)	–	–
NO_2	AAM	0.030 ppm (57 µg/m^3)	0.053 ppm (100 µg/m^3)	Same as Primary
	1 Hour	0.18 ppm (339 µg/m^3)	0.100 ppm (188 µg/m^3)	–
SO_2	24 Hour	0.04 ppm (105 µg/m^3)	–	–
	3 Hour	–	–	0.5 ppm (1,300 µg/m^3)
	1 Hour	0.25 ppm (655 µg/m^3)	0.075 ppm (196 µg/m^3)	–
Lead	30-day Avg.	1.5 µg/m^3	–	–
	Calendar Quarter	–	1.5 µg/m^3	Same as Primary
	Rolling 3-month Avg.	–	0.15 µg/m^3	Same as Primary
Visibility Reducing Particles	8 hour	Extinction coefficient of 0.23 per km – visibility ≥ 10 miles (0.07 per km – ≥30 miles for Lake Tahoe)	No Federal Standards	No Federal Standards
Sulfates	24 Hour	25 µg/m^3	No Federal Standards	No Federal Standards
Hydrogen Sulfide	1 Hour	0.03 ppm (42 µg/m^3)	No Federal Standards	No Federal Standards
Vinyl Chloride	24 Hour	0.01 ppm (26 µg/m^3)	No Federal Standards	No Federal Standards

Source: CARB 2016

Note: More detailed information in the data presented in this table can be found at the CARB website (www.arb.ca.gov).

[a] National Primary Standards: The levels of air quality necessary, within an adequate margin of safety, to protect the public health.

[b] National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

O_3: ozone; ppm: parts per million; µg/m^3: micrograms per cubic meter; PM_{10}: large particulate matter;
AAM: Annual Arithmetic Mean; $PM_{2.5}$: fine particulate matter; CO: carbon monoxide;
mg/m^3: milligrams per cubic meter; NO_2 nitrogen dioxide; SO_2: sulfur dioxide; km: kilometer; –: No Standard.

Areas that do not meet the NAAQS or the CAAQS for a particular pollutant are considered to be "nonattainment areas" for that pollutant. On August 3, 2018, the SDAB was classified as a moderate nonattainment area for the 8-hour NAAQS for ozone (USEPA 2020). The SDAB is currently classified as a nonattainment area under the CAAQS for ozone, PM_{10}, and $PM_{2.5}$. The SDAB is an attainment area for the NAAQS and CAAQS for all other criteria pollutants (SDAPCD 2019).

CARB is the state regulatory agency with authority to enforce regulations to both achieve and maintain the NAAQS and CAAQS. The local air district has the primary responsibility for the development and implementation of rules and regulations designed to attain the NAAQS and CAAQS, as well as the permitting of new or modified sources, development of air quality management plans, and adoption and enforcement of air pollution regulations. The SDAPCD is the local agency responsible for the administration and enforcement of air quality regulations for the County.

The SDAPCD and San Diego Association of Governments (SANDAG) are responsible for developing and implementing the clean air plan for attainment and maintenance of the ambient air quality standards in the SDAB. The San Diego County Regional Air Quality Strategy (RAQS) was initially adopted in 1991, and is generally updated on a triennial basis. The most recent version of the RAQS was adopted by the SDAPCD in 2016. The local RAQS, in combination with those from all other California nonattainment areas with serious (or worse) air quality problems, is submitted to the CARB, which develops the California State Implementation Plan (SIP).

The RAQS relies on information from CARB and SANDAG, including mobile and area source emissions, as well as information regarding projected growth in the County, to project future emissions and then determine from that the strategies necessary for the reduction of emissions through regulatory controls. CARB mobile source emission projections and SANDAG growth projections are based on population and vehicle trends and land use plans developed by the cities and by the County as part of the development of the County's General Plan.

The SIP relies on the same information from SANDAG to develop emission inventories and emission reduction strategies that are included in the attainment demonstration for the air basin.

The current federal and state attainment status (Table 2, *Federal and State Air Quality Designation*) for the County is as follows:

Table 2
FEDERAL AND STATE AIR QUALITY DESIGNATION

Criteria Pollutant	Federal Designation	State Designation
Ozone (1-hour)	Attainment[1]	Nonattainment
Ozone (8-hour)	Nonattainment	Nonattainment
CO	Attainment	Attainment
PM_{10}	Unclassifiable[2]	Nonattainment
$PM_{2.5}$	Attainment	Nonattainment
NO_2	Attainment	Attainment
SO_2	Attainment	Attainment
Lead	Attainment	Attainment
Sulfates	(No federal standard)	Attainment
Hydrogen Sulfide	(No federal standard)	Unclassifiable
Visibility	(No federal standard)	Unclassifiable

Source: SDAPCD 2019

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

[2] At the time of designation, if the available data does not support a designation of attainment or nonattainment, the area is designated as unclassifiable.

2.5 BACKGROUND AIR QUALITY

The SDAPCD operates a network of ambient air monitoring stations throughout the County. The purpose of the monitoring stations is to measure ambient concentrations of the pollutants and determine whether the ambient air quality meets the CAAQS and the NAAQS. The nearest ambient monitoring station to the Project site is the Chula Vista Monitoring Station located at 80 J Street in the city of Chula Vista. This station is located approximately 6.3 miles southwest of the Project site and approximately 0.75 mile west of Interstate 805. The Chula Vista monitoring station monitors ozone, particulate matter, and NO_2. Air quality data for the monitoring station is shown in Table 3, *Air Quality Monitoring Data.*

Monitoring data at the Chula Vista Monitoring Station show no violations of the state 1-hour ozone standard for the years 2016 to 2018. Violations of both the state and federal 8-hour ozone standards occurred once in 2017. One exceedance of the state PM_{10} standard also occurred in 2017 and the annual average for PM_{10} exceeded the state standard in all three years. Violations of the national $PM_{2.5}$ standard occurred once in 2017. Data for the annual average for $PM_{2.5}$ show either no exceedance of the state and federal standard or insufficient data for all three years. The monitoring data show acceptable levels of NO_2 for the years 2016 to 2018.

Table 3
AIR QUALITY MONITORING DATA

Air Pollutant	2016	2017	2018
Ozone (O_3)			
Max 1-hour (ppm)	0.073	0.085	0.076
Days > CAAQS (0.09 ppm)	0	0	0
Max 8-hour (ppm)	0.069	0.75	0.065
Days > NAAQS (0.070 ppm)	0	1	0
Days > CAAQS (0.070 ppm)	0	1	0
Particulate Matter (PM_{10})			
Max Daily (µg/m^3)	48.0	61.0	45.0
Days > NAAQS (150 µg/m^3)	0	0	0
Days > CAAQS (50 µg/m^3)	0	1	0
Annual Average (µg/m^3)	21.8	21.7	20.7
Exceed CAAQS (20 µg/m^3)	Yes	Yes	Yes
Particulate Matter ($PM_{2.5}$)			
Max Daily (µg/m^3)	23.9	42.7	41.9
Days > NAAQS (35 µg/m^3)	0	1	1
Annual Average (µg/m^3)	8.7	*	10.0
Exceed NAAQS (15 µg/m^3)	No	-	No
Exceed CAAQS (12 µg/m^3)	No	-	No
Nitrogen Dioxide (NO_2)			
Max 1-hour (ppm)	0.054	0.057	0.052
Days > NAAQS (0.10 ppm)	0	0	0
Days > CAAQS (0.18 ppm)	0	0	0

Sources: CARB 2020c. Data collected at the Chula Vista Monitoring Station located at 80 J Street in the city of Chula Vista.
> = exceeding; ppm = parts per million; µg/m^3 = micrograms per cubic meter;
* = Insufficient data available to determine the value.

3.0 SIGNIFICANCE CRITERIA AND ANALYSIS METHODOLOGIES

3.1 SIGNIFICANCE CRITERIA

The County (2007) has approved guidelines for determining significance (County Guidelines); however, the County Guidelines have not yet been revised to reflect Appendix G of the State California Environmental Quality Act (CEQA) Guidelines, as updated in 2019. This updated provides a revision to the CEQA impact determination questions for air quality by merging questions 2 and 3 of the previous guidelines (and reflected in the County Guidelines) together as question 2 (identified below). Because the Project must comply with CEQA, the following significance thresholds used in this analysis are based on Appendix G of the State CEQA Guidelines. A significant environmental impact would occur if the Project would:

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

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

3. Expose sensitive receptors to substantial pollutant concentrations; or

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

To determine whether a project would result in a cumulatively considerable net increase of $PM_{10,}$ $PM_{2.5}$, or ozone precursors, NO_X and VOCs, or have an adverse effect on human health, project emissions may be evaluated based on the quantitative emission thresholds established by the SDAPCD. As part of its air quality permitting process, the SDAPCD has established trigger thresholds in Rules 20.2 and 20.3 for the preparation of Air Quality Impact Assessments (AQIAs). SDAPCD has not established AQIA thresholds for emissions of $PM_{2.5}$ or VOCs. As such, the County has adopted the threshold of 55 pounds (lbs) per day or 10 tons per year as a significance threshold for $PM_{2.5}$ from the EPA "Proposed Rule to Implement the Fine Particulate National Ambient Air Quality Standards" published September 8, 2005. The County has also adopted a threshold of 75 lbs per day for VOCs as specified by SCAQMD, which generally has stricter emissions thresholds than SDAPCD.

The screening criteria were developed by SDAPCD and SCAQMD with the purpose of attaining the NAAQS and CAAQS. The NAAQS and CAAQS, as discussed in Section 2.4, identify concentrations of pollutants in the ambient air below which no adverse effects on the public health and welfare are anticipated. Therefore, for CEQA purposes, these screening criteria can be used as numeric methods to demonstrate that a project's total emissions would not result in a significant impact to air quality or an adverse effect on human health. The screening thresholds are included in Table 4, *Screening-Level Thresholds for Air Quality Impact Analysis*.

Table 4
SCREENING-LEVEL THRESHOLDS FOR AIR QUALITY IMPACT ANALYSIS

Pollutant	Total Emissions		
Construction Emissions (Pounds per Day)			
Respirable Particulate Matter (PM_{10})	100		
Fine Particulate Matter ($PM_{2.5}$)	55		
Oxides of Nitrogen (NO_X)	250		
Oxides of Sulfur (SO_X)	250		
Carbon Monoxide (CO)	550		
Volatile Organic Compounds (VOCs)	75		
Operational Emissions			
	Pounds per Hour	**Pounds per Day**	**Tons per Year**
Respirable Particulate Matter (PM_{10})	---	100	15
Fine Particulate Matter ($PM_{2.5}$)	---	55	10
Oxides of Nitrogen (NO_X)	25	250	40
Oxides of Sulfur (SO_X)	25	250	40
Carbon Monoxide (CO)	100	550	100
Lead and Lead Compounds	---	3.2	0.6
Volatile Organic Compounds (VOCs)	---	75	13.7
Toxic Air Contaminant Emissions			
Excess Cancer Risk	1 in 1 million 10 in 1 million with T-BACT		
Non-Cancer Hazard	1.0		

Source: SDACPD Rule 20.2 and Rule 1210
T-BACT = Toxics Best Available Control Technology

3.2 METHODOLOGY

The air quality impact analysis contained in this report was prepared in accordance with the methodologies provided by the County as included in the *Guidelines for Determining Significance and Report Format and Content Requirements for Air Quality* (County 2007).

Criteria pollutant and ozone precursor emissions from Project construction and operation are assessed using the California Emissions Estimator Model (CalEEMod), Version 2016.3.2. CalEEMod is a computer model developed by SCAQMD with the input of several air quality management and pollution control districts to estimate criteria air pollutant emissions resulting from construction and operation of various land uses. CalEEMod has the ability to calculate on-road mobile (i.e., vehicular), off-road mobile (i.e., heavy construction equipment), energy, area, and stationary source emissions. CalEEMod allows for the input of individual land uses for which specific land use types and sizes can be selected to reflect the project.

3.2.1 Construction Emissions

CalEEMod incorporates CARB's EMFAC2014 model for on-road vehicle emissions and the OFFROAD2011 model for off-road vehicle emissions. CalEEMod is designed to model construction emissions for land development projects and allows for the input of project-specific information, such as the number of equipment, hours of operations, duration of construction activities, and selection of emission control

measures. The analysis assessed maximum daily emissions from individual construction activities, including site preparation, demolition, grading, installation of underground infrastructure, building construction, paving, and architectural coating.

Construction would require heavy equipment for these various construction phases. Construction equipment estimates are based on default values in CalEEMod, Version 2016.3.2 model and input from the Project applicant. Table 5, *Construction Equipment Assumptions*, presents a summary of the assumed equipment that would be involved in each stage of construction.

Table 5
CONSTRUCTION EQUIPMENT ASSUMPTIONS

Construction Phase	Equipment	Number
Site Preparation	Tractors/Loaders/Backhoes	1
	Graders	1
Demolition	Excavator	1
	Tractors/Loaders/Backhoes	2
	Concrete/Industrial Saw	1
	Rubber Tired Dozer	1
Grading	Excavator	1
	Skid Steer Loader	1
	Tractors/Loaders/Backhoes	2
	Concrete/Industrial Saw	1
	Rubber Tired Dozer	1
Underground Utilities	Skid Steer Loader	1
	Tractors/Loaders/Backhoes	2
Building Construction	Forklifts	2
	Tractors/Loaders/Backhoes	2
	Aerial Lift	2
	Cranes	1
Paving	Pavers	1
	Rollers	1
	Cement and Mortar Mixers	4
	Tractors/Loaders/Backhoes	1
Architectural Coating	Air Compressors	1

Source: CalEEMod (output data, including equipment horsepower, is provided in Appendix A).

The construction schedule was determined by using CalEEMod defaults, input from the Project applicant, and standard assumptions for similarly sized projects, taking into consideration the size of the Project in order to estimate necessary construction activities and length of days per construction activity. As shown in Table 6, *Anticipated Construction Schedule*, Project development is assumed to start in January 2021 and is projected to end October 2021.

Construction would begin in January 2021 with approximately two days of site preparation including clearing and grubbing. Demolition work would continue for approximately one week. Demolition would be required for the existing paved parking lot surfaces, the 3,185 SF storage structure, and chainlink fencing. Approximately 50,000 SF of asphalt concrete paved surfaces, 6,200 SF of concrete paved surfaces, and 2,000 SF of landscaped area would be demolished. Grading would begin in January 2021 and would last approximately three weeks. Grading would require 13,000 CY of cut, 12,000 CY of fill, and 1,000 CY of export. Underground utilities installation would follow grading starting in February 2021,

and would occur simultaneously for all three buildings for 30 days. Building construction was modeled to begin in March 2021. and is expected to last five months. The paving and architectural coating phases would be conducted in October 2021 and would last two and seven days, respectively.

The quantity, duration, and the intensity of construction activity have an effect on the amount of construction emissions and their related pollutant concentrations that occur at any one time. As such, the emission forecasts provided herein reflect a specific set of conservative assumptions based on the expected construction scenario wherein a relatively large amount of construction is occurring in a relatively intensive manner. If a less intensive buildout schedule is followed during project construction, actual emissions could be less than those forecasted as fewer daily emissions would occur over a longer time interval. In addition, if construction is delayed or occurs over a longer time period, and therefore occurs at a later date, emissions could be reduced because of a more modern and cleaner-burning construction equipment fleet mix than incorporated in CalEEMod. A complete listing of the assumptions used in the analysis and model output is provided in Appendix A of this report.

Table 6
ANTICIPATED CONSTRUCTION SCHEDULE

Construction Activity	Construction Period Start	Construction Period End	Construction Period Number of Working Days
Site Preparation	1/4/2021	1/5/2021	2
Demolition	1/6/2021	1/14/2021	7
Grading	1/15/2021	2/3/2021	14
Underground Utilities	2/4/2021	3/17/2021	30
Building Construction	3/16/2021	8/16/2021	110
Paving	10/1/2021	10/4/2021	2
Architectural Coating	10/1/2021	10/11/2021	7

Source: Input from Project Applicant (output data is provided in Appendix A).

Although it was assumed that all of the dust control measures listed in Section 1.3 of this report would be implemented, to model the most conservative construction estimates, only application of water and limiting vehicle speed to 15 mph on unpaved roads during construction activities were taken into consideration. Based on CalEEMod, the fugitive PM_{10} and $PM_{2.5}$ control efficiency for watering two times per day is 55 percent.

The Project would implement the construction BMPs listed in Section 1.3, including the use of low VOC content coatings with no more than 50 g/L for all interior and exterior coatings. The quantities of coatings that would be applied to the interior and exterior of the new buildings were estimated according to CalEEMod default assumptions. A complete listing of the assumptions used in the analysis and model output is provided in Appendix A of this report.

3.2.2 Operational Emissions

Operational emissions were conservatively modeled for the earliest feasible construction completion year, 2021. This is considered conservative because if the Project becomes operational at a later date, which is likely given the anticipated construction duration, emissions could be reduced because of a more modern and cleaner-burning vehicle fleet than incorporated into the model. The model estimates Project-generated, long-term regional area-source, energy-source, and mobile-source emissions of

criteria air pollutants and ozone precursors. Operational emissions from area sources include engine emissions from landscape maintenance equipment, emissions from consumer products, and VOC emissions from repainting of buildings. Operational emissions from energy sources include emissions associated with combustion of natural gas for heating, cooking, and hot water.

CalEEMod default motor vehicle emission rates are based on CARB's EMFAC state-wide emission factors for the County region which are incorporated into CalEEMod. Due to implementation of the Safer Affordable Fuel-Efficient Vehicles Rule for Model Years 2021-2026 Passenger Cars and Light Trucks (SAFE Vehicles Rule) by the USEPA and NHTSA in September 2019, adjustment factors provided by CARB were applied to the emission factors in the model to account for anticipated increased tailpipe and evaporative emissions. The purpose of the SAFE Vehicles Rule is "to correct the national automobile fuel economy and GHG emissions standards to give the American people greater access to safer, more affordable vehicles that are cleaner for the environment." The direct effect of the rule is to eliminate the standards that were put in place to gradually raise average fuel economy for passenger cars and light trucks under test conditions from 37 miles per gallon in 2020 to 50 miles per gallon in 2025. By contrast, the new SAFE Vehicles Rule freezes the average fuel economy level standards indefinitely at the 2020 levels.

Default vehicle speeds, trip lengths, trip purpose, and trip type percentages for the drive-thru restaurant, coffee shop, and drug store were used. Trip generation for each land use was based on the Local Mobility Analysis prepared for the Project (Mizuta Traffic Consulting 2020). As detailed in the Local Mobility Analysis, the Project would result in 1,539 net new average daily trips (ADT). Model output data sheets are included in Appendix A.

3.2.3 Impacts to Sensitive Receptors

The CARB describes sensitive receptors as residences, schools, day-care centers, playgrounds, medical facilities, or other facilities that may house individuals with health conditions (medical patients or elderly persons/athletes/students/children) that may be adversely affected by changes in air quality. The two primary pollutants of concern regarding health effects for residential development are CO and DPM. DPM is a subset of particulate matter general less than one micrometer in diameter. DPM generated by Project construction equipment is conservatively estimated based on PM_{10} exhaust emissions.

As described above, the closest existing sensitive receptors include residential uses located approximately 100 feet south of the Project's proposed fast food restaurant.

4.0 PROJECT IMPACT ANALYSIS

4.1 CONFORMANCE TO THE REGIONAL AIR QUALITY PLAN

4.1.1 Guidelines for the Determination of Significance

Would the project conflict with or obstruct implementation of the applicable air quality plan?

The applicable air quality plans to the Project are the RAQS and the SIP. The RAQS outlines SDAPCD's plans and control measures designed to attain the CAAQS for ozone. In addition, the SDAPCD relies on the SIP, which includes the SDAPCD's plans and control measures for attaining the ozone NAAQS. These plans accommodate emissions from all sources, including natural sources, through implementation of

control measures, where feasible, on stationary sources to attain the standards. Mobile sources are regulated by the USEPA and CARB, and the emissions and reduction strategies related to mobile sources are considered in the RAQS and SIP.

The RAQS relies on information from CARB and SANDAG, including projected growth in the County, mobile, area and all other source emissions in order to project future emissions and determine from that the strategies necessary for the reduction of stationary source emissions through regulatory controls. CARB mobile source emission projections and SANDAG growth projections are based on population and vehicle trends and land use plans developed by the cities and by the County. As such, projects that propose development that is consistent with the growth anticipated by the general plans would be consistent with the RAQS. In the event that a project proposes development which is less dense than anticipated within the General Plan, the project would likewise be consistent with the RAQS. If a project proposes development that is greater than that anticipated in the County General Plan and SANDAG's growth projections upon which the RAQS is based, the project would be in conflict with the RAQS and SIP, and might have a potentially significant impact on air quality.

4.1.2 Significance of Impacts Prior to Mitigation

The 2016 RAQS is based on projections for residential, commercial, industrial and recreational land uses contained in the current General Plan, adopted in 2011. The General Plan designates the Project site as General Commercial. The Project, which is constructing a new drug store, fast food restaurant, and coffee shop within an existing commercial property, would be consistent with the General Plan land use designation. Therefore, because the Project is proposing development consistent with the General Plan, it is correspondingly consistent with the RAQS and the anticipated growth included in the RAQS assumptions, which were used in developing regional sustainability goals to reduce emissions.

Furthermore, as detailed in Section 4.2, below, the Project would not result in a significant air quality impact with regards to construction- and operational-related emissions of ozone precursors or criteria air pollutants. Therefore, it is unlikely that the Project would interfere with the SDAPCD's goals for improving air quality in the SDAB. Because the Project is proposing development consistent with the RAQS and County guidelines, impacts associated with conformance to regional air quality plans would be less than significant.

4.1.3 Mitigation Measures and Design Considerations

Impacts would be less than significant and no mitigation is required.

4.1.4 Conclusions

The Project would conform to the RAQS and SIP and would result in a less than significant impact.

4.2 CRITERIA POLLUTANT EMISSIONS

4.2.1 Construction Impacts

4.2.1.1 Guidelines for the Determination of Significance

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

The SDAB is designated as a nonattainment area for the NAAQS for ozone and the CAAQS for ozone, PM_{10}, and $PM_{2.5}$. To determine whether the Project's emissions would result in a cumulatively considerable net increase in PM_{10}, $PM_{2.5}$, or the ozone precursors NOX and VOC, contribute substantially to an existing or projected air quality violation, or have an adverse effect on human health, project emissions may be evaluated based on the quantitative emission thresholds established by the SDAPCD (as shown in Table 4).

Cumulatively considerable net increases during the construction phase would typically happen if two or more projects near each other are simultaneously undergoing construction. A project that has a significant direct impact on air quality with regard to emissions of PM_{10}, $PM_{2.5}$, NO_x, or VOCs during construction would also have a significant cumulatively considerable net increase. In the event direct impacts from a proposed project are less than significant, a project may still have a cumulatively considerable impact on air quality if the emissions of concern from the proposed project, in combination with the emissions of concern from other proposed or reasonably foreseeable future projects within a proximity relevant to the pollutants of concern, are in excess of the guidelines identified in Section 3.0.

4.2.1.2 Significance of Impacts Prior to Mitigation

General Construction Activities

Emissions related to the construction of the Project would be temporary. Table 7, *Estimated Construction Emissions,* provides a summary of the worst-case daily construction emission estimates by activity. As noted above, it was assumed that dust control measures (watering a minimum of two times daily and limiting vehicle speeds to 15 mph on unpaved roads) would be employed to reduce emissions of fugitive dust during site grading. Where construction activities were assumed to occur simultaneously, the resultant emissions from each activity were summed and compared to the daily emission thresholds to determine significance.

Table 7
ESTIMATED CONSTRUCTION EMISSIONS

Construction Activity	VOC (lbs/day)	NO_X (lbs/day)	CO (lbs/day)	SO_2 (lbs/day)	PM_{10} (lbs/day)	$PM_{2.5}$ (lbs/day)
Site Preparation	1	8	4	<0.5	1	<0.5
Demolition	1	16	13	<0.5	5	1
Grading	1	13	13	<0.5	1	1
Underground Utilities	<0.5	5	6	<0.5	<0.5	<0.5
Building Construction	1	10	10	<0.5	1	<0.5
Paving	1	7	8	<0.5	1	<0.5
Architectural Coating	16	2	2	<0.5	<0.5	<0.5
MAXIMUM DAILY EMISSIONS[1]	**17**	**16**	**16**	**<0.5**	**5**	**1**
Screening-Level Thresholds	*75*	*250*	*550*	*250*	*100*	*55*
Exceedance?	***No***	***No***	***No***	***No***	***No***	***No***

Note: The total presented is the sum of the unrounded values; as such, totals may not add up exactly due to rounding. The CalEEMod model outputs are presented in Appendix A.
Fugitive dust measures (watering twice daily and limiting vehicle speeds to 15 mph on unpaved roads) were applied to control PM_{10} and $PM_{2.5}$ dust emissions. Low VOC architectural coatings were included.
[1] Maximum daily emissions of VOC occur when Architectural Coating and Paving activities overlap; maximum daily emissions of CO occur when Underground Utilities and Building Construction activities overlap; maximum daily emissions of all other pollutants occur during Demolition activities.
VOC = volatile organic compound; NO_X = nitrogen oxides; CO = carbon monoxide; SO_2 = sulfur dioxide; PM_{10} = particulate matter 10 microns or less in diameter; $PM_{2.5}$ = particulate matter 2.5 microns or less in diameter
lbs/day = pounds per day

As shown in Table 7, with implementation of construction BMPs, emissions of all criteria pollutants, including PM_{10}, $PM_{2.5}$, NO_X, and VOCs, would be below the daily thresholds during construction. Cumulatively considerable pollutant emissions from construction activities could occur if construction of the Project and other projects in the surrounding area were to occur simultaneously. In particular, with respect to local impacts, the consideration of cumulative construction particulate matter (PM_{10} and $PM_{2.5}$) impacts is limited to cases when projects constructed simultaneously are within a few hundred yards of each other because of (1) the combination of the short range (distance) of particulate matter dispersion (especially when compared to gaseous pollutants) and (2) the SDAPCD's required dust control measures which further limit particulate matter dispersion from a project site. There are no known projects in the vicinity of the Project where major construction involving demolition activities, cut-and-fill operations, or soil import/export, would occur concurrently with the Project. The Project's general construction activities would therefore not result in a cumulatively considerable contribution to a significant air quality impact pertaining to NO_X, VOCs, PM_{10}, and $PM_{2.5}$. In addition, because the project's construction emissions would be below screening-level thresholds, which were developed by SDAPCD and SCAQMD to attain the NAAQS and CAAQS, project construction would not conflict with the NAAQS or CAAQS. The NAAQS and CAAQS identify concentrations of pollutants in the ambient air below which no adverse effects on the public health and welfare are anticipated. As such, project construction would not result in adverse human health effects. Impacts would be less than significant.

4.2.1.3 Mitigation Measures and Design Considerations

As discussed in Section 1.3, the Project would incorporate construction BMPs to reduce Project-related emissions. With implementation of those measures, the Project's general construction activities would not exceed the significance thresholds established by the County and would not contribute to

cumulative air quality impacts; therefore, impacts from these activities would be less than significant and no mitigation is required.

4.2.1.4 Conclusions

With implementation of BMPs described in Section 1.3, the Project would result in less than significant construction related emissions and impacts would be less than significant.

4.2.2 Operational Impacts

4.2.2.1 Guidelines for the Determination of Significance

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

As discussed above, the SDAB is designated as a nonattainment area for the NAAQS for ozone and the CAAQS for ozone, PM_{10}, and $PM_{2.5}$. To determine whether the Project's emissions would result in a cumulatively considerable net increase in PM_{10}, $PM_{2.5}$, or the ozone precursors NO_X and VOC, contribute substantially to an existing or projected air quality violation, or have an adverse effect on human health, project emissions may be evaluated based on the quantitative emission trigger thresholds established by the SDAPCD (as shown in Table 4). Also, a project that does not conform to the RAQS and/or has a significant direct impact on air quality with regard to operational emissions of nonattainment pollutants would also have a cumulatively considerable net increase. Finally, projects that cause road intersections to operate at or below a level of service (LOS) E and create a CO hotspot create a cumulatively considerable net increase of CO.

4.2.2.2 Significance of Impacts Prior to Mitigation

Main operational emissions include area sources, such as landscaping equipment and consumer products, mobile emissions associated with traffic, and energy emissions from on-site energy use. Operational emission calculations and model outputs are provided in Appendix A. Table 8, Estimated Daily *Operational Emissions*, presents the summary of operational emissions for the Project.

As shown in Table 8, the Project's emissions of all criteria pollutants during operation would be below the daily thresholds. As described in Sections 4.1, the Project would be consistent with the RAQS. As discussed below in Section 4.4.2, the Project would not create a CO hotspot that would result in a cumulatively considerable net increase of CO. Therefore, Project operations would not create a cumulatively considerable net increase in criteria pollutants. In addition, because the project's operational emissions would be below screening-level thresholds, which were developed by SDAPCD and SCAQMD to attain the NAAQS and CAAQS, project operations would not conflict with the NAAQS or CAAQS. The NAAQS and CAAQS identify concentrations of pollutants in the ambient air below which no adverse effects on the public health and welfare are anticipated. As such, project operations would not result in adverse human health effects. Impacts would be less than significant.

Table 8
ESTIMATED DAILY OPERATIONAL EMISSIONS

Category	VOC (lbs/day)	NO_X (lbs/day)	CO (lbs/day)	SO_2 (lbs/day)	PM_{10} (lbs/day)	$PM_{2.5}$ (lbs/day)
Area	1	<0.5	<0.5	<0.5	<0.5	<0.5
Energy	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Mobile	3	11	30	<0.5	9	2
PROJECT TOTAL	**3**	**12**	**31**	**<0.5**	**9**	**2**
Screening-Level Thresholds	*75*	*250*	*550*	*250*	*100*	*55*
Exceedance?	***No***	***No***	***No***	***No***	***No***	***No***

Note: The total presented is the sum of the unrounded values; as such, totals may not add up exactly due to rounding. The CalEEMod model outputs are presented in Appendix A.
VOC = volatile organic compound; NO_X = nitrogen oxides; CO = carbon monoxide; SO_2 = sulfur dioxide; PM_{10} = particulate matter 10 microns or less in diameter; $PM_{2.5}$ = particulate matter 2.5 microns or less in diameter
lbs/day = pounds per day

4.2.2.3 Mitigation Measures and Design Considerations

As listed in Section 1.3, a wide range of current regulatory codes, Project design features, and other measures would be incorporated into the Project. The Project would incorporate energy-efficiency features that would meet the 2019 California Title 24 Energy Efficiency Standards. Given the result of a less than significant impact, no additional mitigation measures would be required.

4.2.2.4 Conclusions

Operational emissions of criteria pollutants for the Project buildout would be below the significance thresholds and, therefore, would be less than significant under CEQA.

4.3 IMPACTS TO SENSITIVE RECEPTORS

4.3.1 Guidelines for the Determination of Significance

Would the project expose sensitive receptors to substantial pollutant concentrations?

The guidelines of significance listed below are used by the County to address the above question:

> *Would the project place sensitive receptors near CO hotspots or creates CO hotspots near sensitive receptors?*
>
> *Would project implementation result in exposure to TACs resulting in a maximum incremental cancer risk greater than 1 in 1 million without application of Toxics-Best Available Control Technology or a health hazard index greater than 1 and, thus, be deemed as having a potentially significant impact?*

4.3.2 Significance of Impacts Prior to Mitigation

4.3.2.1 CO Concentrations (CO Hotspot Analysis)

CO hotspots are most likely to occur at heavily congested intersections where idling vehicles increase localized CO concentrations. The County guidelines call for a CO hotspot analysis if the Project would:

- place sensitive receptors within 500 feet of a signalized intersection with a LOS of E or F, with peak-hour trips exceeding 3,000 vehicles; or

- cause intersections to operate at LOS E or F, with peak-hour trips exceeding 3,000 vehicles.

The Project would generate a net total of approximately 1,539 daily trips after applying a transit trip credit and pass-by trip credit (Mizuta Traffic Consulting 2020). According to the Local Mobility Analysis prepared for the Project (Mizuta Traffic Consulting 2020), all evaluated intersections would operate at LOS D or better with the Project. As such, Project implementation would not result in the formation of CO hotspots at intersections.

The Project's proposed coffee shop and fast food restaurant would each include a drive-thru that would accommodate idling vehicles that would emit CO. As related to CO hotspots, a drive-thru accommodating idling vehicles is comparable to a congested intersection containing idling vehicles. In comparison to the threshold of 3,000 peak-hour trips used in the CO hotspot analysis for intersections, the number of peak-hour trips generated by the coffee shop and fast food restaurant would be minimal (estimated to be 12 AM peak-hour trips and 24 PM peak-hour trips each, after applying a transit trip credit and pass-by trip credit [Mizuta Traffic Consulting 2020]). Therefore, idling vehicles at the Project's coffee shop and fast food restaurant would not create CO hotspots affecting sensitive receptors. Impacts to sensitive receptors from CO hotspots would be less than significant.

4.3.2.2 Construction-related Diesel Health Risk

Diesel engines emit a complex mixture of air pollutants, including gaseous material and DPMs. DPM emissions would be released from the on-site construction equipment associated with the Project. CARB has declared that DPM from diesel engine exhaust is a TAC. Additionally, Office of Environmental Health Hazard Assessment has determined that chronic exposure to DPM can cause carcinogenic and non-carcinogenic health effects. For this reason, although other pollutants would be generated, DPM would be the primary pollutant of concern.

The dose to which receptors are exposed is the primary factor used to determine health risk related to DPM. Dose is a function of the concentration of a substance or substances in the environment and the duration of exposure to the substance. Dose is positively correlated with time, meaning that a longer exposure period would result in a higher level of health risk for any exposed receptor.

Construction activities associated with the Project would be sporadic, transitory, and short term in nature (i.e., less than one year). The assessment of cancer risk is typically based on a 30-year exposure period. Because exposure to diesel exhaust during this short-term construction period would be well below the 30-year exposure period, construction of the Project is not anticipated to result in an elevated cancer risk to exposed persons. As shown in Table 7, the highest daily emissions of diesel exhaust PM_{10} during construction would be approximately 5 lbs/day during the demolition phase. Emissions of PM_{10} (which includes equipment emissions of DPM) would be well below 100 lbs/day significance level threshold. As discussed above in Section 3.1, these significance level thresholds were developed with the purpose of attaining the NAAQS and CAAQS, which identify concentrations of pollutants in the ambient air below which no adverse effects on the public health and welfare are anticipated. Additionally, all construction activities would occur during daytime hours, when many residents typically are not home, thus limiting exposure from construction-related emissions to these receptors. As such, considering the relatively low mass of DPM emissions that would be generated by construction

activities, the relatively short duration construction activities, and the highly dispersive properties of DPM, Project-related TAC emission impacts during construction would be less than significant and no mitigation is required.

4.3.2.3 Operation-related Health Risk

CARB siting recommendations within the *Air Quality and Land Use Handbook* suggest a detailed health risk assessment should be conducted for proposed sensitive receptors within 1,000 feet of a warehouse distribution center, within 300 feet of a large gas station (defined as a facility with a throughput of 3.6 million gallons per year or greater), 50 feet of a typical gas dispensing facilities or within 300 feet of a dry cleaning facility that uses perchloroethlyene (PCE), among other siting recommendations (CARB 2005). The Project would not develop land uses associated with sensitive air pollutant receptors and would not include uses associated with the requirement for a detailed health risk assessment. Therefore, impacts associated with TACs during operation would be less than significant.

The Project would not generate CO hotpots, emit DPM during construction, or emit TACs during operations that would substantially affect sensitive receptors. Impacts to sensitive receptors would be less than significant.

4.3.3 Mitigation Measures and Design Considerations

Impacts are less than significant; therefore, no mitigation measures are required.

4.3.4 Conclusions

Impacts to sensitive receptors would be less than significant.

4.4 ODOR IMPACTS

4.4.1 Guidelines for the Determination of Significance

Based on the County Guidelines (2007), a project would have a significant impact if it would generate objectionable odors or place sensitive receptors next to existing objectionable odors that would affect a considerable number of persons or the public.

SDAPCD Rule 51 (Public Nuisance) and California Health & Safety Code, Division 26, Part 4, Chapter 3, Section 541700, prohibit the emission of any material that causes nuisance to a considerable number of persons or endangers the comfort, health, or safety of the public. Projects required to obtain permits from SDAPCD, typically industrial and some commercial projects, are evaluated by SDAPCD staff for potential odor nuisance and conditions may be applied (or control equipment required), where necessary, to prevent occurrence of public nuisance.

4.4.2 Significance of Impacts Prior to Mitigation

Project construction could result in minor amounts of odor compounds associated with diesel heavy equipment exhaust. Diesel exhaust and VOCs from application of asphalt and architectural coatings would be emitted during construction of the Project. The odor of these emissions is objectionable to some; however, emissions would disperse rapidly from the Project site and therefore, should not be at a

level that would affect a substantial number of people. Further, construction operations would be temporary. As a result, impacts associated with odors during construction are not considered significant.

According to the SCAQMD *CEQA Air Quality Handbook* (SCAQMD 1993), land uses associated with odor complaints include agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting activities, refineries, landfills, dairies, and fiberglass molding operations. The Project, which involves a drug store, fast food restaurant, and coffee shop, would not include any of these uses. Vehicles utilizing the drive-thru components of the various Project uses would emit odors in the form of exhaust. Any increase in odor emission from vehicle exhaust would be minimal, however, as vehicle exhaust is already prevalent in the area due to the Project site's proximity to State Route 125, Sweetwater Road, and Jamacha Road, as well as the existing gas station adjacent to the Project site. Potential odor types related to food preparation from the Project's restaurant and coffee shop are typically not considered a nuisance and also would not be substantial enough to be considered a nuisance due to the dilution of the odors over the distance to nearby sensitive receptors. Solid waste generated by the proposed on-site uses would be collected by a contracted waste hauler, ensuring that any odors resulting from on-site waste would be managed and collected in a manner to prevent the proliferation of odors. Operational odor impacts would be less than significant.

4.4.3 Mitigation Measures and Design Considerations

Because the Project would not generate objectionable odors or place sensitive receptors near existing odor sources that would affect a considerable number of persons or the public, no mitigation measures or additional design considerations are required.

4.4.4 Conclusions

Due to the nature of the development, there are no significant odorous air emissions anticipated from construction or operation; therefore, impacts are anticipated to be less than significant.

5.0 SUMMARY OF RECOMMENDED PROJECT DESIGN FEATURES, IMPACTS, AND MITIGATION

5.1 PROJECT DESIGN FEATURES

As described in Section 1.3, the Project would incorporate measures to minimize fugitive dust emissions, including watering twice per day during grading and stabilizing storage piles. The Project would comply with Rule 55, which requires that no visible dust is emitted beyond the property line for a period or periods aggregating more than 3 minutes in any 60-minute period, and would incorporate measures to minimize the track-out/carry-out of visible roadway dust.

A wide range of current regulatory codes, Project design features, and other measures would be incorporated into the Project. The Project would incorporate energy-efficiency features that would meet 2019 California Title 24 Energy Efficiency Standards. Low VOC coatings will be used during construction and maintenance in accordance with SDAPCD Rule 67 requirements.

5.2 PROJECT IMPACTS

As described in Section 4.1, the Project would be consistent with the RAQS.

With the implementation of construction BMPs, air pollutant emissions impacts associated with Project construction would be less than significant.

Operational emissions would be associated with vehicle trips generated by the development, onsite energy consumption, and area sources such as landscaping. Based on the evaluation of air emissions, the Project emissions would be below the screening-level thresholds for all criteria pollutants and would be less than significant for air quality.

The Project would not result in any cumulatively considerable emissions of nonattainment air pollutants that would exceed the screening level thresholds.

Impacts associated with exposure of sensitive receptors to substantial pollutant concentrations would be less than significant.

An evaluation of odors from general Project construction and operation of the Project indicated that odor impacts would be less than significant.

5.3 PROJECT MITIGATION

Because the Project would not result in significant impacts, no mitigation is required.

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7.0 LIST OF PREPARERS

Joanne Dramko, AICP	County-approved Air Quality Specialist
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Appendix A

CalEEMod Output

Sweetwater and Jamacha Shopping Center

San Diego County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Pharmacy/Drugstore with Drive Thru	17.38	1000sqft	0.40	17,379.00	0
Fast Food Restaurant with Drive Thru	4.50	1000sqft	0.10	4,500.00	0
Fast Food Restaurant with Drive Thru	4.49	1000sqft	0.10	4,490.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.6	**Precipitation Freq (Days)**	40
Climate Zone	13			**Operational Year**	2021
Utility Company	San Diego Gas & Electric				
CO2 Intensity (lb/MWhr)	720.49	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - Based on information provided by Project Applicant.

Off-road Equipment -

Off-road Equipment - Model defaults plus equipment specified by Project Applicant.

Off-road Equipment - Model defaults plus equipment specified by Project Applicant.

Off-road Equipment - Model defaults plus equipment specified by Project Applicant.

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - Based on information provided by Project Applicant.

Trips and VMT - Based on information provided by Project Applicant.

Demolition - 3,165 sf structure demolition and 56,200 sf asphalt/pavement demolition

Grading - 1,000 CY export indicated by Project Applicant. Total acres graded calculated per methdology contained in CalEEMod Appendix A.

Architectural Coating - Low VOC

Vehicle Trips - Based on Project Local Mobility Analysis (Mizuta Traffic Consultants 2020). Only includes net new trips.

Area Coating - Low VOC

Construction Off-road Equipment Mitigation -

Water Mitigation - Per CALGreen

Waste Mitigation - Per AB 341

Table Name	Column Name	Default Value	New Value
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tblArchitecturalCoating	EF_Nonresidential_Interior	250.00	50.00
tblArchitecturalCoating	EF_Parking	250.00	50.00
tblAreaCoating	Area_EF_Nonresidential_Exterior	250	50

tblAreaCoating	Area_EF_Nonresidential_Interior	250	50
tblAreaCoating	Area_Nonresidential_Exterior	13185	11985
tblAreaCoating	Area_Nonresidential_Interior	39554	35954
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tblConstructionPhase	NumDays	5.00	2.00
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tblGrading	MaterialExported	0.00	1,000.00
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tblSolidWaste	SolidWasteGenerationRate	52.26	45.04
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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	16.8900	16.1633	15.9016	0.0345	8.8964	0.7367	9.4255	1.4008	0.6778	1.9020	0.0000	3,541.4407	3,541.4407	0.7340	0.0000	3,555.6373
Maximum	**16.8900**	**16.1633**	**15.9016**	**0.0345**	**8.8964**	**0.7367**	**9.4255**	**1.4008**	**0.6778**	**1.9020**	**0.0000**	**3,541.4407**	**3,541.4407**	**0.7340**	**0.0000**	**3,555.6373**

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	16.8900	16.1633	15.9016	0.0345	4.2477	0.7367	4.7768	0.6968	0.6778	1.1981	0.0000	3,541.4407	3,541.4407	0.7340	0.0000	3,555.6373
Maximum	**16.8900**	**16.1633**	**15.9016**	**0.0345**	**4.2477**	**0.7367**	**4.7768**	**0.6968**	**0.6778**	**1.1981**	**0.0000**	**3,541.4407**	**3,541.4407**	**0.7340**	**0.0000**	**3,555.6373**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**52.25**	**0.00**	**49.32**	**50.26**	**0.00**	**37.01**	**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	0.5950	2.0000e-005	2.7000e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		5.7700e-003	5.7700e-003	2.0000e-005		6.1500e-003
Energy	0.0475	0.4315	0.3625	2.5900e-003		0.0328	0.0328		0.0328	0.0328		517.7861	517.7861	9.9200e-003	9.4900e-003	520.8630
Mobile	2.5861	11.0928	30.3557	0.0998	8.8209	0.0865	8.9073	2.3576	0.0808	2.4384		10,170.6901	10,170.6901	0.5533		10,184.5234
Total	**3.2285**	**11.5243**	**30.7209**	**0.1024**	**8.8209**	**0.1193**	**8.9401**	**2.3576**	**0.1136**	**2.4712**		**10,688.4820**	**10,688.4820**	**0.5633**	**9.4900e-003**	**10,705.3926**

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	0.5950	2.0000e-005	2.7000e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		5.7700e-003	5.7700e-003	2.0000e-005		6.1500e-003
Energy	0.0475	0.4315	0.3625	2.5900e-003		0.0328	0.0328		0.0328	0.0328		517.7861	517.7861	9.9200e-003	9.4900e-003	520.8630
Mobile	2.5861	11.0928	30.3557	0.0998	8.8209	0.0865	8.9073	2.3576	0.0808	2.4384		10,170.6901	10,170.6901	0.5533		10,184.5234
Total	**3.2285**	**11.5243**	**30.7209**	**0.1024**	**8.8209**	**0.1193**	**8.9401**	**2.3576**	**0.1136**	**2.4712**		**10,688.4820**	**10,688.4820**	**0.5633**	**9.4900e-003**	**10,705.3926**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/4/2021	1/5/2021	5	2	
2	Demolition	Demolition	1/6/2021	1/14/2021	5	7	
3	Grading	Grading	1/15/2021	2/3/2021	5	14	
4	Underground Utilities Installation	Trenching	2/4/2021	3/17/2021	5	30	
5	Building Construction	Building Construction	3/16/2021	8/16/2021	5	110	
6	Paving	Paving	10/1/2021	10/4/2021	5	2	
7	Architectural Coating	Architectural Coating	10/1/2021	10/11/2021	5	7	

Acres of Grading (Site Preparation Phase): 1

Acres of Grading (Grading Phase): 7

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 35,954; Non-Residential Outdoor: 11,985; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	1	8.00	158	0.38
Demolition	Rubber Tired Dozers	1	1.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Excavators	1	8.00	158	0.38
Grading	Rubber Tired Dozers	1	1.00	247	0.40
Grading	Skid Steer Loaders	1	8.00	65	0.37
Grading	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Underground Utilities Installation	Skid Steer Loaders	1	8.00	65	0.37
Underground Utilities Installation	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Aerial Lifts	2	8.00	63	0.31
Building Construction	Cranes	1	4.00	231	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	2	5.00	0.00	3.00	10.80	7.30	10.00	LD_Mix	HDT_Mix	HHDT
Demolition	5	13.00	0.00	270.00	10.80	7.30	10.00	LD_Mix	HDT_Mix	HHDT
Grading	6	15.00	0.00	125.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Underground Utilities Installation	3	8.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	9.00	4.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	2.00	0.00	0.00	10.80	7.30	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Water Unpaved Roads

Reduce Vehicle Speed on Unpaved Roads

3.2 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					0.5303	0.0000	0.5303	0.0573	0.0000	0.0573			0.0000			0.0000
Off-Road	0.6403	7.8204	4.0274	9.7300e-003		0.2995	0.2995		0.2755	0.2755		942.5842	942.5842	0.3049		950.2055
Total	**0.6403**	**7.8204**	**4.0274**	**9.7300e-003**	**0.5303**	**0.2995**	**0.8297**	**0.0573**	**0.2755**	**0.3328**		**942.5842**	**942.5842**	**0.3049**		**950.2055**

3.2 Site Preparation - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	7.0800e-003	0.2615	0.0620	6.4000e-004	0.0131	6.5000e-004	0.0138	3.6000e-003	6.2000e-004	4.2200e-003		69.7831	69.7831	7.3700e-003		69.9673
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	0.0196	0.0126	0.1247	3.8000e-004	0.0411	2.8000e-004	0.0414	0.0109	2.6000e-004	0.0112		38.2274	38.2274	1.1000e-003		38.2548
Total	**0.0267**	**0.2741**	**0.1867**	**1.0200e-003**	**0.0542**	**9.3000e-004**	**0.0551**	**0.0145**	**8.8000e-004**	**0.0154**		**108.0105**	**108.0105**	**8.4700e-003**		**108.2221**

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					0.2386	0.0000	0.2386	0.0258	0.0000	0.0258			0.0000			0.0000
Off-Road	0.6403	7.8204	4.0274	9.7300e-003		0.2995	0.2995		0.2755	0.2755	0.0000	942.5842	942.5842	0.3049		950.2055
Total	**0.6403**	**7.8204**	**4.0274**	**9.7300e-003**	**0.2386**	**0.2995**	**0.5381**	**0.0258**	**0.2755**	**0.3013**	**0.0000**	**942.5842**	**942.5842**	**0.3049**		**950.2055**

3.2 Site Preparation - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	7.0800e-003	0.2615	0.0620	6.4000e-004	0.0131	6.5000e-004	0.0138	3.6000e-003	6.2000e-004	4.2200e-003		69.7831	69.7831	7.3700e-003		69.9673
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	0.0196	0.0126	0.1247	3.8000e-004	0.0411	2.8000e-004	0.0414	0.0109	2.6000e-004	0.0112		38.2274	38.2274	1.1000e-003		38.2548
Total	**0.0267**	**0.2741**	**0.1867**	**1.0200e-003**	**0.0542**	**9.3000e-004**	**0.0551**	**0.0145**	**8.8000e-004**	**0.0154**		**108.0105**	**108.0105**	**8.4700e-003**		**108.2221**

3.3 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					8.4522	0.0000	8.4522	1.2800	0.0000	1.2800			0.0000			0.0000
Off-Road	1.0257	9.4064	10.8409	0.0172		0.5118	0.5118		0.4847	0.4847		1,647.6258	1,647.6258	0.3756		1,657.0160
Total	**1.0257**	**9.4064**	**10.8409**	**0.0172**	**8.4522**	**0.5118**	**8.9640**	**1.2800**	**0.4847**	**1.7646**		**1,647.6258**	**1,647.6258**	**0.3756**		**1,657.0160**

3.3 Demolition - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1821	6.7241	1.5950	0.0164	0.3374	0.0166	0.3540	0.0925	0.0159	0.1084		1,794.4237	1,794.4237	0.1894		1,799.1587
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	0.0510	0.0328	0.3241	1.0000e-003	0.1068	7.4000e-004	0.1075	0.0283	6.8000e-004	0.0290		99.3912	99.3912	2.8600e-003		99.4626
Total	**0.2331**	**6.7569**	**1.9191**	**0.0174**	**0.4442**	**0.0174**	**0.4615**	**0.1208**	**0.0166**	**0.1374**		**1,893.8149**	**1,893.8149**	**0.1923**		**1,898.6213**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.8035	0.0000	3.8035	0.5760	0.0000	0.5760			0.0000			0.0000
Off-Road	1.0257	9.4064	10.8409	0.0172		0.5118	0.5118		0.4847	0.4847	0.0000	1,647.6258	1,647.6258	0.3756		1,657.0160
Total	**1.0257**	**9.4064**	**10.8409**	**0.0172**	**3.8035**	**0.5118**	**4.3153**	**0.5760**	**0.4847**	**1.0607**	**0.0000**	**1,647.6258**	**1,647.6258**	**0.3756**		**1,657.0160**

3.3 Demolition - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1821	6.7241	1.5950	0.0164	0.3374	0.0166	0.3540	0.0925	0.0159	0.1084		1,794.4237	1,794.4237	0.1894		1,799.1587
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	0.0510	0.0328	0.3241	1.0000e-003	0.1068	7.4000e-004	0.1075	0.0283	6.8000e-004	0.0290		99.3912	99.3912	2.8600e-003		99.4626
Total	**0.2331**	**6.7569**	**1.9191**	**0.0174**	**0.4442**	**0.0174**	**0.4615**	**0.1208**	**0.0166**	**0.1374**		**1,893.8149**	**1,893.8149**	**0.1923**		**1,898.6213**

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					1.2931	0.0000	1.2931	0.4726	0.0000	0.4726			0.0000			0.0000
Off-Road	1.1012	10.4100	12.2309	0.0192		0.5526	0.5526		0.5223	0.5223		1,847.8241	1,847.8241	0.4404		1,858.8331
Total	**1.1012**	**10.4100**	**12.2309**	**0.0192**	**1.2931**	**0.5526**	**1.8457**	**0.4726**	**0.5223**	**0.9948**		**1,847.8241**	**1,847.8241**	**0.4404**		**1,858.8331**

3.4 Grading - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0681	2.3084	0.5952	6.7700e-003	0.1560	7.1300e-003	0.1632	0.0428	6.8200e-003	0.0496		742.0261	742.0261	0.0689		743.7484
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	0.0588	0.0378	0.3740	1.1500e-003	0.1232	8.5000e-004	0.1241	0.0327	7.8000e-004	0.0335		114.6821	114.6821	3.2900e-003		114.7645
Total	**0.1270**	**2.3463**	**0.9692**	**7.9200e-003**	**0.2792**	**7.9800e-003**	**0.2872**	**0.0754**	**7.6000e-003**	**0.0831**		**856.7082**	**856.7082**	**0.0722**		**858.5129**

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					0.5819	0.0000	0.5819	0.2127	0.0000	0.2127			0.0000			0.0000
Off-Road	1.1012	10.4100	12.2309	0.0192		0.5526	0.5526		0.5223	0.5223	0.0000	1,847.8241	1,847.8241	0.4404		1,858.8331
Total	**1.1012**	**10.4100**	**12.2309**	**0.0192**	**0.5819**	**0.5526**	**1.1345**	**0.2127**	**0.5223**	**0.7349**	**0.0000**	**1,847.8241**	**1,847.8241**	**0.4404**		**1,858.8331**

3.4 Grading - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0681	2.3084	0.5952	6.7700e-003	0.1560	7.1300e-003	0.1632	0.0428	6.8200e-003	0.0496		742.0261	742.0261	0.0689		743.7484
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	0.0588	0.0378	0.3740	1.1500e-003	0.1232	8.5000e-004	0.1241	0.0327	7.8000e-004	0.0335		114.6821	114.6821	3.2900e-003		114.7645
Total	**0.1270**	**2.3463**	**0.9692**	**7.9200e-003**	**0.2792**	**7.9800e-003**	**0.2872**	**0.0754**	**7.6000e-003**	**0.0831**		**856.7082**	**856.7082**	**0.0722**		**858.5129**

3.5 Underground Utilities Installation - 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	0.4500	4.7952	5.9104	8.2800e-003		0.2644	0.2644		0.2432	0.2432		801.9985	801.9985	0.2594		808.4831
Total	**0.4500**	**4.7952**	**5.9104**	**8.2800e-003**		**0.2644**	**0.2644**		**0.2432**	**0.2432**		**801.9985**	**801.9985**	**0.2594**		**808.4831**

3.5 Underground Utilities Installation - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0314	0.0202	0.1995	6.1000e-004	0.0657	4.5000e-004	0.0662	0.0174	4.2000e-004	0.0179		61.1638	61.1638	1.7600e-003		61.2077
Total	**0.0314**	**0.0202**	**0.1995**	**6.1000e-004**	**0.0657**	**4.5000e-004**	**0.0662**	**0.0174**	**4.2000e-004**	**0.0179**		**61.1638**	**61.1638**	**1.7600e-003**		**61.2077**

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	0.4500	4.7952	5.9104	8.2800e-003		0.2644	0.2644		0.2432	0.2432	0.0000	801.9985	801.9985	0.2594		808.4831
Total	**0.4500**	**4.7952**	**5.9104**	**8.2800e-003**		**0.2644**	**0.2644**		**0.2432**	**0.2432**	**0.0000**	**801.9985**	**801.9985**	**0.2594**		**808.4831**

3.5 Underground Utilities Installation - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0314	0.0202	0.1995	6.1000e-004	0.0657	4.5000e-004	0.0662	0.0174	4.2000e-004	0.0179		61.1638	61.1638	1.7600e-003		61.2077
Total	**0.0314**	**0.0202**	**0.1995**	**6.1000e-004**	**0.0657**	**4.5000e-004**	**0.0662**	**0.0174**	**4.2000e-004**	**0.0179**		**61.1638**	**61.1638**	**1.7600e-003**		**61.2077**

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	0.8500	9.1862	9.4518	0.0148		0.4705	0.4705		0.4328	0.4328		1,428.4555	1,428.4555	0.4620		1,440.0053
Total	**0.8500**	**9.1862**	**9.4518**	**0.0148**		**0.4705**	**0.4705**		**0.4328**	**0.4328**		**1,428.4555**	**1,428.4555**	**0.4620**		**1,440.0053**

3.6 Building Construction - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0128	0.4062	0.1156	1.0600e-003	0.0271	8.9000e-004	0.0280	7.8000e-003	8.5000e-004	8.6500e-003		113.5277	113.5277	8.8400e-003		113.7488
Worker	0.0353	0.0227	0.2244	6.9000e-004	0.0739	5.1000e-004	0.0744	0.0196	4.7000e-004	0.0201		68.8093	68.8093	1.9800e-003		68.8587
Total	**0.0481**	**0.4289**	**0.3400**	**1.7500e-003**	**0.1010**	**1.4000e-003**	**0.1024**	**0.0274**	**1.3200e-003**	**0.0287**		**182.3370**	**182.3370**	**0.0108**		**182.6075**

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	0.8500	9.1862	9.4518	0.0148		0.4705	0.4705		0.4328	0.4328	0.0000	1,428.4555	1,428.4555	0.4620		1,440.0053
Total	**0.8500**	**9.1862**	**9.4518**	**0.0148**		**0.4705**	**0.4705**		**0.4328**	**0.4328**	**0.0000**	**1,428.4555**	**1,428.4555**	**0.4620**		**1,440.0053**

3.6 Building Construction - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0128	0.4062	0.1156	1.0600e-003	0.0271	8.9000e-004	0.0280	7.8000e-003	8.5000e-004	8.6500e-003		113.5277	113.5277	8.8400e-003		113.7488
Worker	0.0353	0.0227	0.2244	6.9000e-004	0.0739	5.1000e-004	0.0744	0.0196	4.7000e-004	0.0201		68.8093	68.8093	1.9800e-003		68.8587
Total	**0.0481**	**0.4289**	**0.3400**	**1.7500e-003**	**0.1010**	**1.4000e-003**	**0.1024**	**0.0274**	**1.3200e-003**	**0.0287**		**182.3370**	**182.3370**	**0.0108**		**182.6075**

3.7 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	0.7214	6.7178	7.0899	0.0113		0.3534	0.3534		0.3286	0.3286		1,035.3425	1,035.3425	0.3016		1,042.8818
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.7214**	**6.7178**	**7.0899**	**0.0113**		**0.3534**	**0.3534**		**0.3286**	**0.3286**		**1,035.3425**	**1,035.3425**	**0.3016**		**1,042.8818**

3.7 Paving - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0706	0.0454	0.4488	1.3800e-003	0.1479	1.0200e-003	0.1489	0.0392	9.4000e-004	0.0402		137.6186	137.6186	3.9500e-003		137.7174
Total	**0.0706**	**0.0454**	**0.4488**	**1.3800e-003**	**0.1479**	**1.0200e-003**	**0.1489**	**0.0392**	**9.4000e-004**	**0.0402**		**137.6186**	**137.6186**	**3.9500e-003**		**137.7174**

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	0.7214	6.7178	7.0899	0.0113		0.3534	0.3534		0.3286	0.3286	0.0000	1,035.3425	1,035.3425	0.3016		1,042.8818
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.7214**	**6.7178**	**7.0899**	**0.0113**		**0.3534**	**0.3534**		**0.3286**	**0.3286**	**0.0000**	**1,035.3425**	**1,035.3425**	**0.3016**		**1,042.8818**

3.7 Paving - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0706	0.0454	0.4488	1.3800e-003	0.1479	1.0200e-003	0.1489	0.0392	9.4000e-004	0.0402		137.6186	137.6186	3.9500e-003		137.7174
Total	**0.0706**	**0.0454**	**0.4488**	**1.3800e-003**	**0.1479**	**1.0200e-003**	**0.1489**	**0.0392**	**9.4000e-004**	**0.0402**		**137.6186**	**137.6186**	**3.9500e-003**		**137.7174**

3.8 Architectural Coating - 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					
Archit. Coating	15.8712					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.9309
Total	**16.0901**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**		**281.4481**	**281.4481**	**0.0193**		**281.9309**

3.8 Architectural Coating - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	7.8400e-003	5.0400e-003	0.0499	1.5000e-004	0.0164	1.1000e-004	0.0165	4.3600e-003	1.0000e-004	4.4600e-003		15.2910	15.2910	4.4000e-004		15.3019
Total	**7.8400e-003**	**5.0400e-003**	**0.0499**	**1.5000e-004**	**0.0164**	**1.1000e-004**	**0.0165**	**4.3600e-003**	**1.0000e-004**	**4.4600e-003**		**15.2910**	**15.2910**	**4.4000e-004**		**15.3019**

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	15.8712					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941	0.0000	281.4481	281.4481	0.0193		281.9309
Total	**16.0901**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**	**0.0000**	**281.4481**	**281.4481**	**0.0193**		**281.9309**

3.8 Architectural Coating - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	7.8400e-003	5.0400e-003	0.0499	1.5000e-004	0.0164	1.1000e-004	0.0165	4.3600e-003	1.0000e-004	4.4600e-003		15.2910	15.2910	4.4000e-004		15.3019
Total	**7.8400e-003**	**5.0400e-003**	**0.0499**	**1.5000e-004**	**0.0164**	**1.1000e-004**	**0.0165**	**4.3600e-003**	**1.0000e-004**	**4.4600e-003**		**15.2910**	**15.2910**	**4.4000e-004**		**15.3019**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2.5861	11.0928	30.3557	0.0998	8.8209	0.0865	8.9073	2.3576	0.0808	2.4384		10,170.6901	10,170.6901	0.5533		10,184.5234
Unmitigated	2.5861	11.0928	30.3557	0.0998	8.8209	0.0865	8.9073	2.3576	0.0808	2.4384		10,170.6901	10,170.6901	0.5533		10,184.5234

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Fast Food Restaurant with Drive Thru	262.35	262.35	262.35	701,738	701,738
Fast Food Restaurant with Drive Thru	261.77	261.77	261.77	700,179	700,179
Pharmacy/Drugstore with Drive Thru	1,014.99	1,014.99	1014.99	2,757,997	2,757,997
Total	1,539.11	1,539.11	1,539.11	4,159,915	4,159,915

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Fast Food Restaurant with Drive	9.50	7.30	7.30	2.20	78.80	19.00	100	0	0
Fast Food Restaurant with Drive	9.50	7.30	7.30	2.20	78.80	19.00	100	0	0
Pharmacy/Drugstore with Drive	9.50	7.30	7.30	7.50	73.50	19.00	100	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Fast Food Restaurant with Drive Thru	0.593936	0.041843	0.182569	0.108325	0.016436	0.005513	0.015940	0.023523	0.001912	0.001972	0.006090	0.000748	0.001193
Pharmacy/Drugstore with Drive Thru	0.593936	0.041843	0.182569	0.108325	0.016436	0.005513	0.015940	0.023523	0.001912	0.001972	0.006090	0.000748	0.001193

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0475	0.4315	0.3625	2.5900e-003		0.0328	0.0328		0.0328	0.0328		517.7861	517.7861	9.9200e-003	9.4900e-003	520.8630
NaturalGas Unmitigated	0.0475	0.4315	0.3625	2.5900e-003		0.0328	0.0328		0.0328	0.0328		517.7861	517.7861	9.9200e-003	9.4900e-003	520.8630

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					
Fast Food Restaurant with Drive Thru	2145.11	0.0231	0.2103	0.1767	1.2600e-003		0.0160	0.0160		0.0160	0.0160		252.3662	252.3662	4.8400e-003	4.6300e-003	253.8659
Fast Food Restaurant with Drive Thru	2149.89	0.0232	0.2108	0.1771	1.2600e-003		0.0160	0.0160		0.0160	0.0160		252.9283	252.9283	4.8500e-003	4.6400e-003	254.4313
Pharmacy/Drugstore with Drive Thru	106.179	1.1500e-003	0.0104	8.7400e-003	6.0000e-005		7.9000e-004	7.9000e-004		7.9000e-004	7.9000e-004		12.4916	12.4916	2.4000e-004	2.3000e-004	12.5658
Total		**0.0475**	**0.4315**	**0.3625**	**2.5800e-003**		**0.0328**	**0.0328**		**0.0328**	**0.0328**		**517.7861**	**517.7861**	**9.9300e-003**	**9.5000e-003**	**520.8631**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Fast Food Restaurant with Drive Thru	2.14511	0.0231	0.2103	0.1767	1.2600e-003		0.0160	0.0160		0.0160	0.0160		252.3662	252.3662	4.8400e-003	4.6300e-003	253.8659
Fast Food Restaurant with Drive Thru	2.14989	0.0232	0.2108	0.1771	1.2600e-003		0.0160	0.0160		0.0160	0.0160		252.9283	252.9283	4.8500e-003	4.6400e-003	254.4313
Pharmacy/Drugstore with Drive Thru	0.106179	1.1500e-003	0.0104	8.7400e-003	6.0000e-005		7.9000e-004	7.9000e-004		7.9000e-004	7.9000e-004		12.4916	12.4916	2.4000e-004	2.3000e-004	12.5658
Total		**0.0475**	**0.4315**	**0.3625**	**2.5800e-003**		**0.0328**	**0.0328**		**0.0328**	**0.0328**		**517.7861**	**517.7861**	**9.9300e-003**	**9.5000e-003**	**520.8631**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.5950	2.0000e-005	2.7000e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		5.7700e-003	5.7700e-003	2.0000e-005		6.1500e-003
Unmitigated	0.5950	2.0000e-005	2.7000e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		5.7700e-003	5.7700e-003	2.0000e-005		6.1500e-003

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	0.0304					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.5643					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.5000e-004	2.0000e-005	2.7000e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		5.7700e-003	5.7700e-003	2.0000e-005		6.1500e-003
Total	**0.5950**	**2.0000e-005**	**2.7000e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**5.7700e-003**	**5.7700e-003**	**2.0000e-005**		**6.1500e-003**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0304					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.5643					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	2.5000e-004	2.0000e-005	2.7000e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		5.7700e-003	5.7700e-003	2.0000e-005		6.1500e-003
Total	**0.5950**	**2.0000e-005**	**2.7000e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**5.7700e-003**	**5.7700e-003**	**2.0000e-005**		**6.1500e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

Apply Water Conservation Strategy

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