# APPENDIX A

## Air Quality Technical Report

# Yucca Valley Dutch Bros Project

## *Air Quality Technical Report*

**November 2025**

**Prepared for:**

Town of Yucca Valley
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Yucca Valley, CA 92284

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# 1.0 INTRODUCTION

This Air Quality Technical Report evaluates air quality impacts associated with the proposed Dutch Bros coffee shop location at 58121 Twentynine Palms Highway in the Town of Yucca Valley (Town) (Project). This report has been prepared by Impact Sciences, Inc., to support the Project's environmental documentation being prepared pursuant to the California Environmental Quality Act (CEQA). This analysis considers both the temporary air quality impacts from Project construction and long-term impacts associated with operation of the Project.

## 1.1 PROJECT LOCATION

The Project Site is located at 58121 Twentynine Palms Highway (State Route 62) in the Town of Yucca Valley, San Bernardino County, California (Assessor's Parcel Number [APN] 0601-416-05). The Project Site encompasses approximately 1.01 gross acres (44,190 square feet) and is situated along the south side of Twentynine Palms Highway, the primary east-west transportation corridor through the Morongo Basin. **Figure 1, Regional Vicinity**, illustrates the site's location in a regional context.

The Project Site is currently vacant and undeveloped, except for an existing paved drive aisle at the northern portion of the site that connects two adjacent commercial developments. The topography of the site is generally flat, with no significant slopes, drainage channels, or geologic features. The site supports native desert vegetation, including Western Joshua Trees (*Yucca brevifolia*), which are protected under the California Endangered Species Act. Portions of the site also show evidence of disturbance from illegal off-road vehicle use. **Figure 2, Aerial Photograph of the Project Site**, shows an aerial photograph of the existing Project Site and surroundings.

## 1.2 PROJECT DESCRIPTION

### Project Overview

The Project proposes the construction and operation of an approximately 1,025-square-foot Dutch Bros Coffee shop with a dual-lane drive-through facility and associated site improvements. The drive-through is designed to accommodate 23 queued vehicles. In addition to on-site improvements, the Project would contribute in-lieu fees toward off-site roadway improvements consistent with the Town's circulation plans, specifically, the widening of Twentynine Palms Highway to an ultimate half-width of 67 feet along the Project frontage. The future widening of Twentynine Palms Highway would be undertaken at a later date by the Town of Yucca Valley Public Works/Engineering Department and the San Bernardino County Transportation Authority. **Figure 3, Conceptual Site Plan**, illustrates the Project's proposed site plan.

**SOURCE:** Esri, 2025

FIGURE **1**

IMPACT SCIENCES

1590.003•10/25

Regional Vicinity

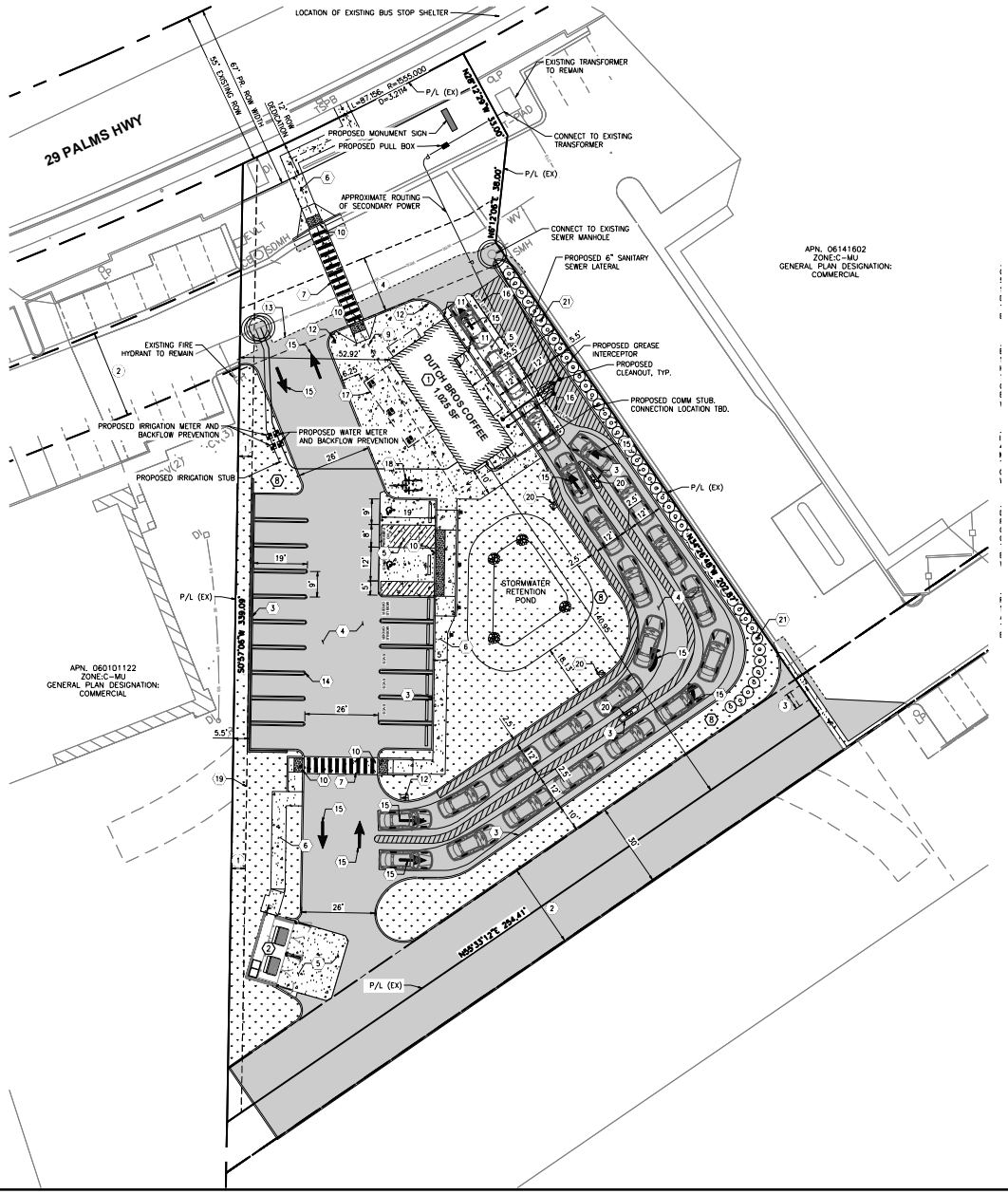
**SOURCE:** Esri, 2025

FIGURE **2**

IMPACT SCIENCES

Aerial Photograph of the Project Site

1590.003•10/25




**SOURCE:** Barghausen Consulting Engineers, LLC., 2025

FIGURE 3

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# Conceptual Site Plan

1590.003•10/25

## Operation

Operation of the Project would entail a drive-through-focused quick-service coffee shop with limited walk-up service and no indoor seating. Land uses, such as the Project, are conditionally permitted in the C-MU zone. The Project is anticipated to operate daily between the hours of 5:00 AM and 11:00 PM. The Project is expected to employ approximately 24 to 32 people, with 6 to 8 employees working per shift. Supply deliveries would occur via small box trucks during off-peak hours.

## Access and Circulation

Site access would be provided from two existing driveways that currently serve adjacent commercial developments. One driveway is located along Twentynine Palms Highway and provides access to the Big 5 Sporting Goods store to the west, while the second driveway is located along Balsa Avenue in proximity to the Walgreens store to the east. Project customers and employees would enter the Project Site from the existing internal drive aisle that connects the two commercial developments and integrate circulation with the surrounding uses. In addition, the Project would include a new drive aisle along the southern perimeter of the Project Site, providing direct access to the Project Site from the existing surface parking lot of the Walgreens to the east.

Internal circulation would allow vehicles to either park in the designated parking area or enter the drive-through lanes, which wrap around the southern portion of the site and direct vehicles northward to exit into adjacent parking lots and back to surrounding roadways. The Project would provide a total of 18 parking spaces (3 future electric vehicle charging stations [EVCS], 1 accessible EVCS, 1 accessible, 13 standard).

## Landscaping

The Project would incorporate approximately 10,350 square feet of landscaping and would retain 2,808 square feet of existing landscaping near Twentynine Palms Highway. The landscape design emphasizes drought-tolerant, desert-appropriate plantings consistent with the Town's Water Efficient Landscape Ordinance and the Water Use Classification of Landscape Species (WUCOLS) guidelines.

Proposed trees include Swan Hill fruitless olive and Mexican palo verde, which can reach a mature size of approximately 25 feet in height and width. Shrub and accent plantings would include desert agave, purple threeawn, grey desert spoon, California buckwheat, Texas sage, deer grass, and jojoba. Texas sage would be installed at a height of approximately 36 inches at the time of planting to provide immediate screening and visual structure along the eastern property line, specifically to screen car headlights, and shrubs would be used to screen the trash enclosure.

Groundcover treatments would consist of approximately 1,498 square feet of decorative local cobble placed over landscape fabric. This treatment would provide a low-maintenance, water-efficient groundcover for a desert climate.

## 1.3 PROJECT CONSTRUCTION SEQUENCING

For the purpose of evaluating potential environmental impacts, this report assumes that construction of the Project would begin in 2026 and extend over a period of approximately five (5) months following issuance of the Incidental Take Permit for the removal of the Western Joshua Trees, with full operation anticipated in 2026. This schedule is considered conservative and is intended to capture the maximum potential daily impacts associated with construction activities.

Construction would occur in three primary stages: (1) debris removal, (2) grading and foundation preparation, and (3) building construction. All equipment and construction staging would occur within the boundaries of the Project Site. The grading plan for the Project anticipates approximately 1,000 cubic yards of cut and 200 cubic yards of fill, resulting in a net export of approximately 800 cubic yards of soil.

The debris removal stage would involve clearing the site and preparing it for grading, which would then be immediately followed by grading and foundation preparation. Debris removal and grading/foundation stages are expected to last approximately five (5) weeks. This stage would establish building pads, prepare utility connections, and level the site. The building construction stage would then proceed over approximately four (4) months and would include construction of the coffee shop structure, installation of utilities, application of architectural coatings, and paving of the Project Site. Architectural coating and paving activities are expected to occur during the final month of the construction stage.

Consistent with the assumptions included within the California Emissions Estimator Model (CalEEMod), the following maximum daily equipment by stage will be assumed.

- Demolition/debris removal: 1 concrete industrial saw, 1 rubber-tired dozer, 2 tractors/loader/backhoes
- Grading: 1 grader, 1 rubber-tired dozer, 1 tractor/loader/backhoe
- Building Construction: 1 crane, 2 forklifts, 2 tractors/loaders/backhoes
- Paving: 4 cement and mortar mixers, 1 paver, 1 roller, 1 tractor/loader/backhoe
- Architectural Coating: 1 air compressor

# 2.0 ENVIRONMENTAL SETTING

## 2.1 AIR QUALITY SETTING

### Mojave Desert Air Basin

The Project Site is located within the San Bernardino County portion of the Mojave Desert Air Basin ("MDAB" or "Basin). The Basin is composed of a 21,000-square-mile area that includes the eastern portion of Kern County, the eastern portion of Riverside County, the northeastern side of Los Angeles County, and almost all of San Bernardino County. The regional climate within the Basin is characterized by hot, dry summers, mild winters, very infrequent rainfalls, moderate winds, and low humidity. The MDAB is home to many mountain ranges containing long, broad valleys. The Sierra Nevada Mountains provide a natural barrier to the north, inhibiting cold air masses originating from Canada and Alaska from passing through the MDAB. Prevailing winds in the MDAB come from the west and the south, caused by air masses pushed onshore in Southern California by differential heating and channeled inland through mountain passes. The San Gabriel and San Bernardino mountain ranges block the majority of cool, moist air from the south; this results in infrequent rainfall and air pollutants settling in over the region. Local air quality in the Basin is affected by the transport of pollutants from other air basins. The Basin is downwind of the South Coast Air Basin and, though to a lesser extent, is downwind from the San Joaquin Valley Air Basin. Prevailing winds transport ozone and ozone precursors from both regions into and through the MDAB during the summer ozone season.

### *Air Pollutants of Concern*

Criteria air pollutants are defined as pollutants for which the federal and state governments have established ambient air quality standards for outdoor concentrations. The federal and state standards have been set at levels above which concentrations could be harmful to human health and welfare. These standards are designed to protect the most sensitive persons, such as children, pregnant women, and the elderly, from illness or discomfort. Criteria air pollutants include ozone ($O_3$), nitrogen dioxide ($NO_2$), carbon monoxide (CO), sulfur dioxide ($SO_2$), particulate matter 2.5 microns or less in diameter (PM2.5), particulate matter ten microns or less in diameter (PM10), and lead (Pb). Note that reactive organic gases (ROGs), which are also known as reactive organic compounds (ROCs) or volatile organic compounds (VOCs), and nitrogen oxides (NOx) are not classified as criteria pollutants. However, ROGs and NOx are widely emitted from land development projects and participate in photochemical reactions in the atmosphere to form $O_3$; therefore, NOx and ROGs are relevant to the Proposed Project and are of concern in the Basin. As such, they are listed below along with the criteria pollutants. Sources and health effects

commonly associated with criteria pollutants are summarized in **Table 1, Criteria Pollutants Summary of Common Sources and Effects.**

**Table 1**
**Criteria Pollutants Summary of Common Sources and Effects**

| Pollutant | Major Man-Made Sources | Human Health & Welfare Effects |
|---|---|---|
| Carbon Monoxide (CO) | An odorless, colorless gas formed when carbon in fuels is not burned completely; a component of motor vehicle exhaust. | Reduces the ability of blood to deliver oxygen to vital tissues, affecting the cardiovascular and nervous system. Impairs vision, causes dizziness, and can lead to unconsciousness or death. |
| Nitrogen Dioxide ($NO_2$) | A reddish-brown gas formed during fuel combustion for motor vehicles and industrial sources. Sources include motor vehicles, electric utilities, and other sources that burn fuel. | Respiratory irritant; aggravates lung and heart problems. Precursor to ozone and acid rain. Contributes to global warming and nutrient overloading, which deteriorates water quality. Causes brown discoloration of the atmosphere. |
| Ozone ($O_3$) | Formed by a chemical reaction between volatile organic compounds (VOC) and nitrous oxides (NOx) in the presence of sunlight. VOCs are also commonly referred to as reactive organic gases (ROGs). Common sources of these precursor pollutants include motor vehicle exhaust, industrial emissions, gasoline storage and transport, solvents, paints, and landfills. | Irritates and causes inflammation of the mucous membranes and lung airways; causes wheezing, coughing, and pain when inhaling deeply; decreases lung capacity; aggravates lung and heart problems. Damages plants; reduces crop yield. Damages rubber, some textiles, and dyes. |
| Particulate Matter (PM10 & PM2.5) | Produced by power plants, steel mills, chemical plants, unpaved roads and parking lots, wood-burning stoves and fireplaces, automobiles, and others. | Increased respiratory symptoms, such as irritation of the airways, coughing or difficulty breathing; aggravated asthma; development of chronic bronchitis; irregular heartbeat; nonfatal heart attacks; and premature death in people with heart or lung disease. Impairs visibility (haze). |
| Sulfur Dioxide ($SO_2$) | A colorless, nonflammable gas formed when fuel containing sulfur is burned, when gasoline is extracted from ore. Examples are petroleum refineries, cement manufacturing, metal processing facilities, locomotives, and ships. | Respiratory irritant; aggravates lung and heart problems. In the presence of moisture and oxygen, sulfur dioxide converts to sulfuric acid, which can damage marble, iron, and steel. Damages crops and natural vegetation. Impairs visibility. Precursor to acid rain. |

*Source: California Air Resources Board, Common Air Pollutants, available online at: https://ww2.arb.ca.gov/resources/common-air-pollutants, accessed September 12, 2025.*

## 2.2 AMBIENT AIR QUALITY

### Criteria Air Pollutant Monitoring Data

Overseen by the California Air Resources Board (CARB), the California Ambient Air Monitoring Network consists of more than 250 monitoring stations operated by Federal, State, and local agencies.[1] Ambient air quality in Yucca Valley can be inferred from ambient air quality measurements conducted at nearby air quality monitoring stations. Existing levels of ambient air quality and historical trends and projections are documented by measurements made by the Mojave Desert Air Quality Management District (MDAQMD), the air pollution regulatory agency in the Basin. The MDAQMD maintains air quality monitoring stations that process ambient air quality measurements throughout the Basin. While the MDAQMD provides multiple air monitoring stations throughout the Mojave Desert Air Basin, the closest monitoring stations representative of air quality in Yucca Valley are monitored by the South Coast Air Quality Management District.

The purpose of the monitoring station is to measure ambient concentrations of pollutants and determine whether ambient air quality meets the National Ambient Air Quality Standards (NAAQS) and the California Ambient Air Quality Standards (CAAQS). Ozone and particulate matter (PM10 and PM2.5) are pollutants of particular concern in the Basin. The closest active monitoring station to the Project Site and most representative of air quality is CARB Station No. 33137, located at 590 E. Racquet Club Avenue in Palm Springs. However, this station only monitors $O_3$ and PM2.5. The closest active monitoring station to the Project Site monitoring PM10 is CARB Station No. 33164, located at 200 S. Hathaway Street in Banning. Ambient emission concentrations vary due to localized variations in emission sources and climate and should be considered "generally" representative of ambient concentrations near the Project Site. See **Table 2, Air Monitoring Station Ambient Pollutant Concentrations**.

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1 California Air Resources Board, Ambient Air Monitoring – Regulatory. Available online at: https://ww2.arb.ca.gov/our-work/programs/ambient-air-monitoring-regulatory, accessed November 14, 2025.

**Table 2**
**Air Monitoring Station Ambient Pollutant Concentrations**

| Pollutant | Standards[1] | Year | | |
|---|---|---|---|---|
| | | 2022 | 2023 | 2024 |
| **Ozone ($O_3$)[a]** | | | | |
| Maximum 1-hour concentration monitored (ppm) | | 0.106 | 0.116 | 0.105 |
| Maximum 8-hour concentration monitored (ppm) | | 0.090 | 0.093 | 0.092 |
| Number of days exceeding state 1-hour standard | 0.09 ppm | 7 | 8 | 8 |
| Number of days exceeding federal/state 8-hour standard | 0.070 ppm | 39 / 43 | 38 / 39 | 0 |
| **Particulate Matter (PM2.5)[a]** | | | | |
| Maximum 24-hour concentration monitored (μg/m$^3$) | | 31.2 | 26.2 | 36.0 |
| Annual average concentration monitored (μg/m$^3$) | | 6.3 | N/A | 6.7 |
| Number of days exceeding federal standards | 35 μg/m$^3$ | 0 | 0 | 3 |
| **Particulate Matter (PM10)[b]** | | | | |
| Maximum 24-hour concentration monitored (μg/m$^3$) | | 48.3 | 94.5 | 43.8 |
| Annual average concentration monitored (μg/m$^3$) | | N/A | 20.6 | 19.5 |
| Number of days exceeding federal/state standards | 150 μg/m$^3$ / 50 μg/m$^3$ | N/A / N/A | 0 / 12 | 0 / 0 |

*Source: CARB. Select-8 Summary. Available at: https://www.arb.ca.gov/adam/select8/sc8start.php, accessed September 12, 2025.*
*N/A – Not Available.*
[a] *CARB Station No. 33137*
[b] *CARB Station No. 33164*
[1] *Parts by volume per million of air (ppm), micrograms per cubic meter of air (μg/m$^3$), or annual arithmetic mean (aam).*
[2] *The 8-hour federal $O_3$ standard was revised from 0.075 ppm to 0.070 ppm in 2015. The statistics shown are based on the 2015 standard of 0.070 ppm.*

The attainment status for the Basin region is included in **Table 3, Attainment Status of Criteria Pollutants in the Mojave Desert Air Basin**. Areas that meet ambient air quality standards are classified as attainment areas, while areas that do not meet these standards are classified as nonattainment areas. The Basin region is designated as a partial nonattainment area for federal ozone and PM2.5 standards and is designated as nonattainment for state ozone, PM10, and PM2.5 standards.

**Table 3**
**Attainment Status of Criteria Pollutants in the Mojave Desert Air Basin**

| Pollutant | State | Federal |
|---|---|---|
| Ozone ($O_3$) | Non-Attainment | Non-Attainment* |
| Particulate Matter (PM10) | Non-Attainment | Non-Attainment** |
| Particulate Matter (PM2.5) | Non-Attainment | Unclassified/Attainment |
| Carbon Monoxide (CO) | Attainment | Unclassified/Attainment |
| Nitrogen Dioxide ($NO_2$) | Attainment | Unclassified/Attainment |
| Sulfur Dioxide ($SO_2$) | Attainment | Unclassified/Attainment |
| Lead | Attainment | Unclassified/Attainment |

** Southwest corner of desert portion of San Berardino County only*
*** San Berardino County portion only*
*Source: MDAQMD. MDAQMD Attainment Status, available online at https://www.mdaqmd.ca.gov/home/showpublisheddocument/1267/636337468837000000, accessed September 12, 2025.*

## Toxic Air Contaminants

In addition to the criteria pollutants discussed above, toxic air contaminants (TACs) are another group of pollutants of concern. TACs are considered either carcinogenic or noncarcinogenic based on the nature of the health effects associated with exposure to the pollutant. For regulatory purposes, carcinogenic TACs are assumed to have no safe threshold below which health impacts would not occur, and cancer risk is expressed as excess cancer cases per one million exposed individuals. Noncarcinogenic TACs differ in that there is generally assumed to be a safe level of exposure below which no negative health impact is believed to occur. These levels are determined on a pollutant-by-pollutant basis.

There are many different types of TACs, with varying degrees of toxicity. Sources of TACs include industrial processes, such as petroleum refining and chrome-plating operations; commercial operations, such as gasoline stations and dry cleaners; and motor vehicle exhaust. Public exposure to TACs can result from emissions from normal operations, as well as from accidental releases of hazardous materials during upset conditions. The health effects associated with TACs are quite diverse and generally are assessed locally, rather than regionally. TACs can cause long-term health effects such as cancer, birth defects, neurological damage, asthma, bronchitis, or genetic damage, or short-term acute affects such as eye watering, respiratory irritation (a cough), running nose, throat pain, and headaches.

To date, CARB has designated 244 compounds as TACs. Additionally, CARB has implemented control measures for a number of compounds that pose high risks and show potential for effective control. The majority of the estimated health risks from TACs can be attributed to a relatively few compounds.[2]

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

## Sensitive Receptors

Some land uses are considered more sensitive to air pollution than others due to the types of population groups or activities involved. Sensitive population groups include children, the elderly, the acutely ill, and the chronically ill, especially those with cardiovascular diseases.[3] According to the MDAQMD, residences, schools, daycare centers, playgrounds, and medical facilities are considered to be sensitive receptor land uses; the following project types proposed for sites within the specified distance to an existing or planned (zoned) sensitive receptor land use must be evaluated using significance threshold criteria number four per MDAQMD guidelines:[4]

- Any industrial project within 1,000 feet
- A distribution center (40 or more trucks per day) within 1,000 feet
- A major transportation project (50,000 or more vehicles per day) within 1,000 feet
- A dry cleaner using perchloroethylene within 500 feet

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2 California Air Resources Board, *CARB Identified Toxic Air Contaminants*. Available online at: https://ww2.arb.ca.gov/resources/documents/carb-identified-toxic-air-contaminants, accessed September 12, 2025.

3 California Air Resources Board, *Sensitive Receptor Assessment*. Available online at: https://ww2.arb.ca.gov/capp-resource-center/community-assessment/sensitive-receptor-assessment, accessed November 10, 2025.

4 MDAQMD, *CEQA and Federal Conformity Guidelines*, 2020. Available online at: https://www.mdaqmd.ca.gov/home/showpublisheddocument/8510/638126583450270000, accessed November 10, 2025.

- A gasoline dispensing facility within 300 feet

The Project does not propose any of these uses, and the closest air quality sensitive receptors are the single-family residences located approximately 228 feet to the south of the Project Site.

# 3.0 REGULATORY FRAMEWORK

## 3.1 FEDERAL

### Clean Air Act

The Clean Air Act (CAA) of 1970 and the CAA Amendments of 1971 required the U.S. Environmental Protection Agency (U.S. EPA) to establish NAAQS, with states retaining the option to adopt more stringent standards or to include other specific pollutants. On April 2, 2007, the Supreme Court found that carbon dioxide is an air pollutant covered by the CAA; however, no NAAQS have been established for carbon dioxide.

These standards are the levels of air quality considered safe, with an adequate margin of safety, to protect public health and welfare. They are designed to protect those "sensitive receptors" most susceptible to further respiratory distress, such as asthmatics, the elderly, very young children, people already weakened by other disease or illness, and persons engaged in strenuous work or exercise. Healthy adults can tolerate occasional exposure to air pollutant concentrations considerably above these minimum standards before adverse effects are observed.

The U.S. EPA has classified air basins (or portions thereof) as being in attainment, nonattainment, or unclassified for each criteria air pollutant, based on whether or not the NAAQS have been achieved. If an area is designated unclassified, it is because inadequate air quality data were available as a basis for nonattainment or attainment designations. **Table 3** lists the federal attainment status of the Basin for the criteria pollutants.

### National Emissions Standards for Hazardous Air Pollutants Program

Under federal law, 187 substances are currently listed as hazardous air pollutants (HAPs). Major sources of specific HAPs are subject to the requirements of the National Emissions Standards for Hazardous Air Pollutants (NESHAPS) program. The U.S. EPA is establishing regulatory schemes for specific source categories and requires implementation of the Maximum Achievable Control Technologies (MACT) for major sources of HAPs in each source category. State law has established the framework for California's TAC identification and control program, which is generally more stringent than the federal program and is aimed at HAPs that are a problem in California. The state has formally identified 244 substances as TACs and is adopting appropriate control measures for each. Once adopted at the state level, each air district will be required to adopt a measure that is equally or more stringent.

## National Ambient Air Quality Standards

The federal CAA required the U.S. EPA to establish NAAQS. The NAAQS sets primary standards and secondary standards for specific air pollutants**.** Primary standards define limits for the intention of protecting public health, which include sensitive populations such as asthmatics, children, and the elderly. Secondary Standards define limits to protect public welfare to include protection against decreased visibility, damage to animals, crops, vegetation, and buildings. A summary of the federal ambient air quality standards is shown in **Table 4, National Ambient Air Quality Standards**.

**Table 4**
**National Ambient Air Quality Standards**

| Pollutant | | Primary/Secondary | Averaging Time | Level |
|---|---|---|---|---|
| Carbon monoxide | | Primary | 8 hours | 9 ppm |
| | | | 1 hour | 35 ppm |
| Lead | | Primary and secondary | Rolling 3-month average | 0.15 μg/m$^3$ |
| Nitrogen dioxide | | Primary | 1 hour | 100 ppb |
| | | Primary and secondary | Annual | 53 ppb |
| Ozone | | Primary and secondary | 8 hours | 0.070 ppm |
| Particulate Matter | PM2.5 | Primary | Annual | 9 μg/m$^3$ |
| | | Secondary | Annual | 15 μg/m$^3$ |
| | | Primary and secondary | 24 hours | 35 μg/m$^3$ |
| | PM10 | Primary and secondary | 24 hours | 150 μg/m$^3$ |
| Sulfur dioxide | | Primary | 1 hour | 75 ppb |
| | | Secondary | Annual | 10 ppb |

*Source: United States Environmental Protection Agency. December 2024. NAAQS Table. Available online at: https://www.epa.gov/criteria-air-pollutants/naaqs-table, accessed September 12, 2025.*

## 3.2 STATE

## California Clean Air Act of 1988

The California CAA of 1988 (CCAA) allows the state to adopt ambient air quality standards and other regulations provided that they are at least as stringent as federal standards. The California Air Resources Board (CARB), a part of the California Environmental Protection Agency (Cal EPA), is responsible for the coordination and administration of both federal and state air pollution control programs within California, including setting the CAAQS. The CCAA, amended in 1992, requires all air quality management districts (AQMDs) in the state to achieve and maintain the CAAQS. The CAAQS are generally stricter than national standards for the same pollutants and have also established state standards for sulfates, hydrogen sulfide,

vinyl chloride, and visibility-reducing particles, for which there are no national standards. CARB also conducts research, compiles emission inventories, develops suggested control measures, and provides oversight of local programs. CARB also has primary responsibility for the development of California's State Implementation Plan (SIP), for which it works closely with the federal government and the local air districts.

## California Ambient Air Quality Standards

The federal CAA permits states to adopt additional or more protective air quality standards if needed. California has set standards for certain pollutants, such as particulate matter and ozone, which are more protective of public health than the respective federal standards. California has also set standards for some pollutants that are not addressed by federal standards. The state standards for ambient air quality are summarized in **Table 5, California Ambient Air Quality Standards**.

**Table 5**
**California Ambient Air Quality Standards**

| Pollutant | | Averaging Time | Level |
|---|---|---|---|
| Carbon monoxide | | 8 hours | 9 ppm |
| | | 1 hour | 20 ppm |
| Lead | | 30-day average | 1.5 μg/m³ |
| Nitrogen dioxide | | 1 hour | 0.180 ppm |
| | | Annual | 0.030 ppm |
| Ozone | | 8 hours | 0.070 ppm |
| | | 1 hour | 0.09 ppm |
| Particulate matter | PM2.5 | Annual | 12 μg/m³ |
| | PM10 | 24 hours | 50 μg/m³ |
| | | Annual | 20 μg/m³ |
| Sulfur dioxide | | 1 hour | 0.25 ppm |
| | | 24 hours | 0.04 ppm |
| Sulfates | | 24 hours | 25 μg/m³ |
| Hydrogen sulfide | | 1 hour | 0.03 ppm |
| Vinyl chloride | | 24 hours | 0.01 ppm |

*Source: California Air Resources Board. July 2024. Table of Ambient Air Quality Standards. Available online at: https://ww2.arb.ca.gov/sites/default/files/2024-08/AAQS%20Table_ADA_FINAL_07222024.pdf, accessed September 12, 2025.*

## California State Implementation Plan

The federal CAA (and its subsequent amendments) requires each state to prepare an air quality control plan referred to as a State Implementation Plan (SIP). The SIP is a living document that is periodically

modified to reflect the latest emissions inventories, plans, and rules and regulations of air basins as reported by the agencies with jurisdiction over them. The CAA Amendments dictate that states containing areas violating the NAAQS revise their SIPs to include extra control measures to reduce air pollution. The SIP includes strategies and control measures to attain the NAAQS by deadlines established by the CAA. The EPA has the responsibility to review all SIPs to determine if they conform to the requirements of the CAA.

State law makes CARB the lead agency for all purposes related to the SIP. Local air districts and other agencies prepare SIP elements and submit them to CARB for review and approval. CARB then forwards SIP revisions to the EPA for approval and publication in the Federal Register. The MDAQMD is responsible for developing, updating, and implementing an air quality attainment plan for the San Bernardino and Riverside County portions of the MDAB, in coordination with the Southern California Association of Governments. The MDAQMD has adopted several plans to attain state and federal standards for ozone and particulate matter within the Western Mojave Desert Ozone Nonattainment Area. The relevant plans for the MDAQMD are listed below:

### *Ozone Attainment Plans*[5]

- 2022 8-Hour Ozone SIP: Western Mojave Desert Nonattainment Area
- 2016 8-Hour Ozone SIP: Western Mojave Desert Nonattainment Area
- 2015 8-Hour Ozone Reasonably Available Control Technology (RACT) SIP Analysis: Mojave Desert Air Quality Management District
- 2014 Updates to the 1997 8-Hour Ozone Standards SIPs: Coachella Valley and Western Mojave Desert 8-Hour Ozone Nonattainment Areas
- 2008 Mojave Desert Air Quality Management District Federal 8-Hour Ozone Attainment Plan (Western Mojave Desert Non-Attainment Area)
- 2004 Mojave Desert Air Quality Management District Ozone Attainment Plan (State & Federal)
- 1994 – Post 1996 Attainment Demonstration and Reasonable Further Progress Plan

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5 California Air Resources Board, Western Mojave Desert Air Quality Plans. Available online at: https://ww2.arb.ca.gov/our-work/programs/california-state-implementation-plans/nonattainment-area-plans/western-mojave, accessed November 14, 2025.

### *Particulate Matter Plans*

- 1995 Mojave Desert Planning Area PM10 Attainment Plan

## California Air Toxics "Hot Spots" Information and Assessment Act (AB 2588)

The California Air Toxics Program is supplemented by the Air Toxics "Hot Spots" program, which became law (AB 2588, Statutes of 1987) in 1987. In 1992, the AB 2588 program was amended by Senate Bill 1731 to require facilities that pose a significant health risk to the community to perform a risk reduction audit and reduce their emissions through implementation of a risk management plan. Under this program, which is required under the Air Toxics "Hot Spots" Information and Assessment Act (Section 44363 of the California Health and Safety Code), facilities are required to report their air toxics emissions, assess health risks, and notify nearby residents and workers of significant risks when present.

Typically, land development projects generate diesel emissions from construction vehicles during the construction phase, as well as some diesel emissions from small trucks during the operational phase. Diesel exhaust is mainly composed of particulate matter and gases, which contain potential cancer-causing substances. Emissions from diesel engines currently include over 40 substances that are listed by EPA as hazardous air pollutants and by CARB as TACs. On August 27, 1998, CARB identified particulate matter in diesel exhaust as a TAC, based on data linking diesel particulate emissions to increased risks of lung cancer and respiratory disease.[6]

In March 2015, the OEHHA adopted "The Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments" in accordance with the Health and Safety Code, Section 44300. The Final Guidance Manual incorporates the scientific basis from three earlier developed Technical Support Documents to assess risk from exposure to facility emissions. The 2015 OEHHA Final Guidance has key changes, including greater age sensitivity, particularly for children, decreased exposure durations, and higher breathing rate profiles. Because cancer risk could be up to three times greater using this new guidance, it may result in greater mitigation requirements, more agency backlog, and increased difficulty in getting air permits. Regardless of the change in calculation methodology, actual emissions and cancer risk within the South Coast Air Basin have declined by more than 50 percent since 2005.

The CARB provides a computer program, the Hot Spots Analysis and Reporting Program (HARP), to assist in a coherent and consistent preparation of a Health Risk Assessment (HRA). HARP2, an update to HARP,

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6 Diesel exhaust is included within pollutants subject to the hotspot program. Please refer to OEHHA's Air Toxics Hot Spot Program Risk Assessment Guidelines. Available online at: https://oehha.ca.gov/air/crnr/notice-adoption-air-toxics-hot-spots-program-guidance-manual-preparation-health-risk-0.

was released in March 2015. HARP2 has a more refined risk characterization in HRA and CEQA documents and incorporates the 2015 OEHHA Final Guidance.

## 3.3 REGIONAL

### Mojave Desert Air Quality Management District (MDAQMD)

The MDAQMD is the air pollution control district for San Bernardino County's High Desert and Riverside County's Palo Verde Valley. The MDAQMD has primary responsibility for regulating stationary sources of air pollution located within its jurisdictional boundaries. The MDAQMD implements air quality programs required by state and federal mandates, enforces rules and regulations based on air pollution laws, and educates businesses and residents about their role in protecting air quality and the risks of air pollution. Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties.[7]

#### *MDAQMD Rules and Regulations*

The following is a list of noteworthy MDAQMD rules that are required of construction activities associated with the Project:

- Rule 401 – *Visible Emissions.* A person shall not discharge into the atmosphere from any single source of emission whatsoever any air contaminant for a period or periods aggregating more than three minutes in any one hour, which is:

    1. As dark or darker in shade as that designated No. 1 on the Ringelmann Chart, as published by the United States Bureau of Mines, or

    2. (b) Of such opacity as to obscure an observer's view to a degree equal to or greater than does smoke described in subsection (a) of this rule.

- Rule 402 – *Nuisance.* A person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property

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7 MDAQMD. *What is MDAQMD?* Available online at: https://www.mdaqmd.ca.gov/about-us, accessed November 10, 2025.

- Rule 403 – *Fugitive Dust.*

(C) Requirements

1. Any person shall not cause or allow the emissions of fugitive dust from any transport, handling, construction or storage activity so that the visible fugitive dust remains visible in the atmosphere beyond the property line of the emission source, except during high winds.

2. A person shall take every reasonable precaution to minimize fugitive dust emissions from wrecking, excavation, grading, clearing of land and solid waste disposal operations.

3. A person shall not cause or allow PM10 to exceed 100 micrograms per cubic meter when determined as the difference between upwind and downwind samples collected on federal reference method samplers at the property line for a minimum of five hours, except during high winds. Installation of samplers or monitors to determine compliance with this subsection shall be required at the Air Pollution Control Officer's (APCO) discretion.

4. Cities, Towns, and the County of San Bernardino shall collectively:

   a) Stabilize sufficient publicly maintained heavily traveled unpaved roads to reduce fugitive dust entrainment and wind erosion by at least 1,541 tons per year of PM10 emissions relative to 1990.

5. The Owner/Operator of a site undergoing weed abatement activity shall not:

   a) Disrupt the soil crust to the extent that visible fugitive dust is created due to wind erosion.

6. The Owner/Operator of any construction/demolition activities subject to this rule in accordance with subsection (A)(2) of this rule shall:

   a) Obtain and maintain a District-approved Dust Control Plan as set forth by Section (D) of this Rule; and

   b) Use periodic watering for short-term stabilization of disturbed surface area to minimize visible fugitive dust emissions. for the purposes of this rule, use of a water truck to maintain moist disturbed surfaces and actively spread water during visible dusting episodes shall be considered sufficient to maintain compliance; and

   c) Take actions sufficient to prevent project-related trackout onto paved surfaces; and;

d) Cover loaded haul vehicles while operating on publicly maintained paved surfaces; and

e) Stabilize graded site surfaces upon completion of grading when subsequent development is delayed or expected to be delayed more than thirty days, except when such delay is due to precipitation that dampens the disturbed surface sufficiently to eliminate visible fugitive dust emissions; and

f) Cleanup project-related trackout or spills on publicly maintained paved surfaces within twenty-four hours; and

g) Reduce non-essential earth-moving activity under high wind conditions. For purposes of this rule, a reduction in earth-moving activity when visible dusting occurs from moist and dry surfaces due to wind erosion shall be considered sufficient to maintain compliance; and

h) Maintain the natural topography to the extent possible during grading and other earth movement; and

i) Provide a construction schedule that specifies construction of parking lots and paved roads first, where feasible, and upwind structures prior to downwind structures; and

j) Cover or otherwise contain bulk material carried on haul trucks operating on paved roads; and

k) Remove bulk material tracked onto paved road surfaces.

- Rule 404: *Particulate Matter Concentration.* A person shall not discharge into the atmosphere from any source, particulate matter except liquid sulfur compounds, in excess of the concentration at standard conditions, shown in Table 404(a). Where the volume discharged is between figures listed in the table, the exact concentration permitted to be discharged shall be determined by linear interpolation.

  1. The provisions of this rule shall not apply to emissions resulting from the combustion of liquid or gaseous fuels in steam generators or gas turbines.

  2. For the purposes of this rule, emissions shall be averaged over one complete cycle of operation or one hour, whichever is the lesser time period. Refer to the official text of the Rule at the MDAQMD website to see Table 404(a).

- Rule 405: *Solid Particulate Matter Weight*

  1. A person shall not discharge into the atmosphere from any source, solid particulate matter including lead and lead compounds, in excess of the rate shown in Table 405 (a). Where the process weight per hour is between figures listed in the table, the exact weight of permitted discharge shall be determined by linear interpolation.

  2. For the purposes of this rule, emissions shall be averaged over one complete cycle of operation or one hour, whichever is the lesser time period. Refer to the official text of the Rule at the MDAQMD website to see Table 405(a).

- Rule 409: *Combustion Contaminants*. A person shall not discharge into the atmosphere from the burning of fuel, combustion contaminants exceeding 0.23 gram per cubic meter (0.1 grain per cubic foot) of gas calculated to 12 percent of carbon dioxide ($CO_2$) at standard conditions averaged over a minimum of 25 consecutive minutes.

## 3.4 LOCAL

### Yucca Valley General Plan

The Town's Open Space and Conservation Element of the General Plan provides goals and policies that address the balance of development and growth with resource protection and preservation issues related to open space, water resources, air quality, biological resources, cultural and paleontological resources, soils, and scenic resources within the Town limits.[8] The following air quality goals and policies are relevant to the Project:

**Goal OSC 10:** Preservation and enhancement of the Mojave Desert region's air quality, in order to assure long-term availability of clean and healthful air in the Town of Yucca Valley, for the protection of the health and welfare of the community.

- **Policy OSC 10-3:** Promote the safe and efficient movement of people and materials into and through the Town as a means of reducing the impact of automobiles on local air quality.

- **Policy OSC 10-4:** Coordinate land use planning efforts to assure that sensitive receptors are reasonably separated from polluting point sources.

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8 Town of Yucca Valley, *Town of Yucca Valley General Plan: Open Space and Conservation Element*, adopted February 4, 2014. Available online at: https://www.yucca-valley.org/home/showpublisheddocument/2596/637009395718470000, accessed September 12, 2025.

- **Policy OSC 10-5:** Provide consistent and effective code enforcement for construction and grading activities to assure ground disturbances do not contribute to blowing sand and fugitive dust emissions.

## Yucca Valley Municipal Code

### *Section 9.34.040 – Air Quality*[9]

A. Equipment Permit And Inspection Requirements: Required permits shall be obtained from the Mojave Desert air quality management district. Before the equipment may be constructed, plans and specifications shall be submitted to the MDAQMD for approval.

B. Permits From Air Quality Management Districts: Permits shall be obtained from the Mojave Desert air quality management district. If requested by the director, uses, activities, or processes that require air quality management district approval to operate shall file a copy of the permit with the department within thirty (30) days of its approval.

C. Diesel Exhaust Emissions Control Measures: The following emissions control measures shall apply to all discretionary land use projects approved by the town on or after January 15, 2009:

1. On Road Diesel Vehicles: On-road diesel vehicles are regulated by the California Air Resources Board.

2. Off-Road Diesel Vehicle/Equipment Operations: All business establishments and contractors that use off-road diesel vehicle/equipment as part of their normal business operations shall adhere to the following measures during their operations in order to reduce diesel particulate matter emissions from diesel fueled engines:

    a. Off road vehicles/equipment shall not be left idling on site for periods in excess of five (5) minutes. The idling limit does not apply to:

        1. Idling when queuing;

        2. Idling to verify that the vehicle is in safe operating condition;

        3. Idling for testing, servicing, repairing or diagnostic purposes;

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9 Town of Yucca Valley, *YVMC: Chapter 9.34.040: Air Quality*. Available online at: https://codelibrary.amlegal.com/codes/yuccavalleyca/latest/yuccavalley_ca/0-0-0-16170, accessed September 12, 2025.

4. Idling necessary to accomplish work for which the vehicle was designed (such as operating a crane) and;

5. Idling required to bring the machine system to operating temperature.

b. Use reformulated ultra-low sulfur diesel fuel in equipment and use equipment certified by the U.S. Environmental Protection Agency (U.S. EPA) or that predates U.S. EPA regulations.

c. Maintain engines in good working order to reduce emissions.

d. Signs shall be posted requiring vehicle drivers to turn off engines when parked.

e. Any requirements or standards subsequently adopted by the Mojave Desert Air Quality Management District or the California Air Resources Board.

f. Provide temporary traffic control during all phases of construction.

g. On-site electrical power connections shall be provided for electric construction tools to eliminate the need for diesel-powered electric generators, where feasible.

h. Maintain construction equipment engines in good working order to reduce emissions. The developer shall have each contractor certify that all construction equipment is properly serviced and maintained in good operating condition.

i. Contractors shall use ultra-low sulfur diesel fuel for stationary construction equipment as regulated by air quality management district rules 431.1 and 431.2 to reduce the release of undesirable emissions.

j. Substitute electric and gasoline powered equipment for diesel powered equipment, where feasible.

# 4.0 AIR QUALITY ANALYSIS

## 4.1 THRESHOLDS AND METHODOLOGY

### Thresholds of Significance

The impact analysis provided below is based on the application of the following *California Environmental Quality Act (CEQA) Guidelines* Appendix G, which indicates that a Project would have a significant impact on air quality if it would:

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

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

3. Expose sensitive receptors to substantial pollutant concentrations.

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

### *MDAQMD Thresholds*

The *MDAQMD CEQA and Federal Conformity Guidelines (MDAQMD Guidelines)* set forth methodologies and quantitative significance thresholds that a lead agency may use to estimate and evaluate the significance of a project's air emissions. According to the MDAQMD, any project is significant if it triggers or exceeds the most appropriate evaluation criteria. The District will clarify upon request which threshold is most appropriate for a given project; in general, the emissions comparison (criteria number 1) is sufficient:

1. Generates total emissions (direct and indirect) in excess of the thresholds given in **Table 6**;

2. Generates a violation of any ambient air quality standard when added to the local background;

3. Does not conform with the applicable attainment or maintenance plan(s);

4. Exposes sensitive receptors to substantial pollutant concentrations, including those resulting in a cancer risk greater than or equal to 10 in a million and/or a Hazard Index (HI) (non-cancerous) greater than or equal to 1.

A project with potentially significant impacts must incorporate mitigation sufficient to reduce its impact to a level that is not significant. A project that cannot be mitigated to a level that is not significant must

incorporate all feasible mitigation. Note that the emission thresholds are given as a daily value and an annual value, so that a multi-phased project (such as a project with a construction phase and a separate operational phase) with phases shorter than one year can be compared to the daily value.[10] See **Table 6, Mojave Desert AQMD Air Quality Significance Thresholds,** below.

**Table 6**
**Mojave Desert AQMD Air Quality Significance Thresholds**

| Mass Daily Thresholds[a] | | |
|---|---|---|
| **Pollutant** | **Annual Threshold (short tons)** | **Daily Threshold (pounds)** |
| **NOx** | 25 | 137 |
| **VOC** | 25 | 137 |
| **PM10** | 15 | 82 |
| **PM2.5** | 12 | 65 |
| **SOx** | 25 | 137 |
| **CO** | 100 | 548 |
| **Lead** | 0.6 | 3 |
| **Greenhouse Gas (GHG) Thresholds** | | |
| **GHG** | 100,000 short tons/yr or 548,000 pounds/day $CO_2e$ | |

[a] *Source: MDAQMD CEQA and Federal Conformity Guidelines*, 2020.

Additionally, a project is deemed to be consistent with applicable attainment or maintenance plans if the project is consistent with its land use plan designation.[11]

## Methodology

This analysis focuses on the nature and magnitude of the change in the air quality environment due to implementation of the Project. Air pollutant emissions associated with the Project would result from on-site Project operations and from Project-related traffic volumes. Construction activities would also generate air pollutant emissions at the Project Site and on roadways, resulting from construction-related equipment and traffic. The increase in Project Site emissions generated by these activities and other secondary sources

10 MDAQMD, *MDAQMD CEQA and Federal Conformity Guidelines*, 2020. Available online at: https://www.mdaqmd.ca.gov/home/showpublisheddocument/8510/638126583450270000, accessed November 10, 2025.

11 MDAQMD, *MDAQMD CEQA and Federal Conformity Guidelines*, 2020. Available online at: https://www.mdaqmd.ca.gov/home/showpublisheddocument/8510/638126583450270000, accessed November 10, 2025.

has been quantitatively estimated and compared to thresholds of significance recommended by the MDAQMD (see **Project Impacts** subsection below).

### *Construction Emissions*

The regional construction emissions associated with the Project were calculated using the California Emissions Estimator Model (CalEEMod). CalEEMod was developed in collaboration with the air districts of California as a statewide land use emissions computer model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify potential criteria pollutant and greenhouse gas (GHG) emissions associated with both construction and operations from a variety of land use projects.

Construction activities associated with site preparation, grading, and building construction would generate pollutant emissions. Specifically, these construction activities would temporarily create emissions of dust, fumes, equipment exhaust, and other air contaminants. These construction emissions were compared to the thresholds established by the MDAQMD.

### *Operational Emissions*

Operational emissions associated with the Project were also calculated using CalEEMod. Operational emissions associated with the Project would comprise mobile source emissions, energy demand, and other area source emissions. Mobile source emissions are generated by the increase in motor vehicle trips to and from the Project Site associated with operation of the Project. Area source emissions are generated by landscape maintenance equipment, application of architectural coatings, and consumer products. To determine if a regional air quality impact would occur, the increase in emissions is compared with the MDAQMD's recommended regional thresholds for operational emissions.

## 4.2 PROJECT IMPACTS

**AQ Impact 1** **Would implementation of the Proposed Project conflict with or obstruct implementation of any applicable air quality plan? *(Less than Significant).***

As part of its enforcement responsibilities, the U.S. EPA requires each state with nonattainment areas to prepare and submit a SIP that demonstrates the means to attain the federal standards. The SIP must integrate federal, state, and local plan components and regulations to identify specific measures to reduce pollution in nonattainment areas, using a combination of performance standards and market-based programs. Similarly, under state law, the CCAA requires an air quality attainment plan to be prepared for areas designated as nonattainment with regard to the federal and state ambient air quality standards. Air

quality attainment plans outline emissions limits and control measures to achieve and maintain these standards by the earliest practical date.

As previously discussed, according to the MDAQMD, if a project does not exceed the thresholds established in **Table 6**, the project would be deemed to be consistent with applicable attainment or maintenance plans. Additionally, if the project is consistent with the existing land use plan designation, it is considered to be consistent with the applicable attainment or maintenance plans. As demonstrated in **AQ Impact 2**, below, the Project would not exceed the thresholds established in **Table 6**; further, the Project is consistent with the land use and zoning for the Project Site. The Project Site is designated as Mixed Use (MU) and is zoned for Mixed-Use Commercial (C-MU). Commercial land uses support local and regional serving retail and service uses, including uses such as shopping centers and malls, small commercial centers, hotels, commercial recreation uses such as movie theaters and bowling alleys, restaurants, supermarkets, and personal services. Fast food (with drive-through, delivery) is permitted in the C-MU zone only with a conditional use permit (CUP).[12] Therefore, the Project would not conflict with or obstruct the implementation of any air quality plan established by the MDAQMD.

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**AQ Impact 2** **Would implementation of the Proposed Project result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is nonattainment under an applicable federal or state ambient air quality standard? *(Less than Significant).***

A project may have a significant impact if project-related emissions would result in a cumulatively considerable net increase for a criteria pollutant for which the region in nonattainment under applicable federal or state ambient air quality standards.

## *Construction Significance Analysis*

For purposes of this analysis, it is estimated that the Project would be constructed in approximately 5 months, with construction beginning in 2026 and project operations commencing in the same year. While construction may begin at a later date and/or take place over a longer period, these assumptions represent the earliest and fastest build-out potential, resulting in a worst-case daily impact scenario for purposes of this analysis. This analysis assumes construction would be undertaken with the following primary construction phases: (1) debris clearing/foundation preparation, (2) grading, and (3) building construction.

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12 Town of Yucca Valley, *YVMC: Chapter 9.09: Commercial Districts*. Available online at: https://codelibrary.amlegal.com/codes/yuccavalleyca/latest/yuccavalley_ca/0-0-0-14877, accessed November 10, 2025.

The Project would also require paving and architectural coatings, which have conservatively been assumed to occur concurrently during the final month of the building construction phase.

The analysis of regional daily construction emissions has been prepared utilizing the CalEEMod computer model. Predicted maximum daily construction-generated emissions for the Project are summarized in **Table 7, Construction-Related Criteria Pollutant and Precursor Emissions.** These calculations assume that appropriate dust control measures would be implemented as part of the Project during each phase of development, as specified by MDAQMD Rule 403 (Fugitive Dust). As shown in **Table 7**, the peak daily emissions generated during the construction of the Project would not exceed any of the emission thresholds recommended by the MDAQMD. Therefore, Project construction would not result in a cumulatively considerable net increase of any criteria air pollutant for which the Project region is nonattainment under an applicable federal or state ambient air quality standard.

**Table 7**
**Construction-Related Criteria Pollutant and Precursor Emissions**

| Maximum Pounds Per Day | | | | | | |
|---|---|---|---|---|---|---|
| **Construction Year** | **ROG** | **NOx** | **CO** | **$SO_2$** | **PM10** | **PM2.5** |
| 2026 | 1.60 | 13.00 | 15.00 | 0.02 | 7.90 | 4.00 |
| **Threshold** | **137** | **137** | **548** | **137** | **82** | **65** |
| *Exceed?* | *No* | *No* | *No* | *No* | *No* | *No* |
| **Maximum Annual Emissions (short tons)*** | | | | | | |
| **Construction Year** | **ROG** | **NOx** | **CO** | **$SO_2$** | **PM10** | **PM2.5** |
| 2026 | 0.05 | 0.43 | 0.54 | < 0.01 | 0.10 | 0.06 |
| **Threshold** | **25** | **25** | ***100*** | **25** | **15** | **12** |
| *Exceed?* | *No* | *No* | *No* | *No* | *No* | *No* |

*Source: Impact Sciences, November 2025. See **Appendix A** to this report. Emissions shown are the highest daily maximum from either the summer or winter season.*
**In CalEEMod, criteria pollutants are represented in pounds per day for daily values, and tons per year for annual values. For clarity purposes, a "ton" and a "short ton" are both equivalent to 2,000 pounds.*
*Note: Project emissions account for the reductions from MDAQMD Rule 403 (Fugitive Dust).*

## *Operational Significance Analysis*

Project-generated emissions would be associated with motor vehicle use, energy use, and area sources, such as the use of natural-gas-fired appliances, landscape maintenance equipment, consumer cleaning products, and architectural coatings associated with the operation of the Project. The operational emissions from the Project were calculated with CalEEMod, and the operational emissions were compared against MDAQMD thresholds to determine Project significance. Long-term operational emissions attributable to

the Project are summarized in **Table 8, Long-Term Operational Emissions**. As shown, the operational emissions generated by the Project would not exceed the regional thresholds of significance set by the MDAQMD.

**Table 8**
**Long-Term Operational Emissions**

| Maximum Pounds Per Day | | | | | | |
|---|---|---|---|---|---|---|
| **Source** | **ROG** | **NOx** | **CO** | **$SO_2$** | **PM10** | **PM2.5** |
| Mobile Source | 2.00 | 2.50 | 22.00 | 0.05 | 4.50 | 1.20 |
| Area Source | 0.03 | < 0.01 | 0.04 | < 0.01 | < 0.01 | < 0.01 |
| Energy Use | < 0.01 | 0.03 | 0.03 | < 0.01 | < 0.01 | < 0.01 |
| *Total* | *2.04* | *2.54* | *22.07* | *0.07* | *4.52* | *1.22* |
| **Threshold** | **137** | **137** | **548** | **137** | **82** | **65** |
| *Exceed?* | *No* | *No* | *No* | *No* | *No* | *No* |
| **Maximum Annual Emissions (short tons)*** | | | | | | |
| **Source** | **ROG** | **NOx** | **CO** | **$SO_2$** | **PM10** | **PM2.5** |
| Mobile | 0.27 | 0.26 | 1.90 | < 0.01 | 0.40 | 0.11 |
| Area Source | 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| Energy Use | < 0.01 | 0.01 | < 0.01 | < 0.01 | < 0.01 | < 0.01 |
| *Total* | *0.29* | *0.28* | *1.92* | *< 0.03* | *0.42* | *0.13* |
| **Threshold** | **25** | **25** | **100** | **25** | **15** | **12** |
| *Exceed?* | *No* | *No* | *No* | *No* | *No* | *No* |

*Source: Impact Sciences, November 2025. See **Appendix A** to this report. Emissions shown are the highest daily maximum from either the summer or winter season.*
**In CalEEMod, criteria pollutants are represented in pounds per day for daily values, and tons per year for annual values. For clarity purposes, a "ton" and a "short ton" are both equivalent to 2,000 pounds.*

As shown in **Table 7** and **Table 8**, the Project's construction and operational emissions would not exceed the MDAQMD's thresholds for any criteria air pollutants. Thus, the Project would also not result in a cumulatively considerable net increase of any criteria air pollutant for which the Project region is nonattainment under an applicable federal or state ambient air quality standard. These impacts are less than significant.

## *Air Quality Health Impacts*

On December 24, 2018, the California Supreme Court published its opinion on the *Sierra Club et al. v. County of Fresno et. Al.* (Case No. S219783), which determined that an environmental review must adequately analyze a project's potential impacts and inform the public how its bare numbers translate to a potential

adverse health impact or explain how existing scientific constraints cannot translate the emissions numbers to the potential health impacts.

Criteria air pollutants are defined as those pollutants for which the federal and state governments have established air quality standards for outdoor or ambient concentrations to protect public health. The national and state ambient air quality standards have been set at levels to protect human health with a determined margin of safety. As discussed previously, the Basin is in state non-attainment for PM2.5, PM10, and Ozone ($O_3$) and federal non-attainment for PM10 and $O_3$. Therefore, an increase in emissions of particulate matter or ozone precursors (ROG and NOx) has the potential to push the region further from reaching attainment status, and, as a result, these pollutants are the greatest concern in the region. As noted in **Table 7** and **Table 8** above, the Project will emit criteria air pollutants during construction and operation**.** However, the Project will not exceed MDAQMD thresholds for ozone precursors (ROG and NOx), PM2.5, PM10, or any other criteria air pollutants, and will not result in a cumulatively significant impact for which the region is in non-attainment. With respect to the Project's increase in criteria pollutant emissions, the Project would not have the potential to cause significant air quality health impacts. Therefore, impacts are less than significant.

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**AQ Impact 3** **Would implementation of the Proposed Project expose sensitive receptors to substantial air pollutant concentrations? (*Less than Significant).***

Based on the MDAQMD Guidelines, a significant impact may occur if a project were to generate pollutant concentrations to a degree that would significantly affect sensitive receptors.

## *Construction*

Project impacts related to increased community risk could occur by introducing a new source of localized pollutants during construction and operation, with the potential to adversely affect existing sensitive receptors in the Project vicinity. According to the MDAQMD, residences, schools, daycare centers, playgrounds, and medical facilities are considered to be sensitive receptor land uses. The following project types proposed for sites within the specified distance to an existing or planned (zoned) sensitive receptor land use must be evaluated using significance threshold criteria number four per MDAQMD guidelines:[13]

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13 MDAQMD, CEQA and Federal Conformity Guidelines. Available online at: https://www.mdaqmd.ca.gov/home/showpublisheddocument/8510/638126583450270000, accessed November 10, 2025.

- Any industrial project within 1,000 feet
- A distribution center (40 or more trucks per day) within 1,000 feet
- A major transportation project (50,000 or more vehicles per day) within 1,000 feet
- A dry cleaner using perchloroethylene within 500 feet
- A gasoline dispensing facility within 300 feet

The Project is not proposing to develop any of the project types listed above and will not be required to be evaluated against MDAQMD significance threshold criteria number four. The closest air quality sensitive receptors would be the single-family residences 228 feet to the south of the Project Site.

The primary sources of potential TACs under the Project would be construction activity and the associated generation of diesel particulate matter (DPM) emissions from the use of off-road diesel equipment required for grading, paving, and other construction activities. The amount to which nearby sensitive receptors are exposed (a function of concentration and duration of exposure) is the primary factor used to determine health risk. Health-related risks associated with diesel exhaust emissions are primarily linked to long-term exposure and the associated risk of contracting cancer. Construction of the Project would not have the potential to generate large amounts of DPM since a minimal amount of daily heavy construction equipment will be utilized, and the overall construction duration would be short (approximately 5 months). Furthermore, the low levels of diesel exhaust would primarily be emitted during the grading/foundational preparation phase, which is anticipated to last only one month total. Average daily diesel exhaust emissions generated on-site during the 4 months of building construction would be negligible. Emissions generated from the development of the Project are temporary and localized and would cease upon completion of construction. This impact would be less than significant.

### *Operation*

Project-operation impacts related to increased health risk can occur either by introducing a new source of TACs with the potential to adversely affect existing sensitive receptors, or by introducing a new sensitive receptor, such as a residential use, in proximity to an existing source of TACs.

The Project does not include any stationary sources of TAC emissions, and most vehicles associated with the operation of the Project would run on gasoline and not diesel, which is the primary source of TACs and DPM. Therefore, operation of the Project would not generate TAC or PM2.5 emissions that could affect the health of sensitive receptors. As such, the Project would not contribute to human health risk to nearby receptors during operation, and the Project would not contribute to any cumulative human health risk impact.

**AQ Impact 4** **Would the Proposed Project include sources that could create other emissions (such as those leading to odors) adversely affecting a substantial number of people? (*Less than Significant*).**

According to CARB's CEQA Air Quality Handbook, land uses often associated with odors include agriculture (farming and livestock), wastewater treatment plants, food processing plants, chemical plants, composting facilities, refineries, landfills, dairies, and fiberglass molding. The Project would not include any of the land uses that have been identified by CARB as odor sources.

Construction activities associated with the Project may generate detectable odors from heavy-duty equipment exhaust and architectural coatings. However, construction-related odors would be short-term in nature and cease upon Project completion. In addition, the Project would be required to comply with the California Code of Regulations, Title 13, sections 2449(d)(3) and 2485, as well as YVMC Section 9.34.040, which minimizes the idling time of construction equipment either by shutting it off when not in use or by reducing the time of idling to no more than five minutes. This would reduce the detectable odors from heavy-duty equipment exhaust. Any odor impacts to existing adjacent land uses would be short-term and not substantial. As such, the Project would not result in other emissions (such as those leading to odors) adversely affecting a substantial number of people. Impacts would be less than significant.

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# APPENDIX A

## Air Quality Data

# Yucca Valley Dutch Bros Custom Report

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# 1. Basic Project Information

## 1.1. Basic Project Information

| Data Field | Value |
|---|---|
| Project Name | Yucca Valley Dutch Bros |
| Construction Start Date | 3/2/2026 |
| Operational Year | 2026 |
| Lead Agency | — |
| Land Use Scale | Project/site |
| Analysis Level for Defaults | County |
| Windspeed (m/s) | 3.6 |
| Precipitation (days) | 14 |
| Location | 34.12734, -116.395715 |
| County | San Bernardino-Mojave Desert |
| City | Yucca Valley |
| Air District | Mojave Desert AQMD |
| Air Basin | Mojave Desert |
| TAZ | 5142 |
| EDFZ | 10 |
| Electric Utility | Southern California Edison |
| Gas Utility | Southern California Gas |
| App Version | 2022.1.1.32 |

## 1.2. Land Use Types

| Land Use Subtype | Size | Unit | Lot Acreage | Building Area (sq ft) | Landscape Area (sq ft) | Special Landscape Area (sq ft) | Population | Description |
|---|---|---|---|---|---|---|---|---|

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Fast Food Restaurant with Drive Thru | 1.0 | 1000sqft | 0.85 | 1,025 | 10,350 | — | — | — |
| Parking Lot | 18 | Space | 0.16 | 0.00 | 0.00 | — | — | — |

## 1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

# 2. Emissions Summary

## 2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Un/Mit. | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Unmit. | 1.8 | 1.6 | 12 | 15 | 0.02 | 0.56 | 7.3 | 7.9 | 0.51 | 3.5 | 4.0 | — | 2,753 | 2,753 | 0.11 | 0.09 | 1.3 | 2,784 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Unmit. | 1.6 | 1.4 | 13 | 13 | 0.02 | 0.56 | 7.3 | 7.9 | 0.51 | 3.5 | 4.0 | — | 2,742 | 2,742 | 0.09 | 0.09 | 0.03 | 2,771 |
| Average Daily (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Unmit. | 0.33 | 0.28 | 2.4 | 2.9 | 0.01 | 0.10 | 0.48 | 0.57 | 0.09 | 0.23 | 0.32 | — | 583 | 583 | 0.02 | 0.01 | 0.05 | 586 |
| Annual (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Unmit. | 0.06 | 0.05 | 0.43 | 0.54 | < 0.005 | 0.02 | 0.09 | 0.10 | 0.02 | 0.04 | 0.06 | — | 97 | 97 | < 0.005 | < 0.005 | 0.01 | 97 |

## 2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Year | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily - Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 2026 | 1.8 | 1.6 | 12 | 15 | 0.02 | 0.56 | 7.3 | 7.9 | 0.51 | 3.5 | 4.0 | — | 2,753 | 2,753 | 0.11 | 0.09 | 1.3 | 2,784 |
| Daily - Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 2026 | 1.6 | 1.4 | 13 | 13 | 0.02 | 0.56 | 7.3 | 7.9 | 0.51 | 3.5 | 4.0 | — | 2,742 | 2,742 | 0.09 | 0.09 | 0.03 | 2,771 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 2026 | 0.33 | 0.28 | 2.4 | 2.9 | 0.01 | 0.10 | 0.48 | 0.57 | 0.09 | 0.23 | 0.32 | — | 583 | 583 | 0.02 | 0.01 | 0.05 | 586 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| 2026 | 0.06 | 0.05 | 0.43 | 0.54 | < 0.005 | 0.02 | 0.09 | 0.10 | 0.02 | 0.04 | 0.06 | — | 97 | 97 | < 0.005 | < 0.005 | 0.01 | 97 |

## 2.4. Operations Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Un/Mit. | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Unmit. | 2.2 | 2.0 | 2.3 | 22 | 0.05 | 0.04 | 4.5 | 4.5 | 0.04 | 1.1 | 1.2 | 7.0 | 5,449 | 5,456 | 0.86 | 0.22 | 20 | 5,562 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Unmit. | 2.0 | 1.8 | 2.5 | 16 | 0.05 | 0.04 | 4.5 | 4.5 | 0.04 | 1.1 | 1.2 | 7.0 | 4,975 | 4,982 | 0.87 | 0.22 | 2.1 | 5,073 |
| Average Daily (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Unmit. | 1.6 | 1.5 | 1.5 | 10 | 0.02 | 0.02 | 2.2 | 2.2 | 0.02 | 0.56 | 0.58 | 7.0 | 2,612 | 2,619 | 0.81 | 0.13 | 5.6 | 2,683 |
| Annual (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Unmit. | 0.30 | 0.28 | 0.27 | 1.9 | < 0.005 | < 0.005 | 0.40 | 0.40 | < 0.005 | 0.10 | 0.11 | 1.2 | 432 | 434 | 0.13 | 0.02 | 0.92 | 444 |

## 2.5. Operations Emissions by Sector, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Sector | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Mobile | 2.2 | 2.0 | 2.3 | 22 | 0.05 | 0.04 | 4.5 | 4.5 | 0.04 | 1.1 | 1.2 | — | 5,346 | 5,346 | 0.16 | 0.21 | 18 | 5,432 |
| Area | 0.03 | 0.03 | < 0.005 | 0.04 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 0.18 | 0.18 | < 0.005 | < 0.005 | — | 0.18 |
| Energy | < 0.005 | < 0.005 | 0.03 | 0.03 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 99 | 99 | 0.01 | < 0.005 | — | 99 |
| Water | — | — | — | — | — | — | — | — | — | — | — | 0.60 | 4.0 | 4.6 | 0.06 | < 0.005 | — | 6.6 |
| Waste | — | — | — | — | — | — | — | — | — | — | — | 6.4 | 0.00 | 6.4 | 0.64 | 0.00 | — | 22 |
| Refrig. | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 1.6 | 1.6 |
| Total | 2.2 | 2.0 | 2.3 | 22 | 0.05 | 0.04 | 4.5 | 4.5 | 0.04 | 1.1 | 1.2 | 7.0 | 5,449 | 5,456 | 0.86 | 0.22 | 20 | 5,562 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Mobile | 2.0 | 1.8 | 2.5 | 16 | 0.05 | 0.04 | 4.5 | 4.5 | 0.04 | 1.1 | 1.2 | — | 4,872 | 4,872 | 0.16 | 0.22 | 0.48 | 4,943 |
| Area | 0.02 | 0.02 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Energy | < 0.005 | < 0.005 | 0.03 | 0.03 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 99 | 99 | 0.01 | < 0.005 | — | 99 |
| Water | — | — | — | — | — | — | — | — | — | — | — | 0.60 | 4.0 | 4.6 | 0.06 | < 0.005 | — | 6.6 |
| Waste | — | — | — | — | — | — | — | — | — | — | — | 6.4 | 0.00 | 6.4 | 0.64 | 0.00 | — | 22 |
| Refrig. | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 1.6 | 1.6 |
| Total | 2.0 | 1.8 | 2.5 | 16 | 0.05 | 0.04 | 4.5 | 4.5 | 0.04 | 1.1 | 1.2 | 7.0 | 4,975 | 4,982 | 0.87 | 0.22 | 2.1 | 5,073 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Mobile | 1.6 | 1.5 | 1.4 | 10 | 0.02 | 0.02 | 2.2 | 2.2 | 0.02 | 0.56 | 0.58 | — | 2,509 | 2,509 | 0.11 | 0.13 | 4.0 | 2,553 |
| Area | 0.03 | 0.03 | < 0.005 | 0.02 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 0.09 | 0.09 | < 0.005 | < 0.005 | — | 0.09 |
| Energy | < 0.005 | < 0.005 | 0.03 | 0.03 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 99 | 99 | 0.01 | < 0.005 | — | 99 |
| Water | — | — | — | — | — | — | — | — | — | — | — | 0.60 | 4.0 | 4.6 | 0.06 | < 0.005 | — | 6.6 |
| Waste | — | — | — | — | — | — | — | — | — | — | — | 6.4 | 0.00 | 6.4 | 0.64 | 0.00 | — | 22 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Refrig. | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 1.6 | 1.6 |
| Total | 1.6 | 1.5 | 1.5 | 10 | 0.02 | 0.02 | 2.2 | 2.2 | 0.02 | 0.56 | 0.58 | 7.0 | 2,612 | 2,619 | 0.81 | 0.13 | 5.6 | 2,683 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Mobile | 0.29 | 0.27 | 0.26 | 1.9 | < 0.005 | < 0.005 | 0.40 | 0.40 | < 0.005 | 0.10 | 0.11 | — | 415 | 415 | 0.02 | 0.02 | 0.66 | 423 |
| Area | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 0.01 | 0.01 | < 0.005 | < 0.005 | — | 0.02 |
| Energy | < 0.005 | < 0.005 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 16 | 16 | < 0.005 | < 0.005 | — | 16 |
| Water | — | — | — | — | — | — | — | — | — | — | — | 0.10 | 0.67 | 0.77 | 0.01 | < 0.005 | — | 1.1 |
| Waste | — | — | — | — | — | — | — | — | — | — | — | 1.1 | 0.00 | 1.1 | 0.11 | 0.00 | — | 3.7 |
| Refrig. | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.27 | 0.27 |
| Total | 0.30 | 0.28 | 0.27 | 1.9 | < 0.005 | < 0.005 | 0.40 | 0.40 | < 0.005 | 0.10 | 0.11 | 1.2 | 432 | 434 | 0.13 | 0.02 | 0.92 | 444 |

# 3. Construction Emissions Details

## 3.1. Debris Removal (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 1.4 | 1.1 | 10 | 11 | 0.02 | 0.42 | — | 0.42 | 0.39 | — | 0.39 | — | 1,970 | 1,970 | 0.08 | 0.02 | — | 1,977 |
| Dust From Material Movement | — | — | — | — | — | — | 5.7 | 5.7 | — | 2.9 | 2.9 | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite truck | 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 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.04 | 0.03 | 0.29 | 0.31 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 54 | 54 | < 0.005 | < 0.005 | — | 54 |
| Dust From Material Movement | — | — | — | — | — | — | 0.16 | 0.16 | — | 0.08 | 0.08 | — | — | — | — | — | — | — |
| Onsite truck | 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 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.01 | 0.01 | 0.05 | 0.06 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 8.9 | 8.9 | < 0.005 | < 0.005 | — | 9.0 |
| Dust From Material Movement | — | — | — | — | — | — | 0.03 | 0.03 | — | 0.01 | 0.01 | — | — | — | — | — | — | — |
| Onsite truck | 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 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.05 | 0.04 | 0.05 | 0.51 | 0.00 | 0.00 | 0.13 | 0.13 | 0.00 | 0.03 | 0.03 | — | 127 | 127 | < 0.005 | < 0.005 | 0.01 | 128 |
| Vendor | 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 | 0.00 |
| Hauling | 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 | 0.00 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | < 0.005 | < 0.005 | < 0.005 | 0.02 | 0.00 | 0.00 | < 0.005 | < 0.005 | 0.00 | < 0.005 | < 0.005 | — | 3.6 | 3.6 | < 0.005 | < 0.005 | 0.01 | 3.6 |
| Vendor | 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 | 0.00 |
| Hauling | 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 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | < 0.005 | < 0.005 | < 0.005 | < 0.005 | 0.00 | 0.00 | < 0.005 | < 0.005 | 0.00 | < 0.005 | < 0.005 | — | 0.59 | 0.59 | < 0.005 | < 0.005 | < 0.005 | 0.60 |
| Vendor | 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 | 0.00 |
| Hauling | 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 | 0.00 |

## 3.3. Grading (2026) - Unmitigated

### Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 1.6 | 1.3 | 12 | 12 | 0.02 | 0.55 | — | 0.55 | 0.50 | — | 0.50 | — | 2,201 | 2,201 | 0.09 | 0.02 | — | 2,209 |
| Dust From Material Movement | — | — | — | — | — | — | 7.1 | 7.1 | — | 3.4 | 3.4 | — | — | — | — | — | — | — |
| Onsite truck | 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 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 1.6 | 1.3 | 12 | 12 | 0.02 | 0.55 | — | 0.55 | 0.50 | — | 0.50 | — | 2,201 | 2,201 | 0.09 | 0.02 | — | 2,209 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Dust From Material Movement | — | — | — | — | — | — | 7.1 | 7.1 | — | 3.4 | 3.4 | — | — | — | — | — | — | — |
| Onsite truck | 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 | 0.00 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.07 | 0.05 | 0.49 | 0.51 | < 0.005 | 0.02 | — | 0.02 | 0.02 | — | 0.02 | — | 90 | 90 | < 0.005 | < 0.005 | — | 91 |
| Dust From Material Movement | — | — | — | — | — | — | 0.29 | 0.29 | — | 0.14 | 0.14 | — | — | — | — | — | — | — |
| Onsite truck | 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 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.01 | 0.01 | 0.09 | 0.09 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 15 | 15 | < 0.005 | < 0.005 | — | 15 |
| Dust From Material Movement | — | — | — | — | — | — | 0.05 | 0.05 | — | 0.03 | 0.03 | — | — | — | — | — | — | — |
| Onsite truck | 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 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.04 | 0.04 | 0.03 | 0.58 | 0.00 | 0.00 | 0.10 | 0.10 | 0.00 | 0.02 | 0.02 | — | 107 | 107 | < 0.005 | < 0.005 | 0.36 | 109 |
| Vendor | 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 | 0.00 |
| Hauling | 0.01 | 0.01 | 0.50 | 0.11 | < 0.005 | 0.01 | 0.12 | 0.13 | 0.01 | 0.03 | 0.04 | — | 445 | 445 | < 0.005 | 0.07 | 0.92 | 467 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.04 | 0.03 | 0.04 | 0.39 | 0.00 | 0.00 | 0.10 | 0.10 | 0.00 | 0.02 | 0.02 | — | 95 | 95 | < 0.005 | < 0.005 | 0.01 | 96 |
| Vendor | 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 | 0.00 |
| Hauling | 0.01 | 0.01 | 0.53 | 0.11 | < 0.005 | 0.01 | 0.12 | 0.13 | 0.01 | 0.03 | 0.04 | — | 446 | 446 | < 0.005 | 0.07 | 0.02 | 467 |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | < 0.005 | < 0.005 | < 0.005 | 0.02 | 0.00 | 0.00 | < 0.005 | < 0.005 | 0.00 | < 0.005 | < 0.005 | — | 4.0 | 4.0 | < 0.005 | < 0.005 | 0.01 | 4.1 |
| Vendor | 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 | 0.00 |
| Hauling | < 0.005 | < 0.005 | 0.02 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | 18 | 18 | < 0.005 | < 0.005 | 0.02 | 19 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | < 0.005 | < 0.005 | < 0.005 | < 0.005 | 0.00 | 0.00 | < 0.005 | < 0.005 | 0.00 | < 0.005 | < 0.005 | — | 0.67 | 0.67 | < 0.005 | < 0.005 | < 0.005 | 0.67 |
| Vendor | 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 | 0.00 |
| Hauling | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 3.0 | 3.0 | < 0.005 | < 0.005 | < 0.005 | 3.2 |

## 3.5. Building Construction (2026) - Unmitigated

### Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.64 | 0.54 | 5.2 | 6.7 | 0.01 | 0.21 | — | 0.21 | 0.19 | — | 0.19 | — | 1,407 | 1,407 | 0.06 | 0.01 | — | 1,412 |
| Onsite truck | 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 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.15 | 0.13 | 1.2 | 1.6 | < 0.005 | 0.05 | — | 0.05 | 0.05 | — | 0.05 | — | 339 | 339 | 0.01 | < 0.005 | — | 340 |
| Onsite truck | 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 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.03 | 0.02 | 0.23 | 0.30 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 56 | 56 | < 0.005 | < 0.005 | — | 56 |
| Onsite truck | 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 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | < 0.005 | < 0.005 | < 0.005 | 0.03 | 0.00 | 0.00 | 0.01 | 0.01 | 0.00 | < 0.005 | < 0.005 | — | 6.2 | 6.2 | < 0.005 | < 0.005 | 0.02 | 6.2 |
| Vendor | < 0.005 | < 0.005 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 5.2 | 5.2 | < 0.005 | < 0.005 | 0.01 | 5.5 |
| Hauling | 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 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | < 0.005 | < 0.005 | < 0.005 | 0.01 | 0.00 | 0.00 | < 0.005 | < 0.005 | 0.00 | < 0.005 | < 0.005 | — | 1.4 | 1.4 | < 0.005 | < 0.005 | < 0.005 | 1.4 |
| Vendor | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 1.3 | 1.3 | < 0.005 | < 0.005 | < 0.005 | 1.3 |
| Hauling | 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 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | < 0.005 | < 0.005 | < 0.005 | < 0.005 | 0.00 | 0.00 | < 0.005 | < 0.005 | 0.00 | < 0.005 | < 0.005 | — | 0.22 | 0.22 | < 0.005 | < 0.005 | < 0.005 | 0.23 |
| Vendor | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | 0.21 | 0.21 | < 0.005 | < 0.005 | < 0.005 | 0.22 |
| Hauling | 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 | 0.00 |

## 3.7. Paving (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.58 | 0.49 | 4.2 | 5.3 | 0.01 | 0.17 | — | 0.17 | 0.16 | — | 0.16 | — | 820 | 820 | 0.03 | 0.01 | — | 823 |
| Paving | 0.02 | 0.02 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 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 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.04 | 0.03 | 0.25 | 0.32 | < 0.005 | 0.01 | — | 0.01 | 0.01 | — | 0.01 | — | 49 | 49 | < 0.005 | < 0.005 | — | 50 |
| Paving | < 0.005 | < 0.005 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 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 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.01 | 0.01 | 0.05 | 0.06 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 8.2 | 8.2 | < 0.005 | < 0.005 | — | 8.2 |
| Paving | < 0.005 | < 0.005 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 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 | 0.00 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.09 | 0.08 | 0.08 | 1.4 | 0.00 | 0.00 | 0.23 | 0.23 | 0.00 | 0.05 | 0.05 | — | 250 | 250 | 0.01 | 0.01 | 0.85 | 254 |
| Vendor | 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 | 0.00 |
| Hauling | 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 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | 0.01 | < 0.005 | 0.01 | 0.06 | 0.00 | 0.00 | 0.01 | 0.01 | 0.00 | < 0.005 | < 0.005 | — | 14 | 14 | < 0.005 | < 0.005 | 0.02 | 14 |
| Vendor | 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 | 0.00 |
| Hauling | 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 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | < 0.005 | < 0.005 | < 0.005 | 0.01 | 0.00 | 0.00 | < 0.005 | < 0.005 | 0.00 | < 0.005 | < 0.005 | — | 2.3 | 2.3 | < 0.005 | < 0.005 | < 0.005 | 2.3 |
| Vendor | 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 | 0.00 |
| Hauling | 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 | 0.00 |

## 3.9. Architectural Coating (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Location | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Onsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.15 | 0.12 | 0.86 | 1.1 | < 0.005 | 0.02 | — | 0.02 | 0.02 | — | 0.02 | — | 134 | 134 | 0.01 | < 0.005 | — | 134 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Architectural | 0.31 | 0.31 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 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 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | 0.01 | 0.01 | 0.05 | 0.07 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 8.0 | 8.0 | < 0.005 | < 0.005 | — | 8.1 |
| Architectural Coatings | 0.02 | 0.02 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 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 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Off-Road Equipment | < 0.005 | < 0.005 | 0.01 | 0.01 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 1.3 | 1.3 | < 0.005 | < 0.005 | — | 1.3 |
| Architectural Coatings | < 0.005 | < 0.005 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Onsite truck | 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 | 0.00 |
| Offsite | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | < 0.005 | < 0.005 | < 0.005 | 0.01 | 0.00 | 0.00 | < 0.005 | < 0.005 | 0.00 | < 0.005 | < 0.005 | — | 1.2 | 1.2 | < 0.005 | < 0.005 | < 0.005 | 1.2 |
| Vendor | 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 | 0.00 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Hauling | 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 | 0.00 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Average Daily | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | < 0.005 | < 0.005 | < 0.005 | < 0.005 | 0.00 | 0.00 | < 0.005 | < 0.005 | 0.00 | < 0.005 | < 0.005 | — | 0.07 | 0.07 | < 0.005 | < 0.005 | < 0.005 | 0.07 |
| Vendor | 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 | 0.00 |
| Hauling | 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 | 0.00 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Worker | < 0.005 | < 0.005 | < 0.005 | < 0.005 | 0.00 | 0.00 | < 0.005 | < 0.005 | 0.00 | < 0.005 | < 0.005 | — | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | 0.01 |
| Vendor | 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 | 0.00 |
| Hauling | 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 | 0.00 |

# 4. Operations Emissions Details

## 4.1. Mobile Emissions by Land Use

### 4.1.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Land Use | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Fast Food Restaurant with Drive Thru | 2.2 | 2.0 | 2.3 | 22 | 0.05 | 0.04 | 4.5 | 4.5 | 0.04 | 1.1 | 1.2 | — | 5,346 | 5,346 | 0.16 | 0.21 | 18 | 5,432 |
| Parking Lot | 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 | 0.00 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Total | 2.2 | 2.0 | 2.3 | 22 | 0.05 | 0.04 | 4.5 | 4.5 | 0.04 | 1.1 | 1.2 | — | 5,346 | 5,346 | 0.16 | 0.21 | 18 | 5,432 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Fast Food Restaurant with Drive Thru | 2.0 | 1.8 | 2.5 | 16 | 0.05 | 0.04 | 4.5 | 4.5 | 0.04 | 1.1 | 1.2 | — | 4,872 | 4,872 | 0.16 | 0.22 | 0.48 | 4,943 |
| Parking Lot | 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 | 0.00 |
| Total | 2.0 | 1.8 | 2.5 | 16 | 0.05 | 0.04 | 4.5 | 4.5 | 0.04 | 1.1 | 1.2 | — | 4,872 | 4,872 | 0.16 | 0.22 | 0.48 | 4,943 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Fast Food Restaurant with Drive Thru | 0.29 | 0.27 | 0.26 | 1.9 | < 0.005 | < 0.005 | 0.40 | 0.40 | < 0.005 | 0.10 | 0.11 | — | 415 | 415 | 0.02 | 0.02 | 0.66 | 423 |
| Parking Lot | 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 | 0.00 |
| Total | 0.29 | 0.27 | 0.26 | 1.9 | < 0.005 | < 0.005 | 0.40 | 0.40 | < 0.005 | 0.10 | 0.11 | — | 415 | 415 | 0.02 | 0.02 | 0.66 | 423 |

## 4.2. Energy

### 4.2.1. Electricity Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Land Use | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Fast Food Restaurant with Drive Thru | — | — | — | — | — | — | — | — | — | — | — | — | 52 | 52 | < 0.005 | < 0.005 | — | 53 |
| Parking Lot | — | — | — | — | — | — | — | — | — | — | — | — | 9.0 | 9.0 | < 0.005 | < 0.005 | — | 9.0 |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | 61 | 61 | < 0.005 | < 0.005 | — | 62 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Fast Food Restaurant with Drive Thru | — | — | — | — | — | — | — | — | — | — | — | — | 52 | 52 | < 0.005 | < 0.005 | — | 53 |
| Parking Lot | — | — | — | — | — | — | — | — | — | — | — | — | 9.0 | 9.0 | < 0.005 | < 0.005 | — | 9.0 |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | 61 | 61 | < 0.005 | < 0.005 | — | 62 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Fast Food Restaurant with Drive Thru | — | — | — | — | — | — | — | — | — | — | — | — | 8.7 | 8.7 | < 0.005 | < 0.005 | — | 8.7 |
| Parking Lot | — | — | — | — | — | — | — | — | — | — | — | — | 1.5 | 1.5 | < 0.005 | < 0.005 | — | 1.5 |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | 10 | 10 | < 0.005 | < 0.005 | — | 10 |

## 4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Land Use | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Fast Food Restaurant with Drive Thru | < 0.005 | < 0.005 | 0.03 | 0.03 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 38 | 38 | < 0.005 | < 0.005 | — | 38 |
| Parking Lot | 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 |
| Total | < 0.005 | < 0.005 | 0.03 | 0.03 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 38 | 38 | < 0.005 | < 0.005 | — | 38 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Fast Food Restaurant with Drive Thru | < 0.005 | < 0.005 | 0.03 | 0.03 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 38 | 38 | < 0.005 | < 0.005 | — | 38 |
| Parking Lot | 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 |
| Total | < 0.005 | < 0.005 | 0.03 | 0.03 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 38 | 38 | < 0.005 | < 0.005 | — | 38 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Fast Food Restaurant with Drive Thru | < 0.005 | < 0.005 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 6.2 | 6.2 | < 0.005 | < 0.005 | — | 6.2 |
| Parking Lot | 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 |
| Total | < 0.005 | < 0.005 | 0.01 | < 0.005 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 6.2 | 6.2 | < 0.005 | < 0.005 | — | 6.2 |

## 4.3. Area Emissions by Source

## 4.3.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Source | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Consumer Products | 0.02 | 0.02 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Architectural Coatings | < 0.005 | < 0.005 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Landscape Equipment | 0.01 | 0.01 | < 0.005 | 0.04 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 0.18 | 0.18 | < 0.005 | < 0.005 | — | 0.18 |
| Total | 0.03 | 0.03 | < 0.005 | 0.04 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 0.18 | 0.18 | < 0.005 | < 0.005 | — | 0.18 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Consumer Products | 0.02 | 0.02 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Architectural Coatings | < 0.005 | < 0.005 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | 0.02 | 0.02 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Consumer Products | < 0.005 | < 0.005 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Architect Coatings | < 0.005 | < 0.005 | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Landscape Equipment | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 0.01 | 0.01 | < 0.005 | < 0.005 | — | 0.02 |
| Total | 0.01 | 0.01 | < 0.005 | < 0.005 | < 0.005 | < 0.005 | — | < 0.005 | < 0.005 | — | < 0.005 | — | 0.01 | 0.01 | < 0.005 | < 0.005 | — | 0.02 |

## 4.4. Water Emissions by Land Use

### 4.4.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Land Use | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Fast Food Restaurant with Drive Thru | — | — | — | — | — | — | — | — | — | — | — | 0.60 | 4.0 | 4.6 | 0.06 | < 0.005 | — | 6.6 |
| Parking Lot | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 0.60 | 4.0 | 4.6 | 0.06 | < 0.005 | — | 6.6 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Fast Food Restaurant with Drive Thru | — | — | — | — | — | — | — | — | — | — | — | 0.60 | 4.0 | 4.6 | 0.06 | < 0.005 | — | 6.6 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Parking Lot | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 0.60 | 4.0 | 4.6 | 0.06 | < 0.005 | — | 6.6 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Fast Food Restaurant with Drive Thru | — | — | — | — | — | — | — | — | — | — | — | 0.10 | 0.67 | 0.77 | 0.01 | < 0.005 | — | 1.1 |
| Parking Lot | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 0.10 | 0.67 | 0.77 | 0.01 | < 0.005 | — | 1.1 |

## 4.5. Waste Emissions by Land Use

### 4.5.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Land Use | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Fast Food Restaurant with Drive Thru | — | — | — | — | — | — | — | — | — | — | — | 6.4 | 0.00 | 6.4 | 0.64 | 0.00 | — | 22 |
| Parking Lot | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 6.4 | 0.00 | 6.4 | 0.64 | 0.00 | — | 22 |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Fast Food Restaurant with Drive Thru | — | — | — | — | — | — | — | — | — | — | — | 6.4 | 0.00 | 6.4 | 0.64 | 0.00 | — | 22 |
| Parking Lot | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 6.4 | 0.00 | 6.4 | 0.64 | 0.00 | — | 22 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Fast Food Restaurant with Drive Thru | — | — | — | — | — | — | — | — | — | — | — | 1.1 | 0.00 | 1.1 | 0.11 | 0.00 | — | 3.7 |
| Parking Lot | — | — | — | — | — | — | — | — | — | — | — | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | — | 0.00 |
| Total | — | — | — | — | — | — | — | — | — | — | — | 1.1 | 0.00 | 1.1 | 0.11 | 0.00 | — | 3.7 |

## 4.6. Refrigerant Emissions by Land Use

### 4.6.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Land Use | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Fast Food Restaurant with Drive Thru | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 1.6 | 1.6 |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 1.6 | 1.6 |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Fast Food Restaurant with Drive Thru | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 1.6 | 1.6 |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 1.6 | 1.6 |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Fast Food Restaurant with Drive Thru | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.27 | 0.27 |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | 0.27 | 0.27 |

## 4.7. Offroad Emissions By Equipment Type

### 4.7.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Equipment Type | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

## 4.8. Stationary Emissions By Equipment Type

### 4.8.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Equipment Type | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

## 4.9. User Defined Emissions By Equipment Type

### 4.9.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Equipment Type | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

## 4.10. Soil Carbon Accumulation By Vegetation Type

### 4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Vegetation | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

### 4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Land Use | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Total | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

## 4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

| Species | TOG | ROG | NOx | CO | SO2 | PM10E | PM10D | PM10T | PM2.5E | PM2.5D | PM2.5T | BCO2 | NBCO2 | CO2T | CH4 | N2O | R | CO2e |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Daily, Summer (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Avoided | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Subtotal | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Sequestered | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Subtotal | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Removed | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Subtotal | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Daily, Winter (Max) | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Avoided | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Subtotal | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Sequestered | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Subtotal | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Removed | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

| | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Subtotal | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Annual | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Avoided | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Subtotal | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Sequestered | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Subtotal | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Removed | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| Subtotal | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |
| — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — | — |

# 5. Activity Data

## 5.1. Construction Schedule

| Phase Name | Phase Type | Start Date | End Date | Days Per Week | Work Days per Phase | Phase Description |
|---|---|---|---|---|---|---|
| Debris Removal | Site Preparation | 3/2/2026 | 3/13/2026 | 5.0 | 10.0 | — |
| Grading | Grading | 3/16/2026 | 4/3/2026 | 5.0 | 15 | — |
| Building Construction | Building Construction | 4/6/2026 | 8/5/2026 | 5.0 | 88 | — |
| Paving | Paving | 7/7/2026 | 8/5/2026 | 5.0 | 22 | — |
| Architectural Coating | Architectural Coating | 7/7/2026 | 8/5/2026 | 5.0 | 22 | — |

## 5.2. Off-Road Equipment

### 5.2.1. Unmitigated

| Phase Name | Equipment Type | Fuel Type | Engine Tier | Number per Day | Hours Per Day | Horsepower | Load Factor |
|---|---|---|---|---|---|---|---|
| Debris Removal | Rubber Tired Dozers | Diesel | Average | 1.00 | 7.0 | 367 | 0.40 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Debris Removal | Tractors/Loaders/Back | Diesel | Average | 2.0 | 8.0 | 84 | 0.37 |
| Debris Removal | Concrete/Industrial Saws | Diesel | Average | 1.00 | 6.0 | 33 | 0.73 |
| Grading | Graders | Diesel | Average | 1.00 | 8.0 | 148 | 0.41 |
| Grading | Tractors/Loaders/Back hoes | Diesel | Average | 1.00 | 7.0 | 84 | 0.37 |
| Grading | Rubber Tired Dozers | Diesel | Average | 1.00 | 8.0 | 367 | 0.40 |
| Building Construction | Cranes | Diesel | Average | 1.00 | 6.0 | 367 | 0.29 |
| Building Construction | Forklifts | Diesel | Average | 2.0 | 6.0 | 82 | 0.20 |
| Building Construction | Tractors/Loaders/Back hoes | Diesel | Average | 2.0 | 6.0 | 84 | 0.37 |
| Paving | Tractors/Loaders/Back hoes | Diesel | Average | 1.00 | 8.0 | 84 | 0.37 |
| Paving | Pavers | Diesel | Average | 1.00 | 6.0 | 81 | 0.42 |
| Paving | Rollers | Diesel | Average | 1.00 | 7.0 | 36 | 0.38 |
| Paving | Cement and Mortar Mixers | Diesel | Average | 4.0 | 6.0 | 10.0 | 0.56 |
| Architectural Coating | Air Compressors | Diesel | Average | 1.00 | 6.0 | 37 | 0.48 |

## 5.3. Construction Vehicles

### 5.3.1. Unmitigated

| Phase Name | Trip Type | One-Way Trips per Day | Miles per Trip | Vehicle Mix |
|---|---|---|---|---|
| Debris Removal | Worker | 10.0 | 19 | LDA,LDT1,LDT2 |
| Debris Removal | Vendor | — | 10 | HHDT,MHDT |
| Debris Removal | Hauling | 0.00 | 20 | HHDT |
| Debris Removal | Onsite truck | — | — | HHDT |
| Grading | Worker | 7.5 | 19 | LDA,LDT1,LDT2 |
| Grading | Vendor | — | 10 | HHDT,MHDT |
| Grading | Hauling | 6.7 | 20 | HHDT |

| | | | | |
|---|---|---|---|---|
| Grading | Onsite truck | — | — | HHDT |
| Building Construction | Worker | 0.43 | 19 | LDA,LDT1,LDT2 |
| Building Construction | Vendor | 0.17 | 10 | HHDT,MHDT |
| Building Construction | Hauling | 0.00 | 20 | HHDT |
| Building Construction | Onsite truck | — | — | HHDT |
| Paving | Worker | 18 | 19 | LDA,LDT1,LDT2 |
| Paving | Vendor | — | 10 | HHDT,MHDT |
| Paving | Hauling | 0.00 | 20 | HHDT |
| Paving | Onsite truck | — | — | HHDT |
| Architectural Coating | Worker | 0.09 | 19 | LDA,LDT1,LDT2 |
| Architectural Coating | Vendor | — | 10 | HHDT,MHDT |
| Architectural Coating | Hauling | 0.00 | 20 | HHDT |
| Architectural Coating | Onsite truck | — | — | HHDT |

## 5.4. Vehicles

### 5.4.1. Construction Vehicle Control Strategies

| Control Strategies Applied | PM10 Reduction | PM2.5 Reduction |
|---|---|---|
| Water unpaved roads twice daily | 55% | 55% |

## 5.5. Architectural Coatings

| Phase Name | Residential Interior Area Coated (sq ft) | Residential Exterior Area Coated (sq ft) | Non-Residential Interior Area Coated (sq ft) | Non-Residential Exterior Area Coated (sq ft) | Parking Area Coated (sq ft) |
|---|---|---|---|---|---|
| Architectural Coating | 0.00 | 0.00 | 1,538 | 513 | 423 |

## 5.6. Dust Mitigation

### 5.6.1. Construction Earthmoving Activities

| Phase Name | Material Imported (cy) | Material Exported (cy) | Acres Graded (acres) | Material Demolished (sq. ft.) | Acres Paved (acres) |
|---|---|---|---|---|---|
| Debris Removal | — | — | 4.4 | 0.00 | 0.00 |
| Grading | — | 800 | 15 | 0.00 | 0.00 |
| Paving | 0.00 | 0.00 | 0.00 | 0.00 | 0.16 |

### 5.6.2. Construction Earthmoving Control Strategies

Non-applicable. No control strategies activated by user.

## 5.7. Construction Paving

| Phase Name | Land Use | Area Paved (acres) | % Asphalt |
|---|---|---|---|
| Paving | Fast Food Restaurant with Drive Thru | 0.00 | 0% |
| Paving | Parking Lot | 0.16 | 100% |

## 5.8. Construction Electricity Consumption and Emissions Factors

### kWh per Year and Emission Factor (lb/MWh)

| Year | kWh per Year | CO2 | CH4 | N2O |
|---|---|---|---|---|
| 2026 | 0.00 | 532 | 0.03 | < 0.005 |

## 5.9. Operational Mobile Sources

### 5.9.1. Unmitigated

| Land Use Type | Trips/Weekday | Trips/Saturday | Trips/Sunday | Trips/Year | VMT/Weekday | VMT/Saturday | VMT/Sunday | VMT/Year |
|---|---|---|---|---|---|---|---|---|
| Fast Food Restaurant with Drive Thru | 358 | 358 | 358 | 130,670 | 1,865 | 6,321 | 6,321 | 1,145,407 |
| Parking Lot | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |

## 5.10. Operational Area Sources

## 5.10.1. Hearths

| Land Use | Hearth Type | Unmitigated (number) | Mitigated (number) |
|---|---|---|---|
| Fast Food Restaurant with Drive Thru | Wood Fireplaces | 0 | 0 |
| Fast Food Restaurant with Drive Thru | Gas Fireplaces | 0 | 0 |
| Fast Food Restaurant with Drive Thru | Propane Fireplaces | 0 | 0 |
| Fast Food Restaurant with Drive Thru | Electric Fireplaces | 0 | 0 |
| Fast Food Restaurant with Drive Thru | No Fireplaces | 0 | 0 |
| Fast Food Restaurant with Drive Thru | Conventional Wood Stoves | 0 | 0 |
| Fast Food Restaurant with Drive Thru | Catalytic Wood Stoves | 0 | 0 |
| Fast Food Restaurant with Drive Thru | Non-Catalytic Wood Stoves | 0 | 0 |
| Fast Food Restaurant with Drive Thru | Pellet Wood Stoves | 0 | 0 |
| Parking Lot | Wood Fireplaces | 0 | 0 |
| Parking Lot | Gas Fireplaces | 0 | 0 |
| Parking Lot | Propane Fireplaces | 0 | 0 |
| Parking Lot | Electric Fireplaces | 0 | 0 |
| Parking Lot | No Fireplaces | 0 | 0 |
| Parking Lot | Conventional Wood Stoves | 0 | 0 |
| Parking Lot | Catalytic Wood Stoves | 0 | 0 |
| Parking Lot | Non-Catalytic Wood Stoves | 0 | 0 |
| Parking Lot | Pellet Wood Stoves | 0 | 0 |

## 5.10.2. Architectural Coatings

| — | Residential Interior Area Coated (sq ft) | Residential Exterior Area Coated (sq ft) | Non-Residential Interior Area Coated (sq ft) | Non-Residential Exterior Area Coated (sq ft) | Parking Area Coated (sq ft) |
|---|---|---|---|---|---|
| undefined | 0.00 | 0.00 | 1,538 | 513 | 423 |

## 5.10.3. Landscape Equipment

| Season | Unit | Value |
|---|---|---|
| Snow Days | day/yr | 0.00 |
| Summer Days | day/yr | 180 |

## 5.11. Operational Energy Consumption

### 5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

| Land Use | Electricity (kWh/yr) | CO2 | CH4 | N2O | Natural Gas (kBTU/yr) |
|---|---|---|---|---|---|
| Fast Food Restaurant with Drive Thru | 35,943 | 532 | 0.0330 | 0.0040 | 117,128 |
| Parking Lot | 6,182 | 532 | 0.0330 | 0.0040 | 0.00 |

## 5.12. Operational Water and Wastewater Consumption

### 5.12.1. Unmitigated

| Land Use | Indoor Water (gal/year) | Outdoor Water (gal/year) |
|---|---|---|
| Fast Food Restaurant with Drive Thru | 311,122 | 229,134 |
| Parking Lot | 0.00 | 0.00 |

## 5.13. Operational Waste Generation

### 5.13.1. Unmitigated

| Land Use | Waste (ton/year) | Cogeneration (kWh/year) |
|---|---|---|
| Fast Food Restaurant with Drive Thru | 12 | 0.00 |
| Parking Lot | 0.00 | 0.00 |

## 5.14. Operational Refrigeration and Air Conditioning Equipment

### 5.14.1. Unmitigated

| Land Use | Equipment Type | Refrigerant | GWP | Quantity (kg) | Operations Leak Rate | Service Leak Rate | Times Serviced |
|---|---|---|---|---|---|---|---|
| Fast Food Restaurant with Drive Thru | Household refrigerators and/or freezers | R-134a | 1,430 | 0.00 | 0.60 | 0.00 | 1.00 |
| Fast Food Restaurant with Drive Thru | Other commercial A/C and heat pumps | R-410A | 2,088 | 1.8 | 4.0 | 4.0 | 18 |
| Fast Food Restaurant with Drive Thru | Walk-in refrigerators and freezers | R-404A | 3,922 | < 0.005 | 7.5 | 7.5 | 20 |

## 5.15. Operational Off-Road Equipment

### 5.15.1. Unmitigated

## 5.16. Stationary Sources

### 5.16.1. Emergency Generators and Fire Pumps

### 5.16.2. Process Boilers

## 5.17. User Defined

## 5.18. Vegetation

### 5.18.1. Land Use Change

#### 5.18.1.1. Unmitigated

| Vegetation Land Use Type | Vegetation Soil Type | Initial Acres | Final Acres |
|---|---|---|---|

### 5.18.1. Biomass Cover Type

#### 5.18.1.1. Unmitigated

| Biomass Cover Type | Initial Acres | Final Acres |
|---|---|---|

### 5.18.2. Sequestration

#### 5.18.2.1. Unmitigated

| Tree Type | Number | Electricity Saved (kWh/year) | Natural Gas Saved (btu/year) |
|---|---|---|---|

# 8. User Changes to Default Data

## 8.1. Justifications

| Screen | Justification |
|---|---|
| Land Use | Project Site is 1.014 acres. The Project proposes to develop a 1,025 sq ft Dutch Bros coffee shop with drive through, 18 parking spaces, and 10,350 sq ft of landscaping. |
| Construction: Construction Phases | Debris removal and grading phase anticipated to be five weeks: debris removal (two weeks), grading (three weeks). Building construction anticipated to take 4 months to complete. Paving and architectural coating conservatively assumed to take place during the final month of building construction. |
| Construction: Off-Road Equipment | Construction mix based on construction schedule |
| Operations: Vehicle Data | Trip generation based on traffic memo prepared by CR Associates, dated November 12, 2025. |