

# Appendix L VMT Screening Memo

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# ENVIRONMENT | PLANNING | DEVELOPMENT SOLUTIONS, INC.

Date: April 10, 2025  
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To: Jorge Estrada  
Placeworks  
Site: Temecula Valley Charter School  
EPD Project Number 20-010  
**Subject:** Vehicle Miles Traveled (VMT) Analysis

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This memo evaluates the potential vehicle miles traveled (VMT) for the proposed Temecula Valley Charter School located in unincorporated Riverside County. The school would be located on an 11.99-acre site at the southeast corner of Washington Street and Yates Road. The charter school is currently in operation with 546 students on a site located on Abelia Street east of Washington Street, approximately ¼ mile north of the proposed project site. The new school will have a capacity of 900 students and would replace the existing school. The project site plan is shown in Figure 1. This memo provides a VMT analysis based on the requirements of the County's Transportation Analysis Guidelines<sup>1</sup>.

## **Background**

Senate Bill (SB) 743 was signed by Governor Brown in 2013 and required the Governor's Office of Planning and Research (OPR) to amend the CEQA Guidelines to provide an alternative to LOS for evaluating Transportation impacts. SB743 specified that the new criteria should promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks and a diversity of land uses. The bill also specified that delay-based level of service could no longer be considered an indicator of a significant impact on the environment. In response, Section 15064.3 was added to the CEQA Guidelines beginning January 1, 2019. Section 15064.3 - Determining the Significance of Transportation Impacts states that Vehicle Miles Traveled (VMT) is the most appropriate measure of transportation impacts and provides lead agencies with the discretion to choose the most appropriate methodology and thresholds for evaluating VMT. Section 15064.3(c) states that the provisions of the section shall apply statewide beginning on July 1, 2020.

## **VMT Screening Analysis**

The project is located in unincorporated Riverside County. The County's Guidelines provide criteria for projects that would be considered to have a less-than significant impact on VMT and therefore could be screened from requiring further analysis. If a project meets one of the following criteria, then the VMT impact of the project is considered less-than significant and no further analysis of VMT would be required:

1. Small projects.
2. Projects located near High Quality Transit.
3. Local Serving Retail projects.
4. Projects providing a Local Essential Service.
5. Projects located in a low VMT generating area.
6. Redevelopment Projects.

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<sup>1</sup> County of Riverside, *Transportation Analysis Guidelines for Level of Service and Vehicle Miles Traveled*, December 2020.

The applicability of each criterion to the proposed project is discussed below.

Screening Criteria 1 – Small Project Screening: According to the County’s guidelines, small projects are defined as projects that would generate less than 3,000 Metric Tons of Carbon Dioxide Equivalent (MTCO<sub>2e</sub>) per year. The guidelines provide examples of various types of projects that would meet the small project threshold. An Air Quality and Greenhouse Gas Appendix prepared for the Project, calculating that the Project would generate 1,181 MTCO<sub>2e</sub> (inclusive of amortized construction emissions), below the 3,000 MTCO<sub>2e</sub>. per year threshold. Therefore, it is presumed that the project would meet Screening Criteria 1.

Screening Criteria 2 – Projects located near High Quality Transit: Projects that are located within ½ mile of an existing major transit stop where service interval frequency is 15 minutes or less during the morning and afternoon peak commute periods are presumed to have a less than significant impact on VMT. The project is not located within ½ mile of an existing major transit stop, therefore Screening Criteria 2 would not apply to the project.

Screening Criteria 3 – Local Serving Retail: The City’s guidelines include a screening threshold for local-serving retail projects where no single store exceeds 50,000 SF. The project is not a retail project; therefore, Screening Criteria 3 would not apply.

Screening Criteria 4 – Local Essential Service: This criterion would apply to land uses that are considered a local essential service such as local serving day care, police or fire, government offices such as post office and library, and local parks. Typically, elementary schools would be considered a local essential service, as they generally serve a neighborhood area and few students would reside outside of the local attendance boundary. Charter elementary schools, however, do not have a local attendance boundary and are open to any child living in the State of California. The enrollment at most charter elementary schools consists of a majority of local students. However, because some students would live outside of the local area, Screening Criteria 4 may not be an appropriate screening threshold to apply to a charter elementary school.

Screening Criteria 5 - Low VMT Area Screening: The County’s map-based screening threshold applies only to residential and office projects. Therefore, Screening Criteria 5 would not apply.

Screening Criteria 6 – Redevelopment Projects: This threshold applies to projects that replace an existing VMT-generating land use and does not result in a net overall increase in VMT. The project is not replacing an existing use, therefore Screening Criteria 5 would not apply.

In summary, because the project would generate less than 3,000 MTCO<sub>2e</sub> per year, Screening Criteria 1 would be met and the project’s impact on VMT would be considered less than significant. Further analysis of VMT would not be required. If you have any questions, please feel free to contact me at techservices@epdsolutions.com or at (949) 794-1180.

Figure 1: Project Site Plan



Source: Kirk Moeller Architects, Inc 2025.

0 120  
 Scale (Feet)



# **Air Quality and Greenhouse Gas Appendix**

# Air Quality and Greenhouse Gas Background and Modeling Data

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## AIR QUALITY

### Air Quality Regulations

The Project has the potential to release gaseous emissions of criteria pollutants and dust into the ambient air; therefore, it falls under the ambient air quality standards promulgated at the local, state, and federal levels. The Project Site is in the SoCAB and is subject to the rules and regulations imposed by the South Coast Air Quality Management District (South Coast AQMD). However, South Coast AQMD reports to California Air Resources board (CARB), and all criteria emissions are also governed by the California and national Ambient Air Quality Standards (AAQS). Federal, state, regional, and local laws, regulations, plans, or guidelines that are potentially applicable to the Project are summarized below.

### AMBIENT AIR QUALITY STANDARDS

The Clean Air Act (CAA) was passed in 1963 by the US Congress and has been amended several times. The 1970 Clean Air Act amendments strengthened previous legislation and laid the foundation for the regulatory scheme of the 1970s and 1980s. In 1977, Congress again added several provisions, including nonattainment requirements for areas not meeting National AAQS and the Prevention of Significant Deterioration program. The 1990 amendments represent the latest in a series of federal efforts to regulate the protection of air quality in the United States. The CAA allows states to adopt more stringent standards or to include other pollution species. The California Clean Air Act (CCAA), signed into law in 1988, requires all areas of the state to achieve and maintain the California AAQS by the earliest practical date. The California AAQS tend to be more restrictive than the National AAQS, based on even greater health and welfare concerns.

These National AAQS and California AAQS are the levels of air quality considered to provide a margin of safety in the protection of the public health and welfare. They are designed to protect “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.

Both California and the federal government have established health-based AAQS for seven air pollutants. As shown in Table 1, *Ambient Air Quality Standards for Criteria Pollutants*, these pollutants include ozone (O<sub>3</sub>), nitrogen dioxide (NO<sub>2</sub>), carbon monoxide (CO), sulfur dioxide (SO<sub>2</sub>), coarse inhalable particulate matter (PM<sub>10</sub>), fine inhalable particulate matter (PM<sub>2.5</sub>), and lead (Pb). In addition, the state has set standards for

sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles. These standards are designed to protect the health and welfare of the populace with a reasonable margin of safety.

**Table 1 Ambient Air Quality Standards for Criteria Pollutants**

Pollutant	Averaging Time	California Standard <sup>1</sup>	Federal Primary Standard <sup>2</sup>	Major Pollutant Sources
Ozone (O <sub>3</sub> ) <sup>3</sup>	1 hour	0.09 ppm	*	Motor vehicles, paints, coatings, and solvents.
	8 hours	0.070 ppm	0.070 ppm	
Carbon Monoxide (CO)	1 hour	20 ppm	35 ppm	Internal combustion engines, primarily gasoline-powered motor vehicles.
	8 hours	9.0 ppm	9 ppm	
Nitrogen Dioxide (NO <sub>2</sub> )	Annual Arithmetic Mean	0.030 ppm	0.053 ppm	Motor vehicles, petroleum-refining operations, industrial sources, aircraft, ships, and railroads.
	1 hour	0.18 ppm	0.100 ppm	
Sulfur Dioxide (SO <sub>2</sub> )	Annual Arithmetic Mean	*	0.030 ppm	Fuel combustion, chemical plants, sulfur recovery plants, and metal processing.
	1 hour	0.25 ppm	0.075 ppm	
	24 hours	0.04 ppm	0.14 ppm	
Respirable Coarse Particulate Matter (PM <sub>10</sub> )	Annual Arithmetic Mean	20 µg/m <sup>3</sup>	*	Dust and fume-producing construction, industrial, and agricultural operations, combustion, atmospheric photochemical reactions, and natural activities (e.g., wind-raised dust and ocean sprays).
	24 hours	50 µg/m <sup>3</sup>	150 µg/m <sup>3</sup>	
Respirable Fine Particulate Matter (PM <sub>2.5</sub> ) <sup>4</sup>	Annual Arithmetic Mean	12 µg/m <sup>3</sup>	12 µg/m <sup>3</sup>	Dust and fume-producing construction, industrial, and agricultural operations, combustion, atmospheric photochemical reactions, and natural activities (e.g., wind-raised dust and ocean sprays).
	24 hours	*	35 µg/m <sup>3</sup>	
Lead (Pb)	30-Day Average	1.5 µg/m <sup>3</sup>	*	Present source: lead smelters, battery manufacturing & recycling facilities. Past source: combustion of leaded gasoline.
	Calendar Quarter	*	1.5 µg/m <sup>3</sup>	
	Rolling 3-Month Average	*	0.15 µg/m <sup>3</sup>	
Sulfates (SO <sub>4</sub> ) <sup>5</sup>	24 hours	25 µg/m <sup>3</sup>	*	Industrial processes.
Visibility Reducing Particles	8 hours	ExCo =0.23/km visibility of 10≥ miles	No Federal Standard	Visibility-reducing particles consist of suspended particulate matter, which is a complex mixture of tiny particles that consists of dry solid fragments, solid cores with liquid coatings, and small droplets of liquid. These particles vary greatly in shape, size and chemical composition, and can be made up of many different materials such as metals, soot, soil, dust, and salt.

**Table 1 Ambient Air Quality Standards for Criteria Pollutants**

Pollutant	Averaging Time	California Standard <sup>1</sup>	Federal Primary Standard <sup>2</sup>	Major Pollutant Sources
Hydrogen Sulfide	1 hour	0.03 ppm	No Federal Standard	Hydrogen sulfide (H <sub>2</sub> S) is a colorless gas with the odor of rotten eggs. It is formed during bacterial decomposition of sulfur-containing organic substances. Also, it can be present in sewer gas and some natural gas and can be emitted as the result of geothermal energy exploitation.
Vinyl Chloride	24 hours	0.01 ppm	No Federal Standard	Vinyl chloride (chloroethene), a chlorinated hydrocarbon, is a colorless gas with a mild, sweet odor. Most vinyl chloride is used to make polyvinyl chloride (PVC) plastic and vinyl products. Vinyl chloride has been detected near landfills, sewage plants, and hazardous waste sites, due to microbial breakdown of chlorinated solvents.

Source: CARB 2016.

Notes: ppm: parts per million; µg/m<sup>3</sup>: micrograms per cubic meter

\* Standard has not been established for this pollutant/duration by this entity.

- California standards for O<sub>3</sub>, CO (except 8-hour Lake Tahoe), SO<sub>2</sub> (1 and 24 hour), NO<sub>2</sub>, and particulate matter (PM<sub>10</sub>, PM<sub>2.5</sub>, and visibility reducing particles), are values that are not to be exceeded. All others are not to be equalled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.
- National standards (other than O<sub>3</sub>, PM, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The O<sub>3</sub> standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM<sub>10</sub>, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m<sup>3</sup> is equal to or less than one. For PM<sub>2.5</sub>, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard.
- On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.
- On December 14, 2012, the national annual PM<sub>2.5</sub> primary standard was lowered from 15 µg/m<sup>3</sup> to 12.0 µg/m<sup>3</sup>. The existing national 24-hour PM<sub>2.5</sub> standards (primary and secondary) were retained at 35 µg/m<sup>3</sup>, as was the annual secondary standard of 15 µg/m<sup>3</sup>. The existing 24-hour PM<sub>10</sub> standards (primary and secondary) of 150 µg/m<sup>3</sup> also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.
- On June 2, 2010, a new 1-hour SO<sub>2</sub> standard was established and the existing 24-hour and annual primary standards were revoked. The 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.

California has also adopted a host of other regulations that reduce criteria pollutant emissions, including:

- AB 1493: Pavley Fuel Efficiency Standards
- Title 20 California Code of Regulations (CCR): Appliance Energy Efficiency Standards
- Title 24, Part 6, CCR: Building and Energy Efficiency Standards
- Title 24, Part 11, CCR: Green Building Standards Code

## CRITERIA AIR POLLUTANTS

The air pollutants emitted into the ambient air by stationary and mobile sources are regulated by federal and state law. Air pollutants are categorized as primary or secondary pollutants. Primary air pollutants are those that are emitted directly from sources and include CO, VOC, NO<sub>2</sub>, SO<sub>x</sub>, PM<sub>10</sub>, PM<sub>2.5</sub>, and Pb. Of these, CO, SO<sub>2</sub>, NO<sub>2</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub> are “criteria air pollutants,” which means that ambient air quality standards (AAQS) have been established for them. VOC and oxides of nitrogen (NO<sub>x</sub>) are air pollutant precursors that form secondary criteria pollutants through chemical and photochemical reactions in the atmosphere. Ozone (O<sub>3</sub>) and NO<sub>2</sub> are the principal secondary pollutants. A description of each of the primary and secondary criteria air pollutants and their known health effects is presented below.

**Carbon Monoxide (CO)** is a colorless, odorless, toxic gas produced by incomplete combustion of carbon substances, such as gasoline or diesel fuel. CO is a primary criteria air pollutant. CO concentrations tend to be the highest during winter mornings with little to no wind, when surface-based inversions trap the pollutant at ground levels. Because CO is emitted directly from internal combustion, engines and motor vehicles operating at slow speeds are the primary source of CO in the SoCAB. The highest ambient CO concentrations are generally found near traffic-congested corridors and intersections. The primary adverse health effect associated with CO is interference with normal oxygen transfer to the blood, which may result in tissue oxygen deprivation (South Coast AQMD 2005, US EPA 2022). The SoCAB is designated as being in attainment under the California AAQS and attainment (serious maintenance) under the National AAQS (CARB 2025a).

**Volatile Organic Compounds (VOC)** are compounds composed primarily of atoms of hydrogen and carbon. Internal combustion associated with motor vehicle usage is the major source of hydrocarbons. Other sources of VOCs include evaporative emissions associated with the use of paints and solvents, the application of asphalt paving, and the use of household consumer products such as aerosols. There are no ambient air quality standards established for VOCs. However, because they contribute to the formation of ozone (O<sub>3</sub>), South Coast AQMD has established a significance threshold for this pollutant (South Coast AQMD 2005).

**Nitrogen Oxides (NO<sub>x</sub>)** are a byproduct of fuel combustion and contribute to the formation of O<sub>3</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub>. The two major forms of NO<sub>x</sub> are nitric oxide (NO) and nitrogen dioxide (NO<sub>2</sub>). The principal form of NO<sub>2</sub> produced by combustion is NO, but NO reacts with oxygen to form NO<sub>2</sub>, creating the mixture of NO and NO<sub>2</sub> commonly called NO<sub>x</sub>. NO<sub>2</sub> acts as an acute irritant and, in equal concentrations, is more injurious than NO. At atmospheric concentrations, however, NO<sub>2</sub> is only potentially irritating. There is some indication of a relationship between NO<sub>2</sub> and chronic pulmonary fibrosis. Some increase in bronchitis in children (two and three years old) has also been observed at concentrations below 0.3 part per million (ppm). NO<sub>2</sub> absorbs blue light; the result is a brownish-red cast to the atmosphere and reduced visibility. NO is a colorless, odorless gas formed from atmospheric nitrogen and oxygen when combustion takes place under high temperature and/or high pressure (South Coast AQMD 2005, US EPA 2022). On February 21, 2019, CARB's Board approved the separation of the area that runs along the State Route 60 corridor through portions of Riverside, San Bernardino, and Los Angeles counties from the remainder of the SoCAB for state nonattainment designation purposes. The Board recommended this corridor and has designated the remainder of the SoCAB in attainment (maintenance) under the National AAQS and attainment under the California AAQS (CARB 2025a).<sup>1</sup>

**Sulfur Dioxide (SO<sub>2</sub>)** is a colorless, pungent, irritating gas formed by the combustion of sulfurous fossil fuels. It enters the atmosphere as a result of burning high-sulfur-content fuel oils and coal and chemical processes at plants and refineries. Gasoline and natural gas have very low sulfur content and do not release significant quantities of SO<sub>2</sub>. When sulfur dioxide forms sulfates (SO<sub>4</sub>) in the atmosphere, together these pollutants are referred to as sulfur oxides (SO<sub>x</sub>). Thus, SO<sub>2</sub> is both a primary and secondary criteria air

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<sup>1</sup> CARB is proposing to redesignate SR-60 Near-Road Portion of San Bernardino, Riverside, and Los Angeles Counties in the SoCAB as attainment for NO<sub>2</sub> at the February 24, 2022 Board Hearing (CARB 2022a).

pollutant. At sufficiently high concentrations, SO<sub>2</sub> may irritate the upper respiratory tract. Current scientific evidence links short-term exposures to SO<sub>2</sub>, ranging from 5 minutes to 24 hours, with an array of adverse respiratory effects, including bronchoconstriction and increased asthma symptoms. These effects are particularly adverse for asthmatics at elevated ventilation rates (e.g., while exercising or playing) at lower concentrations and when combined with particulates, SO<sub>2</sub> may do greater harm by injuring lung tissue. Studies also show a connection between short-term exposure and increased visits to emergency facilities and hospital admissions for respiratory illnesses, particularly in at-risk populations such as children, the elderly, and asthmatics (South Coast AQMD 2005; US EPA 2022). The SoCAB is designated as attainment under the California and National AAQS (CARB 2025a).

**Suspended Particulate Matter (PM<sub>10</sub> and PM<sub>2.5</sub>)** consists of finely divided solids or liquids such as soot, dust, aerosols, fumes, and mists. Two forms of fine particulates are now recognized and regulated. Inhalable coarse particles, or PM<sub>10</sub>, include the particulate matter with an aerodynamic diameter of 10 microns (i.e., 10 millionths of a meter or 0.0004 inch) or less. Inhalable fine particles, or PM<sub>2.5</sub>, have an aerodynamic diameter of 2.5 microns (i.e., 2.5 millionths of a meter or 0.0001 inch) or less. Particulate discharge into the atmosphere results primarily from industrial, agricultural, construction, and transportation activities. However, wind action on arid landscapes also contributes substantially to local particulate loading (i.e., fugitive dust). Both PM<sub>10</sub> and PM<sub>2.5</sub> may adversely affect the human respiratory system, especially in people who are naturally sensitive or susceptible to breathing problems (South Coast AQMD 2005).

The US Environmental Protection Agency's (EPA) scientific review concluded that PM<sub>2.5</sub>, which penetrates deeply into the lungs, is more likely than PM<sub>10</sub> to contribute to health effects and at concentrations that extend well below those allowed by the current PM<sub>10</sub> standards. These health effects include premature death and increased hospital admissions and emergency room visits (primarily the elderly and individuals with cardiopulmonary disease); increased respiratory symptoms and disease (children and individuals with cardiopulmonary disease such as asthma); decreased lung functions (particularly in children and individuals with asthma); and alterations in lung tissue and structure and in respiratory tract defense mechanisms (South Coast AQMD 2005). There has been emerging evidence that even smaller particulates with an aerodynamic diameter of <0.1 microns or less (i.e., ≤0.1 millionths of a meter or <0.000004 inch), known as ultrafine particulates (UFPs), have human health implications, because UFPs toxic components may initiate or facilitate biological processes that may lead to adverse effects to the heart, lungs, and other organs (South Coast AQMD 2013). However, the EPA or CARB have yet to adopt AAQS to regulate these particulates. Diesel particulate matter (DPM) is classified by the CARB as a carcinogen (CARB 1998). Particulate matter can also cause environmental effects such as visibility impairment,<sup>2</sup> environmental damage,<sup>3</sup> and damage<sup>4</sup> (South

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<sup>2</sup> PM<sub>2.5</sub> is the main cause of reduced visibility (haze) in parts of the United States.

<sup>3</sup> Particulate matter can be carried over long distances by wind and then settle on ground or water, making lakes and streams acidic; changing the nutrient balance in coastal waters and large river basins; depleting the nutrients in soil; damaging sensitive forests and farm crops; and affecting the diversity of ecosystems.

<sup>4</sup> Particulate matter can stain and damage stone and other materials, including culturally important objects such as statues and monuments.

Coast AQMD 2005; US EPA 2022). The SoCAB is a nonattainment area for PM<sub>2.5</sub> under California and National AAQS and a nonattainment area for PM<sub>10</sub> under the California AAQS (CARB 2025a).<sup>5</sup>

**Ozone (O<sub>3</sub>)** is commonly referred to as “smog” and is a gas that is formed when VOCs and NO<sub>x</sub>, both by-products of internal combustion engine exhaust, undergo photochemical reactions in the presence of sunlight. O<sub>3</sub> is a secondary criteria air pollutant. O<sub>3</sub> concentrations are generally highest during the summer months when direct sunlight, light winds, and warm temperatures create favorable conditions for the formation of this pollutant. O<sub>3</sub> poses a health threat to those who already suffer from respiratory diseases as well as to healthy people. Breathing O<sub>3</sub> can trigger a variety of health problems, including chest pain, coughing, throat irritation, and congestion. It can worsen bronchitis, emphysema, and asthma. Ground-level O<sub>3</sub> also can reduce lung function and inflame the linings of the lungs. Repeated exposure may permanently scar lung tissue. O<sub>3</sub> also affects sensitive vegetation and ecosystems, including forests, parks, wildlife refuges, and wilderness areas. In particular, O<sub>3</sub> harms sensitive vegetation during the growing season (South Coast AQMD 2005; US EPA 2022). The SoCAB is designated extreme nonattainment under the California AAQS (1-hour and 8-hour) and National AAQS (8-hour) (CARB 2025a).

**Lead (Pb)** is a metal found naturally in the environment as well as in manufactured products. Once taken into the body, lead distributes throughout the body in the blood and accumulates in the bones. Depending on the level of exposure, lead can adversely affect the nervous system, kidney function, immune system, reproductive and developmental systems, and the cardiovascular system. Lead exposure also affects the oxygen-carrying capacity of the blood. The effects of lead most commonly encountered in current populations are neurological effects in children and cardiovascular effects in adults (e.g., high blood pressure and heart disease). Infants and young children are especially sensitive to even low levels of lead, which may contribute to behavioral problems, learning deficits, and lowered IQ (South Coast AQMD 2005; USEPA 2021). The major sources of lead emissions have historically been mobile and industrial sources. As a result of the EPA’s regulatory efforts to remove lead from gasoline, emissions of lead from the transportation sector dramatically declined by 95 percent between 1980 and 1999, and levels of lead in the air decreased by 94 percent between 1980 and 1999. Today, the highest levels of lead in air are usually found near lead smelters. The major sources of lead emissions today are ore and metals processing and piston-engine aircraft operating on leaded aviation gasoline. However, in 2008 the EPA and CARB adopted stricter lead standards, and special monitoring sites immediately downwind of lead sources recorded very localized violations of the new state and federal standards.<sup>6</sup> As a result of these violations, the Los Angeles County portion of the SoCAB is designated nonattainment under the National AAQS for lead (South Coast AQMD 2012; CARB 2025a). Because emissions of lead are found only in projects that are permitted by South Coast AQMD, lead is not a pollutant of concern for the Project.

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<sup>5</sup> CARB approved the South Coast AQMD’s request to redesignate the SoCAB from serious nonattainment for PM<sub>10</sub> to attainment for PM<sub>10</sub> under the National AAQS on March 25, 2010, because the SoCAB did not violate federal 24-hour PM<sub>10</sub> standards from 2004 to 2007. The EPA approved the State of California’s request to redesignate the South Coast PM<sub>10</sub> nonattainment area to attainment of the PM<sub>10</sub> National AAQS, effective on July 26, 2013.

<sup>6</sup> Source-oriented monitors record concentrations of lead at lead-related industrial facilities in the SoCAB, which include Exide Technologies in the City of Commerce; Quemetco, Inc., in the City of Industry; Trojan Battery Company in Santa Fe Springs; and Exide Technologies in Vernon. Monitoring conducted between 2004 through 2007 showed that the Trojan Battery Company and Exide Technologies exceed the federal standards (South Coast AQMD 2012).

## TOXIC AIR CONTAMINANTS

The public's exposure to air pollutants classified as toxic air contaminants (TACs) is a significant environmental health issue in California. In 1983, the California Legislature enacted a program to identify the health effects of TACs and to reduce exposure to these contaminants to protect the public health. The California Health and Safety Code defines a TAC as "an air pollutant which may cause or contribute to an increase in mortality or in serious illness, or which may pose a present or potential hazard to human health." A substance that is listed as a hazardous air pollutant (HAP) pursuant to Section 112(b) of the federal Clean Air Act (42 United States Code §7412[b]) is a toxic air contaminant. Under state law, the California Environmental Protection Agency (Cal/EPA), acting through CARB, is authorized to identify a substance as a TAC if it determines that the substance is an air pollutant that may cause or contribute to an increase in mortality or to an increase in serious illness, or may pose a present or potential hazard to human health.

California regulates TACs primarily through Assembly Bill (AB) 1807 (Tanner Air Toxics Act) and AB 2588 (Air Toxics "Hot Spot" Information and Assessment Act of 1987). The Tanner Air Toxics Act sets forth a formal procedure for CARB to designate substances as TACs. Once a TAC is identified, CARB adopts an "airborne toxics control measure" for sources that emit designated TACs. If there is a safe threshold for a substance (i.e., a point below which there is no toxic effect), the control measure must reduce exposure to below that threshold. If there is no safe threshold, the measure must incorporate toxics best available control technology to minimize emissions. To date, CARB has established formal control measures for 11 TACs, all of which are identified as having no safe threshold.

Air toxics from stationary sources are also regulated in California under the Air Toxics "Hot Spot" Information and Assessment Act of 1987. Under AB 2588, toxic air contaminant emissions from individual facilities are quantified and prioritized by the air quality management district or air pollution control district. High priority facilities are required to perform a health risk assessment and, if specific thresholds are exceeded, are required to communicate the results to the public in the form of notices and public meetings.

By the last update to the TAC list in December 1999, CARB had designated 244 compounds as TACs (CARB 1999). 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 relatively few compounds, the most important being particulate matter from diesel-fueled engines.

### Diesel Particulate Matter

In 1998, CARB identified particulate emissions from diesel-fueled engines (diesel PM) as a TAC. Previously, the individual chemical compounds in diesel exhaust were considered 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.

CARB has promulgated the following specific rules to limit TAC emissions:

- 13 CCR Chapter 10, Section 2485, Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling
- 13 CCR Chapter 10, Section 2480, Airborne Toxic Control Measure to Limit School Bus Idling and Idling at Schools
- 13 CCR Section 2477 and Article 8, Airborne Toxic Control Measure for In-Use Diesel-Fueled Transport Refrigeration Units (TRU) and TRU Generator Sets and Facilities Where TRUs Operate

### Community Risk

In addition, to reduce exposure to TACs, CARB developed and approved the *Air Quality and Land Use Handbook: A Community Health Perspective* (2005) to provide guidance regarding the siting of sensitive land uses in the vicinity of freeways, distribution centers, rail yards, ports, refineries, chrome-plating facilities, dry cleaners, and gasoline-dispensing facilities. This guidance document was developed to assess compatibility and associated health risks when placing sensitive receptors near existing pollution sources. CARB's recommendations on the siting of new sensitive land uses were based on a compilation of recent studies that evaluated data on the adverse health effects from proximity to air pollution sources. The key observation in these studies is that proximity to air pollution sources substantially increases exposure and the potential for adverse health effects. There are three carcinogenic toxic air contaminants that constitute the majority of the known health risks from motor vehicle traffic, DPM from trucks, and benzene and 1,3-butadiene from passenger vehicles. CARB recommendations are based on data that show that localized air pollution exposures can be reduced by as much as 80 percent by following CARB minimum distance separations.

### Air Quality Management Planning

The South Coast AQMD is the agency responsible for improving air quality in the SoCAB and ensuring that the National and California AAQS are attained and maintained. South Coast AQMD is responsible for preparing the air quality management plan (AQMP) for the SoCAB in coordination with the Southern California Association of Governments (SCAG). Since 1979, a number of AQMPs have been prepared.

#### 2016 AQMP

On March 3, 2017, the South Coast AQMD adopted the 2016 AQMP as an update to the 2012 AQMP. The 2016 AQMP addresses strategies and measures to attain the following National AAQS:

- 2008 National 8-hour ozone standard by 2031,
- 2012 National annual PM<sub>2.5</sub> standard by 2025<sup>7</sup>,
- 2006 National 24-hour PM<sub>2.5</sub> standard by 2019,
- 1997 National 8-hour ozone standard by 2023, and the
- 1979 National 1-hour ozone standard by year 2022.

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<sup>7</sup> The 2016 AQMP requests a reclassification from moderate to serious non-attainment for the 2012 National PM<sub>2.5</sub> standard.

It is projected that total NO<sub>x</sub> emissions in the SoCAB would need to be reduced to 150 tons per day (tpd) by year 2023 and to 100 tpd in year 2031 to meet the 1997 and 2008 federal 8-hour ozone standards. The strategy to meet the 1997 federal 8-hour ozone standard would also lead to attaining the 1979 federal 1-hour ozone standard by year 2022 (South Coast AQMD 2017), which requires reducing NO<sub>x</sub> emissions in the SoCAB to 250 tpd. This is approximately 45 percent additional reductions above existing regulations for the 2023 ozone standard and 55 percent additional reductions above existing regulations to meet the 2031 ozone standard.

Reducing NO<sub>x</sub> emissions would also reduce PM<sub>2.5</sub> concentrations in the SoCAB. However, as the goal is to meet the 2012 federal annual PM<sub>2.5</sub> standard no later than year 2025, South Coast AQMD is seeking to reclassify the SoCAB from “moderate” to “serious” nonattainment under this federal standard. A “moderate” non-attainment would require meeting the 2012 federal standard by no later than 2021.

Overall, the 2016 AQMP is composed of stationary and mobile-source emission reductions from regulatory control measures, incentive-based programs, co-benefits from climate programs, mobile-source strategies, and reductions from federal sources such as aircrafts, locomotives, and ocean-going vessels. Strategies outlined in the 2016 AQMP would be implemented in collaboration between CARB and the EPA (South Coast AQMD 2017).

## **2022 AQMP**

On October 1, 2015, the US EPA strengthened the National AAQS for ground-level ozone, lowering the primary and secondary ozone standard levels to 70 parts per billion (ppb). The SoCAB is classified as an “extreme” non-attainment area and the Coachella Valley is classified as a “severe-15” non-attainment area for the 2015 Ozone National AAQS. South Coast AQMD is updating the QMP to address the requirements for meeting this standard (South Coast AQMD 2022).

## **LEAD STATE IMPLEMENTATION PLAN**

In 2008, EPA designated the Los Angeles County portion of the SoCAB nonattainment under the federal lead (Pb) classification due to the addition of source-specific monitoring under the new federal regulation. This designation was based on two source-specific monitors in Vernon and the City of Industry exceeding the new standard. The rest of the SoCAB, outside the Los Angeles County nonattainment area remains in attainment of the new standard. On May 24, 2012, CARB approved the SIP revision for the federal lead standard, which the EPA revised in 2008. Lead concentrations in this nonattainment area have been below the level of the federal standard since December 2011. The SIP revision was submitted to EPA for approval.

## **SOUTH COAST AQMD PM<sub>2.5</sub> REDESIGNATION REQUEST AND MAINTENANCE PLAN**

In 1997, the EPA adopted the 24-hour fine PM<sub>2.5</sub> standard of 65 micrograms per cubic meter (µg/m<sup>3</sup>). In 2006, this standard was lowered to a more health-protective level of 35 µg/m<sup>3</sup>. The SoCAB is designated nonattainment for both the 65 and 35 µg/m<sup>3</sup> 24-hour PM<sub>2.5</sub> standards (24-hour PM<sub>2.5</sub> standards). In 2020, monitored data demonstrated that the SoCAB attained both 24-hour PM<sub>2.5</sub> standards. The South Coast AQMD has developed the 2021 Redesignation Request and Maintenance Plan for the 1997 and 2006 24-hour

PM<sub>2.5</sub> Standards demonstrating that the SoCAB has met the requirements to be redesignated to attainment for the 24-hour PM<sub>2.5</sub> standards (South Coast AQMD 2021b).

## **AB 617, COMMUNITY AIR PROTECTION PROGRAM**

Assembly Bill (AB) 617 (C. Garcia, Chapter 136, Statutes of 2017) requires local air districts to monitor and implement air pollution control strategies that reduce localized air pollution in communities that bear the greatest burdens. In response to AB 617, CARB has established the Community Air Protection Program.

Air districts are required to host workshops to help identify disadvantaged communities disproportionately affected by poor air quality. Once the criteria for identifying the highest priority locations have been identified and the communities have been selected, new community monitoring systems would be installed to track and monitor community-specific air pollution goals. In 2018 CARB prepared an air monitoring plan (Community Air Protection Blueprint), that evaluates the availability and effectiveness of air monitoring technologies and existing community air monitoring networks. Under AB 617, the Blueprint is required to be updated every five years.

Under AB 617, CARB is also required to prepare a statewide strategy to reduce TACs and criteria pollutants in impacted communities; provide a statewide clearinghouse for best available retrofit control technology; adopt new rules requiring the latest best available retrofit control technology for all criteria pollutants for which an area has not achieved attainment of California AAQS; and provide uniform, statewide reporting of emissions inventories. Air districts are required to adopt a community emissions reduction program to achieve reductions for the communities impacted by air pollution that CARB identifies.

## **MULTIPLE AIR TOXICS EXPOSURE STUDY V**

The Multiple Air Toxics Exposure Study (MATES) is a monitoring and evaluation study on existing ambient concentrations of TACs and the potential health risks from air toxics in the SoCAB. In April 2021, South Coast AQMD released the latest update to the MATES study, MATES V. The first MATES analysis, MATES I, began in 1986 but was limited because of the technology available at the time. Conducted in 1998, MATES II was the first MATES iteration to include a comprehensive monitoring program, an air toxics emissions inventory, and a modeling component. MATES III was conducted in 2004 to 2006, with MATES IV following in 2012 to 2013.

MATES V uses measurements taken during 2018 and 2019, with a comprehensive modeling analysis and emissions inventory based on 2018 data. The previous MATES studies quantified the cancer risks based on the inhalation pathway only. MATES V includes information on the chronic noncancer risks from inhalation and non-inhalation pathways for the first time. Cancer risks and chronic noncancer risks from MATES II through IV measurements have been re-examined using current Office of Environmental Health Hazards Assessment (OEHHA) and CalEPA risk assessment methodologies and modern statistical methods to examine the trends over time.

The MATES V study showed that cancer risk in the SoCAB decreased to 454 in a million from 997 in a million in the MATES IV study. Overall, air toxics cancer risk in the SoCAB decreased by 54 percent since

2012 when MATES IV was conducted. MATES V showed the highest risk locations near the Los Angeles International Airport and the Ports of Long Beach and Los Angeles. Diesel particulate matter continues to be the major contributor to air toxics cancer risk (approximately 72 percent of the total cancer risk). Goods movement and transportation corridors have the highest cancer risk. Transportation sources account for 88 percent of carcinogenic air toxics emissions, and the remainder is from stationary sources, which include large industrial operations such as refineries and power plants as well as smaller businesses such as gas stations and chrome-plating facilities. (South Coast AQMD 2021a).

## Existing Conditions

### CLIMATE/METEOROLOGY

#### South Coast Air Basin

The Project Site lies in the South Coast Air Basin (SoCAB), which includes all of Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties. The SoCAB is in a coastal plain with connecting broad valleys and low hills and is bounded by the Pacific Ocean in the southwest quadrant, with high mountains forming the remainder of the perimeter. The general region lies in the semi-permanent high-pressure zone of the eastern Pacific. As a result, the climate is mild, tempered by cool sea breezes. This usually mild weather pattern is interrupted infrequently by periods of extremely hot weather, winter storms, and Santa Ana winds (South Coast AQMD 2005).

#### *Temperature and Precipitation*

The annual average temperature varies little throughout the SoCAB, ranging from the low to middle 60s, measured in degrees Fahrenheit (°F). With a more pronounced oceanic influence, coastal areas show less variability in annual minimum and maximum temperatures than inland areas. The average low is reported at 40.5 °F in December, and the average high is 94.8°F in August (USA.Com 2023).

In contrast to a very steady pattern of temperature, rainfall is seasonally and annually highly variable. Almost all rain falls from October through April. Summer rainfall is normally restricted to widely scattered thundershowers near the coast, with slightly heavier shower activity in the east and over the mountains. Rainfall averages 11.36 inches per year in the vicinity of the area (USA.Com 2023).

#### *Humidity*

Although the SoCAB has a semiarid climate, the air near the earth's surface is typically moist because of the presence of a shallow marine layer. Except for infrequent periods when dry, continental air is brought into the SoCAB by offshore winds, the "ocean effect" is dominant. Periods of heavy fog, especially along the coast, are frequent. Low clouds, often referred to as high fog, are a characteristic climatic feature. Annual average humidity is 70 percent at the coast and 57 percent in the eastern portions of the (South Coast AQMD 2005).

### *Wind*

Wind patterns across the south coastal region are characterized by westerly or southwesterly onshore winds during the day and by easterly or northeasterly breezes at night. Wind speed is somewhat greater during the dry summer months than during the rainy winter season.

Between periods of wind, periods of air stagnation may occur, both in the morning and evening hours. Air stagnation is one of the critical determinants of air quality conditions on any given day. During the winter and fall months, surface high-pressure systems over the SoCAB, combined with other meteorological conditions, can result in very strong, downslope Santa Ana winds. These winds normally continue a few days before predominant meteorological conditions are reestablished.

The mountain ranges to the east affect the transport and diffusion of pollutants by inhibiting their eastward transport. Air quality in the SoCAB generally ranges from fair to poor and is similar to air quality in most of coastal southern California. The entire region experiences heavy concentrations of air pollutants during prolonged periods of stable atmospheric conditions (South Coast AQMD 2005).

### *Inversions*

In conjunction with the two characteristic wind patterns that affect the rate and orientation of horizontal pollutant transport, there are two similarly distinct types of temperature inversions that control the vertical depth through which pollutants are mixed. These are the marine/subsidence inversion and the radiation inversion. The combination of winds and inversions are critical determinants in leading to the highly degraded air quality in summer and the generally good air quality in the winter in the Project area (South Coast AQMD 2005).

## **AREA DESIGNATIONS**

The AQMP provides the framework for air quality basins to achieve attainment of the state and federal ambient air quality standards through the State Implementation Plan (SIP). Areas are classified as attainment or nonattainment areas for particular pollutants, depending on whether they meet ambient air quality standards. Severity classifications for ozone nonattainment range in magnitude from marginal, moderate, and serious to severe and extreme.

- **Unclassified:** a pollutant is designated unclassified if the data are incomplete and do not support a designation of attainment or nonattainment.
- **Attainment:** a pollutant is in attainment if the CAAQS for that pollutant was not violated at any site in the area during a three-year period.
- **Nonattainment:** a pollutant is in nonattainment if there was at least one violation of a state AAQS for that pollutant in the area.

- **Nonattainment/Transitional:** a subcategory of the nonattainment designation. An area is designated nonattainment/transitional to signify that the area is close to attaining the AAQS for that pollutant.

The attainment status for the SoCAB is shown in Table 2, *Attainment Status of Criteria Pollutants in the South Coast Air Basin*.

**Table 2 Attainment Status of Criteria Pollutants in the South Coast Air Basin**

Pollutant	State	Federal
Ozone – 1-hour	Extreme Nonattainment	No Federal Standard
Ozone – 8-hour	Extreme Nonattainment	Extreme Nonattainment
PM <sub>10</sub>	Serious Nonattainment	Attainment
PM <sub>2.5</sub>	Nonattainment	Nonattainment <sup>1</sup>
CO	Attainment	Attainment
NO <sub>2</sub>	Attainment	Attainment/Maintenance
SO <sub>2</sub>	Attainment	Attainment
Lead	Attainment	Nonattainment (Los Angeles County only) <sup>2</sup>
All others	Attainment/Unclassified	Attainment/Unclassified

Source: CARB 2025a.

1 The SoCAB is pending a resignation request from nonattainment to attainment for the 24-hour federal PM<sub>2.5</sub> standards. The 2021 PM<sub>2.5</sub> Redesignation Request and Maintenance Plan demonstrates that the South Coast meets the requirements of the CAA to allow US EPA to redesignate the SoCAB to attainment for the 65 µg/m<sup>3</sup> and 35 µg/m<sup>3</sup> 24-hour PM<sub>2.5</sub> standards. CARB will submit the 2021 PM<sub>2.5</sub> Redesignation Request to the US EPA as a revision to the California SIP (CARB 2021).

2 In 2010, the Los Angeles portion of the SoCAB was designated nonattainment for lead under the new 2008 federal AAQS as a result of large industrial emitters. Remaining areas for lead in the SoCAB are unclassified. However, lead concentrations in this nonattainment area have been below the level of the federal standard since December 2011 (South Coast AQMD 2012). CARB's SIP revision was submitted to the EPA for approval.

## EXISTING AMBIENT AIR QUALITY

Existing levels of ambient air quality and historical trends and projections in the vicinity of the Project Site are best documented by measurements taken by the South Coast AQMD. The Project Site is located within Source Receptor Area (SRA) 24: Perris Valley. The air quality monitoring station closest to the Project is the Winchester-33700 Borel Road Monitoring Station, which is one of 31 monitoring stations South Coast AQMD operates and maintains within the SoCAB.<sup>8</sup> Data from this station includes O<sub>3</sub> and PM<sub>2.5</sub> and is summarized in Table 3, *Ambient Air Quality Monitoring Summary*. Data for NO<sub>2</sub> and PM<sub>10</sub> is supplemented by the Lake Elsinore-W Flint Street Monitoring Station. The data show that the area regularly exceeds the state and federal one-hour and eight-hour O<sub>3</sub> standards within the last five recorded years. Additionally, the area has rarely exceeded the state PM<sub>10</sub> standards.

<sup>8</sup> Locations of the SRAs and monitoring stations are shown here: <http://www.aqmd.gov/docs/default-source/default-document-library/map-of-monitoring-areas.pdf>.

**Table 3 Ambient Air Quality Monitoring Summary**

Pollutant/Standard	Number of Days Threshold Were Exceeded and Maximum Levels during Such Violations <sup>1,2</sup>				
	2019	2020	2021	2022	2023
<b>Ozone (O<sub>3</sub>)</b>					
State 1-Hour ≥ 0.09 ppm (days exceed threshold)	0	5	1	0	0
State & Federal 8-hour ≥ 0.070 ppm (days exceed threshold)	6	37	10	3	3
Max. 1-Hour Conc. (ppm)	0.091	0.108	0.095	0.087	0.088
Max. 8-Hour Conc. (ppm)	0.079	0.091	0.083	0.079	0.082
<b>Nitrogen Dioxide (NO<sub>2</sub>)</b>					
State 1-Hour ≥ 0.18 ppm (days exceed threshold)	0	0	0	0	0
Federal 1-Hour ≥ 0.100 ppm (days exceed threshold)	0	0	0	0	0
Max. 1-Hour Conc. (ppb)	0.038	0.0436	0.0437	0.0372	0.0417
<b>Coarse Particulates (PM<sub>10</sub>)</b>					
State 24-Hour > 50 µg/m <sup>3</sup> (days exceed threshold)	*	*	*	*	*
Federal 24-Hour > 150 µg/m <sup>3</sup> (days exceed threshold)	0	1	0	0	1
Max. 24-Hour Conc. (µg/m <sup>3</sup> )	93.8	192.4	90.0	91.8	187.0
<b>Fine Particulates (PM<sub>2.5</sub>)</b>					
Federal 24-Hour > 35 µg/m <sup>3</sup> (days exceed threshold)	*	*	*	*	*
Max. 24-Hour Conc. (µg/m <sup>3</sup> )	17.0	37.1	26.9	20.3	24.3

Source: CARB 2025b.

Notes: ppm = parts per million; ppb = parts per billion; µg/m<sup>3</sup> = micrograms per cubic meter; \* = Data not available

<sup>1</sup> Data for O<sub>3</sub> and PM<sub>2.5</sub> obtained from the Winchester-33700 Borel Road Monitoring Station. Data for NO<sub>2</sub> and PM<sub>10</sub> obtained from the Lake Elsinore-W Flint Monitoring Station.

<sup>2</sup> Most recent data available as of March 2025.

## 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 cardio-respiratory diseases.

Residential areas are also considered to be sensitive receptors to air pollution because residents (including children and the elderly) tend to be at home for extended periods of time, resulting in sustained exposure to any pollutants present. Schools are also considered sensitive receptors, as children are present for extended durations and engage in regular outdoor activities. Recreational land uses are considered moderately sensitive to air pollution. Although exposure periods are generally short, exercise places a high demand on respiratory functions, which can be impaired by air pollution. In addition, noticeable air pollution can detract from the enjoyment of recreation. Industrial and commercial areas are considered the least sensitive to air pollution. Exposure periods are relatively short and intermittent, as the majority of the workers tend to stay indoors most of the time. In addition, the working population is generally the healthiest segment of the public. The nearest offsite sensitive receptors are the residences along Yates Road approximately 70 feet to the north of the Project Site.

## Methodology

Projected construction-related air pollutant emissions are calculated using the California Emissions Estimator Model (CalEEMod), Version 2022.1. CalEEMod compiles an emissions inventory of construction (fugitive dust, off-gas emissions, on-road emissions, and off-road emissions), area sources, indirect emissions from energy use, mobile sources, indirect emissions from waste disposal (annual only), and indirect emissions from water/wastewater (annual only) use. The calculated emissions of the Project are compared to thresholds of significance for individual projects using the South Coast AQMD's *CEQA Air Quality Analysis Guidance Handbook*.

## Thresholds of Significance

The analysis of the Project's air quality impacts follows the guidance and methodologies recommended in South Coast AQMD's *CEQA Air Quality Handbook* and the significance thresholds on South Coast AQMD's website (South Coast AQMD 1993). CEQA allows the significance criteria established by the applicable air quality management or air pollution control district to be used to assess impacts of a project on air quality. South Coast AQMD has established thresholds of significance for regional air quality emissions for construction activities and Project operation. In addition to the daily thresholds listed above, projects are also subject to the AAQS. These are addressed through an analysis of localized CO impacts and localized significance thresholds (LSTs).

### REGIONAL SIGNIFICANCE THRESHOLDS

The South Coast AQMD has adopted regional construction and operational emissions thresholds to determine a Project's cumulative impact on air quality in the SoCAB. Table 4, *South Coast AQMD Significance Thresholds*, lists South Coast AQMD's regional significance thresholds that are applicable for all projects uniformly regardless of size or scope. There is growing evidence that although ultrafine particulates contribute a very small portion of the overall atmospheric mass concentration, they represent a greater proportion of the health risk from PM. However, the EPA or CARB have not yet adopted AAQS to regulate ultrafine particulates; therefore, South Coast AQMD has not developed thresholds for them.

**Table 4 South Coast AQMD Significance Thresholds**

Air Pollutant	Construction Phase	Operational Phase
Reactive Organic Gases (ROGs)/ Volatile Organic Compounds (VOCs)	75 lbs/day	55 lbs/day
Nitrogen Oxides (NO <sub>x</sub> )	100 lbs/day	55 lbs/day
Carbon Monoxide (CO)	550 lbs/day	550 lbs/day
Sulfur Oxides (SO <sub>x</sub> )	150 lbs/day	150 lbs/day
Particulates (PM <sub>10</sub> )	150 lbs/day	150 lbs/day
Particulates (PM <sub>2.5</sub> )	55 lbs/day	55 lbs/day

Source: South Coast AQMD 2023.

Projects that exceed the regional significance threshold contribute to the nonattainment designation of the SoCAB. The attainment designations are based on the AAQS, which are set at levels of exposure that are determined to not result in adverse health. Exposure to fine particulate pollution and ozone causes myriad health impacts, particularly to the respiratory and cardiovascular systems:

- Linked to increased cancer risk (PM<sub>2.5</sub>, TACs)
- Aggravates respiratory disease (O<sub>3</sub>, PM<sub>2.5</sub>)
- Increases bronchitis (O<sub>3</sub>, PM<sub>2.5</sub>)
- Causes chest discomfort, throat irritation, and increased effort to take a deep breath (O<sub>3</sub>)
- Reduces resistance to infections and increases fatigue (O<sub>3</sub>)
- Reduces lung growth in children (PM<sub>2.5</sub>)
- Contributes to heart disease and heart attacks (PM<sub>2.5</sub>)
- Contributes to premature death (O<sub>3</sub>, PM<sub>2.5</sub>)
- Linked to lower birth weight in newborns (PM<sub>2.5</sub>) (South Coast AQMD 2011)

Exposure to fine particulates and ozone aggravates asthma attacks and can amplify other lung ailments such as emphysema and chronic obstructive pulmonary disease. Exposure to current levels of PM<sub>2.5</sub> is responsible for an estimated 4,300 cardiopulmonary-related deaths per year in the SoCAB. In addition, University of Southern California scientists responsible for a landmark children's health study found that lung growth improved as air pollution declined for children aged 11 to 15 in five communities in the SoCAB (South Coast AQMD 2015c).

Mass emissions in Table 4 are not correlated with concentrations of air pollutants but contribute to the cumulative air quality impacts in the SoCAB. Therefore, regional emissions from a single project do not single-handedly trigger a regional health impact. South Coast AQMD is the primary agency responsible for ensuring the health and welfare of sensitive individuals to elevated concentrations of air quality in the SoCAB. To achieve the health-based standards established by the EPA, South Coast AQMD prepares an AQMP that details regional programs to attain the AAQS.

## CO HOTSPOTS

Areas of vehicle congestion have the potential to create pockets of CO called hot spots. These pockets have the potential to exceed the state one-hour standard of 20 ppm or the eight-hour standard of 9 ppm. Because CO is produced in greatest quantities from vehicle combustion and does not readily disperse into the atmosphere, adherence to ambient air quality standards is typically demonstrated through an analysis of localized CO concentrations. Hot spots are typically produced at intersections, where traffic congestion is highest because vehicles queue for longer periods and are subject to reduced speeds. With the turnover of older vehicles, introduction of cleaner fuels, and implementation of control technology on industrial facilities, CO concentrations in the SoCAB and in the state have steadily declined.

In 2007, the SoCAB was designated in attainment for CO under both the California AAQS and National AAQS. The CO hotspot analysis conducted for the attainment by the South Coast AQMD for busiest intersections in Los Angeles during the peak morning and afternoon periods plan did not predict a violation

of CO standards.<sup>9</sup> As identified in the South Coast AQMD's 2003 AQMP and the 1992 Federal Attainment Plan for Carbon Monoxide (1992 CO Plan), peak carbon monoxide concentrations in the SoCAB in previous years, prior to redesignation, were a result of unusual meteorological and topographical conditions and not a result of congestion at a particular intersection. Under existing and future vehicle emission rates, a project would have to increase traffic volumes at a single intersection to more than 44,000 vehicles per hour—or 24,000 vehicles per hour where vertical and/or horizontal air does not mix—in order to generate a significant CO impact (BAAQMD 2023).

### LOCALIZED SIGNIFICANCE THRESHOLDS

The South Coast AQMD developed LSTs for emissions of NO<sub>x</sub>, CO, PM<sub>10</sub>, and PM<sub>2.5</sub> generated at the Project site (offsite mobile-source emissions are not included in the LST analysis). LSTs represent the maximum emissions at a Project site that are not expected to cause or contribute to an exceedance of the most stringent federal or state AAQS and are shown in Table 5, *South Coast AQMD Localized Significance Thresholds*.

**Table 5 South Coast AQMD Localized Significance Thresholds**

Air Pollutant (Relevant AAQS)	Concentration
1-Hour CO Standard (CAAQS)	20 ppm
8-Hour CO Standard (CAAQS)	9.0 ppm
1-Hour NO <sub>2</sub> Standard (CAAQS)	0.18 ppm
Annual NO <sub>2</sub> Standard (CAAQS)	0.03 ppm
24-Hour PM <sub>10</sub> Standard – Construction (South Coast AQMD) <sup>1</sup>	10.4 µg/m <sup>3</sup>
24-Hour PM <sub>2.5</sub> Standard – Construction (South Coast AQMD) <sup>1</sup>	10.4 µg/m <sup>3</sup>
24-Hour PM <sub>10</sub> Standard – Operation (South Coast AQMD) <sup>1</sup>	2.5 µg/m <sup>3</sup>
24-Hour PM <sub>2.5</sub> Standard – Operation (South Coast AQMD) <sup>1</sup>	2.5 µg/m <sup>3</sup>

Source: South Coast AQMD 2023.

ppm – parts per million; µg/m<sup>3</sup> – micrograms per cubic meter

<sup>1</sup> Threshold is based on South Coast AQMD Rule 403. Since the SoCAB is in nonattainment for PM<sub>10</sub> and PM<sub>2.5</sub>, the threshold is established as an allowable change in concentration. Therefore, background concentration is irrelevant.

To assist lead agencies, South Coast AQMD developed screening-level LSTs to back-calculate the mass amount (lbs. per day) of emissions generated onsite that would trigger the levels shown in Table 5 for projects under 5-acres. These “screening-level” LSTs tables are the localized significance thresholds for all projects of five acres and less; however, it can be used as screening criteria for larger projects to determine whether or not dispersion modeling may be required to compare concentrations of air pollutants generated by the Project to the localized concentrations shown in Table 5.

In accordance with South Coast AQMD’s LST methodology, the screening-level construction LSTs are based on the acreage disturbed per day based on equipment use. The screening-level construction LSTs for the

<sup>9</sup> The four intersections were: Long Beach Boulevard and Imperial Highway; Wilshire Boulevard and Veteran Avenue; Sunset Boulevard and Highland Avenue; and La Cienega Boulevard and Century Boulevard. The busiest intersection evaluated (Wilshire and Veteran) had a daily traffic volume of approximately 100,000 vehicles per day with LOS E in the morning peak hour and LOS F in the evening peak hour.

Project Site in SRA 24 are shown in Table 6, *South Coast AQMD Screening-Level Localized Significance Thresholds*, for sensitive receptors within 82 feet (25 meters) of the Project Site.

**Table 6 South Coast AQMD Screening-Level Localized Significance Thresholds**

Acreage Disturbed	Threshold (lbs/day) <sup>1</sup>			
	Nitrogen Oxides (NO <sub>x</sub> )	Carbon Monoxide (CO)	Coarse Particulates (PM <sub>10</sub> )	Fine Particulates (PM <sub>2.5</sub> )
≤ 1.00 Acres Disturbed Per Day	118	602	4.00	3.00
1.50 Acres Disturbed Per Day	144	742	5.50	3.50
2.00 Acres Disturbed Per Day	170	883	7.00	4.00
2.25 Acres Disturbed Per Day	178	941	7.50	4.33
2.63 Acres Disturbed Per Day	191	1,027	8.25	4.83
3.38 Acres Disturbed Per Day	216	1,201	9.75	5.83
3.50 Acres Disturbed Per Day	220	1,230	9.99	6.00

Source: South Coast AQMD 2008a, 2011, and 2023.

<sup>1</sup> LSTs are based on sensitive receptors within 82 feet (25 meters) of the Project Site in Source Receptor Area (SRA) 24.

### Health Risk

Whenever a project would require use of chemical compounds that have been identified in South Coast AQMD Rule 1401, placed on CARB’s air toxics list pursuant to AB 1807, or placed on the EPA’s National Emissions Standards for Hazardous Air Pollutants, a health risk assessment is required by the South Coast AQMD. Table 7, *Toxic Air Contaminants Incremental Risk Thresholds*, lists the TAC incremental risk thresholds for operation of a project. The purpose of this environmental evaluation is to identify the significant effects of the Project on the environment. CEQA does not require CEQA-level environmental document to analyze the environmental effects of attracting development and people to an area (*California Building Industry Association v. Bay Area Air Quality Management District (2015) 62 Cal.4th 369 (Case No. S213478)*). However, the environmental document must analyze the impacts of environmental hazards on future users, when a Project exacerbates an existing environmental hazard or condition. Residential, commercial, and office uses do not use substantial quantities of TACs and typically do not exacerbate existing hazards, so these thresholds are typically applied to new industrial projects.

**Table 7 South Coast AQMD Toxic Air Contaminants Incremental Risk Thresholds**

Maximum Incremental Cancer Risk	≥ 10 in 1 million
Hazard Index (project increment)	≥ 1.0
Cancer Burden in areas ≥ 1 in 1 million	> 0.5 excess cancer cases

Source: South Coast AQMD 2023.

## GREENHOUSE GAS EMISSIONS

Scientists have concluded that human activities are contributing to global climate change by adding large amounts of heat-trapping gases, known as GHG, to the atmosphere. Climate change is the variation of Earth's climate over time, whether due to natural variability or as a result of human activities. The primary source of these GHG is fossil fuel use. The Intergovernmental Panel on Climate Change (IPCC) has identified four major GHG—water vapor,<sup>10</sup> carbon (CO<sub>2</sub>), methane (CH<sub>4</sub>), and ozone (O<sub>3</sub>)—that are the likely cause of an increase in global average temperatures observed within the 20th and 21st centuries. Other GHG identified by the IPCC that contribute to global warming to a lesser extent include nitrous oxide (N<sub>2</sub>O), sulfur hexafluoride (SF<sub>6</sub>), hydrofluorocarbons, perfluorocarbons, and chlorofluorocarbons (IPCC 2001).<sup>11</sup> The major GHG are briefly described below.

- **Carbon dioxide (CO<sub>2</sub>)** enters the atmosphere through the burning of fossil fuels (oil, natural gas, and coal), solid waste, trees and wood products, and respiration, and also as a result of other chemical reactions (e.g. manufacture of cement). Carbon dioxide is removed from the atmosphere (sequestered) when it is absorbed by plants as part of the biological carbon cycle.
- **Methane (CH<sub>4</sub>)** is emitted during the production and transport of coal, natural gas, and oil. Methane emissions also result from livestock and other agricultural practices and from the decay of organic waste in municipal landfills and water treatment facilities.
- **Nitrous oxide (N<sub>2</sub>O)** is emitted during agricultural and industrial activities as well as during combustion of fossil fuels and solid waste.
- **Fluorinated gases** are synthetic, strong GHGs that are emitted from a variety of industrial processes. Fluorinated gases are sometimes used as substitutes for ozone-depleting substances. These gases are typically emitted in smaller quantities, but because they are potent GHGs, they are sometimes referred to as high global-warming-potential (GWP) gases.
  - **Chlorofluorocarbons (CFCs)** are GHGs covered under the 1987 Montreal Protocol and used for refrigeration, air conditioning, packaging, insulation, solvents, or aerosol propellants. Since they are not destroyed in the lower atmosphere (troposphere, stratosphere), CFCs drift into the upper atmosphere where, given suitable conditions, they break down ozone. These gases are also ozone-

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<sup>10</sup> Water vapor (H<sub>2</sub>O) is the strongest GHG and the most variable in its phases (vapor, cloud droplets, ice crystals). However, water vapor is not considered a pollutant, but part of the feedback loop rather than a primary cause of change.

<sup>11</sup> Black carbon contributes to climate change both directly, by absorbing sunlight, and indirectly, by depositing on snow (making it melt faster) and by interacting with clouds and affecting cloud formation. Black carbon is the most strongly light-absorbing component of particulate matter (PM) emitted from burning fuels such as coal, diesel, and biomass. Reducing black carbon emissions globally can have immediate economic, climate, and public health benefits. California has been an international leader in reducing emissions of black carbon, with close to 95 percent control expected by 2020 due to existing programs that target reducing PM from diesel engines and burning activities (CARB 2017a). However, state and national GHG inventories do not yet include black carbon due to ongoing work resolving the precise global warming potential of black carbon. Guidance for CEQA documents does not yet include black carbon.

depleting gases and are therefore being replaced by other compounds that are GHGs covered under the Kyoto Protocol.

- **Perfluorocarbons (PFCs)** are a group of human-made chemicals composed of carbon and fluorine only. These chemicals (predominantly perfluoromethane [CF<sub>4</sub>] and perfluoroethane [C<sub>2</sub>F<sub>6</sub>]) were introduced as alternatives, along with HFCs, to the ozone-depleting substances. In addition, PFCs are emitted as by-products of industrial processes and are used in manufacturing. PFCs do not harm the stratospheric ozone layer, but they have a high global warming potential.
- **Sulfur Hexafluoride (SF<sub>6</sub>)** is a colorless gas soluble in alcohol and ether, slightly soluble in water. SF<sub>6</sub> is a strong GHG used primarily in electrical transmission and distribution systems as an insulator.
- **Hydrochlorofluorocarbons (HCFCs)** contain hydrogen, fluorine, chlorine, and carbon atoms. Although ozone-depleting substances, they are less potent at destroying stratospheric ozone than CFCs. They have been introduced as temporary replacements for CFCs and are also GHGs.
- **Hydrofluorocarbons (HFCs)** contain only hydrogen, fluorine, and carbon atoms. They were introduced as alternatives to ozone-depleting substances to serve many industrial, commercial, and personal needs. HFCs are emitted as by-products of industrial processes and are also used in manufacturing. They do not significantly deplete the stratospheric ozone layer, but they are strong GHGs (IPCC 2001; USEPA 2023).

GHGs are dependent on the lifetime or persistence of the gas molecule in the atmosphere. Some GHGs have stronger greenhouse effects than others. These are referred to as high GWP gases. The GWP of GHG emissions are shown in Table 8, *GHG Emissions and Their Relative Global Warming Potential Compared to CO<sub>2</sub>*. The GWP is used to convert GHGs to CO<sub>2</sub>-equivalence (CO<sub>2</sub>e) to show the relative potential that different GHGs have to retain infrared radiation in the atmosphere and contribute to the greenhouse effect. For example, under IPCC’s Fifth Assessment Report (AR5) GWP values for CH<sub>4</sub>, a project that generates 10 MT of CH<sub>4</sub> would be equivalent to 280 MT of CO<sub>2</sub>.

**Table 8 GHG Emissions and Their Relative Global Warming Potential Compared to CO<sub>2</sub>**

GHGs	Second Assessment Report (SAR) Global Warming Potential Relative to CO <sub>2</sub> <sup>1</sup>	Fourth Assessment Report (AR4) Global Warming Potential Relative to CO <sub>2</sub> <sup>1</sup>	Fifth Assessment Report (AR5) Global Warming Potential Relative to CO <sub>2</sub> <sup>1</sup>
Carbon Dioxide (CO <sub>2</sub> )	1	1	1
Methane <sup>2</sup> (CH <sub>4</sub> )	21	25	28
Nitrous Oxide (N <sub>2</sub> O)	310	298	265

Source: IPCC 1995, 2007, 2013.

Notes: The IPCC published updated GWP values in its Fifth Assessment Report (AR5) that reflect new information on atmospheric lifetimes of GHGs and an improved calculation of the radiative forcing of CO<sub>2</sub>. However, GWP values identified in AR4 are used by South Coast AQMD to maintain consistency in statewide GHG emissions modeling. In addition, the 2017 Scoping Plan Update was based on the GWP values in AR4.

<sup>1</sup> Based on 100-year time horizon of the GWP of the air pollutant compared to CO<sub>2</sub>.

<sup>2</sup> The methane GWP includes direct effects and indirect effects due to the production of tropospheric ozone and stratospheric water vapor. The indirect effect due to the production of CO<sub>2</sub> is not included.

## California's Greenhouse Gas Sources and Relative Contribution

In 2021, the statewide GHG emissions inventory was updated for 2000 to 2019 emissions using the GWPs in IPCC's AR4 (IPCC 2013). Based on these GWPs, California produced 418.2 MMTCO<sub>2e</sub> GHG emissions in 2019. California's transportation sector was the single largest generator of GHG emissions, producing 39.7 percent of the state's total emissions. Industrial sector emissions made up 21.1 percent, and electric power generation made up 14.1 percent of the state's emissions inventory. Other major sectors of GHG emissions include commercial and residential (10.5 percent), agriculture and forestry (7.6 percent), high GWP (4.9 percent), and recycling and waste (2.1 percent) (CARB 2021).

Since the peak level in 2004, California's GHG emissions have generally followed a decreasing trend. In 2016, California statewide GHG emissions dropped below the AB 32 target for year 2020 of 431 MMTCO<sub>2e</sub> and have remained below this target since then. In 2019, emissions from routine GHG-emitting activities statewide were almost 13 MMTCO<sub>2e</sub> lower than the AB 32 target for year 2020. Per-capita GHG emissions in California have dropped from a 2001 peak of 14.0 MTCO<sub>2e</sub> per person to 10.5 MTCO<sub>2e</sub> per person in 2019, a 25 percent decrease.

Transportation emissions continued to decline in 2019 statewide as they had done in 2018, with even more substantial reductions due to a significant increase in renewable diesel. Since 2008, California's electricity sector has followed an overall downward trend in emissions. In 2019, solar power generation continued its rapid growth since 2013. Emissions from high-GWP gases comprised 4.9 percent of California's emissions in 2019. This continues the increasing trend as the gases replace ozone-depleting substances being phased out under the 1987 Montreal Protocol. Overall trends in the inventory also demonstrate that the carbon intensity of California's economy (the amount of carbon pollution per million dollars of gross domestic product) has declined 45 percent since the 2001 peak, though the state's gross domestic product grew 63 percent during this period (CARB 2021).

## Regulatory Settings

### REGULATION OF GHG EMISSIONS ON A NATIONAL LEVEL

The US Environmental Protection Agency (EPA) announced on December 7, 2009, that GHG emissions threaten the public health and welfare of the American people and that GHG emissions from on-road vehicles contribute to that threat. The EPA's final findings respond to the 2007 U.S. Supreme Court decision that GHG emissions fit within the Clean Air Act definition of air pollutants. The findings do not in and of themselves impose any emission reduction requirements but allow the EPA to finalize the GHG standards proposed in 2009 for new light-duty vehicles as part of the joint rulemaking with the Department of Transportation (USEPA 2009).

To regulate GHGs from passenger vehicles, EPA was required to issue an endangerment finding. The finding identifies emissions of six key GHGs—CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, hydrofluorocarbons, perfluorocarbons, and SF<sub>6</sub>—that have been the subject of scrutiny and intense analysis for decades by scientists in the United States and around the world. The first three are applicable to the Project's GHG emissions inventory because they

constitute the majority of GHG emissions and, per South Coast AQMD guidance, are the GHG emissions that should be evaluated as part of a Project's GHG emissions inventory.

### **US Mandatory Report Rule for GHGs (2009)**

In response to the endangerment finding, the EPA issued the Mandatory Reporting of GHG Rule that requires substantial emitters of GHG emissions (large stationary sources, etc.) to report GHG emissions data. Facilities that emit 25,000 MT or more of CO<sub>2</sub> per year are required to submit an annual report.

### **Update to Corporate Average Fuel Economy Standards (2021 to 2026)**

The federal government issued new Corporate Average Fuel Economy (CAFE) standards in 2012 for model years 2017 to 2025, which required a fleet average of 54.5 miles per gallon in 2025. On March 30, 2020, the EPA finalized an updated CAFE and GHG emissions standards for passenger cars and light trucks and established new standards covering model years 2021 through 2026, known as the Safer Affordable Fuel Efficient (SAFE) Vehicles Final Rule for Model Years 2021 to 2026. However, in response to Executive Order 13990 by President Biden, the National Highway Traffic Safety Administration (NHTSA) announced new proposed fuel standards on August 5, 2021. On December 21, 2021, under the direction of EO 13990, the NHTSA repealed SAFE Vehicles Rule Part One, which had preempted state and local laws related to fuel economy standards. Fuel efficiency under the new standards proposed would increase 8 percent annually for model years 2024 to 2026 and increase estimate fleetwide average by 12 mpg for model year 2026 compared to model year 2021 (NHTSA 2021).

### **EPA Regulation of Stationary Sources under the Clean Air Act (Ongoing)**

Pursuant to its authority under the Clean Air Act, the EPA has developed regulations for new, large, stationary sources of emissions, such as power plants and refineries. Under former President Obama's 2013 Climate Action Plan, the EPA was directed to develop regulations for existing stationary sources as well. On June 19, 2019, the EPA issued the final Affordable Clean Energy (ACE) rule, which became effective on August 19, 2019. The ACE rule was crafted under the direction of President Trump's Energy Independence EO. It officially rescinded the Clean Power Plan rule issued during the Obama Administration and set emissions guidelines for states in developing plans to limit CO<sub>2</sub> emissions from coal-fired power plants. The Affordable Clean Energy rule was vacated by the United States Court of Appeals for the District of Columbia Circuit on January 19, 2021. The Biden Administration is assessing options on potential future regulations.

## **REGULATION OF GHG EMISSIONS ON A STATE LEVEL**

Current State of California guidance and goals for reductions in GHG emissions are generally embodied in EO S-03-05 and EO B-30-15, Assembly Bill 32 (AB 32), AB 1279, Senate Bill 32 (SB 32), and SB 375.

### **Executive Order S-3-05**

Executive Order S-3-05, signed June 1, 2005. Executive Order S-3-05 set the following GHG reduction targets for the State:

- 2000 levels by 2010
- 1990 levels by 2020
- 80 percent below 1990 levels by 2050

### **Assembly Bill 32, the Global Warming Solutions Act (2006)**

AB 32 was passed by the California state legislature on August 31, 2006, to place the state on a course toward reducing its contribution of GHG emissions. AB 32 follows the 2020 tier of emissions reduction targets established in EO S-03-05. CARB prepared the 2008 Scoping Plan to outline a plan to achieve the GHG emissions reduction targets of AB 32.

### **Executive Order B-30-15**

EO B-30-15, signed April 29, 2015, set a goal of reducing GHG emissions within the state to 40 percent of 1990 levels by year 2030. EO B-30-15 also directed CARB to update the Scoping Plan to quantify the 2030 GHG reduction goal for the state and requires state agencies to implement measures to meet the interim 2030 goal as well as the long-term goal for 2050 in EO S-03-05. It also requires the Natural Resources Agency to conduct triennial updates of the California adaptation strategy, “Safeguarding California”, in order to ensure climate change is accounted for in state planning and investment decisions.

### **Senate Bill 32 and Assembly Bill 197**

In September 2016, Governor Brown signed SB 32 and AB 197 into law, making the Executive Order goal for year 2030 into a statewide mandated legislative target. AB 197 established a joint legislative committee on climate change policies and requires the CARB to prioritize direction emissions reductions rather than the market-based cap-and-trade program for large stationary, mobile, and other sources.

### *2017 Climate Change Scoping Plan Update*

EO B-30-15 and SB 32 required CARB to prepare another update to the Scoping Plan to address the 2030 target for the state. On December 24, 2017, CARB adopted the 2017 Climate Change Scoping Plan Update, which outlined potential regulations and programs, including strategies consistent with AB 197 requirements, to achieve the 2030 target. The 2017 Scoping Plan established a new emissions limit of 260 MMTCO<sub>2e</sub> for the year 2030, which corresponds to a 40 percent decrease in 1990 levels by 2030 (CARB 2017b).

California’s climate strategy will require contributions from all sectors of the economy, including enhanced focus on zero- and near-zero emission (ZE/NZE) vehicle technologies; continued investment in renewables such as solar roofs, wind, and other types of distributed generation; greater use of low carbon fuels; integrated land conservation and development strategies; coordinated efforts to reduce emissions of short-lived climate pollutants (methane, black carbon, and fluorinated gases); and an increased focus on integrated land use planning to support livable, transit-connected communities and conservation of agricultural and other lands. Requirements for GHG reductions at stationary sources complement local air pollution control efforts by the local air districts to tighten criteria air pollutants and toxic air contaminants emissions limits on across a broad spectrum of industrial sources. Major elements of the 2017 Scoping Plan framework include:

- Implementing and/or increasing the standards of the Mobile Source Strategy, which include increasing ZEV buses and trucks;
- Low Carbon Fuel Standard (LCFS), with an increased stringency (18 percent by 2030).
- Implementation of SB 350, which expands the Renewables Portfolio Standard (RPS) to 50 percent RPS and doubles energy efficiency savings by 2030.
- California Sustainable Freight Action Plan, which improves freight system efficiency, utilizes near-zero emissions technology, and deployment of ZEV trucks.
- Implementing the Short-Lived Climate Pollutant Strategy (SLPS), which focuses on reducing methane and hydrofluorocarbon emissions by 40 percent and anthropogenic black carbon emissions by 50 percent by year 2030.
- Post-2020 Cap-and-Trade Program that includes declining caps.
- Continued implementation of SB 375.
- Development of a Natural and Working Lands Action Plan to secure California's land base as a net carbon sink.

In addition to the statewide strategies listed above, the 2017 Climate Change Scoping Plan also identified local governments as essential partners in achieving the State's long-term GHG reduction goals and identified local actions to reduce GHG emissions. As part of the recommended actions, CARB recommends statewide targets of no more than 6 MTCO<sub>2e</sub> or less per capita by 2030 and 2 MTCO<sub>2e</sub> or less per capita by 2050. CARB recommends that local governments evaluate and adopt robust and quantitative locally-appropriate goals that align with the statewide per capita targets and the State's sustainable development objectives and develop plans to achieve the local goals. The statewide per capita goals were developed by applying the percent reductions necessary to reach the 2030 and 2050 climate goals (i.e., 40 percent and 80 percent, respectively) to the State's 1990 emissions limit established under AB 32. For CEQA projects, CARB states that lead agencies have discretion to develop evidenced-based numeric thresholds (mass emissions, per capita, or per service population)—consistent with the Scoping Plan and the state's long-term GHG goals. To the degree a project relies on GHG mitigation measures, CARB recommends that lead agencies prioritize on-site design features that reduce emissions, especially from VMT, and direct investments in GHG reductions within the project's region that contribute potential air quality, health, and economic co-benefits. Where further project design or regional investments are infeasible or not proven to be effective, CARB recommends mitigating potential GHG impacts through purchasing and retiring carbon credits.

The 2017 Scoping Plan scenario is set against what is called the business-as-usual (BAU) yardstick—that is, what would the GHG emissions look like if the State did nothing at all beyond the existing policies that are required and already in place to achieve the 2020 limit, as shown in Table 9, *2017 Climate Change Scoping Plan Emissions Reductions Gap*. It includes the existing renewables requirements, advanced clean cars, the “10

percent” Low Carbon Fuel Standard (LCFS), and the SB 375 program for more vibrant communities, among others. However, it does not include a range of new policies or measures that have been developed or put into statute over the past two years. Also shown in the table, the known commitments are expected to result in emissions that are 60 MMTCO<sub>2</sub>e above the target in 2030. If the estimated GHG reductions from the known commitments are not realized due to delays in implementation or technology deployment, the post-2020 Cap-and-Trade Program would deliver the additional GHG reductions in the sectors it covers to ensure the 2030 target is achieved.

**Table 9 2017 Climate Change Scoping Plan Emissions Reductions Gap**

Modeling Scenario	2030 GHG Emissions MMTCO <sub>2</sub> e
Reference Scenario (Business-as-Usual)	389
With Known Commitments	320
2030 GHG Target	260
Gap to 2030 Target	60

Source: CARB 2017b.

Table 10, *2017 Climate Change Scoping Plan Emissions Change by Sector*, provides estimated GHG emissions by sector at 1990 levels, and the range of emissions for each sector estimated for 2030. The following sectors would be applicable to the Project: residential and commercial, electric power, recycling and waste, and transportation.

**Table 10 2017 Climate Change Scoping Plan Emissions Change by Sector**

Scoping Plan Sector	1990 MMTCO <sub>2</sub> e	2030 Proposed Plan Ranges MMTCO <sub>2</sub> e	% Change from 1990
Agricultural	26	24-25	-8% to -4%
Residential and Commercial	44	38-40	-14% to -9%
Electric Power	108	30-53	-72% to -51%
High GWP	3	8-11	267% to 367%
Industrial	98	83-90	-15% to -8%
Recycling and Waste	7	8-9	14% to 29%
Transportation (including TCU)	152	103-111	-32% to -27%
Net Sink <sup>1</sup>	-7	TBD	TBD
Sub Total	431	294-339	-32% to -21%
Cap-and-Trade Program	NA	24-79	NA
<b>Total</b>	<b>431</b>	<b>260</b>	<b>-40%</b>

Source: CARB 2017b.

Notes: TCU = Transportation, Communications, and Utilities; TBD: To Be Determined.

<sup>1</sup> Work is underway through 2017 to estimate the range of potential sequestration benefits from the natural and working lands sector.

## Executive Order B-55-18

Executive Order B-55-18, signed September 10, 2018, set a goal “to achieve carbon neutrality as soon as possible, and no later than 2045, and achieve and maintain net negative emissions thereafter.” Executive Order B-55-18 directs CARB to work with relevant state agencies to ensure that future Scoping Plans identify and recommend measures to achieve the carbon neutrality goal. The goal of carbon neutrality by 2045 is in addition to other

statewide goals, meaning that not only should emissions be reduced to 80 percent below 1990 levels by 2050, but that, by no later than 2045, the remaining emissions should be offset by equivalent net removals of CO<sub>2</sub>e from the atmosphere, including through sequestration in forests, soils, and other natural landscapes.

**2022 Climate Change Scoping Plan**

CARB adopted the *2022 Scoping Plan for Achieving Carbon Neutrality* (2022 Scoping Plan) on December 15, 2022, which lays out a path to achieve carbon neutrality by 2045 or earlier and to reduce the State’s anthropogenic GHG emissions (CARB 2022b). The Scoping Plan was updated to address the carbon neutrality goals of EO B-55-18 (discussed below) and the ambitious GHG reduction target as directed by AB 1279. Previous Scoping Plans focused on specific GHG reduction targets for our industrial, energy, and transportation sectors—to meet 1990 levels by 2020, and then the more aggressive 40 percent below that for the 2030 target. This plan expands upon earlier Scoping Plans with a target of reducing anthropogenic emissions to 85 percent below 1990 levels by 2045. Carbon neutrality takes it one step further by expanding actions to capture and store carbon including through natural and working lands and mechanical technologies, while drastically reducing anthropogenic sources of carbon pollution at the same time.

The path forward was informed by the recent Sixth Assessment Report (AR6) of the IPCC and the measures would achieve 85 percent below 1990 levels by 2045 in accordance AB 1279. CARB’s 2022 Scoping Plan identifies strategies as shown in Table 11, *Priority Strategies for Local Government Climate Action Plans*, that would be most impactful at the local level for ensuring substantial process towards the State’s carbon neutrality goals (see Table 4.8-4, *Priority Strategies for Local Government Climate Action Plans*).

**Table 11 Priority Strategies for Local Government Climate Action Plans**

Priority Area	Priority Strategies
Transportation Electrification	Convert local government fleets to zero-emission vehicles (ZEV) and provide EV charging at public sites.
	Create a jurisdiction-specific ZEV ecosystem to support deployment of ZEVs statewide (such as building standards that exceed state building codes, permit streamlining, infrastructure siting, consumer education, preferential parking policies, and ZEV readiness plans).
VMT Reduction	Reduce or eliminate minimum parking standards.
	Implement Complete Streets policies and investments, consistent with general plan circulation element requirements.
	Increase access to public transit by increasing density of development near transit, improving transit service by increasing service frequency, creating bus priority lanes, reducing or eliminating fares, microtransit, etc.
	Increase public access to clean mobility options by planning for and investing in electric shuttles, bike share, car share, and walking.
	Implement parking pricing or transportation demand management pricing strategies.
	Amend zoning or development codes to enable mixed-use, walkable, transit-oriented, and compact infill development (such as increasing allowable density of the neighborhood).
Building Decarbonization	Preserve natural and working lands by implementing land use policies that guide development toward infill areas and do not convert “greenfield” land to urban uses (e.g., green belts, strategic conservation easements)
	Adopt all-electric new construction reach codes for residential and commercial uses.
	Adopt policies and incentive programs to implement energy efficiency retrofits for existing buildings, such as weatherization, lighting upgrades, and replacing energy-intensive appliances and equipment

**Table 11 Priority Strategies for Local Government Climate Action Plans**

Priority Area	Priority Strategies
	with more efficient systems (such as Energy Star-rated equipment and equipment controllers).
	Adopt policies and incentive programs to electrify all appliances and equipment in existing buildings such as appliance rebates, existing building reach codes, or time of sale electrification ordinances
	Facilitate deployment of renewable energy production and distribution and energy storage on privately owned land uses (e.g., permit streamlining, information sharing)
	Deploy renewable energy production and energy storage directly in new public projects and on existing public facilities (e.g., solar photovoltaic systems on rooftops of municipal buildings and on canopies in public parking lots, battery storage systems in municipal buildings).

Source: CARB 2022b

For residential and mixed-use development projects, CARB recommends this first approach to demonstrate that these land use development projects are aligned with State climate goals based on the attributes of land use development that reduce operational GHG emissions while simultaneously advancing fair housing. Attributes that accommodate growth in a manner consistent with the GHG and equity goals of SB 32 have all the following attributes:

Transportation Electrification

- Provide EV charging infrastructure that, at a minimum, meets the most ambitious voluntary standards in the California Green Building Standards Code at the time of project approval.

VMT Reduction

- Is located on infill sites that are surrounded by existing urban uses and reuses or redevelops previously undeveloped or underutilized land that is presently served by existing utilities and essential public services (e.g., transit, streets, water, sewer).
- Does not result in the loss or conversion of the State’s natural and working lands;
- Consists of transit-supportive densities (minimum of 20 residential dwelling units/acre), or is in proximity to existing transit stops (within a half mile), or satisfies more detailed and stringent criteria specified in the region’s Sustainable Communities Strategy (SCS);
- Reduces parking requirements by:
  - Eliminating parking requirements or including maximum allowable parking ratios (i.e., the ratio of parking spaces to residential units or square feet); or
  - Providing residential parking supply at a ratio of <1 parking space per dwelling unit; or

- For multifamily residential development, requiring parking costs to be unbundled from costs to rent or own a residential unit.
  
- At least 20 percent of the units are affordable to lower-income residents;
- Result in no net loss of existing affordable units.

#### Building Decarbonization

- Use all electric appliances without any natural gas connections and does not use propane or other fossil fuels for space heating, water heating, or indoor cooking.

The second approach to project-level alignment with State climate goals is net zero GHG emissions, especially for new residential development. The third approach to demonstrating project-level alignment with State climate goals is to align with GHG thresholds of significance, which many local air quality management (AQMDs) and air pollution control districts (APCDs) have developed or adopted (CARB 2022b).

#### Assembly Bill 1279

On August 31, 2022, the California Legislature passed AB 1279, which requires California to achieve net-zero GHG emissions no later than 2045 and to achieve and maintain negative GHG emissions thereafter. Additionally, AB 1279 also establishes a GHG emissions reduction goal of 85 percent below 1990 levels by 2045. CARB will be required to update the scoping plan to identify and recommend measures to achieve the net-zero and GHG emissions-reduction goals.

#### Senate Bill 375

In 2008, SB 375, the Sustainable Communities and Climate Protection Act, was adopted to connect the GHG emissions reductions targets established in the 2008 Scoping Plan for the transportation sector to local land use decisions that affect travel behavior. Its intent is to reduce GHG emissions from light-duty trucks and automobiles (excludes emissions associated with goods movement) by aligning regional long-range transportation plans, investments, and housing allocations to local land use planning to reduce VMT and vehicle trips. Specifically, SB 375 required CARB to establish GHG emissions reduction targets for each of the 18 metropolitan planning organizations (MPO). The Southern California Association of Governments (SCAG) is the MPO for the Southern California region, which includes the counties of Los Angeles, Orange, San Bernardino, Riverside, Ventura, and Imperial.

Pursuant to the recommendations of the Regional Transportation Advisory Committee, CARB adopted per capita reduction targets for each of the MPOs rather than a total magnitude reduction target. SCAG's targets are an 8 percent per capita reduction from 2005 GHG emission levels by 2020 and a 13 percent per capita reduction from 2005 GHG emission levels by 2035 (CARB 2010). The 2020 targets are smaller than the 2035 targets because a significant portion of the built environment in 2020 is defined by decisions that have already been made. In general, the 2020 scenarios reflect that more time is needed for large land use and

transportation infrastructure changes. Most of the reductions in the interim are anticipated to come from improving the efficiency of the region's transportation network. The targets would result in 3 MMTCO<sub>2e</sub> of reductions by 2020 and 15 MMTCO<sub>2e</sub> of reductions by 2035. Based on these reductions, the passenger vehicle target in CARB's Scoping Plan (for AB 32) would be met (CARB 2010).

### *2017 Update to the SB 375 Targets*

CARB is required to update the targets for the MPOs every eight years. CARB adopted revised SB 375 targets for the MPOs in March 2018. The updated targets became effective in October 2018. All SCSs adopted after October 1, 2018, are subject to these new targets. CARB's updated SB 375 targets for the SCAG region were an 8 percent per capita GHG reduction in 2020 from 2005 levels (unchanged from the 2010 target) and a 19 percent per capita GHG reduction in 2035 from 2005 levels (compared to the 2010 target of 13 percent) (CARB 2018).

The targets consider the need to further reduce VMT, as identified in the 2017 Scoping Plan Update (for SB 32), while balancing the need for additional and more flexible revenue sources to incentivize positive planning and action toward sustainable communities. Like the 2010 targets, the updated SB 375 targets are in units of "percent per capita" reductions in GHG emissions from automobiles and light trucks relative to 2005; this excludes reductions anticipated from implementation of state technology and fuels strategies and any potential future state strategies, such as statewide road user pricing. The proposed targets call for greater per-capita GHG emission reductions from SB 375 than are currently in place, which for 2035 translate into proposed targets that either match or exceed the emission reduction levels in the MPOs' currently adopted SCSs to achieve the SB 375 targets. CARB foresees that the additional GHG emissions reductions in 2035 may be achieved from land use changes, transportation investment, and technology strategies (CARB 2018).

### *SCAG's Regional Transportation Plan / Sustainable Communities Strategy*

SB 375 requires each MPO to prepare a sustainable communities strategy in its regional transportation plan (RTP/SCS). For the SCAG region, the 2024-2050 RTP/SCS, Connect SoCal, was adopted on April 4, 2024, and is an update to the 2020-2045 RTP/SCS. In general, the RTP/SCS outlines a development pattern for the region that, when integrated with the transportation network and other transportation measures and policies, would reduce VMT from automobiles and light duty trucks and thereby reduce GHG emissions from these sources.

Connect SoCal focuses on the continued efforts of the previous RTP/SCSs to integrate transportation and land use strategies in development of the SCAG region through the horizon year 2050 (SCAG 2024). Connect SoCal forecasts that the SCAG region will meet its GHG per capita reduction targets of 8 percent by 2020 and 19 percent by 2035. It also forecasts that implementation of the plan will reduce VMT per capita in year 2050 by 6.3 percent compared to baseline conditions for that year. Connect SoCal includes a "Core Vision" that centers on maintaining and better managing the transportation network for moving people and goods, while expanding mobility choices by locating housing, jobs, and transit closer together; and increasing investments in transit and complete streets (SCAG 2024).

## Transportation Sector Specific Regulations

### *Assembly Bill 1493*

California vehicle GHG emission standards were enacted under AB 1493 (Pavley I). Pavley I is a clean-car standard that reduces GHG emissions from new passenger vehicles (light-duty auto to medium-duty vehicles) from 2009 through 2016 and is anticipated to reduce GHG emissions from new passenger vehicles by 30 percent in 2016. California implements the Pavley I standards through a waiver granted to California by the EPA. In 2012, the EPA issued a Final Rulemaking that sets even more stringent fuel economy and GHG emissions standards for model years 2017 through 2025 light-duty vehicles. (See also the discussion on the update to the Corporate Average Fuel Economy standards at the beginning of this Section 5.5.2 under “Federal.”) In January 2012, CARB approved the Advanced Clean Cars program (formerly known as Pavley II) for model years 2017 through 2025. The program combines the control of smog, soot, and GHGs with requirements for greater numbers of ZE vehicles into a single package of standards. Under California’s Advanced Clean Car program, by 2025 new automobiles will emit 34 percent less GHG emissions and 75 percent less smog-forming emissions.

### *Executive Order S-01-07*

On January 18, 2007, the state set a new LCFS for transportation fuels sold in the state. Executive Order S-01-07 sets a declining standard for GHG emissions measured in CO<sub>2e</sub> gram per unit of fuel energy sold in California. The LCFS required a reduction of 2.5 percent in the carbon intensity of California’s transportation fuels by 2015 and a reduction of at least 10 percent by 2020. The standard applies to refiners, blenders, producers, and importers of transportation fuels, and uses market-based mechanisms to allow these providers to choose how they reduce emissions during the “fuel cycle” using the most economically feasible methods.

### *Executive Order B-16-2012*

On March 23, 2012, the state identified that CARB, the California Energy Commission (CEC), the Public Utilities Commission, and other relevant agencies worked with the Plug-in Electric Vehicle Collaborative and the California Fuel Cell Partnership to establish benchmarks to accommodate ZE vehicles in major metropolitan areas, including infrastructure to support them (e.g., electric vehicle charging stations). The executive order also directed the number of ZE vehicles in California’s state vehicle fleet to increase through the normal course of fleet replacement so that at least 10 percent of fleet purchases of light-duty vehicles are ZE by 2015 and at least 25 percent by 2020. The executive order also establishes a target for the transportation sector of reducing GHG emissions to 80 percent below 1990 levels.

### *Executive Order N-79-20*

On September 23, 2020, Governor Newsom signed Executive Order N-79-20, whose goal is that 100 percent of in-state sales of new passenger cars and trucks will be ZE by 2035. Additionally, the fleet goals for trucks are that 100 percent of drayage trucks are ZE by 2035, and 100 percent of medium- and heavy-duty vehicles in the state are ZE by 2045, where feasible. The Executive Order’s goal for the State is to transition to 100 percent ZE off-road vehicles and equipment by 2035, where feasible.

## Renewables Portfolio: Carbon Neutrality Regulations

### *Senate Bills 1078, 107, and X1-2 and Executive Order S-14-08*

A major component of California's Renewable Energy Program is the renewables portfolio standard established under Senate Bills 1078 (Sher) and 107 (Simitian). Under the RPS, certain retail sellers of electricity were required to increase the amount of renewable energy each year by at least 1 percent in order to reach at least 20 percent by December 30, 2010. Executive Order S-14-08, signed in November 2008, expanded the state's renewable energy standard to 33 percent renewable power by 2020. This standard was adopted by the legislature in 2011 (SB X1-2). Renewable sources of electricity include wind, small hydropower, solar, geothermal, biomass, and biogas. The increase in renewable sources for electricity production will decrease indirect GHG emissions from development projects because electricity production from renewable sources is generally considered carbon neutral.

### *Senate Bill 350*

Senate Bill 350 (de Leon) was signed into law September 2015 and establishes tiered increases to the RPS—40 percent by 2024, 45 percent by 2027, and 50 percent by 2030. SB 350 also set a new goal to double the energy-efficiency savings in electricity and natural gas through energy efficiency and conservation measures.

### *Senate Bill 100*

On September 10, 2018, Governor Brown signed SB 100. Under SB 100, the RPS for public-owned facilities and retail sellers consist of 44 percent renewable energy by 2024, 52 percent by 2027, and 60 percent by 2030. SB 100 also established a new RPS requirement of 50 percent by 2026. Furthermore, the bill establishes an overall state policy that eligible renewable energy resources and zero-carbon resources supply 100 percent of all retail sales of electricity to California end-use customers and 100 percent of electricity procured to serve all state agencies by December 31, 2045. Under the bill, the state cannot increase carbon emissions elsewhere in the western grid or allow resource shuffling to achieve the 100 percent carbon-free electricity target.

## Energy Efficiency Regulations

### *California Building Code: Building Energy Efficiency Standards*

Energy conservation standards for new residential and nonresidential buildings were adopted by the California Energy Resources Conservation and Development Commission (now the CEC) in June 1977 (Title 24, Part 6, of the California Code of Regulations [CCR]). Title 24 requires the design of building shells and building components to conserve energy. The standards are updated periodically to allow for consideration and possible incorporation of new energy efficiency technologies and methods. The 2019 Building Energy Efficiency Standards were adopted on May 9, 2018, and went into effect on January 1, 2020.

The 2019 standards move toward cutting energy use in new homes by more than 50 percent and require installation of solar photovoltaic systems for single-family homes and multifamily buildings of three stories and less. The 2019 standards focus on four key areas: 1) smart residential photovoltaic systems; 2) updated thermal envelope standards (preventing heat transfer from the interior to exterior and vice versa); 3) residential and nonresidential ventilation requirements; 4) and nonresidential lighting requirements (CEC

2018a). Under the 2019 standards, nonresidential buildings are 30 percent more energy efficient than under the 2016 standards, and single-family homes are 7 percent more energy efficient (CEC 2018b). When accounting for the electricity generated by the solar photovoltaic system, single-family homes would use 53 percent less energy compared to homes built to the 2016 standards (CEC 2018a).

Furthermore, on August 11, 2021, the CEC adopted the 2022 Building Energy Efficiency Standards, which were subsequently approved by the California Building Standards Commission in December 2021. The 2022 standards become effective and replace the existing 2019 standards on January 1, 2023. The 2022 standards would require mixed-fuel single-family homes to be electric-ready to accommodate replacement of gas appliances with electric appliances. In addition, the new standards also include prescriptive photovoltaic system and battery requirements for high-rise, multifamily buildings (i.e., more than three stories) and noncommercial buildings such as hotels, offices, medical offices, restaurants, retail stores, schools, warehouses, theaters, and convention centers (CEC 2021).

### *California Building Code: CALGreen*

On July 17, 2008, the California Building Standards Commission adopted the nation's first green building standards. The California Green Building Standards Code (24 CCR, Part 11, known as "CALGreen") was adopted as part of the California Building Standards Code. CALGreen established planning and design standards for sustainable site development, energy efficiency (in excess of the California Energy Code requirements), water conservation, material conservation, and internal air contaminants.<sup>12</sup> The mandatory provisions of CALGreen became effective January 1, 2011, and were last updated in 2019. The 2019 CALGreen standards became effective January 1, 2020. The 2022 standards become effective and replace the existing 2019 standards on January 1, 2023.

Section 5.408 of CALGreen also requires that at least 65 percent of the nonhazardous construction and demolition waste from nonresidential construction operations be recycled and/or salvaged for reuse.

### *2006 Appliance Efficiency Regulations*

The 2006 Appliance Efficiency Regulations (20 CCR §§ 1601–1608) were adopted by the CEC on October 11, 2006, and approved by the California Office of Administrative Law on December 14, 2006. The regulations include standards for both federally regulated appliances and non–federally regulated appliances. Though these regulations are now often viewed as "business as usual," they exceed the standards imposed by all other states, and they reduce GHG emissions by reducing energy demand.

### *Solid Waste Diversion Regulations*

#### ***AB 939: Integrated Waste Management Act of 1989***

California's Integrated Waste Management Act of 1989 (AB 939, Public Resources Code §§ 40050 et seq.) set a requirement for cities and counties throughout the state to divert 50 percent of all solid waste from landfills by January 1, 2000, through source reduction, recycling, and composting. In 2008, the requirements were

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<sup>12</sup> The green building standards became mandatory in the 2010 edition of the code.

modified to reflect a per capita requirement rather than tonnage. To help achieve this, the act requires that each city and county prepare and submit a source reduction and recycling element. AB 939 also established the goal for all California counties to provide at least 15 years of ongoing landfill capacity.

#### ***AB 341***

AB 341 (Chapter 476, Statutes of 2011) increased the statewide goal for waste diversion to 75 percent by 2020 and requires recycling of waste from commercial and multifamily residential land uses. Section 5.408 of CALGreen also requires that at least 65 percent of the nonhazardous construction and demolition waste from nonresidential construction operations be recycled and/or salvaged for reuse.

#### ***AB 1327***

The California Solid Waste Reuse and Recycling Access Act (AB 1327, Public Resources Code §§ 42900 et seq.) requires areas to be set aside for collecting and loading recyclable materials in development projects. The act required the California Integrated Waste Management Board to develop a model ordinance for adoption by any local agency requiring adequate areas for collection and loading of recyclable materials as part of development projects. Local agencies are required to adopt the model or an ordinance of their own.

#### ***AB 1826***

In October of 2014, Governor Brown signed AB 1826 requiring businesses to recycle their organic waste on and after April 1, 2016, depending on the amount of waste they generate per week. This law also requires that on and after January 1, 2016, local jurisdictions across the state implement an organic waste recycling program to divert organic waste generated by businesses and multifamily residential dwellings with five or more units. Organic waste means food waste, green waste, landscape and pruning waste, nonhazardous wood waste, and food-soiled paper waste that is mixed with food waste.

### ***Water Efficiency Regulations***

#### ***SBX7-7***

The 20x2020 Water Conservation Plan was issued by the Department of Water Resources (DWR) in 2010 pursuant to Senate Bill 7, which was adopted during the 7th Extraordinary Session of 2009–2010 and therefore dubbed “SBX7-7.” SBX7-7 mandated urban water conservation and authorized the DWR to prepare a plan implementing urban water conservation requirements (20x2020 Water Conservation Plan). In addition, it required agricultural water providers to prepare agricultural water management plans, measure water deliveries to customers, and implement other efficiency measures. SBX7-7 required urban water providers to adopt a water conservation target of 20 percent reduction in urban per capita water use by 2020 compared to 2005 baseline use.

#### ***AB 1881: Water Conservation in Landscaping Act***

The Water Conservation in Landscaping Act of 2006 (AB 1881) requires local agencies to adopt the updated DWR model ordinance or an equivalent. AB 1881 also requires the CEC to consult with the DWR to adopt, by regulation, performance standards and labeling requirements for landscape irrigation equipment, including

irrigation controllers, moisture sensors, emission devices, and valves to reduce the wasteful, uneconomic, inefficient, or unnecessary consumption of energy or water.

### *Short-Lived Climate Pollutant Reduction Strategy*

#### ***Senate Bill 1383***

On September 19, 2016, the governor signed SB 1383 to supplement the GHG reduction strategies in the Scoping Plan to consider short-lived climate pollutants, including black carbon and methane. Black carbon is the light-absorbing component of fine particulate matter produced during incomplete combustion of fuels. SB 1383 required the state board, no later than January 1, 2018, to approve and begin implementing that comprehensive strategy to reduce emissions of short-lived climate pollutants—to reduce methane by 40 percent, hydrofluorocarbon gases by 40 percent, and anthropogenic black carbon by 50 percent below 2013 levels by 2030. The bill also established targets for reducing organic waste in landfills, which includes a 50 percent reduction in statewide organic waste disposal from 2014 levels by 2020 and a 75 percent reduction from 2014 levels by 2025. Under SB 1383, jurisdictions are required to implement organic waste collection services for all residents and businesses by January 1, 2022. On March 14, 2017, CARB adopted the “Final Proposed Short-Lived Climate Pollutant Reduction Strategy,” which identifies the state’s approach to reducing anthropogenic and biogenic sources of short-lived climate pollutants. Anthropogenic sources of black carbon include on- and off-road transportation, residential wood burning, fuel combustion (charbroiling), and industrial processes. According to CARB, ambient levels of black carbon in California are 90 percent lower than in the early 1960s despite the tripling of diesel fuel use (CARB 2017b). In-use on-road rules were expected to reduce black carbon emissions from on-road sources by 80 percent between 2000 and 2020. South Coast AQMD is one of the air districts that requires air pollution control technologies for chain-driven broilers, which reduces particulate emissions from these char broilers by over 80 percent (CARB 2017b). Additionally, South Coast AQMD Rule 445 limits installation of new fireplaces in the SoCAB.

## **Thresholds of Significance**

The CEQA Guidelines recommend that a lead agency consider the following when assessing the significance of impacts from GHG emissions on the environment:

1. The extent to which the project may increase (or reduce) GHG emissions as compared to the existing environmental setting;
2. Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project;
3. The extent to which the project complies with regulations or requirements adopted to implement an adopted statewide, regional, or local plan for the reduction or mitigation of GHG emissions.<sup>13</sup>

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<sup>13</sup> The Governor’s Office of Planning and Research recommendations include a requirement that such a plan must be adopted through a public review process and include specific requirements that reduce or mitigate the project’s incremental contribution of GHG emissions. If there is

## SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

To provide guidance to local lead agencies on determining significance for GHG emissions in their CEQA documents, South Coast AQMD has convened a GHG CEQA Significance Threshold Working Group (Working Group). Based on the last Working Group meeting (Meeting No. 15) held in September 2010, the South Coast AQMD Working Group identified a tiered approach for evaluating GHG emissions for development projects where South Coast AQMD is not the lead agency (South Coast AQMD 2010):

- **Tier 1.** If a project is exempt from CEQA, project-level and cumulative GHG emissions are less than significant.
- **Tier 2.** If the project complies with a GHG emissions reduction plan or mitigation program that avoids or substantially reduces GHG emissions in the project's geographic area (i.e., city or county), project-level and cumulative GHG emissions are less than significant.
- **Tier 3.** If GHG emissions are less than the screening-level threshold, project-level and cumulative GHG emissions are less than significant.

For projects that are not exempt or where no qualifying GHG reduction plans are directly applicable, South Coast AQMD requires an assessment of GHG emissions. The South Coast AQMD Working Group identified a screening-level threshold of 3,000 MTCO<sub>2e</sub> annually for all land use types or the following land-use-specific thresholds: 1,400 MTCO<sub>2e</sub> for commercial projects, 3,500 MTCO<sub>2e</sub> for residential projects, or 3,000 MTCO<sub>2e</sub> for mixed-use projects. These bright-line thresholds are based on a review of the Governor's Office of Planning and Research database of CEQA projects. Based on their review of 711 CEQA projects, 90 percent of CEQA projects would exceed the bright-line thresholds identified above. Therefore, projects that do not exceed the bright-line threshold would have a nominal, and therefore, less than cumulatively considerable impact on GHG emissions:

- **Tier 4.** If emissions exceed the screening threshold, a more detailed review of the project's GHG emissions is warranted.

The South Coast AQMD Working Group has identified an efficiency target for projects that exceed the screening threshold of 4.8 MTCO<sub>2e</sub> per year per service population (MTCO<sub>2e</sub>/year/SP) for project-level analyses and 6.6 MTCO<sub>2e</sub>/year/SP for plan level projects (e.g., program-level projects such as general plans) for the year 2020.<sup>14</sup> The per capita efficiency targets are based on the AB 32 GHG reduction target and 2020 GHG emissions inventory prepared for CARB's 2008 Scoping Plan.

The bright-line screening-level criterion of 3,000 MTCO<sub>2e</sub>/yr is used as the significance threshold for this Project. Therefore, if the Project operation-phase emissions exceed the 3,000 MTCO<sub>2e</sub>/yr threshold, GHG emissions would be considered potentially significant in the absence of mitigation measures.

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substantial evidence that the possible effects of a particular project are still cumulatively considerable, notwithstanding compliance with the adopted regulations or requirements, an EIR must be prepared for the project.

<sup>14</sup> It should be noted that the Working Group also considered efficiency targets for 2035 for the first time in this Working Group meeting.

## BIBLIOGRAPHY

- Bay Area Air Quality Management District (BAAQMD). 2023, April. 2022 California Environmental Quality Act Air Quality Guidelines. <https://www.baaqmd.gov/plans-and-climate/california-environmental-quality-act-ceqa/updated-ceqa-guidelines>.
- California Air Pollution Control Officers Association (CAPCOA). 2022. California Emissions Estimator Model (CalEEMod). Version 2022.1.0. Prepared by: ICF in collaboration with Sacramento Metropolitan Air Quality Management District.
- California Air Resources Board (CARB). 1998, April 22. The Report on Diesel Exhaust. <http://www.arb.ca.gov/toxics/dieseltac/de-fnds.htm>.
- . 1999. California Air Resources Board (CARB). Final Staff Report: Update to the Toxic Air Contaminant List. <https://www.arb.ca.gov/toxics/finalreport.pdf>
- . 2010, September. Staff Report Proposed Regional Greenhouse Gas Emission Reduction Targets for Automobiles and Light Trucks Pursuant to Senate Bill 375. <https://ww3.arb.ca.gov/board/res/2010/res10-31.pdf>.
- . 2016, October 1. Ambient Air Quality Standards. <https://ww2.arb.ca.gov/sites/default/files/2020-07/aaqs2.pdf>.
- . 2017a, March 14. Final Proposed Short-Lived Climate Pollutant Reduction Strategy. [https://ww2.arb.ca.gov/sites/default/files/2018-12/final\\_slcp\\_report%20Final%202017.pdf](https://ww2.arb.ca.gov/sites/default/files/2018-12/final_slcp_report%20Final%202017.pdf).
- . 2017b, November. California's 2017 Climate Change Scoping Plan: The Strategy for Achieving California's 2030 Greenhouse Gas Target. [https://www.arb.ca.gov/cc/scopingplan/scoping\\_plan\\_2017.pdf](https://www.arb.ca.gov/cc/scopingplan/scoping_plan_2017.pdf).
- . 2018, February. Proposed Update to the SB 375 Greenhouse Gas Emission Reduction Targets. [https://www.arb.ca.gov/cc/sb375/sb375\\_target\\_update\\_final\\_staff\\_report\\_feb2018.pdf](https://www.arb.ca.gov/cc/sb375/sb375_target_update_final_staff_report_feb2018.pdf).
- . 2019, July 25. California and major automakers reach groundbreaking framework agreement on clean emission standards. <https://ww2.arb.ca.gov/news/california-and-major-automakers-reach-groundbreaking-framework-agreement-clean-emission>.
- . 2022a, February 24. Videoconference Meeting of State of California Air Resources Board. <https://ww2.arb.ca.gov/sites/default/files/barcu/board/mt/2022/mt022422.pdf>.
- . 2022b, 2022 Scoping Plan for Achieving Carbon Neutrality, <https://ww2.arb.ca.gov/sites/default/files/2022-12/2022-sp.pdf>, accessed December 7, 2022.
- . 2025a, March 12 (accessed). Area Designations Maps/State and National. <https://ww2.arb.ca.gov/resources/documents/maps-state-and-federal-area-designations>.

- \_\_\_\_\_. 2025b, March 12 (accessed). Air Pollution Data Monitoring Cards (2019, 2020, 2021, 2022, and 2023). <https://www.arb.ca.gov/adam/topfour/topfour1.php>.
- California Energy Commission (CEC). 2018a. News Release: Energy Commission Adopts Standards Requiring Solar Systems for New Homes, First in Nation. <https://www.energy.ca.gov/news/2018-05/energy-commission-adopts-standards-requiring-solar-systems-new-homes-first>.
- \_\_\_\_\_. 2018b. 2019 Building Energy and Efficiency Standards Frequently Asked Questions. [https://www.energy.ca.gov/sites/default/files/2020-03/Title\\_24\\_2019\\_Building\\_Standards\\_FAQ\\_ada.pdf](https://www.energy.ca.gov/sites/default/files/2020-03/Title_24_2019_Building_Standards_FAQ_ada.pdf).
- \_\_\_\_\_. 2021, May 19. Amendments to the Building Energy Efficiency Standards (2022 Energy Code) Draft Environmental Report. CEC-400-2021-077-D.
- Intergovernmental Panel on Climate Change (IPCC). 1995. Second Assessment Report: Climate Change 1995. [https://www.ipcc.ch/site/assets/uploads/2018/02/ipcc\\_sar\\_wg\\_I\\_full\\_report.pdf](https://www.ipcc.ch/site/assets/uploads/2018/02/ipcc_sar_wg_I_full_report.pdf).
- \_\_\_\_\_. 2001. Third Assessment Report: Climate Change 2001. New York: Cambridge University Press. [https://www.ipcc.ch/site/assets/uploads/2018/03/WGI\\_TAR\\_full\\_report.pdf](https://www.ipcc.ch/site/assets/uploads/2018/03/WGI_TAR_full_report.pdf).
- \_\_\_\_\_. 2007. Fourth Assessment Report: Climate Change 2007. New York: Cambridge University Press. [https://www.ipcc.ch/site/assets/uploads/2018/02/ar4\\_syr\\_full\\_report.pdf](https://www.ipcc.ch/site/assets/uploads/2018/02/ar4_syr_full_report.pdf).
- \_\_\_\_\_. 2013. Fifth Assessment Report: Climate Change 2013. New York: Cambridge University Press. [https://www.ipcc.ch/site/assets/uploads/2018/02/WG1AR5\\_all\\_final.pdf](https://www.ipcc.ch/site/assets/uploads/2018/02/WG1AR5_all_final.pdf).
- National Highway Traffic Safety Administration (NHTSA). 2021, August 5. USDOT Proposes Improved Fuel Economy Standards for MY 2024-2026 Passenger Cars and Light Trucks. <https://www.nhtsa.gov/press-releases/fuel-economy-standards-2024-2026-proposal>.
- South Coast Air Quality Management District (South Coast AQMD). 1992. Federal Attainment Plan for Carbon Monoxide.
- \_\_\_\_\_. 1993. California Environmental Quality Act Air Quality Handbook. [http://www.aqmd.gov/home/rules-compliance/ceqa/air-quality-analysis-handbook/ceqa-air-quality-handbook-\(1993\)](http://www.aqmd.gov/home/rules-compliance/ceqa/air-quality-analysis-handbook/ceqa-air-quality-handbook-(1993)).
- \_\_\_\_\_. 2003. 2003 Air Quality Management Plan. Appendix V. <https://www.aqmd.gov/home/air-quality/clean-air-plans/air-quality-mgt-plan/2003-aqmp>
- \_\_\_\_\_. 2005, May. Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning. <http://www.aqmd.gov/docs/default-source/planning/air-quality-guidance/complete-guidance-document.pdf>.

- . 2008a, July. Final Localized Significance Threshold Methodology. <http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/final-lst-methodology-document.pdf?sfvrsn=2>.
- . 2008b, September. Multiple Air Toxics Exposure Study in the South Coast Air Basin (MATES III). <https://www.aqmd.gov/home/air-quality/air-quality-studies/health-studies/mates-iii>.
- . 2010, September 28. Greenhouse Gases (GHG) CEQA Significance Thresholds Working Group Meeting 15. [http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-\(ghg\)-ceqa-significance-thresholds/year-2008-2009/ghg-meeting-15/ghg-meeting-15-main-presentation.pdf](http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-(ghg)-ceqa-significance-thresholds/year-2008-2009/ghg-meeting-15/ghg-meeting-15-main-presentation.pdf).
- . 2011. Fact Sheet for Applying CalEEMod to Localized Significance Thresholds. <http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/calceemod-guidance.pdf?sfvrsn=2>.
- . 2012, May 4. Final 2012 Lead State Implementation Plan: Los Angeles County. <http://www3.aqmd.gov/hb/attachments/2011-2015/2012May/2012-May4-030.pdf>.
- . 2013, February. 2012 Final Air Quality Management Plan. [https://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2012-air-quality-management-plan/final-2012-aqmp-\(february-2013\)/main-document-final-2012.pdf](https://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2012-air-quality-management-plan/final-2012-aqmp-(february-2013)/main-document-final-2012.pdf).
- . 2015a, October 3. Final Report Multiple Air Toxics Exposure Study in the South Coast Air Basin (MATES IV). <https://www.aqmd.gov/docs/default-source/air-quality/air-toxic-studies/mates-iv/mates-iv-final-draft-report-4-1-15.pdf?sfvrsn=7>.
- . 2015b. Health Effects of Air Pollution. <http://www.aqmd.gov/docs/default-source/publications/brochures/the-health-effects-of-air-pollution-brochure.pdf>.
- . 2015c, October. “Blueprint for Clean Air: 2016 AQMP White Paper.” 2016 AQMP White Papers Web Page. <https://www.aqmd.gov/docs/default-source/Agendas/aqmp/white-paper-working-groups/wp-blueprint-final.pdf?sfvrsn=2>.
- . 2017, March 4. Final 2016 Air Quality Management Plan. <https://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2016-air-quality-management-plan/final-2016-aqmp/final2016aqmp.pdf?sfvrsn=15>.
- . 2019, April (revised). South Coast AQMD Air Quality Significance Thresholds. <http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf>.
- . 2021a, August. Final Report, Multiple Air Toxics Exposure Study V (MATES V). <http://www.aqmd.gov/home/air-quality/air-quality-studies/health-studies/mates-v>.

- . 2021b, October. Draft Final 2021 Redesignation Request and Maintenance Plan for the 2006 and 1997 24-Hour PM<sub>2.5</sub> Standards for South Coast Air Basin.  
<https://ww2.arb.ca.gov/sites/default/files/2021-10/draft-final-pm2-5-redesignation-request-and-maintenance-plan.pdf>
- . 2022, December. 2022 South Coast AQMD Air Quality Management Plan (AQMP),  
<https://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/2022-air-quality-management-plan/final-2022-aqmp/final-2022-aqmp.pdf?sfvrsn=10>.
- . 2023, March (revised). South Coast AQMD Air Quality Significance Thresholds.  
<https://www.aqmd.gov/docs/default-source/ceqa/handbook/south-coast-aqmd-air-quality-significance-thresholds.pdf?sfvrsn=25>.
- Southern California Association of Governments (SCAG). 2024. Connect SoCal Plan: The 2024–2050 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) of the Southern California Association of Governments. <https://www.connectsocial.org/Pages/Connect-SoCal-Final-Plan.aspx>.
- USA.Com. 2023, January 24 (accessed). Temecula, CA Weather. <http://www.usa.com/temecula-ca-weather.htm>.
- US Environmental Protection Agency (USEPA). 2009, December. EPA: Greenhouse Gases Threaten Public Health and the Environment. Science overwhelmingly shows greenhouse gas concentrations at unprecedented levels due to human activity.  
[https://archive.epa.gov/epapages/newsroom\\_archive/newsreleases/08d11a451131bca585257685005bf252.html](https://archive.epa.gov/epapages/newsroom_archive/newsreleases/08d11a451131bca585257685005bf252.html).
- . 2021, August 16 (mod.). Criteria Air Pollutants. Accessed January 25, 2023.  
<https://www.epa.gov/criteria-air-pollutants>.
- . 2023, January 21 (accessed). Overview of Greenhouse Gases.  
<http://www3.epa.gov/climatechange/ghgemissions/gases.html>.

# **Assumptions Worksheet**

## CalEEMod Inputs- Temecula Valley Charter School Project, Onsite Construction

**Name:** Temecula Valley Charter School Project, Onsite Construction  
**Project Number:** TVCS-04  
**Project Location:** 35777 Abelia Street, Winchester, CA 92596  
**County/Air Basin:** Riverside-South Coast  
**Climate Zone:** 10  
**Land Use Setting:** Urban  
**Operational Year:** 2024  
**Utility Company:** Southern California Edison  
**Air Basin:** South Coast Air Basin  
**Air District:** South Coast AQMD  
**SRA:** 24 - Perris Valley

Project Site Acreage 12.81  
 Disturbed Site Acreage 10.82

Project Components	Number of Stories	SQFT	Building Footprint	Acres
<b>Construction</b>				
Main Building	1	17,292	17,292	0.40
Single Classroom Modular Building	1	15,360	15,360	0.00
Future Single Classroom Modular Building	1	960	960	0.00
Double Classroom Modular Building	1	14,400	14,400	0.00
Future Double Classroom Modular Building	1	2,880	2,880	0.00
Restroom Buildings	1	1,920	1,920	0.00
Trash Enclosure	1	220	220	0.00
Shipping Container Storage	1	960	960	0.00
<b>TOTAL<sup>1</sup></b>		<b>53,992</b>		<b>0.40</b>
<b>Onsite Surface Work</b>				
	<b>Stalls</b>			
Parking Lot	153	107,424		2.47
Asphalt Surfaces <sup>1</sup>		96,596		2.22
Landscaping		214,975		4.94
Hardscape		35,019		0.80
			<b>TOTAL ACREAGE</b>	<b>10.82</b>

**Notes**

<sup>1</sup> Asphalt surface area also includes the area under the modular buildings, trash enclosure, and shipping container storage.

### CalEEMod Land Use Inputs

Land Use Type	Land Use Subtype	Unit Amount	Size Metric	Lot Acreage	Building Square Feet	Landscape Area Square Feet	Special Landscape Area Square Feet
School Building	Elementary School	53.99	1000 sqft	5.33	53,992	214,975	0
Parking	Parking Lot	107.42	1000 sqft	2.47	107,424	0	0
Parking	Other Asphalt Surfaces	96.60	1000 sqft	2.22	96,596	0	0
Parking	Other Non-Asphalt Surfaces	35.02	1000 sqft	0.80	35,019	0	0
				<b>10.82</b>			

**Architectural Coating**

	Percent Painted
Interior Painted:	100%
Exterior Painted:	100%

**SCAQMD Rule 1113**

Interior Paint VOC content:	100	grams per liter
Exterior Paing VOC content:	100	grams per liter

Structures	Land Use Square Feet	CalEEMod Factor <sup>2</sup>	Total Paintable Surface Area	Paintable Interior Area <sup>1</sup>	Paintable Exterior Area <sup>1</sup>
<b>Non-Residential Structures</b>					
Elementary School	19,432	2.0	38,864	29,148	9,716
			38,864	<b>29,148</b>	<b>9,716</b>
<b>Parking</b>					
Parking Lot	107,424			-	14,342
					<b>14,342</b>

**Notes**

<sup>1</sup> CalEEMod methodology calculates the paintable interior and exterior areas by multiplying the total paintable surface area by 75 and 25 percent, respectively. Exclude square footage of modular buildings and shipping container storages since these type of structures do not usually require painting.

<sup>2</sup> The program assumes the total surface for painting equals 2 times the floor square footage for nonresidential square footage defined by the user.

<sup>3</sup> CalEEMod default used for striping of parking lot.

**CalEEMod Construction Measures**

<b>C-10-A</b>	Water Exposed Surfaces	Frequency per day:	2	
		PM10:	55	% Reduction
		PM2.5:	55	% Reduction
<b>C-11</b>	Limit Vehicle Speeds on Unpaved Roads	Miles per hour speed limit:	25	
		PM10:	44	% Reduction
		PM25:	44	% Reduction
<b>C-12</b> SCAQMD Rule 1186	Sweep Paved Roads	PM10:	9	% Reduction
		PM25:	9	% Reduction

**Southern California Edison Carbon Intensity Factors<sup>1</sup>**

CO2:	348.64	pounds per megawatt hour
CH4:	0.033	pound per megawatt hour
N2O:	0.004	pound per megawatt hour

**Notes:**

<sup>1</sup> CalEEMod default values.

## CalEEMod Inputs- Temecula Valley Charter School Project, Offsite Construction

**Name:** Temecula Valley Charter School Project, Offsite Construction  
**Project Number:** TVCS-04  
**Project Location:** 35777 Abelia Street, Winchester, CA 92596  
**County/Air Basin:** Riverside-South Coast  
**Climate Zone:** 10  
**Land Use Setting:** Urban  
**Operational Year:** 2024  
**Utility Company:** Southern California Edison  
**Air Basin:** South Coast Air Basin  
**Air District:** South Coast AQMD  
**SRA:** 24 - Perris Valley

Project Site Acreage	12.81
Disturbed Site Acreage	0.69

Project Components	SQFT	TONS		
<b>Demolition</b>				
Asphalt Demolition	26,012	385		
Project Components	Number of Stories	SQFT	Building Footprint	Acres
<b>Offsite Improvements</b>				
Street Asphalt Paving		26,012		0.60
Hardscape		4,245		0.10
<b>TOTAL ACREAGE</b>				<b>0.69</b>

### CalEEMod Land Use Inputs

Land Use Type	Land Use Subtype	Unit Amount	Size Metric	Lot Acreage	Building Square Feet	Landscape Area Square Feet	Special Landscape Area Square Feet
Parking	Other Asphalt Surfaces	26.012	1000 sqft	0.60	26,012	0	0
Parking	Other Non-Asphalt Surfaces	4.245	1000 sqft	0.10	4,245	0	0
				<b>0.69</b>			

**Demolition**

Component	Amount to be Demolished (Tons)	Haul Truck Capacity (Tons) <sup>1</sup>	Haul Distance (miles) <sup>1</sup>	Total Trip Ends	Duration (days)	Trip Ends/Day
Asphalt Demolition Debris Haul	385	20	20	40	1	40
<b>Total</b>	<b>385</b>			<b>40</b>		

Notes:

<sup>1</sup> CalEEMod default used.

**Architectural Coating**

	Percent Painted
Interior Painted:	100%
Exterior Painted:	100%

**SCAQMD Rule 1113**

Interior Paint VOC content:	100	grams per liter
Exterior Paing VOC content:	100	grams per liter

Structures	Land Use Square Feet	CalEEMod Factor <sup>2</sup>	Total Paintable Surface Area	Paintable Interior Area <sup>1</sup>	Paintable Exterior Area <sup>1</sup>
<b>Parking</b>					
Street Asphalt	26,012			-	1,815
					<b>1,815</b>

Notes

<sup>1</sup> CalEEMod methodology calculates the paintable interior and exterior areas by multiplying the total paintable surface area by 75 and 25 percent, respectively. Exclude square footage of modular buildings since these type of structures do not usually require painting.

<sup>2</sup> The program assumes the total surface for painting equals 2 times the floor square footage for nonresidential square footage defined by the user.

<sup>3</sup> CalEEMod default used for striping of street asphalt.

**CalEEMod Construction Measures**

<b>C-10-A</b>	Water Exposed Surfaces	Frequency per day:	2	
		PM10:	55	% Reduction
		PM2.5:	55	% Reduction
<b>C-11</b>	Limit Vehicle Speeds on Unpaved Roads	Miles per hour speed limit:	25	
		PM10:	44	% Reduction
		PM25:	44	% Reduction
<b>C-12</b> SCAQMD Rule 1186	Sweep Paved Roads	PM10:	9	% Reduction
		PM25:	9	% Reduction

**Southern California Edison Carbon Intensity Factors<sup>1</sup>**

CO2:	348.64	pounds per megawatt hour
CH4:	0.033	pound per megawatt hour
N2O:	0.004	pound per megawatt hour

Notes:

<sup>1</sup> CalEEMod default values.

## Pavement Volume to Weight Conversion

<b>Component</b>	<b>Total SF of Area<sup>1</sup></b>	<b>Assumed Thickness (foot)<sup>2</sup></b>	<b>Debris Volume (cu. ft)</b>	<b>Weight of Crushed Asphalt (lbs/cf)<sup>3</sup></b>	<b>AC Mass (lbs)</b>	<b>AC Mass (tons)</b>
Asphalt Demolition	26,012	0.333	8,671	89	770,726	385.36
<b>Total</b>	26,012					385

<sup>1</sup> Based on aerial image of existing project site.

<sup>2</sup> Pavements and Surface Materials. Nonpoint Education for Municipal Officials, Technical Paper Number 8. University of Connecticut Cooperative Extension System, 1999.

<sup>3</sup> <https://www.delmar.ca.us/DocumentCenter/View/5668/CalRecycle-Conversion-Table>

**Construction Activities and Schedule Assumptions**

Construction Activities	Phase Type	Construction Schedule		
		Start Date	End Date	CalEEMod Duration (Workday)
<b>Onsite Construction</b>				
Onsite Site Preparation	Site Preparation	7/25/2023	7/30/2023	4
Onsite Rough Grading	Grading	7/31/2023	8/30/2023	23
Onsite Fine Grading	Grading	8/31/2023	9/15/2023	12
Onsite Utility Trenching	Trenching	9/18/2023	12/11/2023	61
Onsite Building Construction	Building Construction	9/18/2023	6/3/2024	186
Onsite Paving	Paving	9/18/2023	10/20/2023	25
Onsite Modular Building Installation	Building Construction	10/20/2023	11/24/2023	26
Onsite Architectural Coating	Architectural Coating	10/23/2023	12/15/2023	40
Onsite Finishing/Landscaping	Trenching	1/8/2024	5/3/2024	85
<b>Offsite Construction</b>				
Offsite Site Preparation	Site Preparation	3/27/2024	3/29/2024	3
Offsite Asphalt Demolition	Demolition	4/1/2024	4/5/2024	5
Demolition Haul		4/5/2024	4/5/2024	1
Offsite Rough Grading	Grading	4/8/2024	4/9/2024	2
Offsite Fine Grading	Grading	4/10/2024	4/12/2024	3
Offsite Paving	Paving	4/15/2024	4/20/2024	5
Offsite Finishing/Landscaping	Trenching	4/16/2024	4/26/2024	9
Offsite Architectural Coating	Architectural Coating	4/23/2024	4/25/2024	3

**Overlapping Construction Schedule (CalEEMod)**

Construction Activities	Start Date	End Date	CalEEMod Duration (Workday)
Onsite Site Preparation	7/25/2023	7/30/2023	4
Onsite Rough Grading	7/31/2023	8/30/2023	23
Onsite Fine Grading	8/31/2023	9/15/2023	12
Onsite Utility Trenching, Onsite Building Construction, Onsite Paving	9/18/2023	10/19/2023	24
Onsite Utility Trenching, Onsite Building Construction, Onsite Paving, Onsite Modular Building Installation	10/20/2023	10/20/2023	1
Onsite Utility Trenching, Onsite Building Construction, Onsite Modular Building Installation, Onsite Architectural Coating	10/23/2023	11/24/2023	25
Onsite Utility Trenching, Onsite Building Construction, Onsite Architectural Coating	11/25/2023	12/11/2023	11
Onsite Building Construction, Onsite Architectural Coating	12/12/2023	12/15/2023	4
Onsite Building Construction 2023	12/16/2023	12/31/2023	10
Onsite Building Construction 2024	1/1/2024	1/7/2024	5
Onsite Building Construction 2024 and Onsite Finishing/Landscaping	1/8/2024	3/26/2024	57
Onsite Building Construction 2024, Onsite Finishing/Landscaping, Offsite Site Preparation	3/27/2024	3/29/2024	3
Onsite Building Construction 2024, Onsite Finishing/Landscaping, Offsite Asphalt Demolition	4/1/2024	4/5/2024	5
Onsite Building Construction 2024, Onsite Finishing/Landscaping, Offsite Rough Grading	4/8/2024	4/9/2024	2
Onsite Building Construction 2024, Onsite Finishing/Landscaping, Offsite Fine Grading	4/10/2024	4/12/2024	3
Onsite Building Construction 2024, Onsite Finishing/Landscaping, Offsite Paving	4/15/2024	4/15/2024	1
Onsite Building Construction 2024, Onsite Finishing/Landscaping, Offsite Paving, Offsite Finishing/Landscaping	4/16/2024	4/20/2024	4
Onsite Building Construction 2024, Onsite Finishing/Landscaping, Offsite Finishing/Landscaping	4/21/2024	4/22/2024	1
Onsite Building Construction 2024, Onsite Finishing/Landscaping, Offsite Finishing/Landscaping, Offsite Architectural Coating	4/23/2024	4/25/2024	3
Onsite Building Construction 2024, Onsite Finishing/Landscaping, Offsite Finishing/Landscaping	4/26/2024	4/26/2024	1
Onsite Building Construction 2024, Onsite Finishing/Landscaping	4/27/2024	5/3/2024	5
Onsite Building Construction 2024	5/4/2024	6/3/2024	21

**CalEEMod Construction Off-Road Equipment Inputs**

Construction Equipment Details <sup>1</sup>					
Equipment Given	CalEEMod Equipment	# of Equipment	hr/day	hp	total trips per day
<b>Site Preparation</b>					
Water Truck		1	4		
NA	Rubber Tired Dozers	3	8	367	
NA	Tractors/Loaders/Backhoes	4	8	84	
Worker Trips					18
Vendor Trips					0
Hauling Trips					0
Water Trucks					2
<b>Rough Grading</b>					
Water truck		1	4		
Cat D5 Dozer	Crawler Tractor	3	6	170	
Cat 644 Scraper	Scrapers	3	6	423	
824 Compactor	Rubber Tired Dozers	3	6	405	
Worker Trips					23
Vendor Trips					0
Hauling Trips					0
Water Trucks					2
<b>Fine Grading</b>					
Skid Steer - 246	Skid Steer Loaders	2	6	74.3	
Skip Loader	Rubber tired loaders	2	6	150	
430E Backhoe	Tractors/Loaders/Backhoes	2	6	101	
Worker Trips					15
Vendor Trips					0
Hauling Trips					0
<b>Utility Trenching</b>					
Cat 308E Excavator	Excavators	2	6	66.6	
Skip Loader	Rubber tired loaders	2	6	150	
Wacker	Plate compactors	1	6	8	
Worker Trips					13
Vendor Trips					0
Hauling Trips					0
<b>Building Construction</b>					
Scissor Lift	Forklifts	2	8	82	
Forklift	Forklifts	2	8	82	
Skytrak	Rough Terrain Forklift	2	8	96	
Boom Lifts	Aerial Lifts	2	8	46	
Worker Trips					23
Vendor Trips					9
Hauling Trips					0
<b>Modular Installation<sup>2</sup></b>					
Paving Machine	Paving Equipment	1	8	89	
Water Truck		1	4		
Roller (5-8 tn)	Rollers	2	6	36	
Street Sweep	Sweepers/Scrubbers	1	6	36	
Worker Trips					23
Vendor Trips					9
Hauling Trips					0
Water Trucks					2
<b>Paving<sup>2</sup></b>					
Paving Machine	Paving Equipment	1	8	89	
Water Truck		1	4		
Roller (5-8 tn)	Rollers	1	6	36	
Street Sweep	Sweepers/Scrubbers	1	6	36	
Worker Trips					8
Vendor Trips					0
Hauling Trips					0
Water Trucks					2

Architectural Coating					
Scissor Lift	Forklifts	1	8	82	
Forklift	Forklifts	1	8	82	
Skytrak	Rough Terrain Forklift	1	8	96	
Boom Lifts	Aerial Lifts	1	8	46	
Worker Trips					9
Vendor Trips					0
Hauling Trips					0
Finishing/Landscaping					
Skid Steer - 246	Skid Steer Loaders	2	6	74.3	
Skip Loader	Rubber tired loaders	2	6	150	
Worker Trips					10
Vendor Trips					0
Hauling Trips					0

Notes:

<sup>1</sup> If specific equipment type was not given then CalEEMod default equipment and hp was used.

<sup>2</sup> Rubber tired loaders already accounted for in Onsite Utility Trenching activity.

## CalEEMod Construction Off-Road Equipment Inputs

Construction Equipment Details <sup>1</sup>					
Equipment Given	CalEEMod Equipment	# of Equipment	hr/day	hp	total trips per day
<b>Asphalt Demolition</b>					
PM820 Milling Machine	Crushing/Proc Equipment	1	6	99	
Worker Trips					3
Vendor Trips					0
Hauling Trips					40
Water Trucks					0
<b>Site Preparation</b>					
Water Truck		1	4		
	Tractors/Loaders/Backhoes	1	8	84	
	Graders	1	8	148	
Worker Trips					5
Vendor Trips					0
Hauling Trips					0
Water Trucks					2
<b>Rough Grading</b>					
Water truck		1	4		
Cat D5 Dozer	Crawler Tractor	1	6	170	
Cat 644 Scraper	Scrapers	1	6	423	
824 Compactor	Rubber Tired Dozers	1	6	405	
Worker Trips					8
Vendor Trips					0
Hauling Trips					0
Water Trucks					2
<b>Fine Grading<sup>2</sup></b>					
430E Backhoe	Tractors/Loaders/Backhoes	1	6	101	
Worker Trips					3
Vendor Trips					0
Hauling Trips					0
<b>Paving<sup>2</sup></b>					
Paving Machine	Paving Equipment	1	8	89	
Water Truck		1	4		
Roller (5-8 tn)	Rollers	1	6	36	
Street Sweep	Sweepers/Scrubbers	1	6	36	
Worker Trips					8
Vendor Trips					0
Hauling Trips					0
Water Trucks					2
<b>Architectural Coating<sup>4</sup></b>					
Worker Trips					0
Vendor Trips					0
Hauling Trips					0
<b>Finishing/Landscaping<sup>2,3</sup></b>					
Worker Trips					0
Vendor Trips					0
Hauling Trips					0

Notes:

<sup>1</sup> If specific equipment type was not given then CalEEMod default equipment and hp was used.

<sup>2</sup> Rubber tired loaders already accounted for in Onsite Finishing/Landscaping activity.

<sup>3</sup> Skid steer loaders already accounted for in Onsite Finishing/Landscaping activity.

<sup>4</sup> Equipment already accounted for in Onsite Building Construction activity.

Phase Name	Worker Trip	Vendor Trip	Haul Truck	Start Date	End Date	Workdays
	Ends Per Day	Ends Per Day	Trip Ends Per Day			
Onsite Site Preparation	18	2	0	7/25/2023	7/30/2023	4
Onsite Rough Grading	23	2	0	7/31/2023	8/30/2023	23
Onsite Fine Grading	15	0	0	8/31/2023	9/15/2023	12
Onsite Utility Trenching	13	0	0	9/18/2023	12/11/2023	61
Onsite Building Construction	23	9	0	9/18/2023	6/3/2024	186
Onsite Paving	8	2	0	9/18/2023	10/20/2023	25
Onsite Modular Building Installation	23	12	0	10/20/2023	11/24/2023	26
Onsite Architectural Coating	9	0	0	10/23/2023	12/15/2023	40
Onsite Finishing/Landscaping	10	0	0	1/8/2024	5/3/2024	85
Offsite Site Preparation	5	2	0	3/27/2024	3/29/2024	3
Offsite Asphalt Demolition	3	0	40	4/1/2024	4/5/2024	5
Offsite Rough Grading	8	2	0	4/8/2024	4/9/2024	2
Offsite Fine Grading	3	0	0	4/10/2024	4/12/2024	3
Offsite Paving	8	2	0	4/15/2024	4/20/2024	5
Offsite Finishing/Landscaping	0	0	0	4/16/2024	4/26/2024	9
Offsite Architectural Coating	0	0	0	4/23/2024	4/25/2024	3

Construction Activity (Overlapping)	Worker Trip	Vendor Trip	Haul Truck	Start Date	End Date	Workdays
	Ends Per Day	Ends Per Day	Trip Ends Per Day			
Onsite Site Preparation	18	2	0	7/25/2023	7/30/2023	4
Onsite Rough Grading	23	2	0	7/31/2023	8/30/2023	23
Onsite Fine Grading	15	0	0	8/31/2023	9/15/2023	12
Onsite Utility Trenching, Onsite Building Construction, Onsite Paving	44	11	0	9/18/2023	10/19/2023	24
Onsite Utility Trenching, Onsite Building Construction, Onsite Paving, Onsite Modular Building Installation	67	23	0	10/20/2023	10/20/2023	1
Onsite Utility Trenching, Onsite Building Construction, Onsite Modular Building Installation, Onsite Architectural Coating	68	21	0	10/23/2023	11/24/2023	25
Onsite Utility Trenching, Onsite Building Construction, Onsite Architectural Coating	45	9	0	11/25/2023	12/11/2023	11
Onsite Building Construction, Onsite Architectural Coating	32	9	0	12/12/2023	12/15/2023	4
Onsite Building Construction 2023	23	9	0	12/16/2023	12/31/2023	10
Onsite Building Construction 2024	23	9	0	1/1/2024	1/7/2024	5
Onsite Building Construction 2024 and Onsite Finishing/Landscaping	33	9	0	1/8/2024	3/26/2024	57
Onsite Building Construction 2024, Onsite Finishing/Landscaping, Offsite Site Preparation	38	11	0	3/27/2024	3/29/2024	3
Onsite Building Construction 2024, Onsite Finishing/Landscaping, Offsite Asphalt Demolition	36	9	40	4/1/2024	4/5/2024	5
Onsite Building Construction 2024, Onsite Finishing/Landscaping, Offsite Rough Grading	41	11	0	4/8/2024	4/9/2024	2
Onsite Building Construction 2024, Onsite Finishing/Landscaping, Offsite Fine Grading	36	9	0	4/10/2024	4/12/2024	3
Onsite Building Construction 2024, Onsite Finishing/Landscaping, Offsite Paving	41	11	0	4/15/2024	4/15/2024	1
Onsite Building Construction 2024, Onsite Finishing/Landscaping, Offsite Paving, Offsite Finishing/Landscaping	41	11	0	4/16/2024	4/20/2024	4
Onsite Building Construction 2024, Onsite Finishing/Landscaping, Offsite Finishing/Landscaping	33	9	0	4/21/2024	4/22/2024	1
Onsite Building Construction 2024, Onsite Finishing/Landscaping, Offsite Finishing/Landscaping, Offsite Architectural Coating	33	9	0	4/23/2024	4/25/2024	3
Onsite Building Construction 2024, Onsite Finishing/Landscaping, Offsite Finishing/Landscaping	33	9	0	4/26/2024	4/26/2024	1
Onsite Building Construction 2024, Onsite Finishing/Landscaping	33	9	0	4/27/2024	5/3/2024	5
Onsite Building Construction 2024	23	9	0	5/4/2024	6/3/2024	21
<b>Maximum Daily Trips</b>	<b>68</b>	<b>23</b>	<b>40</b>			

## CalEEMod Inputs- Temecula Valley Charter School Project, Operations

**Name:** Temecula Valley Charter School Project, Operations  
**Project Number:** TVCS-04  
**Project Location:** 35777 Abelia Street, Winchester, CA 92596  
**County/Air Basin:** Riverside-South Coast  
**Climate Zone:** 10  
**Land Use Setting:** Rural  
**Operational Year:** 2025  
**Utility Company:** Southern California Edison  
**Air Basin:** South Coast Air Basin  
**Air District:** South Coast AQMD  
**SRA:** 24 - Perris Valley

### CalEEMod Land Use Inputs

Land Use Type	Land Use Subtype	Unit Amount	Size Metric	Lot Acreage	Land Use Square Feet	Landscape Area Square Feet	Special Landscape Area Square Feet
School Building	Elementary School	53.99	1000 sqft	5.33	53,992	214,975	0
Parking	Parking Lot	107.42	1000 sqft	2.47	107,424	0	0
Parking	Other Asphalt Surfaces	122.61	1000 sqft	2.81	122,608	0	0
Parking	Other Non-Asphalt Surfaces	39.26	1000 sqft	0.90	39,264	0	0
				<b>11.51</b>			

### Net Trips<sup>1</sup>

Land Use Type	Average Daily Trips	CalEEMod Trip Rate	Saturday Trips	CalEEMod Trip Rate	Sunday Trips	CalEEMod Trip Rate
Elementary School	655	12.13	0	0.00	0	0.00

**Source:** EPD Solutions. 2022. La Puerta School Site Residential Development Traffic Impact Analysis.

Notes

<sup>1</sup> No trips on weekend as the school will only operate on weekdays.

### Water Use<sup>1,2</sup>

	Indoor (gpd) <sup>3</sup>	Indoor (gpy)	Outdoor (gpd)	Outdoor (gpy)	Total
Elementary School	4,912	1,792,880	12,966	4,732,590	6,525,470

Notes

<sup>1</sup> Based on conservative water and wastewater demand estimates from Section 3.10, *Hydrology and Water Quality*, for entire new campus.

<sup>2</sup> Assumes 100% aerobic treatment.

<sup>3</sup> Includes conservative estimate of 4,421 gpd of wastewater generation (90% of indoor water use)

### Solid Waste

Land Use	Solid Waste Generation Rate (lb/sqft/day)	Total Solid Waste (lb/day) <sup>1</sup>	Total Solid Waste (tons/day)	Total Solid Waste (tons/yr)	Total Solid Waste (tons/unit/yr)
Elementary School	0.007	378	0.19	69.11	1.28

Notes

<sup>1</sup> Based on conservative solid waste estimates from Section 3.19, *Utilities and Service Systems*, for entire new campus.

### Electricity (Buildings)

#### Default CalEEMod Energy Use

Land Use Subtype	Total Annual Electricity Consumption (kWh/year)	Total Annual Natural Gas Consumption (kBtu/year)	Title-24 Electricity Energy Intensity (kWhr/size/year)*	Title-24 Natural Gas Energy Intensity (KBTU/size/year)*	Nontitle-24 Electricity Energy Intensity (kWhr/size/year)	Nontitle-24 Natural Gas Energy Intensity (KBTU/size/year)
Elementary School	351,384.13	1,292,592.08	303,718.24	746,015.04	47,665.89	546,577.04
Parking Lot	94,103.42	0.00	94,103.42	0.00	0.00	0.00

**Architectural Coating**

	Percent Painted
Interior Painted:	100%
Exterior Painted:	100%

**SCAQMD Rule 1113**

Interior Paint VOC content:	100	grams per liter
Exterior Paing VOC content:	100	grams per liter

Structures	Land Use Square Feet	CalEEMod Factor <sup>2</sup>	Total Paintable Surface Area	Paintable Interior Area <sup>1</sup>	Paintable Exterior Area <sup>1</sup>
<b>Non-Residential Structures</b>					
Elementary School	19,432	2.0	38,864	29,148	9,716
			38,864	<b>29,148</b>	<b>9,716</b>
<b>Parking</b>					
Parking Lot	107,424			-	16,485
					<b>16,485</b>

Notes

- <sup>1</sup> CalEEMod methodology calculates the paintable interior and exterior areas by multiplying the total paintable surface area by 75 and 25 percent, respectively. Exclude square footage of modular buildings and shipping container storages since these type of structures do not usually require painting.
- <sup>2</sup> The program assumes the total surface for painting equals 2 times the floor square footage for nonresidential square footage defined by the user.
- <sup>3</sup> CalEEMod default used for striping of parking lot and street asphalt.

**CalEEMod Operation Measures**

**W-4**

Require Low-Flow Water Fixtures	Elementary School:		
Toilet:		51	Fixture % of Total Indoor Water Use
		13	% Reduction in Flow
Urinal		12	Fixture % of Total Indoor Water Use
		12	% Reduction in Flow
Showerhead		5	Fixture % of Total Indoor Water Use
		11	% Reduction in Flow
Bathroom Faucet		3	Fixture % of Total Indoor Water Use
		30	% Reduction in Flow
Kitchen Faucet		4	Fixture % of Total Indoor Water Use
		11	% Reduction in Flow
Dishwashers		2	Fixture % of Total Indoor Water Use
		20	% Reduction in Flow

**Southern California Edison Carbon Intensity Factors**

	2025 Forecasted Factors	
CO <sub>2</sub> :	348.64	pounds per megawatt hour
CH <sub>4</sub> :	0.033	pound per megawatt hour
N <sub>2</sub> O:	0.004	pound per megawatt hour

Notes:

- <sup>1</sup> CalEEMod default values.

Changes to the CalEEMod Defaults - Fleet Mix 2025

Trips 655

Default	HHD	LDA	LDT1	LDT2	LHD1	LHD2	MCY	MDV	MH	MHD	OBUS	SBUS	UBUS	
FleetMix (Model Default)	1.578900218	49.6460855	3.907040134	20.12711912	3.20436433	0.909943227	2.343500778	15.96873403	0.636852579	1.443249173	0.061152998	0.134051102	0.0390064	
FleetMix (Model Default) adjusted	0.015789002	0.496460855	0.039070401	0.201271191	0.032043643	0.009099432	0.023435008	0.15968734	0.006368526	0.014432492	0.00061153	0.001340511	0.000390064	100%
Trips	10	325	26	132	21	6	15	105	4	9	0	1	0	655
Percent		76%			8%			16%						100%
<b>without buses/MH</b>	0.015789	0.496461	0.039070	0.201271	0.032044	0.009099	0.023435	0.159687	0.006369	0.014432	0	0.001341	0	100%
Percent		76%			8%			16%						100%
Adjusted without buses/MH	0.015989	0.496461	0.039070	0.201271	0.032450	0.009215	0.023732	0.159687	0.006449	0.014615	0.000000	0.001357	0.000000	100%
Percent adjusted		76%			8%			16%						100%
<b>Assumed Mix</b>		97.0%			1.00%			2.00%						100%
	0.001997	0.633196	0.049831	0.256705	0.004052	0.001151	0.030268	0.020000	0.000805	0.001825	0.000000	0.000170	0.000000	100%
<b>adjusted with Assumed</b>	0.199675	63.319568	4.983114	25.670513	0.405238	0.115075	3.026806	2.000000	0.080539	0.182520	0.000000	0.016953	0.000000	
Percent Check:		97%			1%			2%						
Trips	1	415	33	168	3	1	20	13	1	1	0	0	0	654

# **Emissions Worksheet**

## Regional Onsite Construction Emissions Worksheet - Unmitigated:

### 3.1 Site Preparation (2023)

2

		ROG	NOx	CO	SO	PM10 Total	PM2.5 Total
Onsite							
	Off-Road Equipment	3.95	39.70	35.50	0.05	1.81	1.66
	Dust from Material Movement					7.67	3.94
	Onsite Truck	0.00	0.00	0.00	0.00	0.00	0.00
	<b>Total</b>	<b>3.95</b>	<b>39.70</b>	<b>35.50</b>	<b>0.05</b>	<b>9.48</b>	<b>5.60</b>
Offsite							
	Worker	0.09	0.09	1.59	0.00	0.23	0.05
	Vendor	0.01	0.07	0.02	0.01	0.02	0.01
	Hauling	0.00	0.00	0.00	0.00	0.00	0.00
	<b>Total</b>	<b>0.10</b>	<b>0.16</b>	<b>1.61</b>	<b>0.01</b>	<b>0.25</b>	<b>0.06</b>
<b>TOTAL</b>		<b>4.05</b>	<b>39.86</b>	<b>37.11</b>	<b>0.06</b>	<b>9.73</b>	<b>5.66</b>

### 3.3 Rough Grading (2023)

		ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite							
	Off-Road Equipment	5.78	58.30	46.60	0.09	2.60	2.39
	Dust From Material Movement					7.15	3.11
	Onsite Truck	0.00	0.00	0.00	0.00	0.00	0.00
	<b>Total</b>	<b>5.78</b>	<b>58.30</b>	<b>46.60</b>	<b>0.09</b>	<b>9.75</b>	<b>5.50</b>
Offsite							
	Worker	0.12	0.12	2.04	0.00	0.29	0.07
	Vendor	0.01	0.07	0.02	0.01	0.02	0.01
	Hauling	0.00	0.00	0.00	0.00	0.00	0.00
	<b>Total</b>	<b>0.13</b>	<b>0.19</b>	<b>2.06</b>	<b>0.01</b>	<b>0.31</b>	<b>0.08</b>
<b>TOTAL</b>		<b>5.91</b>	<b>58.49</b>	<b>48.66</b>	<b>0.10</b>	<b>10.06</b>	<b>5.58</b>

### 3.5 Fine Grading (2023)

		ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite							
	Off-Road Equipment	0.68	6.14	10.10	0.02	0.30	0.27
	Dust From Material Movement					0.00	0.00
	Onsite Truck	0.00	0.00	0.00	0.00	0.00	0.00
	<b>Total</b>	<b>0.68</b>	<b>6.14</b>	<b>10.10</b>	<b>0.02</b>	<b>0.30</b>	<b>0.27</b>
Offsite							
	Worker	0.08	0.08	1.36	0.00	0.20	0.05
	Vendor	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
	<b>Total</b>	<b>0.08</b>	<b>0.08</b>	<b>1.36</b>	<b>0.00</b>	<b>0.20</b>	<b>0.05</b>
<b>TOTAL</b>		<b>0.76</b>	<b>6.22</b>	<b>11.46</b>	<b>0.02</b>	<b>0.50</b>	<b>0.32</b>

### 3.7 Building Construction (2023)

		ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite							
	Off-Road Equipment	0.62	7.39	10.10	0.01	0.28	0.26
	Onsite Truck	0.00	0.00	0.00	0.00	0.00	0.00
	<b>Total</b>	<b>0.62</b>	<b>7.39</b>	<b>10.10</b>	<b>0.01</b>	<b>0.28</b>	<b>0.26</b>
Offsite							
	Worker	0.12	0.12	2.06	0.00	0.30	0.07
	Vendor	0.01	0.32	0.10	0.01	0.08	0.02
	Hauling	0.00	0.00	0.00	0.00	0.00	0.00
	<b>Total</b>	<b>0.13</b>	<b>0.44</b>	<b>2.16</b>	<b>0.01</b>	<b>0.38</b>	<b>0.09</b>
<b>TOTAL</b>		<b>0.75</b>	<b>7.83</b>	<b>12.26</b>	<b>0.02</b>	<b>0.66</b>	<b>0.35</b>

**3.9 Building Construction (2024)**

		ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite							
	Off-Road Equipment	0.59	7.06	10.10	0.01	0.25	0.23
	Onsite Truck	0.00	0.00	0.00	0.00	0.00	0.00
	<b>Total</b>	<b>0.59</b>	<b>7.06</b>	<b>10.10</b>	<b>0.01</b>	<b>0.25</b>	<b>0.23</b>
Offsite							
	Worker	0.12	0.11	1.89	0.00	0.30	0.07
	Vendor	0.01	0.31	0.10	0.01	0.08	0.02
	Hauling	0.00	0.00	0.00	0.00	0.00	0.00
	<b>Total</b>	<b>0.13</b>	<b>0.42</b>	<b>1.99</b>	<b>0.01</b>	<b>0.38</b>	<b>0.09</b>
<b>TOTAL</b>		<b>0.72</b>	<b>7.48</b>	<b>12.09</b>	<b>0.02</b>	<b>0.63</b>	<b>0.32</b>

**3.11 Building Construction (2023) - Modular Building Installation**

		ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite							
	Off-Road Equipment	0.54	3.78	4.57	0.01	0.20	0.19
	Onsite Truck	0.00	0.00	0.00	0.00	0.00	0.00
	<b>Total</b>	<b>0.54</b>	<b>3.78</b>	<b>4.57</b>	<b>0.01</b>	<b>0.20</b>	<b>0.19</b>
Offsite							
	Worker	0.11	0.14	1.56	0.00	0.30	0.07
	Vendor	0.01	0.46	0.14	0.01	0.11	0.03
	Hauling	0.00	0.00	0.00	0.00	0.00	0.00
	<b>Total</b>	<b>0.12</b>	<b>0.60</b>	<b>1.70</b>	<b>0.01</b>	<b>0.41</b>	<b>0.10</b>
<b>TOTAL</b>		<b>0.66</b>	<b>4.38</b>	<b>6.27</b>	<b>0.02</b>	<b>0.61</b>	<b>0.29</b>

**3.13 Asphalt Paving (2023)**

		ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite							
	Off-Road Equipment	0.43	3.07	3.81	0.01	0.17	0.15
	Paving	0.49					
	Onsite Truck	0.00	0.00	0.00	0.00	0.00	0.00
	<b>Total</b>	<b>0.92</b>	<b>3.07</b>	<b>3.81</b>	<b>0.01</b>	<b>0.17</b>	<b>0.15</b>
Offsite							
	Worker	0.04	0.05	0.52	0.00	0.10	0.02
	Vendor	0.01	0.08	0.02	0.01	0.02	0.01
	Hauling	0.00	0.00	0.00	0.00	0.00	0.00
	<b>Total</b>	<b>0.05</b>	<b>0.13</b>	<b>0.54</b>	<b>0.01</b>	<b>0.12</b>	<b>0.03</b>
<b>TOTAL</b>		<b>0.97</b>	<b>3.20</b>	<b>4.35</b>	<b>0.01</b>	<b>0.29</b>	<b>0.18</b>

**3.15 Architectural Coating (2023)**

		ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite							
	Off-Road Equipment	0.31	3.70	5.06	0.01	0.14	0.13
	Architectural Coatings	6.17					
	Onsite Truck	0.00	0.00	0.00	0.00	0.00	0.00
	<b>Total</b>	<b>6.48</b>	<b>3.70</b>	<b>5.06</b>	<b>0.01</b>	<b>0.14</b>	<b>0.13</b>
Offsite							
	Worker	0.05	0.06	0.62	0.00	0.12	0.03
	Vendor	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
	<b>Total</b>	<b>0.05</b>	<b>0.06</b>	<b>0.62</b>	<b>0.00</b>	<b>0.12</b>	<b>0.03</b>
<b>TOTAL</b>		<b>6.53</b>	<b>3.76</b>	<b>5.68</b>	<b>0.01</b>	<b>0.26</b>	<b>0.16</b>

**3.17 Trenching (2024) - Finishing and Landscaping**

		ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite							
	Off-Road Equipment	0.46	4.11	7.07	0.01	0.19	0.17
	Onsite Truck	0.00	0.00	0.00	0.00	0.00	0.00
	<b>Total</b>	<b>0.46</b>	<b>4.11</b>	<b>7.07</b>	<b>0.01</b>	<b>0.19</b>	<b>0.17</b>
Offsite							
	Worker	0.05	0.05	0.83	0.00	0.13	0.03
	Vendor	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
	<b>Total</b>	<b>0.05</b>	<b>0.05</b>	<b>0.83</b>	<b>0.00</b>	<b>0.13</b>	<b>0.03</b>
<b>TOTAL</b>		<b>0.51</b>	<b>4.16</b>	<b>7.90</b>	<b>0.01</b>	<b>0.32</b>	<b>0.20</b>

**3.19 Trenching (2023) - Utility Trenching**

		ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite							
	Off-Road Equipment	0.67	6.94	7.42	0.01	0.39	0.36
	Onsite Truck	0.00	0.00	0.00	0.00	0.00	0.00
	<b>Total</b>	<b>0.67</b>	<b>6.94</b>	<b>7.42</b>	<b>0.01</b>	<b>0.39</b>	<b>0.36</b>
Offsite							
	Worker	0.07	0.07	1.13	0.00	0.16	0.04
	Vendor	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
	<b>Total</b>	<b>0.07</b>	<b>0.07</b>	<b>1.13</b>	<b>0.00</b>	<b>0.16</b>	<b>0.04</b>
<b>TOTAL</b>		<b>0.74</b>	<b>7.01</b>	<b>8.55</b>	<b>0.01</b>	<b>0.55</b>	<b>0.40</b>

**Regional Offsite Construction Emissions Worksheet - Unmitigated:**

**3.1 Demolition (2024)**

		ROG	NOx	CO	SO	PM10 Total	PM2.5 Total
Onsite							
	Off-Road Equipment	0.01	0.01	0.11	0.01	0.01	0.01
	Demolition					1.06	0.16
	Onsite Truck	0.00	0.00	0.00	0.00	0.00	0.00
	<b>Total</b>	<b>0.01</b>	<b>0.01</b>	<b>0.11</b>	<b>0.01</b>	<b>1.07</b>	<b>0.17</b>
Offsite							
	Worker	0.01	0.01	0.21	0.00	0.03	0.01
	Vendor	0.00	0.00	0.00	0.00	0.00	0.00
	Hauling	0.04	3.17	0.76	0.02	0.78	0.26
	<b>Total</b>	<b>0.05</b>	<b>3.18</b>	<b>0.97</b>	<b>0.02</b>	<b>0.81</b>	<b>0.27</b>
<b>TOTAL</b>		<b>0.06</b>	<b>3.19</b>	<b>1.08</b>	<b>0.03</b>	<b>1.88</b>	<b>0.44</b>

**3.3 Site Preparation (2024)**

		ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite							
	Off-Road Equipment	0.50	4.60	5.56	0.01	0.24	0.22
	Dust From Material Movement					0.21	0.02
	Onsite Truck	0.00	0.00	0.00	0.00	0.00	0.00
	<b>Total</b>	<b>0.50</b>	<b>4.60</b>	<b>5.56</b>	<b>0.01</b>	<b>0.45</b>	<b>0.24</b>
Offsite							
	Worker	0.02	0.03	0.32	0.00	0.07	0.02
	Vendor	0.01	0.07	0.02	0.01	0.02	0.01
	Hauling	0.00	0.00	0.00	0.00	0.00	0.00
	<b>Total</b>	<b>0.03</b>	<b>0.10</b>	<b>0.34</b>	<b>0.01</b>	<b>0.09</b>	<b>0.03</b>
<b>TOTAL</b>		<b>0.53</b>	<b>4.70</b>	<b>5.90</b>	<b>0.02</b>	<b>0.54</b>	<b>0.27</b>

**3.5 Rough Grading (2024)**

		ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite							
	Off-Road Equipment	1.81	17.70	14.70	0.03	0.79	0.72
	Dust From Material Movement					2.38	1.04
	Onsite Truck	0.00	0.00	0.00	0.00	0.00	0.00
	<b>Total</b>	<b>1.81</b>	<b>17.70</b>	<b>14.70</b>	<b>0.03</b>	<b>3.17</b>	<b>1.76</b>
Offsite							
	Worker	0.04	0.04	0.63	0.00	0.10	0.02
	Vendor	0.01	0.07	0.02	0.01	0.02	0.01
	Hauling	0.00	0.00	0.00	0.00	0.00	0.00
	<b>Total</b>	<b>0.05</b>	<b>0.11</b>	<b>0.65</b>	<b>0.01</b>	<b>0.12</b>	<b>0.03</b>
<b>TOTAL</b>		<b>1.86</b>	<b>17.81</b>	<b>15.35</b>	<b>0.04</b>	<b>3.29</b>	<b>1.79</b>



	ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
<i>Onsite Site Preparation</i>	4	40	37	0.06	9.73	5.66
<i>Onsite Rough Grading</i>	6	58	49	0.10	10.06	5.58
<i>Onsite Fine Grading</i>	1	6	11	0.02	0.50	0.32
<i>Onsite Utility Trenching, Onsite Building Construction, Onsite Paving</i>	2	18	25	0.04	1.50	0.93
<i>Onsite Utility Trenching, Onsite Building Construction, Onsite Paving, Onsite Modular Building Installation</i>	3	22	31	0.05	2.11	1.22
<i>Onsite Utility Trenching, Onsite Building Construction, Onsite Modular Building Installation, Onsite Architectural Coating</i>	9	23	33	0.05	2.08	1.20
<i>Onsite Utility Trenching, Onsite Building Construction, Onsite Architectural Coating</i>	8	19	26	0.04	1.47	0.91
<i>Onsite Building Construction, Onsite Architectural Coating</i>	7	12	18	0.03	0.92	0.51
<i>Onsite Building Construction 2023</i>	1	8	12	0.02	0.66	0.35
<i>Onsite Building Construction 2024</i>	1	7	12	0.02	0.63	0.32
<i>Onsite Building Construction 2024 and Onsite Finishing/Landscaping</i>	1	12	20	0.03	0.95	0.52
<i>Onsite Building Construction 2024, Onsite Finishing/Landscaping, Offsite Site Preparation</i>	2	16	26	0.04	1.49	0.79
<i>Onsite Building Construction 2024, Onsite Finishing/Landscaping, Offsite Asphalt Demolition</i>	1	15	21	0.05	2.83	0.96
<i>Onsite Building Construction 2024, Onsite Finishing/Landscaping, Offsite Rough Grading</i>	3	29	35	0.06	4.24	2.31
<i>Onsite Building Construction 2024, Onsite Finishing/Landscaping, Offsite Fine Grading</i>	1	12	22	0.03	1.01	0.56
<i>Onsite Building Construction 2024, Onsite Finishing/Landscaping, Offsite Paving</i>	2	15	24	0.04	1.22	0.69
<i>Onsite Building Construction 2024, Onsite Finishing/Landscaping, Offsite Paving, Offsite Finishing/Landscaping</i>	2	15	24	0.04	1.22	0.69
<i>Onsite Building Construction 2024, Onsite Finishing/Landscaping, Offsite Finishing/Landscaping</i>	1	12	20	0.03	0.95	0.52
<i>Onsite Building Construction 2024, Onsite Finishing/Landscaping, Offsite Finishing/Landscaping, Offsite Architectural Coating</i>	4	12	20	0.03	0.95	0.52
<i>Onsite Building Construction 2024, Onsite Finishing/Landscaping</i>	1	12	20	0.03	0.95	0.52
<b>MAX DAILY</b>	<b>9</b>	<b>58</b>	<b>49</b>	<b>0.10</b>	<b>10.06</b>	<b>5.66</b>
<b>Regional Thresholds</b>	<b>75</b>	<b>100</b>	<b>550</b>	<b>150</b>	<b>150</b>	<b>55</b>
Exceeds Thresholds?	No	No	No	No	No	No

## Construction LST Worksheet:

### Regional Onsite Construction Emissions Worksheet - Unmitigated:

#### 3.1 Site Preparation (2023)

		NOx	CO	PM10 Total	PM2.5 Total
Onsite					
	Off-Road Equipment	39.70	35.50	1.81	1.66
	Dust from Material Movement			7.67	3.94
	Onsite Truck	0.00	0.00	0.00	0.00
	<b>Total</b>	<b>39.70</b>	<b>35.50</b>	<b>9.48</b>	<b>5.60</b>
Offsite					
	Worker				
	Vendor				
	Hauling				
	<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>TOTAL</b>		<b>39.70</b>	<b>35.50</b>	<b>9.48</b>	<b>5.60</b>

#### 3.3 Rough Grading (2023)

		NOx	CO	PM10 Total	PM2.5 Total
Onsite					
	Off-Road Equipment	58.30	46.60	2.60	2.39
	Dust From Material Movement			7.15	3.11
	Onsite Truck	0.00	0.00	0.00	0.00
	<b>Total</b>	<b>58.30</b>	<b>46.60</b>	<b>9.75</b>	<b>5.50</b>
Offsite					
	Worker				
	Vendor				
	Hauling				
	<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>TOTAL</b>		<b>58.30</b>	<b>46.60</b>	<b>9.75</b>	<b>5.50</b>

#### 3.5 Fine Grading (2023)

		NOx	CO	PM10 Total	PM2.5 Total
Onsite					
	Off-Road Equipment	6.14	10.10	0.30	0.27
	Dust From Material Movement			0.00	0.00
	Onsite Truck	0.00	0.00	0.00	0.00
	<b>Total</b>	<b>6.14</b>	<b>10.10</b>	<b>0.30</b>	<b>0.27</b>
Offsite					
	Worker				
	Vendor				
	Hauling				
	<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>TOTAL</b>		<b>6.14</b>	<b>10.10</b>	<b>0.30</b>	<b>0.27</b>

#### 3.7 Building Construction (2023)

		NOx	CO	PM10 Total	PM2.5 Total
Onsite					
	Off-Road Equipment	7.39	10.10	0.28	0.26
	Onsite Truck	0.00	0.00	0.00	0.00
	<b>Total</b>	<b>7.39</b>	<b>10.10</b>	<b>0.28</b>	<b>0.26</b>
Offsite					
	Worker				
	Vendor				
	Hauling				
	<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>TOTAL</b>		<b>7.39</b>	<b>10.10</b>	<b>0.28</b>	<b>0.26</b>

**3.9 Building Construction (2024)**

		NOx	CO	PM10 Total	PM2.5 Total
Onsite					
	Off-Road Equipment	7.06	10.10	0.25	0.23
	Onsite Truck	0.00	0.00	0.00	0.00
	<b>Total</b>	<b>7.06</b>	<b>10.10</b>	<b>0.25</b>	<b>0.23</b>
Offsite					
	Worker				
	Vendor				
	Hauling				
	<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>TOTAL</b>		<b>7.06</b>	<b>10.10</b>	<b>0.25</b>	<b>0.23</b>

**3.11 Building Construction (2023) - Modular Building Installation**

		NOx	CO	PM10 Total	PM2.5 Total
Onsite					
	Off-Road Equipment	3.78	4.57	0.20	0.19
	Onsite Truck	0.00	0.00	0.00	0.00
	<b>Total</b>	<b>3.78</b>	<b>4.57</b>	<b>0.20</b>	<b>0.19</b>
Offsite					
	Worker				
	Vendor				
	Hauling				
	<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>TOTAL</b>		<b>3.78</b>	<b>4.57</b>	<b>0.20</b>	<b>0.19</b>

**3.13 Asphalt Paving (2023)**

		NOx	CO	PM10 Total	PM2.5 Total
Onsite					
	Off-Road Equipment	3.07	3.81	0.17	0.15
	Paving				
	Onsite Truck	0.00	0.00	0.00	0.00
	<b>Total</b>	<b>3.07</b>	<b>3.81</b>	<b>0.17</b>	<b>0.15</b>
Offsite					
	Worker				
	Vendor				
	Hauling				
	<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>TOTAL</b>		<b>3.07</b>	<b>3.81</b>	<b>0.17</b>	<b>0.15</b>

**3.15 Architectural Coating (2023)**

		NOx	CO	PM10 Total	PM2.5 Total
Onsite					
	Off-Road Equipment	3.70	5.06	0.14	0.13
	Architectural Coatings				
	Onsite Truck	0.00	0.00	0.00	0.00
	<b>Total</b>	<b>3.70</b>	<b>5.06</b>	<b>0.14</b>	<b>0.13</b>
Offsite					
	Worker				
	Vendor				
	Hauling				
	<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>TOTAL</b>		<b>3.70</b>	<b>5.06</b>	<b>0.14</b>	<b>0.13</b>

### 3.17 Trenching (2024) - Finishing and Landscaping

		NOx	CO	PM10 Total	PM2.5 Total
Onsite					
	Off-Road Equipment	4.11	7.07	0.19	0.17
	Onsite Truck	0.00	0.00	0.00	0.00
	<b>Total</b>	<b>4.11</b>	<b>7.07</b>	<b>0.19</b>	<b>0.17</b>
Offsite					
	Worker				
	Vendor				
	Hauling				
	<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>TOTAL</b>		<b>4.11</b>	<b>7.07</b>	<b>0.19</b>	<b>0.17</b>

### 3.19 Trenching (2023) - Utility Trenching

		NOx	CO	PM10 Total	PM2.5 Total
Onsite					
	Off-Road Equipment	6.94	7.42	0.39	0.36
	Onsite Truck	0.00	0.00	0.00	0.00
	<b>Total</b>	<b>6.94</b>	<b>7.42</b>	<b>0.39</b>	<b>0.36</b>
Offsite					
	Worker				
	Vendor				
	Hauling				
	<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>TOTAL</b>		<b>6.94</b>	<b>7.42</b>	<b>0.39</b>	<b>0.36</b>

## Regional Offsite Construction Emissions Worksheet - Unmitigated:

### 3.1 Demolition (2024)

		NOx	CO	PM10 Total	PM2.5 Total
Onsite					
	Off-Road Equipment	0.01	0.11	0.01	0.01
	Demolition			1.06	0.16
	Onsite Truck	0.00	0.00	0.00	0.00
	<b>Total</b>	<b>0.01</b>	<b>0.11</b>	<b>1.07</b>	<b>0.17</b>
Offsite					
	Worker				
	Vendor				
	Hauling				
	<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>TOTAL</b>		<b>0.01</b>	<b>0.11</b>	<b>1.07</b>	<b>0.17</b>

### 3.3 Site Preparation (2024)

		NOx	CO	PM10 Total	PM2.5 Total
Onsite					
	Off-Road Equipment	4.60	5.56	0.24	0.22
	Dust From Material Movement			0.21	0.02
	Onsite Truck	0.00	0.00	0.00	0.00
	<b>Total</b>	<b>4.60</b>	<b>5.56</b>	<b>0.45</b>	<b>0.24</b>
Offsite					
	Worker				
	Vendor				
	Hauling				
	<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>TOTAL</b>		<b>4.60</b>	<b>5.56</b>	<b>0.45</b>	<b>0.24</b>

### 3.5 Rough Grading (2024)

		NOx	CO	PM10 Total	PM2.5 Total
Onsite					
	Off-Road Equipment	17.70	14.70	0.79	0.72
	Dust From Material Movement			2.38	1.04
	Onsite Truck	0.00	0.00	0.00	0.00
	<b>Total</b>	<b>17.70</b>	<b>14.70</b>	<b>3.17</b>	<b>1.76</b>
Offsite					
	Worker				
	Vendor				
	Hauling				
	<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>TOTAL</b>		<b>17.70</b>	<b>14.70</b>	<b>3.17</b>	<b>1.76</b>

### 3.7 Fine Grading (2024)

		NOx	CO	PM10 Total	PM2.5 Total
Onsite					
	Off-Road Equipment	0.68	1.53	0.03	0.03
	Dust From Material Movement			0.00	0.00
	Onsite Truck	0.00	0.00	0.00	0.00
	<b>Total</b>	<b>0.68</b>	<b>1.53</b>	<b>0.03</b>	<b>0.03</b>
Offsite					
	Worker				
	Vendor				
	Hauling				
	<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>TOTAL</b>		<b>0.68</b>	<b>1.53</b>	<b>0.03</b>	<b>0.03</b>

### 3.9 Asphalt Paving (2024)

		NOx	CO	PM10 Total	PM2.5 Total
Onsite					
	Off-Road Equipment	2.94	3.80	0.15	0.14
	Paving				
	Onsite Truck	0.00	0.00	0.00	0.00
	<b>Total</b>	<b>2.94</b>	<b>3.80</b>	<b>0.15</b>	<b>0.14</b>
Offsite					
	Worker				
	Vendor				
	Hauling				
	<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>TOTAL</b>		<b>2.94</b>	<b>3.80</b>	<b>0.15</b>	<b>0.14</b>

### 3.11 Architectural Coating (2024)

		NOx	CO	PM10 Total	PM2.5 Total
Onsite					
	Architectural Coatings				
	Onsite Truck	0.00	0.00	0.00	0.00
	<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
Offsite					
	Worker				
	Vendor				
	Hauling				
	<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>TOTAL</b>		<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

### 3.13 Trenching (2024) - Finishing and Landscaping

		NOx	CO	PM10 Total	PM2.5 Total
Onsite	Onsite Truck	0.00	0.00	0.00	0.00
	<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
Offsite	Worker				
	Vendor				
	Hauling				
	<b>Total</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>TOTAL</b>		<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

		NOx	CO	PM10 Total	PM2.5 Total
<b>Onsite Site Preparation</b>		<b>40</b>	<b>36</b>	<b>9.48</b>	<b>5.60</b>
	<b>3.50 Acre LST</b>	<b>220</b>	<b>1,230</b>	<b>9.99</b>	<b>6.00</b>
	<b>Exceeds LST?</b>	<b>no</b>	<b>no</b>	<b>no</b>	<b>no</b>
<b>Onsite Rough Grading</b>		<b>58</b>	<b>47</b>	<b>9.75</b>	<b>5.50</b>
	<b>3.38 Acre LST</b>	<b>216</b>	<b>1,201</b>	<b>9.75</b>	<b>5.83</b>
	<b>Exceeds LST?</b>	<b>no</b>	<b>no</b>	<b>yes</b>	<b>no</b>
<b>Onsite Fine Grading</b>		<b>6</b>	<b>10</b>	<b>0.30</b>	<b>0.27</b>
	<b>2.25 Acre LST</b>	<b>178</b>	<b>941</b>	<b>7.50</b>	<b>4.33</b>
	<b>Exceeds LST?</b>	<b>no</b>	<b>no</b>	<b>no</b>	<b>no</b>
<b>Onsite Utility Trenching, Onsite Building Construction, Onsite Paving</b>		<b>17</b>	<b>21</b>	<b>0.84</b>	<b>0.77</b>
	<b>≤1.00 Acre LST</b>	<b>118</b>	<b>602</b>	<b>4.00</b>	<b>3.00</b>
	<b>Exceeds LST?</b>	<b>no</b>	<b>no</b>	<b>no</b>	<b>no</b>
<b>Onsite Utility Trenching, Onsite Building Construction, Onsite Paving, Onsite Modular Building Installation</b>		<b>21</b>	<b>26</b>	<b>1.04</b>	<b>0.96</b>
	<b>≤1.00 Acre LST</b>	<b>118</b>	<b>602</b>	<b>4.00</b>	<b>3.00</b>
	<b>Exceeds LST?</b>	<b>no</b>	<b>no</b>	<b>no</b>	<b>no</b>
<b>Onsite Utility Trenching, Onsite Building Construction, Onsite Modular Building Installation, Onsite Architectural Coating</b>		<b>22</b>	<b>27</b>	<b>1.01</b>	<b>0.94</b>
	<b>≤1.00 Acre LST</b>	<b>118</b>	<b>602</b>	<b>4.00</b>	<b>3.00</b>
	<b>Exceeds LST?</b>	<b>no</b>	<b>no</b>	<b>no</b>	<b>no</b>
<b>Onsite Utility Trenching, Onsite Building Construction, Onsite Architectural Coating</b>		<b>18</b>	<b>23</b>	<b>0.81</b>	<b>0.75</b>
	<b>≤1.00 Acre LST</b>	<b>118</b>	<b>602</b>	<b>4.00</b>	<b>3.00</b>
	<b>Exceeds LST?</b>	<b>no</b>	<b>no</b>	<b>no</b>	<b>no</b>
<b>Onsite Building Construction, Onsite Architectural Coating</b>		<b>11</b>	<b>15</b>	<b>0.42</b>	<b>0.39</b>
	<b>≤1.00 Acre LST</b>	<b>118</b>	<b>602</b>	<b>4.00</b>	<b>3.00</b>
	<b>Exceeds LST?</b>	<b>no</b>	<b>no</b>	<b>no</b>	<b>no</b>

<b>Onsite Building Construction 2023</b>	<b>7</b>	<b>10</b>	<b>0.28</b>	<b>0.26</b>
<b>≤1.00 Acre LST</b>	<b>118</b>	<b>602</b>	<b>4.00</b>	<b>3.00</b>
<b>Exceeds LST?</b>	<b>no</b>	<b>no</b>	<b>no</b>	<b>no</b>
<b>Onsite Building Construction 2024</b>	<b>7</b>	<b>10</b>	<b>0.25</b>	<b>0.23</b>
<b>≤1.00 Acre LST</b>	<b>118</b>	<b>602</b>	<b>4.00</b>	<b>3.00</b>
<b>Exceeds LST?</b>	<b>no</b>	<b>no</b>	<b>no</b>	<b>no</b>
<b>Onsite Building Construction 2024 and Onsite Finishing/Landscaping</b>	<b>11</b>	<b>17</b>	<b>0.44</b>	<b>0.40</b>
<b>1.50 Acre LST</b>	<b>144</b>	<b>742</b>	<b>5.50</b>	<b>3.50</b>
<b>Exceeds LST?</b>	<b>no</b>	<b>no</b>	<b>no</b>	<b>no</b>
<b>Onsite Building Construction 2024, Onsite Finishing/Landscaping, Offsite Site Preparation</b>	<b>16</b>	<b>23</b>	<b>0.89</b>	<b>0.64</b>
<b>2.00 Acre LST</b>	<b>170</b>	<b>883</b>	<b>7.00</b>	<b>4.00</b>
<b>Exceeds LST?</b>	<b>no</b>	<b>no</b>	<b>no</b>	<b>no</b>
<b>Onsite Building Construction 2024, Onsite Finishing/Landscaping, Offsite Asphalt Demolition</b>	<b>11</b>	<b>17</b>	<b>1.51</b>	<b>0.57</b>
<b>1.50 Acre LST</b>	<b>144</b>	<b>742</b>	<b>5.50</b>	<b>3.50</b>
<b>Exceeds LST?</b>	<b>no</b>	<b>no</b>	<b>no</b>	<b>no</b>
<b>Onsite Building Construction 2024, Onsite Finishing/Landscaping, Offsite Rough Grading</b>	<b>29</b>	<b>32</b>	<b>3.61</b>	<b>2.16</b>
<b>2.63 Acre LST</b>	<b>191</b>	<b>1,027</b>	<b>8.25</b>	<b>4.83</b>
<b>Exceeds LST?</b>	<b>no</b>	<b>no</b>	<b>no</b>	<b>no</b>
<b>Onsite Building Construction 2024, Onsite Finishing/Landscaping, Offsite Fine Grading</b>	<b>12</b>	<b>19</b>	<b>0.47</b>	<b>0.43</b>
<b>1.50 Acre LST</b>	<b>144</b>	<b>742</b>	<b>5.50</b>	<b>3.50</b>
<b>Exceeds LST?</b>	<b>no</b>	<b>no</b>	<b>no</b>	<b>no</b>
<b>Onsite Building Construction 2024, Onsite Finishing/Landscaping, Offsite Paving</b>	<b>14</b>	<b>21</b>	<b>0.59</b>	<b>0.54</b>
<b>1.50 Acre LST</b>	<b>144</b>	<b>742</b>	<b>5.50</b>	<b>3.50</b>
<b>Exceeds LST?</b>	<b>no</b>	<b>no</b>	<b>no</b>	<b>no</b>
<b>Onsite Building Construction 2024, Onsite Finishing/Landscaping, Offsite Paving, Offsite Finishing/Landscaping</b>	<b>14</b>	<b>21</b>	<b>0.59</b>	<b>0.54</b>
<b>1.50 Acre LST</b>	<b>144</b>	<b>742</b>	<b>5.50</b>	<b>3.50</b>
<b>Exceeds LST?</b>	<b>no</b>	<b>no</b>	<b>no</b>	<b>no</b>

<i>Onsite Building Construction 2024, Onsite Finishing/Landscaping, Offsite Finishing/Landscaping</i>	<b>11</b>	<b>17</b>	<b>0.44</b>	<b>0.40</b>
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<b>1.50 Acre LST</b>	<b>144</b>	<b>742</b>	<b>5.50</b>	<b>3.50</b>
<i>Exceeds LST?</i>	<i>no</i>	<i>no</i>	<i>no</i>	<i>no</i>

<i>Onsite Building Construction 2024, Onsite Finishing/Landscaping, Offsite Finishing/Landscaping, Offsite Architectural Coating</i>	<b>11</b>	<b>17</b>	<b>0.44</b>	<b>0.40</b>
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<b>≤1.00 Acre LST</b>	<b>144</b>	<b>742</b>	<b>5.50</b>	<b>3.50</b>
<i>Exceeds LST?</i>	<i>no</i>	<i>no</i>	<i>no</i>	<i>no</i>

## Regional Operation Emissions Worksheet:

<sup>1</sup> CalEEMod, Version 2022.1

### Proposed Project

#### Summer

	ROG	NO <sub>x</sub>	CO	SO <sub>2</sub>	PM <sub>10</sub> Total	PM <sub>2.5</sub> Total
Mobile	3.14	2.19	42.80	0.09	8.96	2.29
Area	1.63	0.02	2.35	0.01	0.01	0.01
Energy	0.02	0.35	0.29	0.01	0.03	0.03
<b>Total</b>	<b>4.79</b>	<b>2.56</b>	<b>45.44</b>	<b>0.10</b>	<b>9.00</b>	<b>2.33</b>

#### Winter

	ROG	NO <sub>x</sub>	CO	SO <sub>2</sub>	PM <sub>10</sub> Total	PM <sub>2.5</sub> Total
Mobile	3.00	2.41	35.00	0.08	8.96	2.29
Area	1.25					
Energy	0.02	0.35	0.29	0.01	0.03	0.03
<b>Total</b>	<b>4.27</b>	<b>2.76</b>	<b>35.29</b>	<b>0.09</b>	<b>8.99</b>	<b>2.32</b>

#### Max Daily

	ROG	NO <sub>x</sub>	CO	SO <sub>2</sub>	PM <sub>10</sub> Total	PM <sub>2.5</sub> Total
Mobile	3.14	2.41	42.80	0.09	8.96	2.29
Area	1.63	0.02	2.35	0.01	0.01	0.01
Energy	0.02	0.35	0.29	0.01	0.03	0.03
<b>Total</b>	<b>4.79</b>	<b>2.76</b>	<b>45.44</b>	<b>0.10</b>	<b>9.00</b>	<b>2.33</b>

#### Regional Thresholds (lb/day)

Regional Thresholds (lb/day)	55	55	550	150	150	55
Exceeds Thresholds?	No	No	No	No	No	No

# GHG Emissions Inventory

## Proposed Project Buildout

### Onsite Construction<sup>1</sup>

	MTCO <sub>2</sub> e
2023	274
2024	161
<b>Total Construction</b>	<b>435</b>
<b>30-Year Amortization<sup>2</sup></b>	<b>15</b>

### Offsite Construction<sup>1</sup>

	MTCO <sub>2</sub> e
2024	13
<b>Total Construction</b>	<b>13</b>
<b>30-Year Amortization<sup>2</sup></b>	<b>0</b>

<sup>1</sup> CalEEMod, Version 2022.1

<sup>2</sup> Total construction emissions are amortized over 30 years per SCAQMD methodology; SCAQMD. 2009, November 19. Greenhouse Gases (GHG) CEQA Significance Thresholds Working Group Meeting 14. [http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-\(ghg\)-ceqa-significance-thresholds/year-2008-2009/ghg-meeting-14/ghg-meeting-14-main-presentation.pdf?sfvrsn=2](http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-(ghg)-ceqa-significance-thresholds/year-2008-2009/ghg-meeting-14/ghg-meeting-14-main-presentation.pdf?sfvrsn=2).

### Operations<sup>1</sup>

	MTCO <sub>2</sub> e/Year <sup>2</sup>	
	Operations	%
Mobile (Vehicle Trips)	997	84%
Area	1	0%
Energy	140	12%
Water	7	1%
Solid Waste	22	2%
Refrigerants	0	0%
30-Year Construction Amortization	15	1%
	<b>1,181</b>	<b>100%</b>
South Coast AQMD Bright-Line Screening Threshold	<b>3,000</b>	
<b>Exceed Threshold?</b>	<b>No</b>	

<sup>1</sup> CalEEMod, Version 2022.1

<sup>2</sup> MTCO<sub>2</sub>e=metric tons of carbon dioxide equivalent.

# **CalEEMod On-Site Construction**

# TVCS-04 Onsite Construction Custom Report

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  - 2.2. Construction Emissions by Year, Unmitigated
3. Construction Emissions Details
  - 3.1. Site Preparation (2023) - Unmitigated
  - 3.3. Grading (2023) - Unmitigated
  - 3.5. Grading (2023) - Unmitigated
  - 3.7. Building Construction (2023) - Unmitigated
  - 3.9. Building Construction (2024) - Unmitigated
  - 3.11. Building Construction (2023) - Unmitigated

3.13. Paving (2023) - Unmitigated

3.15. Architectural Coating (2023) - Unmitigated

3.17. Trenching (2024) - Unmitigated

3.19. Trenching (2023) - Unmitigated

## 5. Activity Data

5.1. Construction Schedule

5.2. Off-Road Equipment

5.2.1. Unmitigated

5.3. Construction Vehicles

5.3.1. Unmitigated

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

5.5. Architectural Coatings

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

5.6.2. Construction Earthmoving Control Strategies

5.7. Construction Paving

## 5.8. Construction Electricity Consumption and Emissions Factors

### 8. User Changes to Default Data

# 1. Basic Project Information

## 1.1. Basic Project Information

Data Field	Value
Project Name	TVCS-04 Onsite Construction
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.50
Precipitation (days)	14.0
Location	33.60130128919539, -117.08256513210402
County	Riverside-South Coast
City	Unincorporated
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	5685
EDFZ	11
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas

## 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
Elementary School	54.0	1000sqft	5.33	53,992	214,975	0.00	—	—
Parking Lot	107	1000sqft	2.47	0.00	0.00	—	—	—
Other Asphalt Surfaces	96.6	1000sqft	2.22	0.00	0.00	—	—	—

Other Non-Asphalt Surfaces	35.0	1000sqft	0.80	0.00	0.00	—	—	—
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### 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.	7.01	5.90	58.5	48.7	0.09	2.60	7.91	10.1	2.39	4.00	5.66	—	9,609	9,609	0.39	0.10	3.64	9,649
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	3.08	8.66	23.0	32.0	0.04	1.05	1.05	2.10	0.97	0.25	1.22	—	5,758	5,758	0.23	0.17	0.16	5,813
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.99	1.54	8.06	9.02	0.01	0.36	0.71	1.07	0.33	0.28	0.61	—	1,642	1,642	0.07	0.03	0.44	1,654
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.18	0.28	1.47	1.65	< 0.005	0.07	0.13	0.20	0.06	0.05	0.11	—	272	272	0.01	0.01	0.07	274

### 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	7.01	5.90	58.5	48.7	0.09	2.60	7.91	10.1	2.39	4.00	5.66	—	9,609	9,609	0.39	0.10	3.64	9,649
2024	1.44	1.22	11.6	20.0	0.03	0.44	0.50	0.95	0.41	0.12	0.53	—	3,502	3,502	0.14	0.08	2.64	3,532
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	3.08	8.66	23.0	32.0	0.04	1.05	1.05	2.10	0.97	0.25	1.22	—	5,758	5,758	0.23	0.17	0.16	5,813
2024	1.43	1.21	11.7	19.3	0.03	0.44	0.50	0.95	0.41	0.12	0.53	—	3,464	3,464	0.14	0.08	0.07	3,491
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	0.99	1.54	8.06	9.02	0.01	0.36	0.71	1.07	0.33	0.28	0.61	—	1,642	1,642	0.07	0.03	0.44	1,654
2024	0.39	0.33	3.25	5.36	0.01	0.12	0.14	0.26	0.11	0.03	0.15	—	963	963	0.04	0.02	0.33	971
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2023	0.18	0.28	1.47	1.65	< 0.005	0.07	0.13	0.20	0.06	0.05	0.11	—	272	272	0.01	0.01	0.07	274
2024	0.07	0.06	0.59	0.98	< 0.005	0.02	0.03	0.05	0.02	0.01	0.03	—	159	159	0.01	< 0.005	0.05	161

### 3. Construction Emissions Details

#### 3.1. Site Preparation (2023) - 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	4.70	3.95	39.7	35.5	0.05	1.81	—	1.81	1.66	—	1.66	—	5,295	5,295	0.21	0.04	—	5,314

Dust From Material Movement:	—	—	—	—	—	—	7.67	7.67	—	3.94	3.94	—	—	—	—	—	—	
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	
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Off-Road Equipment	0.05	0.04	0.44	0.39	< 0.005	0.02	—	0.02	0.02	—	0.02	—	58.0	58.0	< 0.005	< 0.005	—	58.2
Dust From Material Movement:	—	—	—	—	—	—	0.08	0.08	—	0.04	0.04	—	—	—	—	—	—	
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	
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Off-Road Equipment	0.01	0.01	0.08	0.07	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	9.61	9.61	< 0.005	< 0.005	—	9.64
Dust From Material Movement:	—	—	—	—	—	—	0.02	0.02	—	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	
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
Worker	0.10	0.09	0.09	1.59	0.00	0.00	0.23	0.23	0.00	0.05	0.05	—	257	257	0.01	0.01	1.10	261
Vendor	< 0.005	< 0.005	0.07	0.02	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	62.8	62.8	< 0.005	0.01	0.17	65.8
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	

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	—	2.62	2.62	< 0.005	< 0.005	0.01	2.66
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.69	0.69	< 0.005	< 0.005	< 0.005	0.72
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	—	0.43	0.43	< 0.005	< 0.005	< 0.005	0.44
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.11	0.11	< 0.005	< 0.005	< 0.005	0.12
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 (2023) - 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	6.87	5.78	58.3	46.6	0.09	2.60	—	2.60	2.39	—	2.39	—	9,215	9,215	0.37	0.07	—	9,247
Dust From Material Movement	—	—	—	—	—	—	7.15	7.15	—	3.11	3.11	—	—	—	—	—	—	—
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	0.43	0.36	3.67	2.94	0.01	0.16	—	0.16	0.15	—	0.15	—	581	581	0.02	< 0.005	—	583
Dust From Material Movement	—	—	—	—	—	—	0.45	0.45	—	0.20	0.20	—	—	—	—	—	—	—
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	0.08	0.07	0.67	0.54	< 0.005	0.03	—	0.03	0.03	—	0.03	—	96.1	96.1	< 0.005	< 0.005	—	96.5
Dust From Material Movement	—	—	—	—	—	—	0.08	0.08	—	0.04	0.04	—	—	—	—	—	—	—
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	0.13	0.12	0.12	2.04	0.00	0.00	0.29	0.29	0.00	0.07	0.07	—	331	331	0.01	0.01	1.42	336
Vendor	< 0.005	< 0.005	0.07	0.02	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	62.8	62.8	< 0.005	0.01	0.17	65.8
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	0.01	0.01	0.10	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	19.4	19.4	< 0.005	< 0.005	0.04	19.7
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.96	3.96	< 0.005	< 0.005	< 0.005	4.14

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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.21	3.21	< 0.005	< 0.005	0.01	3.25	
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.66	0.66	< 0.005	< 0.005	< 0.005	0.69	
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	

### 3.5. Grading (2023) - 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	0.81	0.68	6.14	10.1	0.02	0.30	—	0.30	0.27	—	0.27	—	1,656	1,656	0.07	0.01	—	1,661
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
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	0.03	0.02	0.20	0.33	< 0.005	0.01	—	0.01	0.01	—	0.01	—	54.4	54.4	< 0.005	< 0.005	—	54.6
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—

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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.04	0.06	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	9.01	9.01	< 0.005	< 0.005	—	9.04	
Dust From Material Movement	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—	
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	1.36	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	220	220	0.01	0.01	0.94	224	
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	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	6.74	6.74	< 0.005	< 0.005	0.01	6.84	
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	—	1.12	1.12	< 0.005	< 0.005	< 0.005	1.13	
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	

## 3.7. Building Construction (2023) - 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	0.73	0.62	7.39	10.1	0.01	0.28	—	0.28	0.26	—	0.26	—	1,621	1,621	0.07	0.01	—	1,626
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	0.73	0.62	7.39	10.1	0.01	0.28	—	0.28	0.26	—	0.26	—	1,621	1,621	0.07	0.01	—	1,626
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	0.15	0.13	1.52	2.08	< 0.005	0.06	—	0.06	0.05	—	0.05	—	333	333	0.01	< 0.005	—	334
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	0.28	0.38	< 0.005	0.01	—	0.01	0.01	—	0.01	—	55.1	55.1	< 0.005	< 0.005	—	55.3
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	0.13	0.12	0.12	2.06	0.00	0.00	0.30	0.30	0.00	0.07	0.07	—	333	333	0.01	0.01	1.43	338
Vendor	0.01	0.01	0.32	0.10	< 0.005	< 0.005	0.08	0.08	< 0.005	0.02	0.02	—	278	278	0.01	0.04	0.77	291
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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.13	0.11	0.14	1.56	0.00	0.00	0.30	0.30	0.00	0.07	0.07	—	306	306	0.01	0.01	0.04	310
Vendor	0.01	0.01	0.34	0.10	< 0.005	< 0.005	0.08	0.08	< 0.005	0.02	0.02	—	278	278	0.01	0.04	0.02	291
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	0.03	0.02	0.03	0.34	0.00	0.00	0.06	0.06	0.00	0.01	0.01	—	63.7	63.7	< 0.005	< 0.005	0.13	64.6
Vendor	< 0.005	< 0.005	0.07	0.02	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	57.1	57.1	< 0.005	0.01	0.07	59.8
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	0.01	0.06	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	10.5	10.5	< 0.005	< 0.005	0.02	10.7
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	9.46	9.46	< 0.005	< 0.005	0.01	9.89
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. Building Construction (2024) - 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	0.70	0.59	7.06	10.1	0.01	0.25	—	0.25	0.23	—	0.23	—	1,621	1,621	0.07	0.01	—	1,626
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	0.70	0.59	7.06	10.1	0.01	0.25	—	0.25	0.23	—	0.23	—	1,621	1,621	0.07	0.01	—	1,626
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	0.21	0.18	2.14	3.07	< 0.005	0.08	—	0.08	0.07	—	0.07	—	492	492	0.02	< 0.005	—	493
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	0.04	0.03	0.39	0.56	< 0.005	0.01	—	0.01	0.01	—	0.01	—	81.4	81.4	< 0.005	< 0.005	—	81.7
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	0.13	0.12	0.11	1.89	0.00	0.00	0.30	0.30	0.00	0.07	0.07	—	326	326	0.01	0.01	1.29	331
Vendor	0.01	0.01	0.31	0.10	< 0.005	< 0.005	0.08	0.08	< 0.005	0.02	0.02	—	275	275	0.01	0.04	0.77	288
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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.12	0.11	0.13	1.43	0.00	0.00	0.30	0.30	0.00	0.07	0.07	—	300	300	0.01	0.01	0.03	304

Vendor	0.01	0.01	0.33	0.10	< 0.005	< 0.005	0.08	0.08	< 0.005	0.02	0.02	—	275	275	0.01	0.04	0.02	287
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	0.04	0.03	0.04	0.46	0.00	0.00	0.09	0.09	0.00	0.02	0.02	—	92.1	92.1	< 0.005	< 0.005	0.17	93.4
Vendor	< 0.005	< 0.005	0.10	0.03	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	83.4	83.4	< 0.005	0.01	0.10	87.2
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	0.01	0.01	0.01	0.08	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	15.3	15.3	< 0.005	< 0.005	0.03	15.5
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	13.8	13.8	< 0.005	< 0.005	0.02	14.4
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

### 3.11. Building Construction (2023) - 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	0.65	0.54	3.78	4.57	0.01	0.20	—	0.20	0.19	—	0.19	—	640	640	0.03	0.01	—	642
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	0.05	0.04	0.27	0.33	< 0.005	0.01	—	0.01	0.01	—	0.01	—	45.6	45.6	< 0.005	< 0.005	—	45.7

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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.05	0.06	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.55	7.55	< 0.005	< 0.005	—	7.57	
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	0.13	0.11	0.14	1.56	0.00	0.00	0.30	0.30	0.00	0.07	0.07	—	306	306	0.01	0.01	0.04	310	
Vendor	0.02	0.01	0.46	0.14	< 0.005	0.01	0.10	0.11	0.01	0.03	0.03	—	377	377	0.01	0.06	0.03	394	
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	0.01	0.01	0.01	0.12	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	22.1	22.1	< 0.005	< 0.005	0.04	22.4	
Vendor	< 0.005	< 0.005	0.03	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	26.9	26.9	< 0.005	< 0.005	0.03	28.1	
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	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.66	3.66	< 0.005	< 0.005	0.01	3.71	
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	4.45	4.45	< 0.005	< 0.005	0.01	4.65	
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	

### 3.13. Paving (2023) - 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
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Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.51	0.43	3.07	3.81	< 0.005	0.17	—	0.17	0.15	—	0.15	—	534	534	0.02	< 0.005	—	535
Paving	—	0.49	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	0.51	0.43	3.07	3.81	< 0.005	0.17	—	0.17	0.15	—	0.15	—	534	534	0.02	< 0.005	—	535
Paving	—	0.49	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	0.03	0.03	0.21	0.26	< 0.005	0.01	—	0.01	0.01	—	0.01	—	36.5	36.5	< 0.005	< 0.005	—	36.7
Paving	—	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.04	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	6.05	6.05	< 0.005	< 0.005	—	6.07
Paving	—	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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.04	0.68	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	110	110	< 0.005	< 0.005	0.47	112
Vendor	< 0.005	< 0.005	0.07	0.02	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	62.8	62.8	< 0.005	0.01	0.17	65.8
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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.05	0.52	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	101	101	< 0.005	< 0.005	0.01	102
Vendor	< 0.005	< 0.005	0.08	0.02	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	62.9	62.9	< 0.005	0.01	< 0.005	65.7
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	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.02	7.02	< 0.005	< 0.005	0.01	7.12
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	4.30	4.30	< 0.005	< 0.005	0.01	4.50
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	—	1.16	1.16	< 0.005	< 0.005	< 0.005	1.18
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.71	0.71	< 0.005	< 0.005	< 0.005	0.75
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

### 3.15. Architectural Coating (2023) - 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	0.37	0.31	3.70	5.06	0.01	0.14	—	0.14	0.13	—	0.13	—	810	810	0.03	0.01	—	813
Architectural Coatings	—	6.17	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	0.41	0.55	< 0.005	0.02	—	0.02	0.01	—	0.01	—	88.8	88.8	< 0.005	< 0.005	—	89.1
Architectural Coatings	—	0.68	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	0.07	0.10	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	14.7	14.7	< 0.005	< 0.005	—	14.8
Architectural Coatings	—	0.12	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	0.05	0.06	0.62	0.00	0.00	0.12	0.12	0.00	0.03	0.03	—	122	122	0.01	< 0.005	0.01	124

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	0.01	< 0.005	0.01	0.07	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	13.6	13.6	< 0.005	< 0.005	0.03	13.8
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	—	2.25	2.25	< 0.005	< 0.005	< 0.005	2.28
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

### 3.17. Trenching (2024) - 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	0.55	0.46	4.11	7.07	0.01	0.19	—	0.19	0.17	—	0.17	—	1,136	1,136	0.05	0.01	—	1,140
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	0.55	0.46	4.11	7.07	0.01	0.19	—	0.19	0.17	—	0.17	—	1,136	1,136	0.05	0.01	—	1,140
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	0.13	0.11	0.96	1.65	< 0.005	0.04	—	0.04	0.04	—	0.04	—	265	265	0.01	< 0.005	—	265
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	0.02	0.02	0.17	0.30	< 0.005	0.01	—	0.01	0.01	—	0.01	—	43.8	43.8	< 0.005	< 0.005	—	44.0
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	0.06	0.05	0.05	0.83	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	144	144	0.01	< 0.005	0.57	146
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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.05	0.06	0.63	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	132	132	0.01	< 0.005	0.01	134
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	0.01	0.01	0.01	0.15	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	31.2	31.2	< 0.005	< 0.005	0.06	31.6
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	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	5.17	5.17	< 0.005	< 0.005	0.01	5.24

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	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	0.00

### 3.19. Trenching (2023) - 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	0.80	0.67	6.94	7.42	0.01	0.39	—	0.39	0.36	—	0.36	—	1,128	1,128	0.05	0.01	—	1,132	
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	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.80	0.67	6.94	7.42	0.01	0.39	—	0.39	0.36	—	0.36	—	1,128	1,128	0.05	0.01	—	1,132	
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	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	0.11	1.16	1.24	< 0.005	0.07	—	0.07	0.06	—	0.06	—	189	189	0.01	< 0.005	—	189	
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	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.21	0.23	< 0.005	0.01	—	0.01	0.01	—	0.01	—	31.2	31.2	< 0.005	< 0.005	—	31.3	
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	0.00

Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.07	0.07	1.13	0.00	0.00	0.16	0.16	0.00	0.04	0.04	—	184	184	0.01	0.01	0.79	186
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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.06	0.08	0.86	0.00	0.00	0.16	0.16	0.00	0.04	0.04	—	169	169	0.01	0.01	0.02	171
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	0.01	0.01	0.01	0.15	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	28.6	28.6	< 0.005	< 0.005	0.06	29.0
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	0.03	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	4.73	4.73	< 0.005	< 0.005	0.01	4.79
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

## 5. Activity Data

### 5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Site Preparation	Site Preparation	7/25/2023	7/30/2023	5.00	4.00	—
Rough Grading	Grading	7/31/2023	8/30/2023	5.00	23.0	—

Fine Grading	Grading	8/31/2023	9/15/2023	5.00	12.0	—
Building Construction	Building Construction	9/18/2023	6/3/2024	5.00	186	—
Modular Building Installation	Building Construction	10/20/2023	11/24/2023	5.00	26.0	—
Paving	Paving	9/18/2023	10/20/2023	5.00	25.0	—
Architectural Coating	Architectural Coating	10/23/2023	12/15/2023	5.00	40.0	—
Finishing and Landscaping	Trenching	1/8/2024	5/3/2024	5.00	85.0	—
Utility Trenching	Trenching	9/18/2023	12/11/2023	5.00	61.0	—

## 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
Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00	8.00	367	0.40
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	4.00	8.00	84.0	0.37
Rough Grading	Crawler Tractors	Diesel	Average	3.00	6.00	170	0.43
Rough Grading	Scrapers	Diesel	Average	3.00	6.00	423	0.48
Building Construction	Forklifts	Diesel	Average	4.00	8.00	82.0	0.20
Paving	Paving Equipment	Diesel	Average	1.00	8.00	89.0	0.36
Paving	Rollers	Diesel	Average	1.00	6.00	36.0	0.38
Architectural Coating	Forklifts	Diesel	Average	2.00	8.00	82.0	0.20
Fine Grading	Skid Steer Loaders	Diesel	Average	2.00	6.00	74.3	0.37
Fine Grading	Rubber Tired Loaders	Diesel	Average	2.00	6.00	150	0.36
Fine Grading	Tractors/Loaders/Backhoes	Diesel	Average	2.00	6.00	101	0.37
Modular Building Installation	Paving Equipment	Diesel	Average	1.00	8.00	89.0	0.36

Modular Building Installation	Rollers	Diesel	Average	2.00	6.00	36.0	0.38
Modular Building Installation	Sweepers/Scrubbers	Diesel	Average	1.00	6.00	36.0	0.46
Rough Grading	Rubber Tired Dozers	Diesel	Average	3.00	6.00	405	0.40
Building Construction	Rough Terrain Forklifts	Diesel	Average	2.00	8.00	96.0	0.40
Building Construction	Aerial Lifts	Diesel	Average	2.00	8.00	46.0	0.31
Paving	Sweepers/Scrubbers	Diesel	Average	1.00	6.00	36.0	0.46
Architectural Coating	Rough Terrain Forklifts	Diesel	Average	1.00	8.00	96.0	0.40
Architectural Coating	Aerial Lifts	Diesel	Average	1.00	8.00	46.0	0.31
Finishing and Landscaping	Skid Steer Loaders	Diesel	Average	2.00	6.00	74.3	0.37
Finishing and Landscaping	Rubber Tired Loaders	Diesel	Average	2.00	6.00	150	0.36
Utility Trenching	Excavators	Diesel	Average	2.00	6.00	66.6	0.38
Utility Trenching	Rubber Tired Loaders	Diesel	Average	2.00	6.00	150	0.36
Utility Trenching	Plate Compactors	Diesel	Average	1.00	6.00	8.00	0.43

## 5.3. Construction Vehicles

### 5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Finishing and Landscaping	—	—	—	—
Finishing and Landscaping	Worker	10.0	18.5	LDA,LDT1,LDT2
Finishing and Landscaping	Vendor	—	10.2	HHDT,MHDT
Finishing and Landscaping	Hauling	0.00	20.0	HHDT
Finishing and Landscaping	Onsite truck	—	—	HHDT
Site Preparation	—	—	—	—
Site Preparation	Worker	17.5	18.5	LDA,LDT1,LDT2

Site Preparation	Vendor	2.00	10.2	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Rough Grading	—	—	—	—
Rough Grading	Worker	22.5	18.5	LDA,LDT1,LDT2
Rough Grading	Vendor	2.00	10.2	HHDT,MHDT
Rough Grading	Hauling	0.00	20.0	HHDT
Rough Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	22.7	18.5	LDA,LDT1,LDT2
Building Construction	Vendor	8.85	10.2	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	7.50	18.5	LDA,LDT1,LDT2
Paving	Vendor	2.00	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	9.07	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	10.2	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT
Fine Grading	—	—	—	—
Fine Grading	Worker	15.0	18.5	LDA,LDT1,LDT2
Fine Grading	Vendor	—	10.2	HHDT,MHDT
Fine Grading	Hauling	0.00	20.0	HHDT

Fine Grading	Onsite truck	—	—	HHDT
Modular Building Installation	—	—	—	—
Modular Building Installation	Worker	22.7	18.5	LDA,LDT1,LDT2
Modular Building Installation	Vendor	12.0	10.2	HHDT,MHDT
Modular Building Installation	Hauling	0.00	20.0	HHDT
Modular Building Installation	Onsite truck	—	—	HHDT
Utility Trenching	—	—	—	—
Utility Trenching	Worker	12.5	18.5	LDA,LDT1,LDT2
Utility Trenching	Vendor	—	10.2	HHDT,MHDT
Utility Trenching	Hauling	0.00	20.0	HHDT
Utility Trenching	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%
Limit vehicle speeds on unpaved roads to 25 mph	44%	44%
Sweep paved roads once per month	9%	9%

## 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	29,148	9,716	14,342

## 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)
Site Preparation	—	—	6.00	0.00	—
Rough Grading	—	—	104	0.00	—
Fine Grading	—	—	0.00	0.00	—
Paving	0.00	0.00	0.00	0.00	5.49

### 5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	2	61%	61%

### 5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Elementary School	0.00	0%
Parking Lot	2.47	100%
Other Asphalt Surfaces	2.22	100%
Other Non-Asphalt Surfaces	0.80	0%

### 5.8. Construction Electricity Consumption and Emissions Factors

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

Year	kWh per Year	CO2	CH4	N2O
2023	0.00	532	0.03	< 0.005
2024	0.00	532	0.03	< 0.005

## 8. User Changes to Default Data

Screen	Justification
Land Use	Based on District info., see assumptions file
Construction: Construction Phases	Based on District info., see assumptions file
Construction: Off-Road Equipment	Based on equipment mix provided by District, see assumptions file
Construction: Trips and VMT	District provided water trucks, included as vendor trips, see assumptions file
Construction: Architectural Coatings	Exclude square footage of modular buildings and shipping container storages since these type of structures do not usually require painting.

# **CalEEMod Off-Site Construction**

# TVCS-04 Offsite Construction Custom Report

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# 1. Basic Project Information

## 1.1. Basic Project Information

Data Field	Value
Project Name	TVCS-04 Offsite Construction
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.50
Precipitation (days)	14.0
Location	33.60122836961651, -117.08242128461683
County	Riverside-South Coast
City	Unincorporated
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	5685
EDFZ	11
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas

## 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
Other Asphalt Surfaces	26.0	1000sqft	0.60	26,012	0.00	—	—	—
Other Non-Asphalt Surfaces	4.25	1000sqft	0.10	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.	2.19	2.81	17.8	15.3	0.03	0.79	2.50	3.28	0.72	1.06	1.79	—	3,241	3,241	0.13	0.46	6.07	3,257
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.63	0.53	4.70	5.90	0.01	0.24	0.29	0.53	0.22	0.04	0.26	—	986	986	0.04	0.02	0.01	993
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.03	0.05	0.23	0.22	< 0.005	0.01	0.04	0.05	0.01	0.01	0.02	—	76.6	76.6	< 0.005	0.01	0.04	78.8
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	< 0.005	0.01	0.04	0.04	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	12.7	12.7	< 0.005	< 0.005	0.01	13.0

### 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

2024	2.19	2.81	17.8	15.3	0.03	0.79	2.50	3.28	0.72	1.06	1.79	—	3,241	3,241	0.13	0.46	6.07	3,257
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.63	0.53	4.70	5.90	0.01	0.24	0.29	0.53	0.22	0.04	0.26	—	986	986	0.04	0.02	0.01	993
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	0.03	0.05	0.23	0.22	< 0.005	0.01	0.04	0.05	0.01	0.01	0.02	—	76.6	76.6	< 0.005	0.01	0.04	78.8
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2024	< 0.005	0.01	0.04	0.04	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	12.7	12.7	< 0.005	< 0.005	0.01	13.0

### 3. Construction Emissions Details

#### 3.1. Demolition (2024) - 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	< 0.005	< 0.005	< 0.005	0.11	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.52	1.52	0.04	0.01	—	4.77
Demolition	—	—	—	—	—	—	1.06	1.06	—	0.16	0.16	—	—	—	—	—	—	—
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	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.02	0.02	< 0.005	< 0.005	—	0.07
Demolition	—	—	—	—	—	—	0.01	0.01	—	< 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	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	< 0.005	< 0.005	< 0.005	< 0.005	—	0.01
Demolition	—	—	—	—	—	—	< 0.005	< 0.005	—	< 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	0.01	0.01	0.01	0.21	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	36.0	36.0	< 0.005	< 0.005	0.14	36.5
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	0.12	0.04	3.17	0.76	0.02	0.05	0.72	0.78	0.05	0.20	0.26	—	2,802	2,802	0.05	0.45	5.93	2,943
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	—	0.46	0.46	< 0.005	< 0.005	< 0.005	0.47
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	0.05	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	38.4	38.4	< 0.005	0.01	0.03	40.3
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.08	0.08	< 0.005	< 0.005	< 0.005	0.08
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	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	6.36	6.36	< 0.005	< 0.005	0.01	6.67

### 3.3. Site Preparation (2024) - 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	0.60	0.50	4.60	5.56	0.01	0.24	—	0.24	0.22	—	0.22	—	858	858	0.03	0.01	—	861
Dust From Material Movement	—	—	—	—	—	—	0.21	0.21	—	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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.04	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.05	7.05	< 0.005	< 0.005	—	7.08
Dust From Material Movement	—	—	—	—	—	—	< 0.005	< 0.005	—	< 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	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.17	1.17	< 0.005	< 0.005	—	1.17

Dust From Material Movement:	—	—	—	—	—	—	< 0.005	< 0.005	—	< 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.02	0.03	0.32	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	66.1	66.1	< 0.005	< 0.005	0.01	67.0
Vendor	< 0.005	< 0.005	0.07	0.02	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	62.1	62.1	< 0.005	0.01	< 0.005	65.0
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	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.55	0.55	< 0.005	< 0.005	< 0.005	0.56
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.51	0.51	< 0.005	< 0.005	< 0.005	0.53
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	—	0.09	0.09	< 0.005	< 0.005	< 0.005	0.09
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.08	0.08	< 0.005	< 0.005	< 0.005	0.09
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

### 3.5. Grading (2024) - 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	2.15	1.81	17.7	14.7	0.03	0.79	—	0.79	0.72	—	0.72	—	3,071	3,071	0.12	0.02	—	3,082
Dust From Material Movement:	—	—	—	—	—	—	2.38	2.38	—	1.04	1.04	—	—	—	—	—	—	—
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	0.10	0.08	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	16.8	16.8	< 0.005	< 0.005	—	16.9
Dust From Material Movement:	—	—	—	—	—	—	0.01	0.01	—	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.79	2.79	< 0.005	< 0.005	—	2.80
Dust From Material Movement:	—	—	—	—	—	—	< 0.005	< 0.005	—	< 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	0.04	0.04	0.04	0.63	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	108	108	< 0.005	< 0.005	0.43	110
Vendor	< 0.005	< 0.005	0.07	0.02	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	62.1	62.1	< 0.005	0.01	0.17	65.1
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	—	0.55	0.55	< 0.005	< 0.005	< 0.005	0.56
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.34	0.34	< 0.005	< 0.005	< 0.005	0.36
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	—	0.09	0.09	< 0.005	< 0.005	< 0.005	0.09
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.06	0.06	< 0.005	< 0.005	< 0.005	0.06
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. Grading (2024) - 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	0.10	0.09	0.68	1.53	< 0.005	0.03	—	0.03	0.03	—	0.03	—	260	260	0.01	< 0.005	—	261

Dust From Material Movement:	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
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	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.14	2.14	< 0.005	< 0.005	—	2.15
Dust From Material Movement:	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
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	< 0.005	< 0.005	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.35	0.35	< 0.005	< 0.005	—	0.36
Dust From Material Movement:	—	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
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	0.01	0.01	0.01	0.21	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	36.0	36.0	< 0.005	< 0.005	0.14	36.5
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	—	0.28	0.28	< 0.005	< 0.005	< 0.005	0.28
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	—	0.05	0.05	< 0.005	< 0.005	< 0.005	0.05
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. Paving (2024) - 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	0.48	0.40	2.94	3.80	< 0.005	0.15	—	0.15	0.14	—	0.14	—	533	533	0.02	< 0.005	—	535
Paving	—	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	0.04	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	7.30	7.30	< 0.005	< 0.005	—	7.33
Paving	—	< 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	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.21	1.21	< 0.005	< 0.005	—	1.21
Paving	—	< 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	0.04	0.04	0.04	0.63	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	108	108	< 0.005	< 0.005	0.43	110
Vendor	< 0.005	< 0.005	0.07	0.02	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	62.1	62.1	< 0.005	0.01	0.17	65.1
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	—	1.38	1.38	< 0.005	< 0.005	< 0.005	1.40
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.85	0.85	< 0.005	< 0.005	< 0.005	0.89
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	—	0.23	0.23	< 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	—	0.14	0.14	< 0.005	< 0.005	< 0.005	0.15
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

### 3.11. Architectural Coating (2024) - 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architect ural Coatings	—	2.81	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architect ural Coatings	—	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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architect ural Coatings	—	< 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	0.00	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

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	0.00	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
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	0.00	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
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

### 3.13. Trenching (2024) - 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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	0.00	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
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	0.00	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
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	0.00	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
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

### 4.10. 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)

Remove d	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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
Asphalt Demolition	Demolition	4/1/2024	4/5/2024	5.00	5.00	—
Site Preparation	Site Preparation	3/27/2024	3/29/2024	5.00	3.00	—
Rough Grading	Grading	4/8/2024	4/9/2024	5.00	2.00	—
Fine Grading	Grading	4/10/2024	4/12/2024	5.00	3.00	—
Paving	Paving	4/15/2024	4/19/2024	5.00	5.00	—
Architectural Coating	Architectural Coating	4/23/2024	4/25/2024	5.00	3.00	—
Finishing and Landscaping	Trenching	4/16/2024	4/26/2024	5.00	9.00	—

### 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
Asphalt Demolition	Crushing/Proc. Equipment	Gasoline	Average	1.00	6.00	99.0	0.85
Site Preparation	Graders	Diesel	Average	1.00	8.00	148	0.41
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Rough Grading	Rubber Tired Dozers	Diesel	Average	1.00	6.00	405	0.40
Paving	Rollers	Diesel	Average	1.00	6.00	36.0	0.38

Fine Grading	Tractors/Loaders/Backh	Diesel	Average	1.00	6.00	101	0.37
Rough Grading	Crawler Tractors	Diesel	Average	1.00	6.00	170	0.43
Rough Grading	Scrapers	Diesel	Average	1.00	6.00	423	0.48
Paving	Paving Equipment	Diesel	Average	1.00	8.00	89.0	0.36
Paving	Sweepers/Scrubbers	Diesel	Average	1.00	6.00	36.0	0.46

### 5.3. Construction Vehicles

#### 5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Asphalt Demolition	—	—	—	—
Asphalt Demolition	Worker	2.50	18.5	LDA,LDT1,LDT2
Asphalt Demolition	Vendor	—	10.2	HHDT,MHDT
Asphalt Demolition	Hauling	40.0	20.0	HHDT
Asphalt Demolition	Onsite truck	—	—	HHDT
Site Preparation	—	—	—	—
Site Preparation	Worker	5.00	18.5	LDA,LDT1,LDT2
Site Preparation	Vendor	2.00	10.2	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Rough Grading	—	—	—	—
Rough Grading	Worker	7.50	18.5	LDA,LDT1,LDT2
Rough Grading	Vendor	2.00	10.2	HHDT,MHDT
Rough Grading	Hauling	0.00	20.0	HHDT
Rough Grading	Onsite truck	—	—	HHDT
Fine Grading	—	—	—	—
Fine Grading	Worker	2.50	18.5	LDA,LDT1,LDT2

Fine Grading	Vendor	—	10.2	HHDT,MHDT
Fine Grading	Hauling	0.00	20.0	HHDT
Fine Grading	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	7.50	18.5	LDA,LDT1,LDT2
Paving	Vendor	2.00	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	0.00	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	10.2	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT
Finishing and Landscaping	—	—	—	—
Finishing and Landscaping	Worker	0.00	18.5	LDA,LDT1,LDT2
Finishing and Landscaping	Vendor	—	10.2	HHDT,MHDT
Finishing and Landscaping	Hauling	0.00	20.0	HHDT
Finishing and Landscaping	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%
Limit vehicle speeds on unpaved roads to 25 mph	44%	44%
Sweep paved roads once per month	9%	9%

### 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	0.00	0.00	1,815

### 5.6. Dust Mitigation

#### 5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (Ton of Debris)	Acres Paved (acres)
Asphalt Demolition	0.00	0.00	0.00	385	—
Site Preparation	—	—	1.50	0.00	—
Rough Grading	—	—	3.00	0.00	—
Fine Grading	—	—	0.00	0.00	—
Paving	0.00	0.00	0.00	0.00	0.69

#### 5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	2	61%	61%
Water Demolished Area	2	36%	36%

### 5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Other Asphalt Surfaces	0.60	100%
Other Non-Asphalt Surfaces	0.10	0%

### 5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2024	0.00	532	0.03	< 0.005

### 8. User Changes to Default Data

Screen	Justification
Construction: Construction Phases	Based on District info., see assumptions file
Construction: Off-Road Equipment	Based on District info., see assumptions file
Construction: Trips and VMT	Included water truck trips as vendor trips, see assumptions file
Construction: Off-Road Equipment EF	Based on OFFROAD 2021 V 1.0.3 Emissions inventory

# **CalEEMod Operations Model**

# TVCS-04 Ops Custom Report

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8. User Changes to Default Data

# 1. Basic Project Information

## 1.1. Basic Project Information

Data Field	Value
Project Name	TVCS-04 Ops
Operational Year	2025
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.50
Precipitation (days)	14.0
Location	33.60138451656185, -117.08255217133168
County	Riverside-South Coast
City	Unincorporated
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	5685
EDFZ	11
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas
App Version	2022.1.1.29

## 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
Elementary School	54.0	1000sqft	5.33	53,992	214,975	0.00	—	—
Parking Lot	107	1000sqft	2.47	0.00	0.00	—	—	—

Other Asphalt Surfaces	123	1000sqft	2.81	0.00	0.00	—	—	—
Other Non-Asphalt Surfaces	39.3	1000sqft	0.90	0.00	0.00	—	—	—

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

Sector	#	Measure Title
Water	W-4	Require Low-Flow Water Fixtures

## 2. Emissions Summary

### 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.	5.21	4.79	2.55	45.4	0.09	0.07	8.91	8.99	0.07	2.25	2.32	41.1	9,823	9,864	4.13	0.24	34.6	10,073
Mit.	5.21	4.79	2.55	45.4	0.09	0.07	8.91	8.99	0.07	2.25	2.32	40.7	9,822	9,863	4.13	0.24	34.6	10,071
% Reduced	—	—	—	—	—	—	—	—	—	—	—	1%	< 0.5%	< 0.5%	< 0.5%	—	—	< 0.5%
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	4.65	4.26	2.76	35.3	0.08	0.07	8.91	8.98	0.07	2.25	2.32	41.1	9,112	9,153	4.14	0.25	1.10	9,333
Mit.	4.65	4.26	2.76	35.3	0.08	0.07	8.91	8.98	0.07	2.25	2.32	40.7	9,110	9,151	4.14	0.25	1.10	9,331
% Reduced	—	—	—	—	—	—	—	—	—	—	—	1%	< 0.5%	< 0.5%	< 0.5%	—	—	< 0.5%
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Unmit.	3.96	3.66	2.13	27.9	0.06	0.06	6.31	6.37	0.06	1.59	1.65	41.1	6,838	6,879	4.05	0.19	10.8	7,047
Mit.	3.96	3.66	2.13	27.9	0.06	0.06	6.31	6.37	0.06	1.59	1.65	40.7	6,836	6,877	4.04	0.19	10.8	7,045
% Reduced	—	—	—	—	—	—	—	—	—	—	—	1%	< 0.5%	< 0.5%	< 0.5%	—	—	< 0.5%
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.72	0.67	0.39	5.09	0.01	0.01	1.15	1.16	0.01	0.29	0.30	6.80	1,132	1,139	0.67	0.03	1.79	1,167
Mit.	0.72	0.67	0.39	5.09	0.01	0.01	1.15	1.16	0.01	0.29	0.30	6.73	1,132	1,139	0.67	0.03	1.79	1,166
% Reduced	—	—	—	—	—	—	—	—	—	—	—	1%	< 0.5%	< 0.5%	< 0.5%	< 0.5%	—	< 0.5%

## 2.6. Operations Emissions by Sector, Mitigated

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	3.51	3.14	2.19	42.8	0.09	0.04	8.91	8.96	0.04	2.25	2.29	—	8,938	8,938	0.31	0.22	34.4	9,047
Area	1.66	1.63	0.02	2.35	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	9.66	9.66	< 0.005	< 0.005	—	9.69
Energy	0.04	0.02	0.35	0.29	< 0.005	0.03	—	0.03	0.03	—	0.03	—	840	840	0.08	0.01	—	843
Water	—	—	—	—	—	—	—	—	—	—	—	3.43	34.4	37.9	0.02	0.01	—	40.6
Waste	—	—	—	—	—	—	—	—	—	—	—	37.2	0.00	37.2	3.72	0.00	—	130
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.21	0.21
Total	5.21	4.79	2.55	45.4	0.09	0.07	8.91	8.99	0.07	2.25	2.32	40.7	9,822	9,863	4.13	0.24	34.6	10,071
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	3.36	3.00	2.41	35.0	0.08	0.04	8.91	8.96	0.04	2.25	2.29	—	8,236	8,236	0.32	0.24	0.89	8,316
Area	1.25	1.25	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.04	0.02	0.35	0.29	< 0.005	0.03	—	0.03	0.03	—	0.03	—	840	840	0.08	0.01	—	843
Water	—	—	—	—	—	—	—	—	—	—	—	3.43	34.4	37.9	0.02	0.01	—	40.6

Waste	—	—	—	—	—	—	—	—	—	—	—	37.2	0.00	37.2	3.72	0.00	—	130
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.21	0.21
Total	4.65	4.26	2.76	35.3	0.08	0.07	8.91	8.98	0.07	2.25	2.32	40.7	9,110	9,151	4.14	0.25	1.10	9,331
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	2.39	2.13	1.77	26.0	0.06	0.03	6.31	6.34	0.03	1.59	1.62	—	5,956	5,956	0.23	0.17	10.6	6,024
Area	1.53	1.51	0.01	1.61	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	6.61	6.61	< 0.005	< 0.005	—	6.64
Energy	0.04	0.02	0.35	0.29	< 0.005	0.03	—	0.03	0.03	—	0.03	—	840	840	0.08	0.01	—	843
Water	—	—	—	—	—	—	—	—	—	—	—	3.43	34.4	37.9	0.02	0.01	—	40.6
Waste	—	—	—	—	—	—	—	—	—	—	—	37.2	0.00	37.2	3.72	0.00	—	130
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.21	0.21
Total	3.96	3.66	2.13	27.9	0.06	0.06	6.31	6.37	0.06	1.59	1.65	40.7	6,836	6,877	4.04	0.19	10.8	7,045
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.44	0.39	0.32	4.75	0.01	0.01	1.15	1.16	0.01	0.29	0.30	—	986	986	0.04	0.03	1.76	997
Area	0.28	0.28	< 0.005	0.29	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.10	1.10	< 0.005	< 0.005	—	1.10
Energy	0.01	< 0.005	0.06	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	139	139	0.01	< 0.005	—	140
Water	—	—	—	—	—	—	—	—	—	—	—	0.57	5.70	6.27	< 0.005	< 0.005	—	6.72
Waste	—	—	—	—	—	—	—	—	—	—	—	6.17	0.00	6.17	0.62	0.00	—	21.6
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.03	0.03
Total	0.72	0.67	0.39	5.09	0.01	0.01	1.15	1.16	0.01	0.29	0.30	6.73	1,132	1,139	0.67	0.03	1.79	1,166

## 4. Operations Emissions Details

### 4.1. Mobile Emissions by Land Use

#### 4.1.2. Mitigated

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Elementary School	3.51	3.14	2.19	42.8	0.09	0.04	8.91	8.96	0.04	2.25	2.29	—	8,938	8,938	0.31	0.22	34.4	9,047
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
Other Asphalt Surfaces	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
Other Non-Asphalt Surfaces	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	3.51	3.14	2.19	42.8	0.09	0.04	8.91	8.96	0.04	2.25	2.29	—	8,938	8,938	0.31	0.22	34.4	9,047
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Elementary School	3.36	3.00	2.41	35.0	0.08	0.04	8.91	8.96	0.04	2.25	2.29	—	8,236	8,236	0.32	0.24	0.89	8,316
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
Other Asphalt Surfaces	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
Other Non-Asphalt Surfaces	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	3.36	3.00	2.41	35.0	0.08	0.04	8.91	8.96	0.04	2.25	2.29	—	8,236	8,236	0.32	0.24	0.89	8,316
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Elementary School	0.44	0.39	0.32	4.75	0.01	0.01	1.15	1.16	0.01	0.29	0.30	—	986	986	0.04	0.03	1.76	997
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

Other Asphalt Surfaces	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	0.00
Other Non-Asphalt Surfaces	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	0.00
Total	0.44	0.39	0.32	4.75	0.01	0.01	1.15	1.16	0.01	0.29	0.30	—	986	986	0.04	0.03	1.76	997	

## 4.2. Energy

### 4.2.2. Electricity Emissions By Land Use - Mitigated

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Elementary School	—	—	—	—	—	—	—	—	—	—	—	—	336	336	0.03	< 0.005	—	338	
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	89.9	89.9	0.01	< 0.005	—	90.4	
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00	
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00	
Total	—	—	—	—	—	—	—	—	—	—	—	—	426	426	0.04	< 0.005	—	428	
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Elementary School	—	—	—	—	—	—	—	—	—	—	—	—	336	336	0.03	< 0.005	—	338	

Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	89.9	89.9	0.01	< 0.005	—	90.4
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	426	426	0.04	< 0.005	—	428
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Elementary School	—	—	—	—	—	—	—	—	—	—	—	—	55.6	55.6	0.01	< 0.005	—	55.9
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	—	14.9	14.9	< 0.005	< 0.005	—	15.0
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	70.4	70.4	0.01	< 0.005	—	70.9

4.2.4. Natural Gas Emissions By Land Use - Mitigated

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Elementary School	0.04	0.02	0.35	0.29	< 0.005	0.03	—	0.03	0.03	—	0.03	—	414	414	0.04	< 0.005	—	415
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

Other Asphalt Surfaces	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
Other Non-Asphalt Surfaces	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	0.04	0.02	0.35	0.29	< 0.005	0.03	—	0.03	0.03	—	0.03	—	414	414	0.04	< 0.005	—	415
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Elementary School	0.04	0.02	0.35	0.29	< 0.005	0.03	—	0.03	0.03	—	0.03	—	414	414	0.04	< 0.005	—	415
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
Other Asphalt Surfaces	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
Other Non-Asphalt Surfaces	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	0.04	0.02	0.35	0.29	< 0.005	0.03	—	0.03	0.03	—	0.03	—	414	414	0.04	< 0.005	—	415
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Elementary School	0.01	< 0.005	0.06	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	68.6	68.6	0.01	< 0.005	—	68.8
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
Other Asphalt Surfaces	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
Other Non-Asphalt Surfaces	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	0.01	< 0.005	0.06	0.05	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	68.6	68.6	0.01	< 0.005	—	68.8

## 4.3. Area Emissions by Source

## 4.3.2. Mitigated

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	1.18	1.18	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.07	0.07	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.42	0.39	0.02	2.35	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	9.66	9.66	< 0.005	< 0.005	—	9.69
Total	1.66	1.63	0.02	2.35	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	9.66	9.66	< 0.005	< 0.005	—	9.69
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	1.18	1.18	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.07	0.07	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	1.25	1.25	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Consumer Product	0.21	0.21	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.01	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.05	0.05	< 0.005	0.29	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.10	1.10	< 0.005	< 0.005	—	1.10
Total	0.28	0.28	< 0.005	0.29	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.10	1.10	< 0.005	< 0.005	—	1.10

#### 4.4. Water Emissions by Land Use

##### 4.4.2. Mitigated

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Elementary School	—	—	—	—	—	—	—	—	—	—	—	3.43	34.4	37.9	0.02	0.01	—	40.6
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	3.43	34.4	37.9	0.02	0.01	—	40.6

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Elementary School	—	—	—	—	—	—	—	—	—	—	—	3.43	34.4	37.9	0.02	0.01	—	40.6
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	3.43	34.4	37.9	0.02	0.01	—	40.6
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Elementary School	—	—	—	—	—	—	—	—	—	—	—	0.57	5.70	6.27	< 0.005	< 0.005	—	6.72
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	0.57	5.70	6.27	< 0.005	< 0.005	—	6.72

## 4.5. Waste Emissions by Land Use

### 4.5.2. Mitigated

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Elementary School	—	—	—	—	—	—	—	—	—	—	—	37.2	0.00	37.2	3.72	0.00	—	130
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	37.2	0.00	37.2	3.72	0.00	—	130
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Elementary School	—	—	—	—	—	—	—	—	—	—	—	37.2	0.00	37.2	3.72	0.00	—	130
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	37.2	0.00	37.2	3.72	0.00	—	130
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Elementary School	—	—	—	—	—	—	—	—	—	—	—	6.17	0.00	6.17	0.62	0.00	—	21.6
Parking Lot	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

Other Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	—	6.17	0.00	6.17	0.62	0.00	—	21.6

## 4.6. Refrigerant Emissions by Land Use

### 4.6.2. Mitigated

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)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Elementary School	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.21	0.21	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.21	0.21	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Elementary School	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.21	0.21	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.21	0.21	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Elementary School	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.03	0.03	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.03	0.03	—

### 4.7. Offroad Emissions By Equipment Type

#### 4.7.2. Mitigated

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

Equipm ent 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

#### 4.8.2. Mitigated

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

Equipm ent 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

### 4.9.2. Mitigated

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

Equipm ent 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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

## 5. Activity Data

### 5.9. Operational Mobile Sources

#### 5.9.2. Mitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Elementary School	655	0.00	0.00	170,741	12,780	0.00	0.00	3,331,814
Parking Lot	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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## 5.10. Operational Area Sources

### 5.10.1. Hearths

#### 5.10.1.2. Mitigated

### 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)
0	0.00	29,148	9,716	16,485

### 5.10.4. Landscape Equipment - Mitigated

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	250

## 5.11. Operational Energy Consumption

### 5.11.2. Mitigated

#### 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)
Elementary School	351,384	349	0.0330	0.0040	1,292,592
Parking Lot	94,103	349	0.0330	0.0040	0.00
Other Asphalt Surfaces	0.00	349	0.0330	0.0040	0.00
Other Non-Asphalt Surfaces	0.00	349	0.0330	0.0040	0.00

## 5.12. Operational Water and Wastewater Consumption

### 5.12.2. Mitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Elementary School	1,607,138	4,732,590
Parking Lot	0.00	0.00
Other Asphalt Surfaces	0.00	0.00
Other Non-Asphalt Surfaces	0.00	0.00

## 5.13. Operational Waste Generation

### 5.13.2. Mitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Elementary School	69.1	—
Parking Lot	0.00	—
Other Asphalt Surfaces	0.00	—
Other Non-Asphalt Surfaces	0.00	—

## 5.14. Operational Refrigeration and Air Conditioning Equipment

### 5.14.2. Mitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Elementary School	Household refrigerators and/or freezers	R-134a	1,430	0.02	0.60	0.00	1.00
Elementary School	Other commercial A/C and heat pumps	R-410A	2,088	< 0.005	4.00	4.00	18.0
Elementary School	Stand-alone retail refrigerators and freezers	R-134a	1,430	< 0.005	1.00	0.00	1.00

Elementary School	Walk-in refrigerators and freezers	R-404A	3,922	< 0.005	7.50	7.50	20.0
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## 5.15. Operational Off-Road Equipment

### 5.15.2. Mitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
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## 5.16. Stationary Sources

### 5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor
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### 5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)
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## 5.17. User Defined

Equipment Type	Fuel Type
—	—

## 8. User Changes to Default Data

Screen	Justification
Land Use	Based on District info., see assumptions file
Operations: Vehicle Data	Based on EPD Solutions, see assumptions file
Operations: Fleet Mix	Fleet mix for the project is modified to reflect a higher proportion of passenger vehicles than the regional VMT. Assumes a mix of approximately 97% passenger vehicles, 2% medium duty trucks, and 1% heavy duty trucks and buses, see assumptions file

Operations: Architectural Coatings	Exclude square footage of modular buildings and shipping container storages since these type of structures do not usually require painting.
Operations: Water and Waste Water	Assume 100% aerobic treatment, based on water and wastewater generation from Section 3.10, Hydrology and Water Quality
Operations: Solid Waste	Based on solid waste estimates from section 3.19, Utilities and Service Systems.
Characteristics: Project Details	Based on PD and County's Transportation Guidelines

# **LST Worksheets**

**Construction Localized Significance Thresholds: Onsite Site Preparation**

SRA No.	Acres	NOx & CO		PM10 & PM2.5		Construction / Project Site Size (Acres)	
		Source Receptor Distance (meters)	Source Receptor Distance (Feet)	Source Receptor Distance (meters)	Source Receptor Distance (Feet)		
24	3.50	25	82	25	82	12.04	
<b>Source Receptor Distance (meters)</b>	<b>Perris Valley</b>		<b>Equipment</b>	<b>Acres/8-hr Day</b>	<b>Daily hours</b>	<b>Equipment Used</b>	<b>Acres</b>
	25		Tractors	0.5	0.0625	4	2
<b>NOx</b>	<b>220</b>		Graders	0.5	0.0625	3	0
<b>CO</b>	<b>1,230</b>		Dozers	0.5	0.0625		1.5
<b>PM10</b>	<b>9.99</b>		Scrapers	1	0.125		0
<b>PM2.5</b>	<b>6.00</b>					<b>Acres</b>	<b>3.50</b>
	Acres	<b>25</b>	<b>50</b>		<b>100</b>	<b>200</b>	<b>500</b>
NOx	3	203	234		302	415	716
	4	237	268		340	452	748
		220	251		321	434	732
CO	3	1114	1567		2634	4711	20141
	4	1346	1873		3035	4285	21336
		1230	1720		2835	4498	20739
PM10	3	9	27		45	82	193
	4	11	33		52	89	200
		10	30		49	86	197
PM2.5	3	5	7		12	26	96
	4	7	9		14	28	100
		6	8		13	27	98
Perris Valley	<b>3.50 Acres</b>						
	<b>25</b>	<b>50</b>	<b>100</b>		<b>200</b>	<b>500</b>	
NOx	220	251	321		434	732	
CO	1230	1720	2835		4498	20739	
PM10	10	30	49		86	197	
PM2.5	6	8	13		27	98	

Acre Below		Acre Above	
SRA No.	Acres	SRA No.	Acres
24	3	24	4
<b>Distance Increment Below</b>			
25			
<b>Distance Increment Above</b>			
25			

Updated: 10/21/2009 - Table C-1. 2006 – 2008

## Construction Localized Significance Thresholds: Onsite Rough Grading

SRA No.	Acres	NOx & CO		PM10 & PM2.5		Construction / Project Site Size (Acres)
		Source Receptor Distance (meters)	Source Receptor Distance (Feet)	Source Receptor Distance (meters)	Source Receptor Distance (Feet)	
24	3.38	25	82	25	82	12.04
<b>Source Receptor Distance (meters)</b>						
	<b>Perris Valley</b>		<b>Equipment</b>	<b>Acres/8-hr Day</b>	<b>Daily hours</b>	<b>Equipment Used Acres</b>
	25					
	<b>NOx</b>	<b>216</b>	Tractors	0.5	0.0625	0
	<b>CO</b>	<b>1,201</b>	Graders	0.5	0.0625	0
	<b>PM10</b>	<b>9.75</b>	Dozers	0.5	0.0625	6 3 1.125
	<b>PM2.5</b>	<b>5.83</b>	Scrapers	1	0.125	6 3 2.25
						<b>Acres</b>
						3.38
	<b>Acres</b>	<b>25</b>	<b>50</b>	<b>100</b>	<b>200</b>	<b>500</b>
	NOx	3	203	234	302	415
		4	237	268	340	452
			216	247	316	429
	CO	3	1114	1567	2634	4711
		4	1346	1873	3035	4285
			1201	1682	2784	4551
	PM10	3	9	27	45	82
		4	11	33	52	89
			10	29	48	85
	PM2.5	3	5	7	12	26
		4	7	9	14	28
			6	8	13	27
	Perris Valley					
	<b>3.38 Acres</b>					
	<b>25</b>	<b>50</b>	<b>100</b>	<b>200</b>	<b>500</b>	
	NOx	216	247	316	429	728
	CO	1201	1682	2784	4551	20589
	PM10	10	29	48	85	196
	PM2.5	6	8	13	27	97

Acre Below		Acre Above	
SRA No.	Acres	SRA No.	Acres
24	3	24	4
<b>Distance Increment Below</b>			
25			
<b>Distance Increment Above</b>			
25			

Updated: 10/21/2009 - Table C-1. 2006 – 2008

**Construction Localized Significance Thresholds: Onsite Fine Grading**

SRA No.	Acres	NOx & CO		PM10 & PM2.5		Construction / Project Site Size (Acres)		
		Source Receptor Distance (meters)	Source Receptor Distance (Feet)	Source Receptor Distance (meters)	Source Receptor Distance (Feet)			
24	2.25	25	82	25	82	12.04		
<b>Source Receptor Distance (meters)</b>	<b>Perris Valley</b>		<b>Equipment</b>	<b>Acres/8-hr Day</b>	<b>Daily hours</b>	<b>Equipment Used</b>	<b>Acres</b>	
	25							
<b>NOx</b>	<b>178</b>		Tractors	0.5	0.0625	6	6	2.25
<b>CO</b>	<b>941</b>		Graders	0.5	0.0625			0
<b>PM10</b>	<b>7.50</b>		Dozers	0.5	0.0625			0
<b>PM2.5</b>	<b>4.33</b>		Scrapers	1	0.125			0
							<b>Acres</b>	2.25
	<b>Acres</b>	<b>25</b>	<b>50</b>		<b>100</b>		<b>200</b>	<b>500</b>
NOx	2	170	200		264		379	684
	3	203	234		302		415	716
		178	209		274		388	692
CO	2	883	1262		2232		5136	18947
	3	1114	1567		2634		4711	20141
		941	1338		2332		5030	19246
PM10	2	7	20		38		75	186
	3	9	27		45		82	193
		8	22		40		77	188
PM2.5	2	4	6		10		23	91
	3	5	7		12		26	96
		4	6		11		24	92
Perris Valley	<b>2.25 Acres</b>							
	<b>25</b>	<b>50</b>	<b>100</b>		<b>200</b>		<b>500</b>	
NOx	178	209	274		388		692	
CO	941	1338	2332		5030		19246	
PM10	8	22	40		77		188	
PM2.5	4	6	11		24		92	

Acre Below		Acre Above	
SRA No.	Acres	SRA No.	Acres
24	2	24	3
<b>Distance Increment Below</b>			
25			
<b>Distance Increment Above</b>			
25			

Updated: 10/21/2009 - Table C-1. 2006 – 2008

**Construction Localized Significance Thresholds: Onsite Utility Trenching, Onsite Building Construction, and Onsite Paving**

SRA No.	Acres	NOx & CO		PM10 & PM2.5		Construction / Project Site Size (Acres)		
		Source Receptor Distance (meters)	Source Receptor Distance (Feet)	Source Receptor Distance (meters)	Source Receptor Distance (Feet)			
24	0.75	25	82	25	82	12.04		
<b>Source Receptor Distance (meters)</b>	<b>Perris Valley</b>		<b>Equipment</b>	<b>Acres/8-hr Day</b>	<b>Daily hours</b>	<b>Equipment Used</b>	<b>Acres</b>	
	25							
<b>NOx</b>	<b>118</b>		Tractors	0.5	0.0625	6	2	0.75
<b>CO</b>	<b>602</b>		Graders	0.5	0.0625			0
<b>PM10</b>	<b>4.00</b>		Dozers	0.5	0.0625			0
<b>PM2.5</b>	<b>3.00</b>		Scrapers	1	0.125			0
							<b>Acres</b>	0.75
	<b>Acres</b>	<b>25</b>	<b>50</b>		<b>100</b>		<b>200</b>	<b>500</b>
NOx	1	118	148		212		335	652
	1	118	148		212		335	652
		118	148		212		335	652
CO	1	602	887		1746		4359	17640
	1	602	887		1746		4359	17640
		602	887		1746		4359	17640
PM10	1	4	12		30		67	178
	1	4	12		30		67	178
		4	12		30		67	178
PM2.5	1	3	4		8		20	86
	1	3	4		8		20	86
		3	4		8		20	86
Perris Valley	<b>0.75 Acres</b>							
	<b>25</b>	<b>50</b>	<b>100</b>		<b>200</b>		<b>500</b>	
NOx	118	148	212		335		652	
CO	602	887	1746		4359		17640	
PM10	4	12	30		67		178	
PM2.5	3	4	8		20		86	

Acre Below		Acre Above	
SRA No.	Acres	SRA No.	Acres
24	1	24	1
<b>Distance Increment Below</b>			
25			
<b>Distance Increment Above</b>			
25			

Updated: 10/21/2009 - Table C-1. 2006 – 2008

**Construction Localized Significance Thresholds: Onsite Utility Trenching, Onsite Building Construction, Onsite Paving, Onsite Modular Building Installation**

SRA No.	Acres	NOx & CO		PM10 & PM2.5		Construction / Project Site Size (Acres)
		Source Receptor Distance (meters)	Source Receptor Distance (Feet)	Source Receptor Distance (meters)	Source Receptor Distance (Feet)	
24	0.75	25	82	25	82	12.04

Source Receptor Distance (meters)	Perris Valley	Equipment	Acres/8-hr Day	Daily hours	Equipment Used	Acres
NOx	118	Tractors	0.5	6	2	0.75
CO	602	Graders	0.5			0
PM10	4.00	Dozers	0.5			0
PM2.5	3.00	Scrapers	1			0
					<b>Acres</b>	0.75
	<b>Acres</b>	<b>25</b>	<b>50</b>	<b>100</b>	<b>200</b>	<b>500</b>
NOx	1	118	148	212	335	652
	1	118	148	212	335	652
	1	118	148	212	335	652
CO	1	602	887	1746	4359	17640
	1	602	887	1746	4359	17640
	1	602	887	1746	4359	17640
PM10	1	4	12	30	67	178
	1	4	12	30	67	178
	1	4	12	30	67	178
PM2.5	1	3	4	8	20	86
	1	3	4	8	20	86
	1	3	4	8	20	86
Perris Valley	<b>0.75 Acres</b>	<b>25</b>	<b>50</b>	<b>100</b>	<b>200</b>	<b>500</b>
NOx	118	148	212	335	652	
CO	602	887	1746	4359	17640	
PM10	4	12	30	67	178	
PM2.5	3	4	8	20	86	

Acre Below		Acre Above	
SRA No.	Acres	SRA No.	Acres
24	1	24	1
<b>Distance Increment Below</b>			
25			
<b>Distance Increment Above</b>			
25			

Updated: 10/21/2009 - Table C-1. 2006 – 2008

**Construction Localized Significance Thresholds: Onsite Utility Trenching, Onsite Building Construction, Onsite Paving, Onsite Modular Building Installation, Onsite Architectural Coating**

SRA No.	Acres	NOx & CO		PM10 & PM2.5		Construction / Project Site Size (Acres)	
		Source Receptor Distance (meters)	Source Receptor Distance (Feet)	Source Receptor Distance (meters)	Source Receptor Distance (Feet)		
24	0.75	25	82	25	82	12.04	
<b>Source Receptor Distance (meters)</b>	<b>Perris Valley</b>	<b>Equipment</b>	<b>Acres/8-hr Day</b>	<b>Daily hours</b>	<b>Equipment Used</b>	<b>Acres</b>	
	25						
NOx	118	Tractors	0.5	0.0625	6	2	0.75
CO	602	Graders	0.5	0.0625			0
PM10	4.00	Dozers	0.5	0.0625			0
PM2.5	3.00	Scrapers	1	0.125			0
						<b>Acres</b>	0.75
	<b>Acres</b>	<b>25</b>	<b>50</b>	<b>100</b>	<b>200</b>	<b>500</b>	
NOx	1	118	148	212	335	652	
	1	118	148	212	335	652	
		118	148	212	335	652	
CO	1	602	887	1746	4359	17640	
	1	602	887	1746	4359	17640	
		602	887	1746	4359	17640	
PM10	1	4	12	30	67	178	
	1	4	12	30	67	178	
		4	12	30	67	178	
PM2.5	1	3	4	8	20	86	
	1	3	4	8	20	86	
		3	4	8	20	86	
Perris Valley	<b>0.75 Acres</b>						
	<b>25</b>	<b>50</b>	<b>100</b>	<b>200</b>	<b>500</b>		
NOx	118	148	212	335	652		
CO	602	887	1746	4359	17640		
PM10	4	12	30	67	178		
PM2.5	3	4	8	20	86		

Acre Below		Acre Above	
SRA No.	Acres	SRA No.	Acres
24	1	24	1
<b>Distance Increment Below</b>			
25			
<b>Distance Increment Above</b>			
25			

Updated: 10/21/2009 - Table C-1. 2006 – 2008

**Construction Localized Significance Thresholds: Onsite Utility Trenching, Onsite Building Construction, Onsite Architectural Coating**

SRA No.	Acres	NOx & CO		PM10 & PM2.5		Construction / Project Site Size (Acres)	
		Source Receptor Distance (meters)	Source Receptor Distance (Feet)	Source Receptor Distance (meters)	Source Receptor Distance (Feet)		
24	0.75	25	82	25	82	12.04	
<b>Source Receptor Distance (meters)</b>	<b>Perris Valley</b>		<b>Equipment</b>	<b>Acres/8-hr Day</b>	<b>Daily hours</b>	<b>Equipment Used</b>	<b>Acres</b>
	25		Tractors	0.5	6	2	0.75
<b>NOx</b>	<b>118</b>		Graders	0.5			0
<b>CO</b>	<b>602</b>		Dozers	0.5			0
<b>PM10</b>	<b>4.00</b>		Scrapers	1			0
<b>PM2.5</b>	<b>3.00</b>						0
						<b>Acres</b>	<b>0.75</b>
	<b>Acres</b>	<b>25</b>	<b>50</b>	<b>100</b>	<b>200</b>	<b>500</b>	
NOx	1	118	148	212	335	652	
	1	118	148	212	335	652	
		118	148	212	335	652	
CO	1	602	887	1746	4359	17640	
	1	602	887	1746	4359	17640	
		602	887	1746	4359	17640	
PM10	1	4	12	30	67	178	
	1	4	12	30	67	178	
		4	12	30	67	178	
PM2.5	1	3	4	8	20	86	
	1	3	4	8	20	86	
		3	4	8	20	86	
Perris Valley							
	<b>0.75 Acres</b>						
	<b>25</b>	<b>50</b>	<b>100</b>	<b>200</b>	<b>500</b>		
NOx	118	148	212	335	652		
CO	602	887	1746	4359	17640		
PM10	4	12	30	67	178		
PM2.5	3	4	8	20	86		

Acre Below		Acre Above	
SRA No.	Acres	SRA No.	Acres
24	1	24	1
<b>Distance Increment Below</b>			
25			
<b>Distance Increment Above</b>			
25			

Updated: 10/21/2009 - Table C-1. 2006 – 2008

## Construction Localized Significance Thresholds: Onsite Building Construction, Onsite Architectural Coating

SRA No.	Acres	NOx & CO		PM10 & PM2.5		Construction / Project Site Size (Acres)	
		Source Receptor Distance (meters)	Source Receptor Distance (Feet)	Source Receptor Distance (meters)	Source Receptor Distance (Feet)		
24	0.00	25	82	25	82	12.04	
<b>Source Receptor Distance (meters)</b>							
	<b>Perris Valley</b>		<b>Equipment</b>	<b>Acres/8-hr Day</b>	<b>Daily hours</b>	<b>Equipment Used Acres</b>	
	25						
	<b>NOx</b>	<b>118</b>	Tractors	0.5	0.0625	0	
	<b>CO</b>	<b>602</b>	Graders	0.5	0.0625	0	
	<b>PM10</b>	<b>4.00</b>	Dozers	0.5	0.0625	0	
	<b>PM2.5</b>	<b>3.00</b>	Scrapers	1	0.125	0	
					<b>Acres</b>	0.00	
	<b>Acres</b>	<b>25</b>	<b>50</b>		<b>100</b>	<b>200</b>	<b>500</b>
	NOx	1	118	148	212	335	652
		1	118	148	212	335	652
		1	118	148	212	335	652
	CO	1	602	887	1746	4359	17640
		1	602	887	1746	4359	17640
		1	602	887	1746	4359	17640
	PM10	1	4	12	30	67	178
		1	4	12	30	67	178
		1	4	12	30	67	178
	PM2.5	1	3	4	8	20	86
		1	3	4	8	20	86
		1	3	4	8	20	86
<b>Perris Valley</b>							
	<b>0.00 Acres</b>						
	<b>25</b>	<b>50</b>	<b>100</b>		<b>200</b>	<b>500</b>	
	NOx	118	148	212	335	652	
	CO	602	887	1746	4359	17640	
	PM10	4	12	30	67	178	
	PM2.5	3	4	8	20	86	

Acre Below		Acre Above	
SRA No.	Acres	SRA No.	Acres
24	1	24	1
<b>Distance Increment Below</b>			
25			
<b>Distance Increment Above</b>			
25			

Updated: 10/21/2009 - Table C-1. 2006 – 2008

### Construction Localized Significance Thresholds: Onsite Building Construction (2023-2024)

SRA No.	Acres	NOx & CO		PM10 & PM2.5		Construction / Project Site Size (Acres)	
		Source Receptor Distance (meters)	Source Receptor Distance (Feet)	Source Receptor Distance (meters)	Source Receptor Distance (Feet)		
24	0.00	25	82	25	82	12.04	
<b>Source Receptor</b>							
	<b>Perris Valley</b>		<b>Equipment</b>	<b>Acres/8-hr Day</b>	<b>Daily hours</b>	<b>Equipment Used</b>	<b>Acres</b>
	Distance (meters)	25					
	<b>NOx</b>	<b>118</b>	Tractors	0.5	0.0625		0
	<b>CO</b>	<b>602</b>	Graders	0.5	0.0625		0
	<b>PM10</b>	<b>4.00</b>	Dozers	0.5	0.0625		0
	<b>PM2.5</b>	<b>3.00</b>	Scrapers	1	0.125		0
						<b>Acres</b>	0.00
	Acres	<b>25</b>	<b>50</b>		<b>100</b>	<b>200</b>	<b>500</b>
	NOx	1	118	148	212	335	652
		1	118	148	212	335	652
		1	118	148	212	335	652
	CO	1	602	887	1746	4359	17640
		1	602	887	1746	4359	17640
		1	602	887	1746	4359	17640
	PM10	1	4	12	30	67	178
		1	4	12	30	67	178
		1	4	12	30	67	178
	PM2.5	1	3	4	8	20	86
		1	3	4	8	20	86
		1	3	4	8	20	86
<b>Perris Valley</b>							
	<b>0.00 Acres</b>						
	<b>25</b>	<b>50</b>	<b>100</b>		<b>200</b>	<b>500</b>	
	NOx	118	148	212	335	652	
	CO	602	887	1746	4359	17640	
	PM10	4	12	30	67	178	
	PM2.5	3	4	8	20	86	

Acre Below		Acre Above	
SRA No.	Acres	SRA No.	Acres
24	1	24	1
<b>Distance Increment Below</b>			
25			
<b>Distance Increment Above</b>			
25			

Updated: 10/21/2009 - Table C-1. 2006 – 2008

## Construction Localized Significance Thresholds: Onsite Building Construction 2024 and Onsite Finishing/Landscaping

SRA No.	Acres	NOx & CO		PM10 & PM2.5		Construction / Project Site Size (Acres)		
		Source Receptor Distance (meters)	Source Receptor Distance (Feet)	Source Receptor Distance (meters)	Source Receptor Distance (Feet)			
24	1.50	25	82	25	82	12.04		
<b>Source Receptor Distance (meters)</b>								
	<b>Perris Valley</b>		<b>Equipment</b>	<b>Acres/8-hr Day</b>	<b>Daily hours</b>	<b>Equipment Used</b>	<b>Acres</b>	
	25							
	<b>NOx</b>	<b>144</b>	Tractors	0.5	0.0625	6	4	1.5
	<b>CO</b>	<b>742</b>	Graders	0.5	0.0625			0
	<b>PM10</b>	<b>5.50</b>	Dozers	0.5	0.0625			0
	<b>PM2.5</b>	<b>3.50</b>	Scrapers	1	0.125			0
						<b>Acres</b>		1.50
	<b>Acres</b>	<b>25</b>	<b>50</b>					<b>100</b>
	NOx	1	118	148				212
		2	170	200				264
			144	174				238
	CO	1	602	887				1746
		2	883	1262				2232
			743	1075				1989
	PM10	1	4	12				30
		2	7	20				38
			6	16				34
	PM2.5	1	3	4				8
		2	4	6				10
			4	5				9
								22
								89
	<b>Perris Valley</b>							
	<b>1.50 Acres</b>							
	25	50	100					200
	NOx	144	174	238				357
	CO	743	1075	1989				4748
	PM10	6	16	34				71
	PM2.5	4	5	9				22
								89

Acre Below		Acre Above	
SRA No.	Acres	SRA No.	Acres
24	1	24	2
<b>Distance Increment Below</b>			
25			
<b>Distance Increment Above</b>			
25			

Updated: 10/21/2009 - Table C-1. 2006 – 2008

**Construction Localized Significance Thresholds: Onsite Building Construction 2024, Onsite Finishing/Landscaping, and Offsite Site Preparation**

SRA No.	Acres	NOx & CO		PM10 & PM2.5		Construction / Project Site Size (Acres)	
		Source Receptor Distance (meters)	Source Receptor Distance (Feet)	Source Receptor Distance (meters)	Source Receptor Distance (Feet)		
24	2.00	25	82	25	82	12.04	
<b>Source Receptor Distance (meters)</b>	<b>Perris Valley</b>		<b>Equipment</b>	<b>Acres/8-hr Day</b>	<b>Daily hours</b>	<b>Equipment Used</b>	<b>Acres</b>
	25						
<b>NOx</b>	<b>170</b>		Tractors	0.5	0.0625	4	1.5
<b>CO</b>	<b>883</b>		Graders	0.5	0.0625	1	0.5
<b>PM10</b>	<b>7.00</b>		Dozers	0.5	0.0625		0
<b>PM2.5</b>	<b>4.00</b>		Scrapers	1	0.125		0
						<b>Acres</b>	<b>2.00</b>
	<b>Acres</b>	<b>25</b>	<b>50</b>		<b>100</b>	<b>200</b>	<b>500</b>
NOx	2	170	200		264	379	684
	2	170	200		264	379	684
		170	200		264	379	684
CO	2	883	1262		2232	5136	18947
	2	883	1262		2232	5136	18947
		883	1262		2232	5136	18947
PM10	2	7	20		38	75	186
	2	7	20		38	75	186
		7	20		38	75	186
PM2.5	2	4	6		10	23	91
	2	4	6		10	23	91
		4	6		10	23	91
Perris Valley							
	<b>2.00 Acres</b>						
	<b>25</b>	<b>50</b>	<b>100</b>		<b>200</b>	<b>500</b>	
NOx	170	200	264		379	684	
CO	883	1262	2232		5136	18947	
PM10	7	20	38		75	186	
PM2.5	4	6	10		23	91	

Acre Below		Acre Above	
SRA No.	Acres	SRA No.	Acres
24	2	24	2
<b>Distance Increment Below</b>			
25			
<b>Distance Increment Above</b>			
25			

Updated: 10/21/2009 - Table C-1. 2006 – 2008

**Construction Localized Significance Thresholds: Onsite Building Construction 2024, Onsite Finishing/Landscaping, and Offsite Asphalt Demolition**

SRA No.	Acres	NOx & CO		PM10 & PM2.5		Construction / Project Site Size (Acres)		
		Source Receptor Distance (meters)	Source Receptor Distance (Feet)	Source Receptor Distance (meters)	Source Receptor Distance (Feet)			
24	1.50	25	82	25	82	12.04		
<b>Source Receptor Distance (meters)</b>	<b>Perris Valley</b>		<b>Equipment</b>	<b>Acres/8-hr Day</b>	<b>Daily hours</b>	<b>Equipment Used</b>	<b>Acres</b>	
	25		Tractors	0.5	0.0625	6	4	1.5
<b>NOx</b>	<b>144</b>		Graders	0.5	0.0625			0
<b>CO</b>	<b>742</b>		Dozers	0.5	0.0625			0
<b>PM10</b>	<b>5.50</b>		Scrapers	1	0.125			0
<b>PM2.5</b>	<b>3.50</b>							0
						<b>Acres</b>		1.50
	<b>Acres</b>	<b>25</b>	<b>50</b>		<b>100</b>	<b>200</b>		<b>500</b>
NOx	1	118	148		212	335		652
	2	170	200		264	379		684
		144	174		238	357		668
CO	1	602	887		1746	4359		17640
	2	883	1262		2232	5136		18947
		743	1075		1989	4748		18294
PM10	1	4	12		30	67		178
	2	7	20		38	75		186
		6	16		34	71		182
PM2.5	1	3	4		8	20		86
	2	4	6		10	23		91
		4	5		9	22		89
Perris Valley								
	<b>1.50 Acres</b>							
	<b>25</b>	<b>50</b>	<b>100</b>		<b>200</b>	<b>500</b>		
NOx	144	174	238		357	668		
CO	743	1075	1989		4748	18294		
PM10	6	16	34		71	182		
PM2.5	4	5	9		22	89		

Acre Below		Acre Above	
SRA No.	Acres	SRA No.	Acres
24	1	24	2
<b>Distance Increment Below</b>			
25			
<b>Distance Increment Above</b>			
25			

Updated: 10/21/2009 - Table C-1. 2006 – 2008

**Construction Localized Significance Thresholds: Onsite Building Construction 2024, Onsite Finishing/Landscaping, and Offsite Rough Grading**

SRA No.	Acres	NOx & CO		PM10 & PM2.5		Construction / Project Site Size (Acres)	
		Source Receptor Distance (meters)	Source Receptor Distance (Feet)	Source Receptor Distance (meters)	Source Receptor Distance (Feet)		
24	2.63	25	82	25	82	12.04	
<b>Source Receptor Distance (meters)</b>							
	<b>Perris Valley</b>		<b>Equipment</b>	<b>Acres/8-hr Day</b>	<b>Daily hours</b>	<b>Equipment Used</b>	<b>Acres</b>
	25		Tractors	0.5	0.0625	4	1.5
	<b>NOx 191</b>		Graders	0.5	0.0625	1	0
	<b>CO 1,027</b>		Dozers	0.5	0.0625	1	0.375
	<b>PM10 8.25</b>		Scrapers	1	0.125	1	0.75
	<b>PM2.5 4.83</b>						2.63
						<b>Acres</b>	
		<b>25</b>	<b>50</b>			<b>200</b>	<b>500</b>
	NOx	2	170	200	264	379	684
		3	203	234	302	415	716
			191	221	288	402	704
	CO	2	883	1262	2232	5136	18947
		3	1114	1567	2634	4711	20141
			1028	1453	2483	4870	19693
	PM10	2	7	20	38	75	186
		3	9	27	45	82	193
			8	24	42	79	190
	PM2.5	2	4	6	10	23	91
		3	5	7	12	26	96
			5	7	11	25	94
<b>Perris Valley</b>							
	<b>2.63 Acres</b>						
	<b>25</b>	<b>50</b>	<b>100</b>		<b>200</b>	<b>500</b>	
	NOx	191	221	288	402	704	
	CO	1028	1453	2483	4870	19693	
	PM10	8	24	42	79	190	
	PM2.5	5	7	11	25	94	

Acre Below		Acre Above	
SRA No.	Acres	SRA No.	Acres
24	2	24	3
<b>Distance Increment Below</b>			
25			
<b>Distance Increment Above</b>			
25			

Updated: 10/21/2009 - Table C-1. 2006 – 2008

**Construction Localized Significance Thresholds: Onsite Building Construction 2024, Onsite Finishing/Landscaping, and Offsite Fine Grading**

SRA No.	Acres	NOx & CO		PM10 & PM2.5		Construction / Project Site Size (Acres)	
		Source Receptor Distance (meters)	Source Receptor Distance (Feet)	Source Receptor Distance (meters)	Source Receptor Distance (Feet)		
24	1.50	25	82	25	82	12.04	
<b>Source Receptor Distance (meters)</b>	<b>Perris Valley</b>		<b>Equipment</b>	<b>Acres/8-hr Day</b>	<b>Daily hours</b>	<b>Equipment Used</b>	<b>Acres</b>
	25		Tractors	0.5	6	4	1.5
<b>NOx</b>	<b>144</b>		Graders	0.5			0
<b>CO</b>	<b>742</b>		Dozers	0.5			0
<b>PM10</b>	<b>5.50</b>		Scrapers	1			0
<b>PM2.5</b>	<b>3.50</b>						0
						<b>Acres</b>	<b>1.50</b>
	<b>Acres</b>	<b>25</b>	<b>50</b>	<b>100</b>		<b>200</b>	<b>500</b>
NOx	1	118	148	212		335	652
	2	170	200	264		379	684
		144	174	238		357	668
CO	1	602	887	1746		4359	17640
	2	883	1262	2232		5136	18947
		743	1075	1989		4748	18294
PM10	1	4	12	30		67	178
	2	7	20	38		75	186
		6	16	34		71	182
PM2.5	1	3	4	8		20	86
	2	4	6	10		23	91
		4	5	9		22	89
Perris Valley							
	<b>1.50 Acres</b>						
	<b>25</b>	<b>50</b>	<b>100</b>	<b>200</b>		<b>500</b>	
NOx	144	174	238	357		668	
CO	743	1075	1989	4748		18294	
PM10	6	16	34	71		182	
PM2.5	4	5	9	22		89	

Acre Below		Acre Above	
SRA No.	Acres	SRA No.	Acres
24	1	24	2
<b>Distance Increment Below</b>			
25			
<b>Distance Increment Above</b>			
25			

Updated: 10/21/2009 - Table C-1. 2006 – 2008

**Construction Localized Significance Thresholds: Onsite Building Construction 2024, Onsite Finishing/Landscaping, Offsite Paving**

SRA No.	Acres	NOx & CO		PM10 & PM2.5		Construction / Project Site Size (Acres)	
		Source Receptor Distance (meters)	Source Receptor Distance (Feet)	Source Receptor Distance (meters)	Source Receptor Distance (Feet)		
24	1.50	25	82	25	82	12.04	
<b>Source Receptor Distance (meters)</b>	<b>Perris Valley</b>		<b>Equipment</b>	<b>Acres/8-hr Day</b>	<b>Daily hours</b>	<b>Equipment Used</b>	<b>Acres</b>
	25		Tractors	0.5	6	4	1.5
<b>NOx</b>	<b>144</b>		Graders	0.5			0
<b>CO</b>	<b>742</b>		Dozers	0.5			0
<b>PM10</b>	<b>5.50</b>		Scrapers	1			0
<b>PM2.5</b>	<b>3.50</b>						0
						<b>Acres</b>	<b>1.50</b>
	<b>Acres</b>	<b>25</b>	<b>50</b>	<b>100</b>		<b>200</b>	<b>500</b>
NOx	1	118	148	212		335	652
	2	170	200	264		379	684
		144	174	238		357	668
CO	1	602	887	1746		4359	17640
	2	883	1262	2232		5136	18947
		743	1075	1989		4748	18294
PM10	1	4	12	30		67	178
	2	7	20	38		75	186
		6	16	34		71	182
PM2.5	1	3	4	8		20	86
	2	4	6	10		23	91
		4	5	9		22	89
Perris Valley							
	<b>1.50 Acres</b>						
	<b>25</b>	<b>50</b>	<b>100</b>	<b>200</b>		<b>500</b>	
NOx	144	174	238	357		668	
CO	743	1075	1989	4748		18294	
PM10	6	16	34	71		182	
PM2.5	4	5	9	22		89	

Acre Below		Acre Above	
SRA No.	Acres	SRA No.	Acres
24	1	24	2
<b>Distance Increment Below</b>			
25			
<b>Distance Increment Above</b>			
25			

Updated: 10/21/2009 - Table C-1. 2006 – 2008

**Construction Localized Significance Thresholds: Onsite Building Construction 2024, Onsite Finishing/Landscaping, Offsite Paving, and Offsite Finishing/Landscaping**

SRA No.	Acres	NOx & CO		PM10 & PM2.5		Construction / Project Site Size (Acres)	
		Source Receptor Distance (meters)	Source Receptor Distance (Feet)	Source Receptor Distance (meters)	Source Receptor Distance (Feet)		
24	1.50	25	82	25	82	12.04	
<b>Source Receptor Distance (meters)</b>	<b>Perris Valley</b>	<b>Equipment</b>	<b>Acres/8-hr Day</b>	<b>Daily hours</b>	<b>Equipment Used</b>	<b>Acres</b>	
	25						
<b>NOx</b>	<b>144</b>	Tractors	0.5	0.0625	6	4	1.5
<b>CO</b>	<b>742</b>	Graders	0.5	0.0625			0
<b>PM10</b>	<b>5.50</b>	Dozers	0.5	0.0625			0
<b>PM2.5</b>	<b>3.50</b>	Scrapers	1	0.125			0
					<b>Acres</b>		1.50
	<b>Acres</b>	<b>25</b>	<b>50</b>	<b>100</b>	<b>200</b>	<b>500</b>	
NOx	1	118	148	212	335	652	
	2	170	200	264	379	684	
		144	174	238	357	668	
CO	1	602	887	1746	4359	17640	
	2	883	1262	2232	5136	18947	
		743	1075	1989	4748	18294	
PM10	1	4	12	30	67	178	
	2	7	20	38	75	186	
		6	16	34	71	182	
PM2.5	1	3	4	8	20	86	
	2	4	6	10	23	91	
		4	5	9	22	89	
Perris Valley	<b>1.50 Acres</b>						
	<b>25</b>	<b>50</b>	<b>100</b>	<b>200</b>	<b>500</b>		
NOx	144	174	238	357	668		
CO	743	1075	1989	4748	18294		
PM10	6	16	34	71	182		
PM2.5	4	5	9	22	89		

Acre Below		Acre Above	
SRA No.	Acres	SRA No.	Acres
24	1	24	2
<b>Distance Increment Below</b>			
25			
<b>Distance Increment Above</b>			
25			

Updated: 10/21/2009 - Table C-1. 2006 – 2008

**Construction Localized Significance Thresholds: Onsite Building Construction 2024, Onsite Finishing/Landscaping, and Offsite Finishing/Landscaping**

SRA No.	Acres	NOx & CO		PM10 & PM2.5		Construction / Project Site Size (Acres)	
		Source Receptor Distance (meters)	Source Receptor Distance (Feet)	Source Receptor Distance (meters)	Source Receptor Distance (Feet)		
24	1.50	25	82	25	82	12.04	
<b>Source Receptor Distance (meters)</b>	<b>Perris Valley</b>		<b>Equipment</b>	<b>Acres/8-hr Day</b>	<b>Daily hours</b>	<b>Equipment Used</b>	<b>Acres</b>
	25		Tractors	0.5	6	4	1.5
<b>NOx</b>	<b>144</b>		Graders	0.5			0
<b>CO</b>	<b>742</b>		Dozers	0.5			0
<b>PM10</b>	<b>5.50</b>		Scrapers	1			0
<b>PM2.5</b>	<b>3.50</b>						1.50
						<b>Acres</b>	
	<b>Acres</b>	<b>25</b>	<b>50</b>	<b>100</b>		<b>200</b>	<b>500</b>
NOx	1	118	148	212		335	652
	2	170	200	264		379	684
		144	174	238		357	668
CO	1	602	887	1746		4359	17640
	2	883	1262	2232		5136	18947
		743	1075	1989		4748	18294
PM10	1	4	12	30		67	178
	2	7	20	38		75	186
		6	16	34		71	182
PM2.5	1	3	4	8		20	86
	2	4	6	10		23	91
		4	5	9		22	89
Perris Valley							
	<b>1.50 Acres</b>						
	<b>25</b>	<b>50</b>	<b>100</b>	<b>200</b>		<b>500</b>	
NOx	144	174	238	357		668	
CO	743	1075	1989	4748		18294	
PM10	6	16	34	71		182	
PM2.5	4	5	9	22		89	

Acre Below		Acre Above	
SRA No.	Acres	SRA No.	Acres
24	1	24	2
<b>Distance Increment Below</b>			
25			
<b>Distance Increment Above</b>			
25			

Updated: 10/21/2009 - Table C-1. 2006 – 2008

**Construction Localized Significance Thresholds: Onsite Building Construction 2024, Onsite Finishing/Landscaping, and Offsite Finishing/Landscaping, and Offsite Architectural Coating**

SRA No.	Acres	NOx & CO		PM10 & PM2.5		Construction / Project Site Size (Acres)	
		Source Receptor Distance (meters)	Source Receptor Distance (Feet)	Source Receptor Distance (meters)	Source Receptor Distance (Feet)		
24	1.50	25	82	25	82	12.04	
<b>Source Receptor Distance (meters)</b>	<b>Perris Valley</b>		<b>Equipment</b>	<b>Acres/8-hr Day</b>	<b>Daily hours</b>	<b>Equipment Used</b>	<b>Acres</b>
	25		Tractors	0.5	6	4	1.5
<b>NOx</b>	<b>144</b>		Graders	0.5			0
<b>CO</b>	<b>742</b>		Dozers	0.5			0
<b>PM10</b>	<b>5.50</b>		Scrapers	1			0
<b>PM2.5</b>	<b>3.50</b>						0
						<b>Acres</b>	<b>1.50</b>
	<b>Acres</b>	<b>25</b>	<b>50</b>	<b>100</b>		<b>200</b>	<b>500</b>
NOx	1	118	148	212		335	652
	2	170	200	264		379	684
		144	174	238		357	668
CO	1	602	887	1746		4359	17640
	2	883	1262	2232		5136	18947
		743	1075	1989		4748	18294
PM10	1	4	12	30		67	178
	2	7	20	38		75	186
		6	16	34		71	182
PM2.5	1	3	4	8		20	86
	2	4	6	10		23	91
		4	5	9		22	89
Perris Valley							
	<b>1.50 Acres</b>						
	<b>25</b>	<b>50</b>	<b>100</b>	<b>200</b>		<b>500</b>	
NOx	144	174	238	357		668	
CO	743	1075	1989	4748		18294	
PM10	6	16	34	71		182	
PM2.5	4	5	9	22		89	

Acre Below		Acre Above	
SRA No.	Acres	SRA No.	Acres
24	1	24	2
<b>Distance Increment Below</b>			
25			
<b>Distance Increment Above</b>			
25			

Updated: 10/21/2009 - Table C-1. 2006 – 2008

# **Emissions Rate Calculations for Crushing/Processing Equipment**

Model Output: OFFROAD2021 (v1.0.3) Emissions Inventory

Region Type: Statewide  
 Region: California  
 Calendar Year: 2023

Scenario: All Adopted Rules - Exhaust  
 Vehicle Classification: OFFROAD2021 Equipment Types

Units: tons/day for Emissions, gallons/year for Fuel, hours/year for Activity, Horsepower-hours/year for Horsepower-hours

Region	Calendar Year	Vehicle Category	Model Year Bin	Horsepower	Fuel	Emissions													g/bhp-hr Emissions Factor										
						HC_tpd	ROG_tpd	TOG_tpd	CO_tpd	NOx_tpd	CO2_tpd	PM10_tpd	PM2.5_tpd	SOx_tpd	NH3_tpd	Fuel Consumption	Total Activity	Hours Per Day		Total Population	Average Hours Per Day	Horsepower_Hours							
Statewide Totals	2023	Construction and Mining - Misc - Asphalt Pavers	Aggregate	100 Gasoline	0.00131	0.001207	0.001444	0.0604	0.003442	1.428236	9.958E-05	7.524E-05	1.38E-05	2.02E-05	57545.9	14866.45	40.73	38.02	1.071278275	906853.45	0.00121	0.001444	0.060392	0.003443	1.428236	9.96165E-05	7.53E-05	1.38E-05	2.02E-05
Statewide Totals	2023	Construction and Mining - Misc - Asphalt Pavers	Aggregate	50 Gasoline	0.00267	0.002458	0.002894	0.1208	0.006884	2.856472	0.00079	0.001408	2.76E-05	4.04E-05	115091.8	29732.9	81.46	76.04	1.080152274	875532.8	0.00255	0.003047	0.020891	0.007018	1.429388	9.85394E-05	7.45E-05	1.74E-05	2.34E-05
Statewide Totals	2023	Construction and Mining - Misc - Bore/Drill Rigs	Aggregate	100 Gasoline	0.00125	0.001148	0.001375	0.0424	0.004098	1.743374	0.0001216	9.184E-05	1.68E-05	2.4E-05	68426.55	10366	28.4	99.55	0.28283777	9121.208	0.00114	0.001366	0.042117	0.004075	1.733774	0.00010883	9.13E-05	1.68E-05	2.38E-05
Statewide Totals	2023	Construction and Mining - Misc - Bore/Drill Rigs	Aggregate	175 Gasoline	0.00028	0.00026	0.000311	0.0197	0.00159	0.609917	4.308E-05	3.255E-05	5.97E-06	8.28E-06	23644.7	2263	6.2	23.62	0.262489416	28513.8	0.00083	0.00099	0.06262	0.005057	1.911857	0.00013706	0.000104	1.9E-05	2.64E-05
Statewide Totals	2023	Construction and Mining - Misc - Bore/Drill Rigs	Aggregate	50 Gasoline	0.00021	0.00019	0.000227	0.0119	0.00036	0.304958	6.628E-06	1.7E-06	1.96E-06	5.88E-05	5588.15	1992.9	5.46	20.67	0.264150943	63772.8	0.00270	0.003232	0.169357	0.00512	1.986672	0.00013659	0.000103	2.42E-05	2.78E-05
Statewide Totals	2023	Construction and Mining - Misc - Concrete/Industrial Saws	Aggregate	100 Gasoline	0.00148	0.001366	0.001634	0.0734	0.003711	3.424852	0.0002388	0.0001804	3.31E-05	4.7E-05	134104.65	28407.95	77.83	46.5	1.673763441	1874924.7	0.00066	0.000791	0.035496	0.001796	1.65712	0.000115538	8.73E-05	1.6E-05	2.27E-05
Statewide Totals	2023	Construction and Mining - Misc - Concrete/Industrial Saws	Aggregate	50 Gasoline	0.00361	0.003323	0.003976	0.1456	0.007422	6.849704	0.0004776	0.0003608	7.4E-05	0.000116	137791.15	49618.1	135.94	81.21	1.673931782	1736633.5	0.00174	0.002077	0.140664	0.003028	1.674008	0.00011541	6.72E-05	2.04E-05	2.52E-05
Statewide Totals	2023	Construction and Mining - Misc - Cranes	Aggregate	100 Gasoline	0.00109	0.001743	0.002085	0.0773	0.004964	1.674647	0.0001168	6.822E-05	1.62E-05	2.39E-05	68145.5	20217.35	55.39	48.43	1.143712575	1496083.9	0.00106	0.001265	0.046689	0.00301	1.015461	7.08004E-05	5.35E-05	9.81E-06	1.45E-05
Statewide Totals	2023	Construction and Mining - Misc - Cranes	Aggregate	175 Gasoline	8.7E-05	7.96E-05	9.52E-05	0.004	0.000366	0.110047	7.889E-06	5.961E-06	1.09E-06	1.43E-06	4095.3	580.35	1.59	1.3	1.232076923	72543.75	0.00100	0.00119	0.050021	0.004581	1.37618	9.86574E-05	7.45E-05	1.37E-05	1.79E-05
Statewide Totals	2023	Construction and Mining - Misc - Cranes	Aggregate	50 Gasoline	0.00095	0.000871	0.001042	0.0655	0.001335	0.423419	2.919E-06	2.205E-05	5.15E-06	6.92E-06	19746.5	9917.05	27.17	23.62	1.150296359	366930.85	0.00215	0.002576	0.161883	0.003302	1.046843	7.21684E-05	5.45E-05	1.27E-05	1.71E-05
Statewide Totals	2023	Construction and Mining - Misc - Dumpsters/Tenders	Aggregate	100 Gasoline	0.00011	9.81E-05	0.000117	0.0037	0.000343	0.143542	1.001E-05	7.562E-06	1.39E-06	1.83E-06	5215.85	1945.45	5.33	16.72	0.318779904	128399.7	0.00069	0.000829	0.026079	0.002424	1.014172	7.07105E-05	5.34E-05	9.8E-06	1.29E-05
Statewide Totals	2023	Construction and Mining - Misc - Other	Aggregate	175 Gasoline	0.00139	0.001274	0.001524	0.1183	0.004549	3.54468	0.0001541	0.000193	3.52E-05	4.95E-05	141328	25644.9	70.26	69.08	1.017081644	3212157.4	0.00036	0.000428	0.033209	0.001277	0.995179	7.13438E-05	5.39E-05	9.89E-06	1.39E-05
Statewide Totals	2023	Construction and Mining - Misc - Paving Equipment	Aggregate	100 Gasoline	0.00036	0.000334	0.000399	0.018	0.00094	0.790641	5.513E-05	4.165E-05	7.64E-06	1.08E-05	30871.7	8409.6	23.04	48.75	0.472615385	555033.6	0.00055	0.000653	0.029467	0.001536	1.292279	9.01008E-05	6.81E-05	1.25E-05	1.77E-05
Statewide Totals	2023	Construction and Mining - Misc - Paving Equipment	Aggregate	50 Gasoline	0.00204	0.001875	0.002243	0.1534	0.003278	1.739305	0.0001199	9.06E-05	2.11E-05	2.63E-05	75069.55	33507	91.8	191.78	0.47867348	1239759	0.00137	0.001642	0.112285	0.002398	1.272724	8.77405E-05	6.63E-05	1.55E-05	1.92E-05
Statewide Totals	2023	Construction and Mining - Misc - Rollers	Aggregate	100 Gasoline	0.00889	0.008174	0.009779	0.3834	0.021267	6.298658	0.0004392	0.0003318	6.09E-05	9.19E-05	262278.05	57611.6	157.84	92.54	1.705640804	4320870	0.00172	0.002053	0.080506	0.004465	1.32243	9.2203E-05	6.97E-05	1.28E-05	1.93E-05
Statewide Totals	2023	Construction and Mining - Misc - Rollers	Aggregate	50 Gasoline	0.00459	0.004222	0.005051	0.1917	0.010634	3.149329	0.0002196	0.0001659	3.04E-05	4.59E-05	131139.05	28805.8	83.81	48.43	1.730538922	1131854.05	0.00338	0.004048	0.269671	0.004745	1.339809	9.23652E-05	6.98E-05	1.63E-05	2.35E-05
Statewide Totals	2023	Construction and Mining - Misc - Rough Terrain Forklifts	Aggregate	100 Gasoline	0.01645	0.015134	0.018107	0.6709	0.043147	14.57483	0.0010162	0.0007076	0.000141	0.000208	593438.9	115858.3	317.42	280.28	1.132510347	8424955.5	0.00138	0.001668	0.061884	0.003975	1.342162	9.36107E-05	7.07E-05	1.3E-05	1.93E-05
Statewide Totals	2023	Construction and Mining - Misc - Rough Terrain Forklifts	Aggregate	175 Gasoline	0.00065	0.000601	0.000719	0.0303	0.002772	0.83382	5.978E-05	4.516E-05	8.28E-06	1.14E-05	32682.1	3292.3	9.02	7.72	1.168393782	467506.6	0.00117	0.001396	0.058772	0.005379	1.618007	0.000115994	8.76E-05	1.61E-05	2.22E-05
Statewide Totals	2023	Construction and Mining - Misc - Rough Terrain Forklifts	Aggregate	50 Gasoline	0.00128	0.001178	0.001409	0.0885	0.001808	0.573985	3.957E-05	2.99E-05	6.98E-06	9.32E-06	26615.8	7475.2	20.48	17.56	1.166287016	351334.4	0.00304	0.003639	0.228518	0.004669	1.482095	0.000102174	7.72E-05	1.8E-05	2.41E-05
Statewide Totals	2023	Construction and Mining - Misc - Rubber Tired Loaders	Aggregate	100 Gasoline	0.00996	0.009237	0.009855	0.3986	0.024417	7.667961	0.0004346	0.0004039	7.41E-05	0.00011	315071.65	84103.3	230.42	163.81	1.406629632	605437.6	0.00123	0.001476	0.093722	0.003358	1.148762	8.00945E-05	6.05E-05	1.11E-05	1.65E-05
Statewide Totals	2023	Construction and Mining - Misc - Rubber Tired Loaders	Aggregate	50 Gasoline	0.00152	0.001402	0.001677	0.1136	0.002046	0.648853	4.473E-05	3.38E-05	7.89E-06	1.1E-05	31306.05	12402.7	33.98	23.7	1.433755274	496108	0.00256	0.003067	0.207712	0.003741	1.186494	8.17959E-05	6.18E-05	1.44E-05	2.01E-05
Statewide Totals	2023	Construction and Mining - Misc - Skid Steer Loaders	Aggregate	100 Gasoline	0.00636	0.005853	0.007002	0.3349	0.015964	13.61807	0.0009459	0.0007174	0.000132	0.000188	535951.4	125373.85	343.49	404.25	0.845696907	10029908	0.00053	0.000633	0.03029	0.001444	1.231727	8.58789E-05	6.49E-05	1.19E-05	1.7E-05
Statewide Totals	2023	Construction and Mining - Misc - Skid Steer Loaders	Aggregate	50 Gasoline	0.01107	0.010182	0.012182	0.3702	0.017205	9.208869	0.0006349	0.0004797	0.000112	0.000141	401708.05	209692.5	574.5	675.98	0.849877215	6710960	0.00138	0.001647	0.117651	0.002326	1.245	8.58292E-05	6.48E-05	1.51E-05	1.9E-05
Statewide Totals	2023	Construction and Mining - Misc - Tractors/Loaders/Backhoes	Aggregate	100 Gasoline	0.00448	0.004116	0.004925	0.3141	0.011455	5.372288	0.0003746	0.000283	5.19E-05	7.79E-05	222507.65	75865.25	207.85	86.66	2.398453727	4779510.75	0.00078	0.000935	0.059625	0.002174	1.019698	7.10958E-05	5.37E-05	9.85E-06	1.48E-05
Statewide Totals	2023	Construction and Mining - Misc - Tractors/Loaders/Backhoes	Aggregate	50 Gasoline	0.00684	0.006287	0.007522	0.2776	0.018029	6.135734	0.0004278	0.000232	5.93E-05	8.74E-05	249477.5	99144.75	164.15	148.95	1.102097667	3954373.5	0.00144	0.001726	0.063691	0.004136	1.407618	9.81425E-05	7.42E-05	1.36E-05	2.01E-05
Statewide Totals	2023	Construction and Mining - Misc - Trenchers	Aggregate	50 Gasoline	0.01873	0.017232	0.020616	1.2893	0.026598	8.499336	0.0005659	0.0004427	0.000103	0.00014	400908.7	181273.6	496.64	450.68	1.101979231	5438208	0.00287	0.003439	0.215077	0.004437	1.473833	9.7441E-05	7.39E-05	1.72E-05	2.34E-05
Statewide Totals	2023	Construction and Mining - Misc - Trenchers	Aggregate	175 Gasoline	0.00112	0.001032	0.001222	0.0492	0.002611	1.074336	0.000132	0.000103	1.1E-05	1.5E-05	4073.15	1263	3.4	1.08312			0.00152	0.00182	0.10125	0.00945	1.3691	0.000095	0.000072	0.000015	0.000020

0.9024 gram/day  
 0.00199 lbs/day  
 2.00987 gram/day  
 0.00443 lbs/day