

## 5. Environmental Analysis

### 5.1 AIR QUALITY

This section of the Draft Environmental Impact Report (DEIR) evaluates the potential for the Proposed Project to impact air quality in a local and regional context. This evaluation is based on the methodology recommended by the South Coast Air Quality Management District (SCAQMD). The analysis focuses on air pollution from regional emissions and localized pollutant concentrations. Criteria air pollutant emissions modeling for the Proposed Project is included in Appendix C of this DEIR. Transportation-sector impacts are based on trip generation and average trip length as compiled by PlaceWorks (see Appendix F). Cumulative impacts related to air quality are based on the regional boundaries of the South Coast Air Basin (SoCAB). Overall, this section evaluates the worst-case scenario for potential construction and operation impacts that could occur under the Proposed Project.

#### 5.1.1 Environmental Setting

##### 5.1.1.1 REGULATORY FRAMEWORK

Ambient air quality standards (AAQS) have been adopted at the state and federal levels for criteria air pollutants. In addition, both the state and federal government regulate the release of toxic air contaminants (TACs). The Project area is in the South Coast Air Basin (SoCAB) and is subject to the rules and regulations imposed by the SCAQMD as well as the California AAQS adopted by California Air Resources Board (CARB) and National AAQS adopted by the United States Environmental Protection Agency (EPA). Federal, state, regional, and local laws, regulations, plans, or guidelines that are potentially applicable to the Project are summarized in this section.

#### Federal and State

##### *Ambient Air Quality Standards*

The Clean Air Act 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 Clean Air Act allows states to adopt more stringent standards or to include other pollution species. The California Clean Air Act, 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.

The National 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.

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Both California and the federal government have established health-based AAQS for seven air pollutants, which are shown in Table 5.1-1, *Ambient Air Quality Standards for Criteria Pollutants*. These pollutants are 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 5.1-1 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.   |

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**Table 5.1-1 Ambient Air Quality Standards for Criteria Pollutants**

| Pollutant                     | Averaging Time | California Standard <sup>1</sup>          | Federal Primary Standard <sup>2</sup> | Major Pollutant Sources  |
|-------------------------------|----------------|---|---------------------------------------|--|
| Visibility Reducing Particles | 8 hours        | ExCo = 0.23/km<br>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. |
| 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 hour        | 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.

<sup>1</sup> 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.

<sup>2</sup> 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.

<sup>3</sup> On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.

<sup>4</sup> 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.

<sup>5</sup> 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
- California Code of Regulations (CCR), Title 20: Appliance Energy Efficiency Standards
- 24 CCR, Part 6: Building and Energy Efficiency Standards
- 24 CCR, Part 11: Green Building Standards Code

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#### *Tanner Air Toxics Act and Air Toxics Hots Information and Assessment Act*

Public exposure to 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 reduce exposure to them. 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” (17 CCR § 93000). A substance that is listed as a hazardous air pollutant pursuant to Section 112(b) of the federal Clean Air Act (42 US Code § 7412[b]) is a toxic air contaminant. Under state law, the California Environmental Protection Agency, acting through CARB, is authorized to identify a substance as a TAC if it is an air pollutant that may cause or contribute to an increase in mortality or serious illness, or may pose a present or potential hazard to human health.

California regulates TACs primarily through AB 1807 (Tanner Air Toxics Act) and AB 2588 (Air Toxics “Hot Spot” Information and Assessment Act of 1987). The Tanner Air Toxics Act set up 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 that TAC. 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 that are identified as having no safe threshold.

Under AB 2588, TAC 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 through notices and public meetings.

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

- **13 CCR Chapter 10 § 2485.** Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling
- **13 CCR Chapter 10 § 2480.** Airborne Toxic Control Measure to Limit School Bus Idling and Idling at Schools
- **13 CCR § 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

#### **Air Pollutants of Concern**

##### *Criteria Air Pollutants*

The pollutants emitted into the ambient air by stationary and mobile sources are categorized as primary and/or secondary pollutants. Primary air pollutants are emitted directly from sources. Carbon monoxide (CO), volatile organic compounds (VOC), nitrogen oxides (NO<sub>x</sub>), sulfur dioxide (SO<sub>2</sub>), coarse inhalable

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particulate matter (PM<sub>10</sub>), fine inhalable particulate matter (PM<sub>2.5</sub>), and lead (Pb) are primary air pollutants. 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 AAQS have been established for them. VOC and NO<sub>x</sub> are criteria pollutant precursors that form secondary criteria air pollutants through chemical and photochemical reactions in the atmosphere. Ozone (O<sub>3</sub>) and nitrogen dioxide (NO<sub>2</sub>) are the principal secondary pollutants.

A description of each of the primary and secondary criteria air pollutants and its known health effects is presented below.

- **Carbon Monoxide** is a colorless, odorless 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. 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 (SCAQMD 2005; USEPA 2018). The SoCAB is designated under the California and National AAQS as being in attainment of CO criteria levels (CARB 2017a).
- **Volatile Organic Compounds** are composed primarily of hydrogen and carbon atoms. Internal combustion associated with motor vehicle usage is the major source of VOCs. Other sources include evaporative emissions from paints and solvents, asphalt paving, and household consumer products such as aerosols (SCAQMD 2005). There are no AAQS for VOCs. However, because they contribute to the formation of O<sub>3</sub>, SCAQMD has established a significance threshold.
- **Nitrogen Oxides** are a by-product of fuel combustion and contribute to the formation of ground-level 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>). NO is a colorless, odorless gas formed from atmospheric nitrogen and oxygen when combustion takes place under high temperature and/or high pressure. The principal form of NO<sub>x</sub> produced by combustion is NO, but NO reacts quickly 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> is an acute irritant and more injurious than NO in equal concentrations. At atmospheric concentrations, however, NO<sub>2</sub> is only potentially irritating. NO<sub>2</sub> absorbs blue light; the result is a brownish-red cast to the atmosphere and reduced visibility. NO<sub>2</sub> exposure concentrations near roadways are of particular concern for susceptible individuals, including asthmatics, children, and the elderly. Current scientific evidence links short-term NO<sub>2</sub> exposures, ranging from 30 minutes to 24 hours, with adverse respiratory effects, including airway inflammation in healthy people and increased respiratory symptoms in people with asthma. Also, studies show a connection between elevated short-term NO<sub>2</sub> concentrations and increased visits to emergency departments and hospital admissions for respiratory issues, especially asthma (SCAQMD 2005; USEPA 2018). The SoCAB is designated an attainment area for NO<sub>2</sub> under the National and California AAQS (CARB 2017a).
- **Sulfur Dioxide** 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

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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 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 (SCAQMD 2005; USEPA 2018). The SoCAB is designated attainment under the California and National AAQS (CARB 2017a).

- **Suspended Particulate Matter** 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 particulate matter with an aerodynamic diameter of 10 microns or less (i.e., ≤10 millionths of a meter or 0.0004 inch). Inhalable fine particles, or PM<sub>2.5</sub>, have an aerodynamic diameter of 2.5 microns or less (i.e., ≤2.5 millionths of a meter or 0.0001 inch). Particulate discharge into the atmosphere results primarily from industrial, agricultural, construction, and transportation activities. 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. The EPA's 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 far lower concentrations. These health effects include premature death in people with heart or lung disease, nonfatal heart attacks, irregular heartbeat, aggravated asthma, decreased lung function, and increased respiratory symptoms (e.g., irritation of the airways, coughing, or difficulty breathing) (SCAQMD 2005). There has been emerging evidence that ultrafine particulates, which are 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), have human health implications, because their toxic components may initiate or facilitate biological processes that may lead to adverse effects to the heart, lungs, and other organs (SCAQMD 2013). However, the EPA or CARB has yet to adopt AAQS to regulate these particulates. Diesel particulate matter is classified by CARB as a carcinogen (CARB 1998). Particulate matter can also cause environmental effects such as visibility impairment,<sup>1</sup> environmental damage,<sup>2</sup> and aesthetic damage<sup>3</sup> (SCAQMD 2005; USEPA 2018). 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 2017a).<sup>4</sup>

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<sup>1</sup> PM<sub>2.5</sub> is the main cause of reduced visibility (haze) in parts of the United States.

<sup>2</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>3</sup> Particulate matter can stain and damage stone and other materials, including culturally important objects such as statues and monuments.

<sup>4</sup> CARB approved the SCAQMD'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

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- **Ozone** 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 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 its formation. 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 (SCAQMD 2005; USEPA 2018). The SoCAB is designated extreme nonattainment under the California AAQS (1-hour and 8-hour) and National AAQS (8-hour) (CARB 2017a).
- **Lead** 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 (SCAQMD 2005; USEPA 2018). 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 more strict lead standards, and special monitoring sites immediately downwind of lead sources recorded very localized violations of the new state and federal standards.<sup>5</sup> As a result of these violations, the Los Angeles County portion of the SoCAB is designated as nonattainment under the National AAQS for lead (SCAQMD 2012; CARB 2017a). Because emissions of lead are found only in projects that are permitted by SCAQMD, lead is not a pollutant of concern for the Proposed Project.

#### *Toxic Air Contaminants*

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

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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>5</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 (SCAQMD 2012).

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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 diesel particulate matter (DPM) as a TAC. Previously, the individual chemical compounds in diesel exhaust were considered TACs. Almost all diesel exhaust particles are 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 lungs.

#### **Air Quality Management Planning**

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

#### **2016 AQMP**

On March 3, 2017, SCAQMD adopted the 2016 AQMP, which serves 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>6</sup>
- 2006 National 24-hour PM<sub>2.5</sub> standard by 2019
- 1997 National 8-hour ozone standard by 2023
- 1979 National 1-hour ozone standard by year 2022

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 (SCAQMD 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, SCAQMD is seeking to reclassify the SoCAB from “moderate” to “serious” nonattainment under this federal standard. A “moderate” nonattainment would require meeting the 2012 federal standard by no later than 2021.

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<sup>6</sup> The 2016 AQMP requests a reclassification from moderate to serious non-attainment for the 2012 National PM<sub>2.5</sub> standard.

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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 (SCAQMD 2017).

#### *Lead Implementation Plan*

In 2008, the EPA designated the Los Angeles County portion of the SoCAB as a nonattainment area under the federal lead classification due to the addition of source-specific monitoring under the new federal regulation. This designation was based on two source-specific monitors in the City of Vernon and the City of Industry that exceeded the new standard in the 2007–2009 period. The remainder of the SoCAB, outside the Los Angeles County nonattainment area, remains in attainment of the new 2008 lead standard. On May 24, 2012, CARB approved the State Implementation Plan (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 the EPA for approval.

#### *SCAQMD Rules and Regulations*

All projects are subject to SCAQMD rules and regulations in effect at the time of activity, including the following:

- **Rule 401, Visible Emissions.** This rule is intended to prevent the discharge of pollutant emissions from an emissions source that results in visible emissions. Specifically, the rule prohibits the discharge of any air contaminant into the atmosphere by a person from any single source of emission for a period or periods aggregating more than three minutes in any one hour that is as dark as or darker than designated No. 1 on the Ringelmann Chart, as published by the U.S. Bureau of Mines.
- **Rule 402, Nuisance.** This rule is intended to prevent the discharge of pollutant emissions from an emissions source that results in a public nuisance. Specifically, this rule prohibits any person from discharging quantities of air contaminants or other material from any source such that it would result in an injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public. Additionally, the discharge of air contaminants would also be prohibited where it would endanger the comfort, repose, health, or safety of any number of persons or the public, or that cause, or have a natural tendency to cause, injury or damage to business or property. This rule does not apply to odors emanating from agricultural operations necessary for the growing of crops or the raising of fowl or animals.
- **Rule 403, Fugitive Dust.** This rule is intended to reduce the amount of particulate matter entrained in the ambient air as a result of anthropogenic (human-made) fugitive dust sources by requiring actions to prevent, reduce, or mitigate fugitive dust emissions. Rule 403 applies to any activity or human-made condition capable of generating fugitive dust, and requires best available control measures to be applied to earth moving and grading activities. In general, the rule prohibits new developments from the installation of wood-burning devices.

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- **Rule 1113, Architectural Coatings.** This rule serves to limit the VOC content of architectural coatings used on projects in the SCAQMD. Any person who supplies, sells, offers for sale, or manufactures any architectural coating for use on projects in the SCAQMD must comply with the current VOC standards set in this rule.
- **Rule 1403, Asbestos Emissions from Demolition/Renovation Activities.** The purpose of this rule is to specify work practice requirements to limit asbestos emissions from building demolition and renovation activities, including the removal and associated disturbance of asbestos-containing materials (ACM). The requirements for demolition and renovation activities include asbestos surveying, notification, ACM removal procedures and time schedules, ACM handling and clean-up procedures, and storage, disposal, and landfilling requirements for asbestos-containing waste materials. All operators are required to maintain records, including waste shipment records, and are required to use appropriate warning labels, signs, and markings.

#### 5.1.1.2 EXISTING CONDITIONS

##### South Coast Air Basin

The Project area is in the SoCAB, which includes all of Orange County and the nondesert 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 semipermanent 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 (SCAQMD 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 climatological station nearest to the Project area is the Santa Ana Fire Station Monitoring Station (ID No. 047888). The average low is reported at 43.1°F in January, and the average high is 84.7°F in August (WRCC 2017).

In contrast to a very steady pattern of temperature, rainfall is seasonally and annually highly variable. Almost all rain falls from November 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 13.69 inches per year in the Project area (WRCC 2017).

##### *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

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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 SoCAB (SCAQMD 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 (SCAQMD 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 (SCAQMD 2005).

#### **SoCAB Nonattainment Areas**

The AQMP provides the framework for air quality basins to achieve attainment of the state and federal ambient air quality standards through the SIP. Areas are classified as attainment or nonattainment areas for particular pollutants depending on whether they meet the 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 AAQS 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 an AAQS for that pollutant in the area.

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- **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 5.1-2, *Attainment Status of Criteria Pollutants in the South Coast Air Basin*.

**Table 5.1-2 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  |
| CO                | Attainment              | Attainment   |
| NO <sub>2</sub>   | Attainment              | Attainment/Maintenance                               |
| SO <sub>2</sub>   | Attainment              | Attainment   |
| Lead              | Attainment              | Nonattainment (Los Angeles County only) <sup>1</sup> |
| All others        | Attainment/Unclassified | Attainment/Unclassified                              |

Source: CARB 2017a.

<sup>1</sup> 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 in the SoCAB are unclassified.

### Multiple Air Toxics Exposure Study IV

The Multiple Air Toxics Exposure Study (MATES) is a monitoring and evaluation study on ambient concentrations of TACs and the potential health risks from air toxics in the SoCAB. In 2008, SCAQMD conducted its third update, MATES III, based on the Office of Environmental Health Hazards Assessment's (OEHHA) 2003 Air Toxics Hot Spots Program Guidance Manual for Preparation of Health Risk Assessments (2003 HRA Guidance Manual). The results showed that the overall risk for excess cancer from a lifetime exposure to ambient levels of air toxics was about 1,200 in a million. The largest contributor to this risk was diesel exhaust, which accounted for 84 percent of the cancer risk (SCAQMD 2008a).

SCAQMD recently released the fourth update, MATES IV, which was also based on OEHHA's 2003 HRA Guidance Manual. The results showed that the overall monitored risk for excess cancer from a lifetime exposure to ambient levels of air toxics decreased to approximately 418 in one million. Compared to the 2008 MATES III, monitored excess cancer risks decreased by approximately 65 percent. Approximately 90 percent of the risk is attributed to mobile sources, and 10 percent is attributed to TACs from stationary sources, such as refineries, metal processing facilities, gas stations, and chrome plating facilities. The largest contributor to this risk was diesel exhaust, which accounted for approximately 68 percent of the air toxics risk. Compared to MATES III, MATES IV found substantial improvement in air quality and associated decrease in air toxics

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exposure. As a result, the estimated basinwide population-weighted risk decreased by approximately 57 percent since MATES III (SCAQMD 2015a).

OEHHA updated the guidelines for estimating cancer risks on March 6, 2015 (OEHHA 2015). The new method uses higher estimates of cancer potency during early life exposures, which result in a higher calculation of risk. There are also differences in the assumptions on breathing rates and length of residential exposures. When combined, SCAQMD estimates that risks for a given inhalation exposure level will be about 2.7 times higher than the risk identified in MATES IV using the 2015 OEHHA guidance methodology (e.g., 2.7 times higher than 418 in one million overall excess cancer risk) (SCAQMD 2015a).

### Existing Ambient Air Quality

Existing levels of ambient air quality and historical trends and projections in the vicinity of the Proposed Project are best documented by measurements made by SCAQMD. The majority of the Project area is in Source Receptor Area (SRA) 18 – North Orange County Coastal. The air quality monitoring station closest to the Project area is the Costa Mesa – Mesa Verde Drive Monitoring Station. As this station does not have information for PM<sub>10</sub> and PM<sub>2.5</sub>, information for these criteria air pollutants was obtained from the Anaheim-Pampas Lane Monitoring Station. Data from these stations are summarized in Table 5.1-3, *Ambient Air Quality Monitoring Summary*. The data show that the concentration levels of O<sub>3</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub> of the area regularly exceed the state and federal one-hour and eight-hour O<sub>3</sub> standards as well as the state PM<sub>10</sub> and federal PM<sub>2.5</sub> standards. The CO, SO<sub>2</sub>, and NO<sub>2</sub> standards have not been exceeded in the last five years in the Project vicinity.

**Table 5.1-3 Ambient Air Quality Monitoring Summary**

| Pollutant/Standard   | Number of Days Thresholds Were Exceeded and Maximum Levels |        |        |        |        |
|--|--|--------|--------|--------|--------|
|  | 2012   | 2013   | 2014   | 2015   | 2016   |
| <b>Ozone (O<sub>3</sub>)<sup>1</sup></b>                     |  |        |        |        |        |
| State 1-Hour ≥ 0.09 ppm (days exceed threshold)              | 0  | 1      | 1      | 1      | 0      |
| State 8-hour ≥ 0.07 ppm (days exceed threshold)              | 1  | 2      | 6      | 2      | 0      |
| Federal 8-Hour > 0.075 ppm (days exceed threshold)           | 1  | 1      | 4      | 1      | 0      |
| Max. 1-Hour Conc. (ppm)                                      | 0.090  | 0.095  | 0.096  | 0.099  | 0.090  |
| Max. 8-Hour Conc. (ppm)                                      | 0.076  | 0.083  | 0.079  | 0.079  | 0.069  |
| <b>Carbon Monoxide (CO)<sup>1</sup></b>                      |  |        |        |        |        |
| State 8-Hour > 9.0 ppm (days exceed threshold)               | 0  | *      | *      | *      | *      |
| Federal 8-Hour ≥ 9.0 ppm (days exceed threshold)             | 0  | *      | *      | *      | *      |
| Max. 8-Hour Conc. (ppm)                                      | 1.71   | *      | *      | *      | *      |
| <b>Nitrogen Dioxide (NO<sub>2</sub>)<sup>1</sup></b>         |  |        |        |        |        |
| State 1-Hour ≥ 0.18 ppm (days exceed threshold)              | 0  | 0      | 0      | 0      | 0      |
| Max. 1-Hour Conc. (ppm)                                      | 0.0744   | 0.0747 | 0.0606 | 0.0524 | 0.0598 |
| <b>Sulfur Dioxide (SO<sub>2</sub>)<sup>1</sup></b>           |  |        |        |        |        |
| State 24-Hour ≥ 0.04 ppm (days exceed threshold)             | 0  | 0      | *      | *      | *      |
| Federal 24-Hour ≥ 0.14 ppm (days exceed threshold)           | 0  | 0      | *      | *      | *      |
| Max 24-Hour Conc. (ppm)                                      | 0.001  | 0.001  | *      | *      | *      |
| <b>Coarse Particulates (PM<sub>10</sub>)<sup>2</sup></b>     |  |        |        |        |        |
| State 24-Hour > 50 µg/m <sup>3</sup> (days exceed threshold) | 0  | 1      | 2      | 2      | *      |

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**Table 5.1-3 Ambient Air Quality Monitoring Summary**

| Pollutant/Standard  | Number of Days Thresholds Were Exceeded and Maximum Levels |      |      |      |      |
|---|--|------|------|------|------|
|   | 2012   | 2013 | 2014 | 2015 | 2016 |
| Federal 24-Hour > 150 µg/m <sup>3</sup> (days exceed threshold) | 0  | 0    | 0    | 0    | 0    |
| Max. 24-Hour Conc. (µg/m <sup>3</sup> )                         | 48.0   | 77.0 | 85.0 | 59.0 | 74.0 |
| <b>Fine Particulates (PM<sub>2.5</sub>)<sup>2</sup></b>         |  |      |      |      |      |
| Federal 24-Hour > 35 µg/m <sup>3</sup> (days exceed threshold)  | 4  | 1    | 4    | 3    | 1    |
| Max. 24-Hour Conc. (µg/m <sup>3</sup> )                         | 50.1   | 37.8 | 45.0 | 45.8 | 44.4 |

Source: CARB 2017b.

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 obtained from the Costa Mesa – Mesa Verde Drive Monitoring Station at 2850 Mesa Verde Drive East in the City of Costa Mesa.

<sup>2</sup> Data obtained from the Anaheim – Pampa Lane Monitoring Station at 1630 Pampas Lane in the City of Anaheim.

### Existing Emissions

All 13 school campuses currently generate criteria air pollutant emissions from natural gas used for heating, vehicle trips associated with the students and staff, and area sources such as landscaping equipment and consumer cleaning products.

### 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 cardiorespiratory diseases.

Residential areas are also considered sensitive 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. Other sensitive receptors include retirement facilities, hospitals, and schools. 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, commercial, retail, and office areas are considered the least sensitive to air pollution. Exposure periods are relatively short and intermittent, because the majority of the workers tend to stay indoors most of the time. In addition, the workforce is generally the healthiest segment of the population.

The nearest off-site sensitive receptors to Sun View Elementary School (ES) include the surrounding residences. For Pleasant View/Ocean View Preparatory Preschool (Pleasant View/OVPP), the nearest off-site sensitive receptors are the adjacent residences to the north and south in addition to the residences to the west across Royal Drive. The nearest off-site sensitive receptors to Westmont ES are the adjacent residences to the east along Dana Circle in addition to the residences to the south across Heil Avenue and to the north across the channel.

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#### 5.1.2 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project would:

- AQ-1 Conflict with or obstruct implementation of the applicable air quality plan.
- AQ-2 Violate any air quality standard or contribute substantially to an existing or projected air quality violation.
- AQ-3 Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors).
- AQ-4 Expose sensitive receptors to substantial pollutant concentrations.
- AQ-5 Create objectionable odors affecting a substantial number of people.

The Initial Study, included as Appendix A, substantiates that impacts associated with the following thresholds would be less than significant:

- Threshold AQ-1
- Threshold AQ-5

These impacts will not be addressed in the following analysis.

##### 5.1.2.1 SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT THRESHOLDS

The analysis of the Proposed Project's air quality impacts follows the guidance and methodologies recommended in SCAQMD's *CEQA Air Quality Handbook* and the significance thresholds on SCAQMD's website (SCAQMD 1993).<sup>7</sup> 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. SCAQMD 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

SCAQMD has adopted regional construction and operational emissions thresholds to determine a project's cumulative impact on air quality in the SoCAB, shown in Table 5.1-4, *SCAQMD Regional Significance Thresholds*. The table lists thresholds that are applicable for all projects uniformly, regardless of size or scope. There is growing evidence that although ultrafine particles contribute a very small portion of the overall atmospheric

<sup>7</sup> SCAQMD's Air Quality Significance Thresholds are current as of March 2015 and can be found at: <http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook>.

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mass concentration, they represent a greater proportion of the health risk from PM. However, the EPA and CARB have not adopted AAQS to regulate ultrafine particles; therefore, SCAQMD has not developed thresholds for them.

**Table 5.1-4 SCAQMD 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: SCAQMD 2015b.

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 effects. Exposure to fine particulate pollution and ozone causes myriad health impacts, particularly to the respiratory and cardiovascular systems:

- Increases 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>)
- Contributes to lower birth weight in newborns (PM<sub>2.5</sub>) (SCAQMD 2015c)

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, in 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 (SCAQMD 2015d).

Mass emissions in Table 5.1-4 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, and it is speculative to identify how many more individuals in

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the air basin would be affected by the health effects listed above. In addition, the analysis to determine how exceeding the regional thresholds would affect the number of days the region is in nonattainment is within the scope of the AQMP. SCAQMD is the primary agency responsible for ensuring the health and welfare of sensitive individuals exposed to elevated concentrations of air pollutants in the SoCAB. To achieve the health-based standards established by the EPA, SCAQMD 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 hotspots. 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. Hotspots 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 and introduction of cleaner fuels, as well as implementation of control technology on industrial facilities, CO concentrations in the SoCAB and 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 SCAQMD did not predict a violation of CO standards at the busiest intersections in Los Angeles during the peak morning and afternoon periods.<sup>8</sup> As identified in SCAQMD's 2003 AQMP and the 1992 Federal Attainment Plan for Carbon Monoxide, peak carbon monoxide concentrations in the SoCAB in years before redesignation were a result of unusual meteorological and topographical conditions and not 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 by 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 2017).

#### Localized Significance Thresholds

SCAQMD identifies localized significance thresholds, shown in Table 5.1-5, *SCAQMD Localized Significance Thresholds*. Emissions of NO<sub>2</sub>, CO, PM<sub>10</sub>, and PM<sub>2.5</sub> generated at a project site (offsite mobile-source emissions are not included in the LST analysis) could expose sensitive receptors to substantial concentrations of criteria air pollutants. A project that generates emissions that trigger a violation of the AAQS when added to the local background concentrations would generate a significant impact.

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<sup>8</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.

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**Table 5.1-5 SCAQMD 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 (SCAQMD) <sup>1</sup>  | 10.4 µg/m <sup>3</sup> |
| 24-Hour PM <sub>2.5</sub> Standard – Construction (SCAQMD) <sup>1</sup> | 10.4 µg/m <sup>3</sup> |
| 24-Hour PM <sub>10</sub> Standard – Operation (SCAQMD) <sup>1</sup>     | 2.5 µg/m <sup>3</sup>  |
| 24-Hour PM <sub>2.5</sub> Standard – Operation (SCAQMD) <sup>1</sup>    | 2.5 µg/m <sup>3</sup>  |
| Annual Average PM <sub>10</sub> Standard (SCAQMD) <sup>1</sup>          | 1.0 µg/m <sup>3</sup>  |

Source: SCAQMD 2015b.

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

<sup>1</sup> Threshold is based on SCAQMD 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, SCAQMD 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 5.1-5 for projects under five acres. These “screening-level” LSTs tables are the localized significance thresholds for all projects of five acres and less; however, they can be used as screening criteria for larger projects to determine whether or not dispersion modeling may be required.

The screening-level construction LSTs in SRA 18 are shown in Table 5.1-6, *SCAQMD Screening-Level Localized Significance Thresholds: Construction*. For construction activities, LSTs are based on the acreage disturbed per day based on equipment use (SCAQMD 2011). The different types of construction activities would require different equipment mixes, resulting in multiple LSTs. Because the Proposed Project is not an industrial project that has the potential to emit substantial sources of stationary emissions, operational LSTs are not an air quality impact of concern.

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**Table 5.1-6 SCAQMD Screening-Level Localized Significance Thresholds: Construction**

| Acreage Disturbed            | Threshold (lbs/day)                             |                                   |  |   |
|------------------------------|---|-----------------------------------|--|---|
|                              | Nitrogen Oxides (NO <sub>x</sub> ) <sup>1</sup> | Carbon Monoxide (CO) <sup>1</sup> | Coarse Particulates (PM <sub>10</sub> ) <sup>2</sup> | Fine Particulates (PM <sub>2.5</sub> ) <sup>2</sup> |
| <b>Pleasant View/OVPP</b>    |   |                                   |  |   |
| ≤1.00 Acre Disturbed per Day | 92  | 647                               | 4.00   | 3.00  |
| 1.88 Acres Disturbed per Day | 126   | 923                               | 6.62   | 4.75  |
| 2.00 Acres Disturbed per Day | 131   | 962                               | 7.00   | 5.00  |
| 2.38 Acres Disturbed per Day | 139   | 1,056                             | 7.87   | 5.50  |
| 2.59 Acres Disturbed per Day | 144   | 1,109                             | 8.37   | 5.79  |
| <b>Sun View ES</b>           |   |                                   |  |   |
| ≤1.00 Acre Disturbed per Day | 92  | 647                               | 4.00   | 3.00  |
| 2.00 Acres Disturbed per Day | 131   | 962                               | 7.00   | 5.00  |
| 2.50 Acres Disturbed per Day | 142   | 1,087                             | 8.16   | 5.67  |
| 3.28 Acres Disturbed per Day | 159   | 1,282                             | 9.98   | 6.71  |
| <b>Westmont ES</b>           |   |                                   |  |   |
| ≤1.00 Acre Disturbed per Day | 92  | 647                               | 4.00   | 3.00  |

Source: SCAQMD 2008b and SCAQMD 2011, Based on receptors in SRA 18.

<sup>1</sup> LSTs are based on receptors within 82 feet (25 meters).

**5.1.1.1 HEALTH RISK THRESHOLDS**

Whenever a project would use chemical compounds identified in SCAQMD Rule 1401, is on CARB's air toxics list pursuant to Assembly Bill (AB) 1807, or is in the EPA's National Emissions Standards for Hazardous Air Pollutants, a health risk assessment is required by the SCAQMD. Table 5.1-7, *SCAQMD Toxic Air Contaminants Incremental Risk Thresholds*, lists the SCAQMD's TAC incremental risk thresholds for operation of a project. Projects that do not generate emissions that exceed the values in Table 5.1-7 would not substantially contribute to cumulative air quality hazards or exacerbate an existing environmental hazard. Pursuant to the *California Building Industry Association v. Bay Area Air Quality Management District* (2015) 62 Cal.4th 369 (Case No. S213478), the purpose of this EIR is to identify the significant effects of the Proposed Project on the environment, not the significant effects of the environment on the Proposed Project. CEQA does not require an EIR to analyze the environmental effects of attracting development and people to an area. However, the EIR must analyze the impacts of environmental hazards on future users when the Proposed Project exacerbates an existing environmental hazard or condition.

The new school facilities would not emit substantial quantities of TACs, and school land uses typically do not exacerbate existing hazards. Therefore, these thresholds are typically applied to new industrial projects and are not required to be applied to the Proposed Project.

**Table 5.1-7 SCAQMD Toxic Air Contaminants Incremental Risk Thresholds**

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

Source: SCAQMD 2015b.

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### 5.1.3 Environmental Impacts

#### 5.1.3.1 METHODOLOGY

This air quality emissions evaluation was prepared in accordance with the requirements of CEQA to determine if significant air quality impacts are likely in conjunction with the type and scale of development associated with the Proposed Project. Air quality emissions modeling was completed for the Project using the California Emissions Estimator Model (CalEEMod) recommended by SCAQMD. Air quality modeling datasheets are in Appendix C.

The operational-phase emissions are based on the interim housing improvements and operations at Pleasant View/OVPP and Sun View ES. The modeling accounts for the average daily vehicle trips generated by relocating students from the other schools, energy usage of the new portable classrooms, and area sources. Construction emissions are based on information provided for the Project and are primarily focused on the interim housing improvements at the Pleasant View/OVPP and Sun View campuses. Because the proposed improvements at these two interim campuses would require the most construction intensive activities and generally occur concurrently, they would generally represent the worst-case scenario compared to the modernizations. Where specific information was not available, CalEEMod default values were utilized.

- **Transportation.** The average daily trip (ADT) generation was compiled by PlaceWorks (see Section 5.6, *Transportation and Traffic*) and evaluated the relocation of 700 elementary school students from Circle View ES to Pleasant View/OVPP and the relocation of 820 middle school students from Mesa View MS to Sun View ES. The relocation of these students would generate 1,310 ADT and 1,730 ADT, respectively, and representing the worst-case day for each campus. These ADTs are over estimation because they do not account for the bussing program to be implemented. As the worst-case scenario, vehicles traveling an average of 7.0 miles based on the general location of the other schools in relation to Pleasant View/OVPP and Sun View ES were assumed. For further details, refer to Appendix C of this DEIR. On-road criteria air pollutant emissions are based on year 2018 emission rates and provide a conservative estimate, as it is anticipated that the relocation of the Circle View ES and Mesa View MS students would occur in a later year.
- **Energy Use.** Energy use associated with the Proposed Project is based on the CalEEMod default values. Portable classrooms would be built to meet the 2016 Building and Energy Efficiency Standards.
- **Area Sources.** Area source emissions from use of consumer cleaning products, landscaping equipment, and VOC emissions from paints are based on CalEEMod default values and the square footage of the proposed surface parking lot areas and new portable buildings to be installed. It is assumed that these portables would be pre-painted during their production and would not be painted onsite.
- **Construction.** Based on the conservative phasing plans included in this DEIR Chapter 3, Tables 3-1 and 3-2, construction of the interim housing improvements at Pleasant View/OVPP and Sun View ES was assumed to occur concurrently. Stages 1 and 2 would generally occur during the 2018 and 2019 summer recess periods. The installed portables would be removed in the 2023/2024 school or later after the all

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students return to their home schools. The total combined construction duration for Phases 1, 3, and 12 would be approximately four to five months. Table 5.1-8, *Construction Activities, Phasing, and Equipment*, shows the assumed construction activities, stages, and equipment based on information provided and CalEEMod defaults.

**Table 5.1-8 Construction Activities, Phasing, and Equipment**

| Activities <sup>1</sup>                   | Start/End Dates <sup>1</sup> | Equipment <sup>1,2</sup>  |
|---|------------------------------|---|
| <b>Stage 1 in Phase 1</b>                 |                              |   |
| <b>Pleasant View/OVPP and Sun View ES</b> |                              |   |
| Asphalt Demolition                        | 06/21/2018 – 06/25/2018      | 2 saw cutters; 2 front loaders; 6 dump trucks; 1 asphalt grinder; 1 water truck; 1 utility truck            |
| Asphalt Demo Debris Haul                  | 06/26/2018 – 06/27/2018      | No additional equipment assumed.  |
| Site Preparation                          | 06/27/2018 – 07/02/2018      | 1 skip loader; 1 front loader; 3 dump trucks; 1 water truck; 1 utility truck                                |
| Site Preparation Soil Haul                | 07/03/2018 – 07/03/2018      | No additional equipment assumed.  |
| Rough Grading                             | 07/04/2018 – 07/10/2018      | 1 scraper; 1 front loader; 1 skip loader; 1 blade; 1 sweeper; 1 water truck; 2 utility truck                |
| Rough Grading Soil Haul                   | 07/11/2018 – 07/11/2018      | No additional equipment assumed.  |
| Utility Trenching                         | 07/12/2018 – 07/25/2018      | 2 excavators; 2 backhoes; 2 loaders; 4 dump trucks; 1 water truck; 2 utility trucks                         |
| Fine Grading                              | 07/25/2018 – 07/27/2018      | 2 graders; 2 skip loaders; 1 dump truck; 1 water truck  |
| Fine Grading Soil Haul                    | 07/30/2018 – 07/30/2018      | No additional equipment assumed.  |
| Asphalt Paving                            | 07/31/2018 – 08/07/2018      | 1 bitumen distributor; 2 skip loaders; 2 vibrators; 1 roller; 1 roller; 1 utility truck; 10 end dump trucks |
| Portables Installation                    | 08/08/2018 – 08/31/2018      | 1 crane; 4 utility trucks; 10 tractor trailers  |
| Finishing/Landscaping                     | 09/03/2018 – 09/18/2018      | 1 skip loader; 1 skid steer loader; 1 water truck; 2 utility trucks   |
| <b>Stage 2 in Phase 3</b>                 |                              |   |
| <b>Pleasant View/OVPP</b>                 |                              |   |
| Temporary Buildings Removal               | 06/20/2019 – 07/03/2019      | 1 crane; 6 tractor trailers; 4 utility trucks   |
| Site Preparation                          | 07/04/2019 – 07/11/2019      | 1 skip loader; 1 front loader; 1 dump truck; 1 utility truck; 1 water truck                                 |
| Fine Grading                              | 07/12/2019 – 07/18/2019      | 1 skip loader; 1 front loader; 1 dump truck; 1 utility truck; 1 water truck                                 |
| <b>Sun View ES</b>                        |                              |   |
| Temporary Buildings Installation          | 6/20/2019 – 7/2/2019         | 1 crane; 4 utility trucks; 6 tractor trailers   |
| <b>End Phase (Phase 12)</b>               |                              |   |
| <b>Pleasant View/OVPP and Sun View ES</b> |                              |   |
| Temporary Buildings Removal               | 06/20/2024 – 07/02/2024      | 1 crane; 4 utility trucks; 10 tractor trailers  |

<sup>1</sup> Based on information provided by the District.

<sup>2</sup> A water truck is assumed for asphalt demolition, site preparation, and grading.

### 5.1.3.2 IMPACT ANALYSIS

The following impact analysis addresses thresholds of significance for which the Initial Study disclosed potentially significant impacts. The applicable thresholds are identified in brackets after the impact statement.

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**Impact 5.1-1: Construction activities associated with the Proposed Project would not generate short-term emissions in exceedance of SCAQMD'S threshold criteria. [Thresholds AQ-2 and AQ-3]**

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**Impact Analysis:** Construction activities produce combustion emissions from various sources, such as onsite heavy-duty construction vehicles, vehicles hauling materials to and from the site, and motor vehicles transporting the construction crew. Site preparation activities produce fugitive dust emissions (PM<sub>10</sub> and PM<sub>2.5</sub>) from demolition and soil-disturbing activities, such as grading and excavation. Air pollutant emissions from construction activities onsite vary daily as construction activity levels change.

The interim housing improvements at Sun View ES and Pleasant View/OVPP are anticipated to be concurrent during the summer recesses of 2018 and 2019, with other construction/removal in 2023/2024 school year after relocation of students from these two campuses. Note that this construction scenario was assumed for the EIR analysis as a reasonable worst-case development condition, and the actual construction schedule would be based on availability of funding. The proposed parking lot and bus drop-off improvements at Westmont ES and College View ES as part of modernization would occur during the academic school year and would not coincide with the improvements at Pleasant View/OVPP and Sun View ES. It is anticipated that the construction activities associated with those campuses would be similar or less intensive than what is required for Pleasant View/OVPP and Sun View ES. The modernizations at the other nine campuses would primarily involve: student safety improvements such as the installation of camera systems, security fencing, and emergency systems; HVAC systems; plumbing improvements; and play area improvements. Construction activities associated with these improvements are also anticipated to be less intensive than what is required for Pleasant View/OVPP and Sun View ES. Overall, construction emissions associated with improvements to Pleasant View/OVPP and Sun View ES would occur concurrently and are anticipated to represent the worst-case day.

An estimate of maximum daily construction emissions for the Proposed Project is provided in Table 5.1-9, *Maximum Daily Regional Construction Emissions*. As shown in the table, pollutant emissions generated from Project-related construction activities would not exceed SCAQMD's regional significance thresholds. Therefore, impacts to the regional air quality from construction of the Proposed Project would be less than significant.

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**Table 5.1-9 Maximum Daily Regional Construction Emissions**

| Construction Phase  | Pollutants<br>(pounds per day) <sup>1, 2</sup> |                 |     |                 |                  |                   |
|---|--|-----------------|-----|-----------------|------------------|-------------------|
|   | VOC  | NO <sub>x</sub> | CO  | SO <sub>2</sub> | PM <sub>10</sub> | PM <sub>2.5</sub> |
| <b>Stage 1 in Phase 1 – Year 2018 (Combined Pleasant View/OVPP and Sun View ES Emissions)</b>         |  |                 |     |                 |                  |                   |
| Asphalt Demolition  | 4  | 33              | 29  | <1              | 2                | 2                 |
| Asphalt Demolition Debris Haul  | 2  | 67              | 17  | <1              | 23               | 4                 |
| Overlap of Asphalt Demolition Debris Haul & Site Preparation  | 3  | 78              | 26  | <1              | 24               | 5                 |
| Site Preparation  | 1  | 11              | 10  | <1              | 1                | 1                 |
| Site Preparation Soil Haul  | 2  | 78              | 19  | <1              | 5                | 1                 |
| Rough Grading   | 5  | 59              | 35  | <1              | 4                | 3                 |
| Rough Grading Soil Haul   | 2  | 80              | 20  | <1              | 5                | 1                 |
| Utility Trenching   | 4  | 37              | 34  | <1              | 3                | 2                 |
| Fine Grading  | 3  | 39              | 17  | <1              | 3                | 2                 |
| Overlap of Utility Trenching & Fine Grading   | 7  | 76              | 51  | <1              | 5                | 4                 |
| Fine Grading Soil Haul  | 2  | 56              | 14  | <1              | 3                | 1                 |
| Overlap of Portables Installation (Sun View) & Asphalt Paving (Pleasant View)                         | 4  | 34              | 22  | <1              | 3                | 2                 |
| Overlap of Portables Installation (Sun View) & Asphalt Paving + Architectural Coating (Pleasant View) | 15   | 36              | 24  | <1              | 3                | 2                 |
| Overlap of Asphalt Paving (Sun View) & Portables Installation (Pleasant View)                         | 3  | 29              | 19  | <1              | 2                | 2                 |
| Overlap of Asphalt Paving + Architectural Coating (Sun View) & Portables Installation (Pleasant View) | 12   | 31              | 21  | <1              | 2                | 2                 |
| Finishing/Landscaping   | 1  | 9               | 9   | <1              | 1                | 1                 |
| <b>Stage 2 in Phase 3 – Year 2019</b>   |  |                 |     |                 |                  |                   |
| Overlap of Portables Installation (Sun View) & Portables Removal (Pleasant View)                      | 1  | 17              | 7   | <1              | 1                | 1                 |
| Portables Removal (Pleasant View)   | 1  | 10              | 4   | <1              | 1                | <1                |
| Site Preparation (Pleasant View)  | <1   | 5               | 5   | <1              | <1               | <1                |
| Fine Grading (Pleasant View)  | <1   | 5               | 5   | <1              | <1               | <1                |
| <b>End Phase (Phase 12) – Year 2024 (Combined Pleasant View/OVPP and Sun View ES Emissions)</b>       |  |                 |     |                 |                  |                   |
| Portables Removal   | 1  | 11              | 6   | <1              | 1                | 1                 |
| Maximum Daily Emissions   | 15   | 80              | 51  | <1              | 25               | 5                 |
| SCAQMD Regional Construction Threshold  | 75   | 100             | 550 | 150             | 150              | 55                |
| <b>Significant?</b>   | No   | No              | No  | No              | No               | No                |

Source: CalEEMod Version 2016.3.2

Notes: Emissions totals may not equal 100 percent due to rounding.

<sup>1</sup> Based on the preliminary information provided by the Applicant. Where specific information regarding Project-related construction activities was not available, construction assumptions were based on CalEEMod defaults, which are based on construction surveys conducted by SCAQMD of construction equipment.

<sup>2</sup> Includes implementation of fugitive dust control measures required by SCAQMD under Rule 403, including watering disturbed areas a minimum of two times per day, reducing speed limit to 15 miles per hour on unpaved surfaces, replacing ground cover quickly, and street sweeping with Rule 1186-compliant sweepers.

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**Impact 5.1-2: The Project would generate additional vehicle trips but associated operation emissions would not exceed SCAQMD's threshold criteria. [Thresholds AQ-2 and AQ-3]**

**Impact Analysis:** Operation-phase air pollutant emissions would be generated by the Proposed Project from transportation sources (vehicle trips associated the relocated students), area sources (e.g., landscape fuel use, aerosols, and paints), and energy use (natural gas) associated with the proposed facility. Table 5.1-10, *Maximum Daily Regional Operational Emissions*, identifies the criteria air pollutant emissions that would result from implementation of the Proposed Project. The mobile-source emissions shown in the table are based on the estimated vehicle trips that would be generated from the relocation of Circle View ES students to Pleasant View/OVPP and the Mesa View MS students to Sun View ES. The vehicle trips generated by relocation from these two schools would be the highest and represent the worst-case scenarios for Pleasant View/OVPP and Sun View ES. Additionally, the analysis is based on the combined emissions scenario, which assumes that the relocation of the Circle View and Mesa View students would occur in the same academic year—the worst-case scenario. As shown in the table, Project-related air pollutant emissions would not exceed SCAQMD's regional emissions thresholds for operational activities. The actual vehicle trips would be significantly less because busing program would be implemented. Therefore, impacts to the regional air quality from operation of the Proposed Project would be less than significant.

**Table 5.1-10 Maximum Daily Regional Operational Emissions**

|                           | Criteria Air Pollutants (lbs/day) |     |     |                 |                  |                   |
|---------------------------|-----------------------------------|-----|-----|-----------------|------------------|-------------------|
|                           | ROG (VOC)                         | NOx | CO  | SO <sub>2</sub> | PM <sub>10</sub> | PM <sub>2.5</sub> |
| <b>Pleasant View/OVPP</b> |                                   |     |     |                 |                  |                   |
| Area                      | 1                                 | <1  | <1  | <1              | <1               | <1                |
| Energy                    | <1                                | <1  | <1  | <1              | <1               | <1                |
| Mobile <sup>1</sup>       | 2                                 | 3   | 26  | <1              | 7                | 2                 |
| Total                     | 3                                 | 3   | 26  | <1              | 7                | 2                 |
| <b>Sun View ES</b>        |                                   |     |     |                 |                  |                   |
| Area                      | <1                                | <1  | <1  | <1              | <1               | <1                |
| Energy                    | <1                                | <1  | <1  | <1              | <1               | <1                |
| Mobile <sup>1</sup>       | 3                                 | 4   | 35  | <1              | 9                | 3                 |
| Total                     | 3                                 | 4   | 35  | <1              | 9                | 3                 |
| <b>Combined Emissions</b> |                                   |     |     |                 |                  |                   |
| Area                      | 1                                 | <1  | <1  | <1              | <1               | <1                |
| Energy                    | <1                                | <1  | <1  | <1              | <1               | <1                |
| Mobile <sup>1</sup>       | 5                                 | 6   | 61  | <1              | 16               | 4                 |
| Total                     | 6                                 | 7   | 61  | <1              | 16               | 4                 |
| SCAQMD Threshold          | 55                                | 55  | 550 | 150             | 150              | 55                |
| Exceeds Threshold         | No                                | No  | No  | No              | No               | No                |

Source: CalEEMod, Version 2016.3.2. Based on trip generation information compiled by PlaceWorks.

Notes: Highest winter or summer. Emissions totals may not equal 100 percent due to rounding.

<sup>1</sup> Based on year 2018 emission rates, which provides a slightly more conservative estimate of emissions because it is not anticipated that Circle View and Mesa View students would relocate until a later year.

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**Impact 5.1-3: Project-related construction activities could expose sensitive receptors to substantial pollutant concentrations. [Threshold AQ-4]**

*Impact Analysis:* The following describes changes in localized impacts from short-term construction activities and long-term operation of the Proposed Project.

**Localized Construction Impacts**

The Proposed Project could expose sensitive receptors to elevated pollutant concentrations during construction activities if it would cause or contribute significantly to elevated levels. Unlike the mass of construction and operations emissions shown in the regional emissions analysis in Tables 5.1-9 and 5.1-10, which are described in pounds per day, localized concentrations refer to an amount of pollutant in a volume of air (ppm or  $\mu\text{g}/\text{m}^3$ ) and can be correlated to potential health effects.

*Construction-Phase LSTs*

LSTs are the amount of Project-related emissions at which localized concentrations (ppm or  $\mu\text{g}/\text{m}^3$ ) could exceed the AAQs for criteria air pollutants for which the SoCAB is designated nonattainment. LSTs are based on the size of the project site and distance to the nearest sensitive receptor. Thresholds are based on the California AAQS, which are the most stringent AAQS, established to protect sensitive receptors most susceptible to further respiratory distress.

*Pleasant View/OVPP and Sun View ES*

Table 5.1-11, *Pleasant View/OVPP: Maximum Daily On-Site Construction Emissions*, and Table 5.1-12, *Pleasant View/OVPP: Maximum Daily On-Site Construction Emissions*, show the maximum daily construction emissions (pounds per day) generated during on-site construction activities at Pleasant View/OVPP and Sun View ES, respectively, compared with the SCAQMD's LSTs. On-site emissions include fugitive dust emissions and exhaust emissions associated with operation of off-road construction equipment. As shown in the tables, maximum daily construction emissions would not exceed the SCAQMD screening-level construction LSTs for  $\text{NO}_x$ , CO, or  $\text{PM}_{2.5}$ . However, Stage 1 asphalt demolition debris hauling activities at both schools would exceed the  $\text{PM}_{10}$  screening-level construction LST (shown in **bold**). Thus, without mitigation, Project-related construction emissions could exceed the California AAQS, and Project construction could expose sensitive receptors to substantial pollutant concentrations. Therefore, without mitigation, Project-related construction emissions could result in potentially significant localized air quality impacts.

**Table 5.1-11 Pleasant View/OVPP: Maximum Daily Onsite Construction Emissions**

| Source   | Pollutants<br>(pounds per day) <sup>1,2</sup> |    |                  |                   |
|--|---|----|------------------|-------------------|
|  | $\text{NO}_x$                                 | CO | $\text{PM}_{10}$ | $\text{PM}_{2.5}$ |
| <b>Stage 1 in Phase 1 – Year 2018</b>                        |   |    |                  |                   |
| Asphalt Demolition   | 16  | 14 | 1.01             | 0.97              |
| Asphalt Demolition Debris Haul                               | <1  | <1 | <b>9.49</b>      | 1.44              |
| Overlap of Asphalt Demolition Debris Haul & Site Preparation | 5   | 4  | <b>9.81</b>      | 1.74              |

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**Table 5.1-11 Pleasant View/OVPP: Maximum Daily Onsite Construction Emissions**

| Source   | Pollutants<br>(pounds per day) <sup>1,2</sup> |              |                  |                   |
|--|---|--------------|------------------|-------------------|
|  | NO <sub>x</sub>                               | CO           | PM <sub>10</sub> | PM <sub>2.5</sub> |
| Site Preparation                               | 5   | 4            | 0.33             | 0.30              |
| Site Preparation Soil Haul                     | <1  | <1           | 0.05             | 0.01              |
| Rough Grading Soil Haul                        | <1  | <1           | 0.05             | 0.01              |
| Fine Grading Soil Haul                         | <1  | <1           | 0.03             | <0.01             |
| Asphalt Paving                                 | 18  | 15           | 1.24             | 1.14              |
| Overlap Asphalt Paving & Architectural Coating | 20  | 17           | 1.39             | 1.29              |
| Portables Installation                         | 7   | 3            | 0.30             | 0.27              |
| Finishing/Landscaping                          | 4   | 4            | 0.25             | 0.23              |
| <b>Stage 2 in Phase 3 – Year 2019</b>          |   |              |                  |                   |
| Portables Removal                              | 6   | 2            | 0.25             | 0.23              |
| Site Preparation                               | 4   | 4            | 0.27             | 0.25              |
| Fine Grading                                   | 4   | 4            | 0.27             | 0.25              |
| <b>End Phase (Phase 12) – Year 2024</b>        |   |              |                  |                   |
| Portables Removal                              | 4   | 2            | 0.15             | 0.13              |
| <b>1.00-Acre or Less LST</b>                   | <b>92</b>                                     | <b>647</b>   | <b>4.00</b>      | <b>3.00</b>       |
| <b>Exceeds LST?</b>                            | No  | No           | <b>Yes</b>       | No                |
| <b>Stage 1 in Phase 1 – Year 2018</b>          |   |              |                  |                   |
| Utility Trenching                              | 17  | 16           | 1.05             | 0.96              |
| <b>2.00-Acre LST</b>                           | <b>131</b>                                    | <b>962</b>   | <b>7.00</b>      | <b>5.00</b>       |
| <b>Exceeds LST?</b>                            | No  | No           | No               | No                |
| Fine Grading                                   | 19  | 8            | 1.24             | 0.78              |
| <b>1.88-Acre LST</b>                           | <b>126</b>                                    | <b>923</b>   | <b>6.62</b>      | <b>4.75</b>       |
| <b>Exceeds LST?</b>                            | No  | No           | No               | No                |
| Rough Grading                                  | 29  | 17           | 2.02             | 1.31              |
| <b>2.38-Acre LST</b>                           | <b>139</b>                                    | <b>1,056</b> | <b>7.87</b>      | <b>5.50</b>       |
| <b>Exceeds LST?</b>                            | No  | No           | No               | No                |
| Overlap of Utility Trenching & Fine Grading    | 36  | 24           | 2.31             | 1.74              |
| <b>2.59-Acre LST</b>                           | <b>144</b>                                    | <b>1,109</b> | <b>8.37</b>      | <b>5.79</b>       |
| <b>Exceeds LST?</b>                            | No  | No           | No               | No                |

Source: CalEEMod Version 2016.3.2., and SCAQMD 2008, SCAQMD 2011. In accordance with SCAQMD methodology, only on-site stationary sources and mobile equipment occurring on the project site are included in the analysis. LSTs are based on receptors within 82 feet (25 meters) of the campus.

Notes: Emissions totals may not equal 100 percent due to rounding. **Bold** = exceeds LST

<sup>1</sup> Based on the information provided by the District. Where specific information regarding Project-related construction activities was not available, construction assumptions were based on CalEEMod defaults, which are based on construction surveys conducted by SCAQMD of construction equipment.

<sup>2</sup> Includes implementation of fugitive dust control measures required by SCAQMD under Rule 403, including watering disturbed areas a minimum of two times per day, reducing speed limit to 15 miles per hour on unpaved surfaces, replacing ground cover quickly, and street sweeping with Rule 1186-compliant sweepers.

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**Table 5.1-12 Sun View ES: Maximum Daily Onsite Construction Emissions**

| Source   | Pollutants<br>(pounds per day) <sup>1,2</sup> |       |                  |                   |
|--|---|-------|------------------|-------------------|
|  | NO <sub>x</sub>                               | CO    | PM <sub>10</sub> | PM <sub>2.5</sub> |
| <b>Stage 1 in Phase 1 – Year 2018</b>                        |   |       |                  |                   |
| Asphalt Demolition   | 16  | 14    | 1.01             | 0.97              |
| Asphalt Demolition Debris Haul                               | <1  | <1    | <b>9.96</b>      | 1.51              |
| Overlap of Asphalt Demolition Debris Haul & Site Preparation | 5   | 5     | <b>10.33</b>     | 1.85              |
| Site Preparation   | 5   | 5     | 0.37             | 0.34              |
| Site Preparation Soil Haul                                   | <1  | <1    | 0.05             | 0.01              |
| 1 Rough Grading Soil Haul                                    | <1  | <1    | 0.05             | 0.01              |
| Fine Grading Soil Haul                                       | <1  | <1    | 0.04             | 0.01              |
| Portables Installation                                       | 6   | 2     | 0.26             | 0.24              |
| Asphalt Paving   | 16  | 13    | 1.08             | 0.99              |
| Overlap of Asphalt Paving & Architectural Coating            | 18  | 15    | 1.23             | 1.14              |
| Finishing/Landscaping  | 4   | 4     | 0.25             | 0.23              |
| <b>Stage 2 in Phase 3 – Year 2019</b>                        |   |       |                  |                   |
| Portables Installation                                       | 5   | 2     | 0.22             | 0.21              |
| <b>End Phase (Phase 12) – Year 2024</b>                      |   |       |                  |                   |
| Portables Removal  | 4   | 2     | 0.15             | 0.13              |
| <b>1.00-Acre or Less LST</b>                                 | 92  | 647   | 4.00             | 3.00              |
| <b>Exceeds LST?</b>  | No  | No    | <b>Yes</b>       | No                |
| <b>Stage 1 in Phase 1 – Year 2018</b>                        |   |       |                  |                   |
| Utility Trenching  | 17  | 16    | 1.05             | 0.96              |
| Fine Grading   | 20  | 9     | 1.29             | 0.82              |
| <b>2.00-Acre LST</b>   | 131   | 962   | 7.00             | 5.00              |
| <b>Exceeds LST?</b>  | No  | No    | No               | No                |
| Rough Grading  | 29  | 17    | 2.07             | 1.35              |
| <b>2.50-Acre LST</b>   | 142   | 1,087 | 8.16             | 5.67              |
| <b>Exceeds LST?</b>  | No  | No    | No               | No                |
| Overlap of Utility Trenching & Fine Grading                  | 36  | 24    | 2.33             | 1.78              |
| <b>3.28-Acre LST</b>   | 159   | 1,282 | 9.98             | 6.71              |
| <b>Exceeds LST?</b>  | No  | No    | No               | No                |

Source: CalEEMod Version 2016.3.2., and SCAQMD 2008, SCAQMD 2011. In accordance with SCAQMD methodology, only on-site stationary sources and mobile equipment occurring on the Project site are included in the analysis. LSTs are based on receptors within 82 feet (25 meters) of the campus.

Notes: Emissions totals may not equal 100 percent due to rounding.

**Bold** = exceeds LST

<sup>1</sup> Based on the information provided by the District. Where specific information regarding Project-related construction activities was not available, construction assumptions were based on CalEEMod defaults, which are based on construction surveys conducted by SCAQMD of construction equipment.

<sup>2</sup> Includes implementation of fugitive dust control measures required by SCAQMD under Rule 403, including watering disturbed areas a minimum of two times per day, reducing speed limit to 15 miles per hour on unpaved surfaces, replacing ground cover quickly, and street sweeping with Rule 1186-compliant sweepers.

**Westmont ES**

Table 5.1-13, *Westmont ES: Maximum Daily Onsite Construction Emissions*, show the maximum daily construction emissions (pounds per day) generated during onsite construction activities at Westmont ES, compared with

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the SCAQMD’s LSTs. For purposes of this analysis, the emissions generated during the asphalt demolition and site preparation activities associated with the Sun View ES improvements are used to represent the emissions for these activities at Westmont ES. However, the asphalt demolition debris haul emissions shown in the below table are based on the estimated amount of asphalt demolition debris to be removed offsite from Westmont ES. This analysis assumes removal of the asphalt demolition debris would occur over one day and would overlap with asphalt demolition and site preparation activities. For any remaining construction activities, it is assumed that emissions would be similar to the emissions shown in Tables 5.1-11 and 5.1-12, which represent worst-case scenarios.

As shown in the Table 5.1-13, maximum daily construction emissions during the overlap of the asphalt demolition, onsite demolition debris hauling operations, and site preparation activities would not exceed the SCAQMD screening-level construction LSTs for NO<sub>x</sub>, CO, PM<sub>10</sub>, or PM<sub>2.5</sub>. Additionally, as shown in Table 5.1-11 and 5.1-12, the remaining construction activities would not exceed the screening-level construction LSTs. Construction emissions at Westmont ES would not exceed the California AAQS and would not expose sensitive receptors to substantial pollutant concentrations. Therefore, Project-related construction activities associated with the Westmont campus would result in localized air quality impacts that are less than significant.

**Table 5.1-13 Westmont ES: Maximum Daily Onsite Construction Emissions**

| Source   | Pollutants<br>(pounds per day) <sup>1,2</sup> |            |                  |                   |
|--|---|------------|------------------|-------------------|
|  | NO <sub>x</sub>                               | CO         | PM <sub>10</sub> | PM <sub>2.5</sub> |
| <b>2018/2019 School Year</b>                                 |   |            |                  |                   |
| Asphalt Demolition <sup>3</sup>                              | 16  | 14         | 1.01             | 0.97              |
| Asphalt Demolition Debris Haul                               | 0   | 0          | 1.64             | 0.25              |
| Site Preparation <sup>3</sup>                                | 5   | 5          | 0.37             | 0.34              |
| Overlap of Asphalt Demolition Debris Haul & Site Preparation | 51  | 19         | 3.02             | 1.56              |
| <b>1.00-Acre or Less LST</b>                                 | <b>92</b>                                     | <b>647</b> | <b>4.00</b>      | <b>3.00</b>       |
| <b>Exceeds LST?</b>  | No  | No         | No               | No                |

Source: CalEEMod Version 2016.3.2., and SCAQMD 2008, SCAQMD 2011. In accordance with SCAQMD methodology, only on-site stationary sources and mobile equipment occurring on the Project site are included in the analysis. LSTs are based on receptors within 82 feet (25 meters) of the campus.

Notes: Emissions totals may not equal 100 percent due to rounding.

<sup>1</sup> Based on the information provided by the District. Where specific information regarding Project-related construction activities was not available, construction assumptions were based on CalEEMod defaults, which are based on construction surveys conducted by SCAQMD of construction equipment.

<sup>2</sup> Includes implementation of fugitive dust control measures required by SCAQMD under Rule 403, including watering disturbed areas a minimum of two times per day, reducing speed limit to 15 miles per hour on unpaved surfaces, replacing ground cover quickly, and street sweeping with Rule 1186-compliant sweepers.

<sup>3</sup> Based on emissions from Sun View ES.

### Health Risk

SCAQMD currently does not require health risk assessments to be conducted for short-term emissions from construction equipment. Emissions from construction equipment primarily consist of DPM. The OEHHA adopted new guidance for the preparation of health risk assessments in March 2015. OEHHA has developed a cancer risk factor and noncancer chronic reference exposure level for DPM, but these factors are based on continuous exposure over a 30-year time frame. No short-term acute exposure levels have been developed for

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DPM. SCAQMD currently does not require the evaluation of long-term excess cancer risk or chronic health impacts for a short-term project. The Project-related construction activities at Pleasant View/OVPP and Sun View ES are anticipated to be implemented over three separate summer recesses with durations of one to three months each. It is also anticipated that the modernization improvements at the other campuses would be short in duration or require only minimal construction and would occur during the period in which the students are relocated off-site. The overall short durations would limit exposures to on-site and off-site receptors. In addition, exhaust emissions from off-road vehicles associated with overall Project-related construction activities would not exceed the screening-level LSTs. For these reasons, it is anticipated that construction emissions would not pose a threat to off-site receptors near the Project site, and Project-related construction health impacts would be less than significant.

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**Impact 5.1-4: Operation of the Proposed Project would not expose sensitive receptors to substantial pollutant concentrations. [Threshold AQ-4]**

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*Impact Analysis:* The following describes changes in localized impacts from operation of the Proposed Project.

#### Localized Operational Impacts

##### *Operational Phase LSTs*

Operation of the Proposed Project would not generate substantial quantities of emission from on-site stationary sources. Land uses that have the potential to generate substantial stationary sources of emissions that would require a permit from SCAQMD include industrial land uses, such as chemical processing and warehousing operations where substantial truck idling could occur onsite. The Proposed Project does not fall within these categories of uses. While operation of the Proposed Project could result in the use of standard onsite mechanical equipment such as heating, ventilation, and air conditioning units installed on the new portables along with the additional occasional use of landscaping equipment for site maintenance, air pollutant emissions generated from these activities would be nominal (see Table 5.1-10). Therefore, localized air quality impacts related to stationary-source emissions would not expose sensitive receptors to pollutant concentrations.

##### *CO Hotspots*

Under existing and future vehicle emission rates, a project would have to increase traffic volumes at a single intersection by more than 44,000 vehicles per hour—or 24,000 vehicles per hour where vertical and/or horizontal mixing is substantially limited—in order to generate a significant CO impact. The Proposed Project would result in a high of up to approximately 471 peak hour trips from the relocation of the Mesa View MS students to Sun View ES, and would be below the CO hotspots screening criteria. Thus, implementation of the Proposed Project would not produce the volume of traffic required to generate a CO hotspot. Therefore, implementation of the Proposed Project would not have the potential to substantially increase CO hotspots at intersections near the Project sites, and impacts would be less than significant.

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#### 5.1.4 Cumulative Impacts

In accordance with SCAQMD's methodology, any project that produces a significant project-level regional air quality impact in an area that is in nonattainment contributes to the cumulative impact. Cumulative projects in the local area include new development and general growth in the Project area. The greatest source of emissions in the SoCAB is mobile sources. Due to the extent of the area potentially impacted by cumulative project emissions (i.e., the SoCAB), SCAQMD considers a project cumulatively significant when project-related emissions exceed the SCAQMD regional emissions thresholds shown in Table 5.1-4 (SCAQMD 1993). In addition, no significant cumulative impacts were identified with regard to CO hotspots.

#### Construction

The SoCAB is designated nonattainment for O<sub>3</sub> and PM<sub>2.5</sub> under the California and National AAQS and nonattainment for PM<sub>10</sub> and lead (Los Angeles County only) under the National AAQS. Construction of cumulative projects will further degrade the regional and local air quality. Air quality would be temporarily impacted during construction activities. However, as discussed below, implementation of mitigation would reduce Project-related construction emissions to below the SCAQMD significance thresholds on a project and cumulative basis. Therefore, the Proposed Project's contribution to cumulative air quality impacts would not be cumulatively considerable.

#### Operation

For operational air quality emissions, any project that does not exceed or can be mitigated to less than the daily regional threshold values is not considered by SCAQMD to be a substantial source of air pollution and does not add significantly to a cumulative impact. Operation of the Proposed Project would not result in emissions in excess of the SCAQMD regional emissions thresholds for VOC, CO, NO<sub>x</sub>, PM<sub>10</sub>, and PM<sub>2.5</sub>. Therefore, the air pollutant emissions associated with the Proposed Project would not be cumulatively considerable.

#### 5.1.5 Regulatory Requirements

##### State

- Clean Car Standards – Pavley (AB 1493)
- California Advanced Clean Cars CARB (Title 13 CCR)
- Low-Emission Vehicle Program – LEV III (Title 13 CCR)
- Statewide Retail Provider Emissions Performance Standards (SB 1368).
- Airborne Toxics Control Measure to Limit School Bus Idling and Idling at Schools (13 CCR 2480)
- Airborne Toxic Control Measure to Limit Diesel-Fuel Commercial Vehicle Idling (13 CCR 2485)
- In-Use Off-Road Diesel Idling Restriction (13 CCR 2449)
- Building Energy Efficiency Standards (Title 24, Part 6)
- California Green Building Code (Title 24, Part 11)

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- Appliance Energy Efficiency Standards (Title 20)

#### SCAQMD

- SCAQMD Rule 201: Permit to Construct
- SCAQMD Rule 402: Nuisance Odors
- SCAQMD Rule 403: Fugitive Dust
- SCAQMD Rule 445: Wood-Burning Devices
- SCAQMD Rule 1113: Architectural Coatings
- SCAQMD Rule 1186: Street Sweeping
- SCAQMD Rule 1401: New Source Review of Toxic Air Contaminants
- SCAQMD Rule 1403: Asbestos Emissions from Demolition/Renovation Activities

#### 5.1.6 Level of Significance Before Mitigation

Upon implementation of regulatory requirements and standard conditions of approval, some impacts would be less than significant: 5.1-1, 5.1-2, and 5.1-4.

Without mitigation, one impact would be **potentially significant**:

- **Impact 5.1-3** Project-related construction activities could expose sensitive receptors to substantial pollutant concentrations.

#### 5.1.7 Mitigation Measures

##### Impact 5.1-3

AQ-1 The Ocean View School District shall include the following provisions in the construction bid contact for the interim housing improvements at Pleasant View/Ocean View Preparatory Preschool (Pleasant View/OVPP):

- The construction contractor shall limit hauling of demolition debris during Stage 1 in Phase 1 to a maximum of 17 trucks per day (34 one-way haul trips per day if 16 cubic yard trucks are used), assuming a one-way haul distance of 20 miles. If the truck haul distance for export of soil from site preparation activities is greater than 20 miles one way, as identified by the contractor(s), hauling shall be restricted to no more than 680 miles per day. Demolition debris hauling operations shall not overlap with any grading operations and grading soil haul operations.

These requirements shall be noted on all construction management plans and verified by the Ocean View School District prior to and during the demolition phases at Pleasant View/OVPP.

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AQ-2 The Ocean View School District shall include the following provisions in the construction bid contact for the improvements at Sun View Elementary School (ES).

- The construction contractor shall limit hauling of demolition debris during Stage 1 in Phase 1 to a maximum of 18 trucks per day (36 one-way haul trips per day if 16 cubic yard trucks are used), assuming a one-way haul distance of 20 miles. If the truck haul distance for export of soil from site preparation activities is greater than 20 miles one way, as identified by the contractor(s), hauling shall be restricted to no more than 720 miles per day. Demolition debris hauling operations shall not overlap with any grading operations and grading soil haul operations.

These requirements shall be noted on all construction management plans and verified by the Ocean View School District prior to and during demolition activities at Pleasant View/OVPP and Sun View ES.

### 5.1.8 Level of Significance After Mitigation

#### Impact 5.1-3

Implementation of Mitigation Measures (MM) AQ-1 and AQ-2 would limit the number of truck haul trips per day associated with the Stage 1 demolition debris hauling operations at Pleasant View/OVPP and Sun View ES, respectively. As shown in Table 5.1-14, *Pleasant View/OVPP: Maximum Daily Onsite Construction Emissions with Mitigation*, and Table 5.1-15, *Sun View ES: Maximum Daily Onsite Construction Emissions with Mitigation*, with incorporation of MM AQ-1 and MM AQ-2, onsite construction-related PM<sub>10</sub> emissions at both Pleasant View/OVPP and Sun View ES would be reduced to below the respective SCAQMD screening-level LST. Therefore, Impact 5.1-3 would be reduced to less than significant.

**Table 5.1-14 Pleasant View/OVPP: Maximum Daily Onsite Construction Emissions with Mitigation**

| Source   | Pollutants<br>(pounds per day) <sup>1,2</sup> |            |                  |                   |
|--|---|------------|------------------|-------------------|
|  | NO <sub>x</sub>                               | CO         | PM <sub>10</sub> | PM <sub>2.5</sub> |
| <b>Stage 1 in Phase 1 – Year 2018</b>                        |   |            |                  |                   |
| Asphalt Demolition   | 16  | 14         | 1.01             | 0.97              |
| Asphalt Demolition Debris Haul                               | <1  | <1         | 3.16             | 0.48              |
| Overlap of Asphalt Demolition Debris Haul & Site Preparation | 5   | 4          | 3.49             | 0.78              |
| <b>1.00-Acre or Less LST</b>                                 | <b>92</b>                                     | <b>647</b> | <b>4.00</b>      | <b>3.00</b>       |
| <b>Exceeds LST?</b>  | No  | No         | No               | No                |

Source: CalEEMod Version 2016.3.2., and SCAQMD 2008, SCAQMD 2011. In accordance with SCAQMD methodology, only on-site stationary sources and mobile equipment occurring on the Project site are included in the analysis. LSTs are based on receptors within 82 feet (25 meters) of the campus.

Notes: Emissions totals may not equal 100 percent due to rounding.

<sup>1</sup> Based on the information provided by the District. Where specific information regarding Project-related construction activities was not available, construction assumptions were based on CalEEMod defaults, which are based on construction surveys conducted by SCAQMD of construction equipment.

<sup>2</sup> Includes implementation of fugitive dust control measures required by SCAQMD under Rule 403, including watering disturbed areas a minimum of two times per day, reducing speed limit to 15 miles per hour on unpaved surfaces, replacing ground cover quickly, and street sweeping with Rule 1186-compliant sweepers. Also includes implementation of MM AQ-1, which limits the number of demolition debris truck hauls per day.

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**Table 5.1-15 Sun View ES: Maximum Daily Onsite Construction Emissions with Mitigation**

| Source   | Pollutants<br>(pounds per day) <sup>1,2</sup> |            |                  |                   |
|--|---|------------|------------------|-------------------|
|  | NO <sub>x</sub>                               | CO         | PM <sub>10</sub> | PM <sub>2.5</sub> |
| <b>Stage 1 in Phase 1 – Year 2018</b>                        |   |            |                  |                   |
| Asphalt Demolition   | 16  | 14         | 1.01             | 0.97              |
| Asphalt Demolition Debris Haul                               | <1  | <1         | 3.32             | 0.50              |
| Overlap of Asphalt Demolition Debris Haul & Site Preparation | 5   | 5          | 3.69             | 0.85              |
| <b>1.00-Acre or Less LST</b>                                 | <b>92</b>                                     | <b>647</b> | <b>4.00</b>      | <b>3.00</b>       |
| <b>Exceeds LST?</b>  | No  | No         | No               | No                |

Source: CalEEMod Version 2016.3.2., and SCAQMD 2008, SCAQMD 2011 A. In accordance with SCAQMD methodology, only on-site stationary sources and mobile equipment occurring on the Project site are included in the analysis. LSTs are based on receptors within 82 feet (25 meters) of the campus.

Notes: Emissions totals may not equal 100 percent due to rounding.

<sup>1</sup> Based on the information provided by the District. Where specific information regarding Project-related construction activities was not available, construction assumptions were based on CalEEMod defaults, which are based on construction surveys conducted by SCAQMD of construction equipment.

<sup>2</sup> Includes implementation of fugitive dust control measures required by SCAQMD under Rule 403, including watering disturbed areas a minimum of two times per day, reducing speed limit to 15 miles per hour on unpaved surfaces, replacing ground cover quickly, and street sweeping with Rule 1186-compliant sweepers. Also includes implementation of MM AQ-22, which limits the number of demolition debris truck hauls per day.

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