4.1 Air Quality

4.1.1 Summary

Table 6 summarizes the identified environmental impacts, proposed Mitigation Measures, and residual impacts on the proposed project with regard to air quality. Additional details are provided in Section 4.1.2 (Impact Analysis).

Table 6 Impact and Mitigation Summary: Air Quality

Impact	Mitigation Measures	Residual Impact
Impact AQ-1. Construction and operation of the proposed project would not generate air pollutants in quantities that exceed MBARD significance thresholds. Therefore, the proposed project would not violate, or contribute substantially to the violation of an air quality standard. This impact would be less than significant.	As the impact would be less than significant, no mitigation is required. However, the following measures are *recommended* to ensure project consistency with applicable General Plan policies and to further minimize the less than significant air quality impacts from construction activities. **AQ-1(a) Measures to Reduce Fugitive Dust** ▪ Water all active construction areas at least twice daily. Frequency should be based on the type of operation, soil, and wind exposure. ▪ Prohibit all grading activities during periods of high wind (over 15 mph). ▪ Apply chemical soil stabilizers on inactive construction areas (disturbed lands within construction projects that are unused for at least four consecutive days). ▪ Apply non-toxic binders (e.g., latex acrylic copolymer) to exposed areas after cut and fill operations and hydro seed area. ▪ Haul trucks shall maintain at least 2'0" of freeboard. ▪ Cover all trucks hauling dirt, sand, or loose materials. ▪ Plant tree windbreaks on the windward perimeter of construction projects if adjacent to open land. ▪ Plant vegetative ground cover in disturbed areas as soon as possible. ▪ Cover inactive storage piles. ▪ Install wheel washers at the entrance to construction sites for all exiting trucks. ▪ Pave all roads on construction sites. ▪ Sweep streets if visible soil material is carried out from the construction site. ▪ Post a publicly visible sign which specifies the telephone number and person to contact regarding dust complaints. This person shall respond to complaints and take corrective action within 48 hours. The phone number of the Monterey Bay 8-3 Unified Air Pollution Control District shall be visible to ensure compliance with Rule 402 (Nuisance). ▪ Limit the area under construction at any one time. **AQ-1(b) Standard Mitigation for Construction Equipment** ▪ Maintain all construction equipment in proper	Impacts would be less than significant.

Impact	Mitigation Measures	Residual Impact
	condition according to manufacturer's specifications ▪ Fuel all off-road and portable diesel powered equipment with ARB-certified motor vehicle diesel fuel (non-taxed version suitable for use off-road) ▪ Use diesel construction equipment meeting ARB's Tier 2 certified engines or cleaner off-road heavy-duty diesel engines, and comply with the State off-Road Regulation ▪ Use on-road heavy-duty trucks that meet the ARB's 2007 or cleaner certification standard for on-road heavy-duty diesel engines and comply with the State On-Road Regulation; construction or trucking companies with fleets that that do not have engines in their fleet that meet the engine standards identified in the above two measures (e.g. captive or NOx exempt area fleets) may be eligible by proving alternative compliance ▪ All on- and off-road diesel equipment shall not idle for more than 5 minutes. Signs shall be posted in the designated queuing areas and or job sites to remind drivers and operators of the 5 minute idling limit ▪ Prohibit diesel idling within 1,000 feet of sensitive receptors ▪ Prohibit staging and queuing areas within 1,000 feet of sensitive receptors ▪ Electrify equipment when feasible ▪ Substitute gasoline-powered in place of diesel-powered equipment, where feasible ▪ Use alternatively fueled construction equipment on-site where feasible, such as compressed natural gas (CNG), liquefied natural gas (LNG), propane or biodiesel. **Monitoring Action for AQ-1(a) and (b):** The project applicant shall require construction contractors to incorporate the above standard Mitigation Measures, as applicable, to reduce PM, ROG, and NO_X emissions from construction activities. Mitigation Measures shall be listed on project construction plans and the project proponent shall perform periodic site inspections during construction to ensure that Mitigation Measures are being implemented.	
Impact AQ-2. Operation of the proposed project would not generate PM_{10} emissions in quantities exceeding MBARD's significance thresholds and the project would be consistent with the AQMP. Therefore, the project would not result in a cumulatively considerable net increase in PM_{10} or ozone.	No mitigation is required.	Impacts would be less than significant.

Impact	Mitigation Measures	Residual Impact
Impact AQ-3. The project would not generate volumes of traffic that would result in a violation of CO ambient air quality standards.	No mitigation is required.	Impacts would be less than significant.
Impact AQ-4. The project would not generate substantial levels of diesel exhaust during construction. Therefore, the project would not expose sensitive receptors to substantial concentrations of TACs.	No mitigation is required.	Impacts would be less than significant.
Impact AQ-5. The proposed project would not create objectionable odors that would affect neighboring properties. Impacts related to odors would be less than significant.	No mitigation is required.	Impacts would be less than significant.

4.1.2 Setting

a. Climate and Topography

The project site is located within the North Central Coast Air Basin (NCCAB), which includes Monterey, San Benito, and Santa Cruz counties. The NCCAB includes an area of approximately 5,159 square miles along the central coast of California. The project site is located near the coast in the central portion of the air basin. The Monterey Bay Air Resources District (MBARD) is responsible for local control and monitoring of criteria air pollutants throughout the NCCAB.

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

Winds in the San Francisco Bay Area Air Basin (SFBAAB) often transport pollutants into the NCCAB, where surface winds move the pollutants to the eastern portion of the NCCAB. The transport of pollutants from SFBAAB greatly influences pollutant levels in the NCCAB. Assessments from 1994 and 1995 indicate that 50 percent of NCCAB exceedances are the result of the transport of emissions from the SFBAAB (MBUAPCD 2013).

Temperatures in the area range from the mid-40s to the low 70s (Fahrenheit) and precipitation averages approximately 19.73 inches per year (1906-2014) (WRCC 2016). August, September, and October are typically the warmest months of the year.

b. Air Pollutants of Primary Concern

The State and federal Clean Air Acts mandate the control and reduction of certain air pollutants. Under these Acts, the U.S. Environmental Protection Agency (USEPA) and the California Air Resources Board (CARB) have established ambient air quality standards for certain “criteria”

pollutants. Ambient air pollutant concentrations are affected by the rates and distributions of corresponding air pollutant emissions, as well as by the climactic and topographic influences discussed above. The primary determinant of concentrations of non-reactive pollutants, such as carbon monoxide (CO) and particulate matter (PM_{10}), is proximity to major sources. Ambient CO levels, in particular, usually closely follow the spatial and temporal distributions of vehicular traffic. A discussion of primary criteria pollutants is provided below.

Ozone

Ozone is a colorless gas with a pungent odor. Most ozone in the atmosphere is formed as a result of the interaction of ultraviolet light, volatile organic compounds (VOC), and oxides of nitrogen (NO_x). VOCs are typically composed of non-methane hydrocarbons. NO_x is made of different chemical combinations of nitrogen and oxygen, mainly nitric oxide (NO) and nitrogen dioxide (NO_2). High levels of ozone tend to exist only while high VOC and NO_x levels are present to sustain the ozone formation process. Once the precursors have been depleted, ozone levels rapidly decline. Because these reactions occur on a regional rather than local scale, ozone is considered a regional pollutant.

Carbon Monoxide

Carbon monoxide (CO) is an odorless, colorless, gas that is emitted by mobile and stationary sources as a result of incomplete combustion of hydrocarbons or other carbon-based fuels. CO causes a number of health problems including fatigue, headache, confusion, and dizziness. The incomplete combustion of petroleum fuels in on-road vehicles and at power plants is a major source of CO. CO is also produced during the winter from wood stoves and fireplaces. CO tends to dissipate rapidly into the atmosphere; consequently, violations of the State CO standard are generally associated with the major roadway intersections during peak hour traffic conditions.

Localized CO “hotspots” can occur at intersections with heavy peak hour traffic. Specifically, hotspots can be created at intersections where traffic levels are sufficiently high such that the local CO concentration exceeds the federal Ambient Air Quality Standards (AAQS) of 35.0 parts per million (ppm) or the State AAQS of 20.0 ppm.

Nitrogen Dioxide

Nitrogen dioxide (NO_2) is a by-product of fuel combustion, with the primary source being motor vehicles and industrial boilers and furnaces. Combustion produces nitric oxide (NO), which reacts rapidly to form NO_2, creating a mixture of NO and NO_2 commonly called NO_x. NO_2 is an acute irritant. A relationship between NO_2 and chronic pulmonary fibrosis may exist, and an increase in bronchitis in young children at concentrations below 0.3 ppm may occur. NO_2 absorbs blue light and causes a reddish brown cast to the atmosphere and reduced visibility. It can also contribute to the formation of PM_{10} and acid rain.

Particulate Matter

Suspended particulate matter (airborne dust or fugitive dust) consists of particles small enough to remain suspended in the air for long periods. Fine particulate matter refers to particles small enough to be inhaled, pass through the respiratory system, and lodge in the lungs, with resultant health effects. Particulate matter can include materials such as sulfates and nitrates, which are particularly damaging to the lungs. Health-effect studies resulting in revision of the Total Suspended Particulate (TSP) standard in 1987 focus on particulates that are small enough to be considered “inhalable,” i.e. 10 microns or less in size (PM_{10}). PM_{10} arises from sources such as road dust, diesel

soot, combustion products, construction operations, and dust storms. PM_{10} scatters light and significantly reduces visibility. In addition, these particulates penetrate the lungs and can potentially damage the respiratory tract. On June 19, 2003, CARB adopted amendments to the statewide 24-hour particulate matter standards based upon requirements set forth in the Children's Environmental Health Protection Act (SB 25).

In July of 1997, a revision of the federal standard added criteria for $PM_{2.5}$, reflecting recent studies that suggest that particulates less than 2.5 microns in diameter are of particular concern. Due to increased concerns over health impacts related to fine particulate matter, both State and federal $PM_{2.5}$ standards have been created. These standards were established due to increasing concerns that previous standards were inadequate and the statewide potential for significant health impacts associated with fine particulate matter exposure was determined to be large and wide-ranging. Fine particulate matter impacts primarily affect infants, children, the elderly, and those with pre-existing cardiopulmonary disease.

Table 7 Current Federal and State Ambient Air Quality Standards

Pollutant	Averaging Time	California Standard (CAAQS)	Federal Standard (NAAQS)
Ozone (O_3)	1-Hour	0.09 ppm	–
	8-Hour	0.070 ppm	0.070 ppm
Carbon Monoxide (CO)	8-Hour	9.0 ppm	9.0 ppm
	1-Hour	20.0 ppm	35.0 ppm
Nitrogen Dioxide (NO_2)	Annual	0.030 ppm	0.053 ppm
	1-Hour	0.18 ppm	0.100 ppm
Sulfur Dioxide (SO_2)	Annual	–	–
	24-Hour	0.04 ppm	–
	1-Hour	0.25 ppm	0.075 ppm
PM_{10}	Annual	20 µg/m^3	–
	24-Hour	50 µg/m^3	150 µg/m^3
$PM_{2.5}$	Annual	12 µg/m^3	12 µg/m^3
	24-Hour	–	35 µg/m^3
Lead	30-Day Average	1.5 µg/m^3	–
	Rolling 3-Month Average	–	0.15 µg/m^3

ppm = parts per million; µg/m^3 = micrograms per cubic meter

Source: CARB 2017a

c. Current Ambient Air Quality

Local air districts and CARB monitor ambient air quality to assure that air quality standards are met, and if they are not met, to also develop strategies to meet the standards. Air quality monitoring stations measure pollutant ground-level concentrations, typically ten feet above ground level. Depending on whether the standards are met or exceed, the local air basin is classified as in "attainment" or "non-attainment." Some areas are unclassified; which means no monitoring data are available. Unclassified areas are considered to be in attainment. Table 8 summarizes the State and federal attainment status for criteria pollutants in the NCCAB.

Table 8 Attainment Status of the North Central Coast Air Basin

Pollutant	State Standard (CAAQS)	Federal Standard (NAAQS)
Ozone (O_3)	**Non-attainment**	Attainment
Inhalable Particulates (PM_{10})	**Non-attainment**	Attainment
Fine Particulates ($PM_{2.5}$)	Attainment	Attainment
Carbon Monoxide (CO)	Attainment (Monterey County)[1]	Attainment
Nitrogen Dioxide (NO_2)	Attainment	Attainment
Sulfur Dioxide (SO_X)	Attainment	Attainment
Lead	Attainment	Attainment

Notes: Non-attainment pollutants are highlighted in bold.

1. Monterey County is in attainment for CO; San Benito and Santa Cruz Counties or in non-attainment.

Source: MBUAPCD 2015

As shown in Table 8, although the NCCAB is in attainment or unclassified for all NAAQS, it is in non-attainment with respect to the more stringent State PM_{10} standard and the State's eight-hour ozone standard. The federal eight-hour ozone standards were lowered to 0.07 ppm in October 2015; however, the federal attainment status has not been changed.

Ambient air quality is monitored at six MBARD-operated monitoring stations throughout the NCCAB, located in Felton, Santa Cruz, Hollister, Salinas, Carmel Valley, and King City. In addition, the National Parks Service operates a station at the Pinnacles National Park. Table 9 summarizes the representative annual air quality data for the project vicinity over the past three years (2014-2016). The nearest monitoring stations to the project site are Carmel Valley (approximately ten miles southeast) and Salinas (approximately 19 miles northeast). However, the King City monitoring station was used to determine levels of PM_{10} as neither the Carmel Valley nor the Salinas monitoring stations recorded PM_{10} concentrations.

The primary pollutants of concern for the NCCAB are ozone and PM_{10}, as those are the pollutants for which the MBARD is in non-attainment. As indicated in Table 9, there was no federal or state ozone exceedance at the nearest NCCAB monitoring station in 2014, 2015, or 2016. The State and federal standards for PM_{10} were also not exceeded at the nearest NCCAB monitoring station in 2014, 2015, and 2016; the federal standard for $PM_{2.5}$ was not exceeded in 2014, but was exceeded once in 2015 and an estimated 11.9 days in 2016 (CARB 2017a).

Table 9 Ambient Air Quality Data

Pollutant	2014	2015	2016
Ozone (ppm), Worst 1-Hour	0.078	0.071	0.078
Number of days of State exceedances (>0.09 ppm)	0	0	0
Ozone (ppm), 8-Hour Average	0.07	0.066	0.061
Number of days of State exceedances (>0.07 ppm)	0	0	0
Number of days of Federal exceedances (>0.07 ppm)	0	0	0
Carbon Monoxide (ppm), Highest 8-Hour Average	*	*	*
Number of days of above State or Federal standard (>9.0 ppm)	*	*	*
Particulate Matter <10 microns, $\mu g/m^3$, Worst 24 Hours	99.2	72.6	71.4
Number of days above State standard (>50 $\mu g/m^3$)	*	*	*
Number of days above Federal standard (>150 $\mu g/m^3$)	0	0	0
Particulate Matter <2.5 microns, $\mu g/m^3$, Worst 24 Hours	16.3	43.2	104.7
Number of days above Federal standard (>35 $\mu g/m^3$)	0	1	12

Notes: ppm = parts per million; $\mu g/m^3$ = micrograms per cubic meter

* No data was available for the NCCAB to determine the value.

Source: CARB 2017a

Toxic Air Contaminants

According to Section 39655 of the California Health and Safety Code, a toxic air contaminant (TAC) is "an air contaminant which may cause or contribute to an increase in mortality or an increase in serious illness, or which may pose a present or potential hazard to human health." 189 substances that have been listed as federal hazardous air pollutants (HAP) pursuant to Section 4712 of Title 42 of the United States Code are classified as TACs under the State's air toxics program pursuant to Section 39657(b) of the California Health and Safety Code.

TACs can cause cancer and other types of long-term health effects, depending on the particular chemical, their type and duration of exposure; some TACs can also result in short-term health effects. The ten TACs posing the greatest health risk in California are acetaldehyde, benzene, 1-3 butadiene, carbon tetrachloride, hexavalent chromium, para-dichlorobenzene, formaldehyde, methylene chloride, perchlorethylene, and diesel PM. Mobile sources of TACs include freeways and other roads with high traffic volumes (urban roads with traffic volumes exceeding 100,000 vehicles per day or rural roads exceeding 50,000 vehicles per day), while stationary sources include distribution centers, rail yards, ports, refineries, dry cleaners, and large gas dispensing facilities.

d. Sensitive Receptors

Certain population groups are more sensitive to air pollution than the general population; in particular, children, the elderly, and acutely ill and chronically ill persons, especially those with cardio-respiratory diseases, are considered sensitive receptors. Sensitive receptors that are in proximity to localized sources of particulate matter, toxics, and CO are of particular concern. As described in the MBARD's *CEQA Air Quality Guidelines*, a sensitive receptor is defined as: any residence including private homes, condominiums, apartments, and living quarters; education resources such as preschools and kindergarten through grade twelve (K-12); daycare centers; and healthcare facilities such as hospitals or retirement and nursing homes.

MBARD recommends evaluating potential impacts to sensitive receptors within 1,000 feet of the project site. The nearest sensitive receptors to the project site are mixed-use buildings (offices/residences) located approximately 30 feet east of the project site and the lodging use/inn, located directly northwest of the project site (Monterey County 2011). For the purposes of this analysis, any future reference to sensitive receptors will be referring to these residences.

4.1.3 Regulatory Setting

This analysis has been prepared pursuant to the California Environmental Quality Act (CEQA) of 1970 and associated Guidelines (Public Resources Code 21000 et seq. and California Code of Regulations, Title 14, Chapter 3, Sections 15000-15387) and in accordance with local, state and federal laws, including those administered by MBARD, CARB, and the USEPA. The principal air quality regulatory mechanisms include the following:

- Federal Clean Air Act (FCAA), in particular, the 1990 amendments;
- California Clean Air Act (CCAA);
- California Health and Safety Code (H&SC), in particular, Chapter 3.5 (Toxic Air Contaminants) (H&SC Section 39650 et seq.) and Part 6 (Air Toxics "Hot Spots" Information and Assessment) (H&SC Section 44300 et seq.);
- MBARD's Rules and Regulations and air quality planning documents; Rule 400 (Visible Emissions), Rule 402 (Nuisances), Rule 423 (New Source Performance Standards) incorporates Part 60, Chapter I, Title 40 of the Code of Federal Regulations, Rule 425 (Use of Cutback Asphalt);
- 2012-2015 Air Quality Management Plan (AQMP) – Adopted March 2017 as an update to the 2012 AQMP;
- 2007 Federal Maintenance Plan – Adopted May 2007 for maintaining the 1997 federal ozone standard;
- 2005 Particulate Matter Plan – Adopted December 2005 for particulate matter made in response to SB 656;
- 2008 MBUAPCD California Environmental Quality Act Air Quality Guidelines; and
- Guidelines for Implementing the California Environmental Quality Act, updated February 2016.

Federal

The federal and state governments have been empowered by the federal and state Clean Air Acts to regulate the emission of airborne pollutants and have established ambient air quality standards for the protection of public health. The USEPA is the federal agency designated to administer air quality regulation, while the CARB is the state equivalent in California. Local control in air quality management is provided by CARB through county-level or regional (multi-county) air pollution control districts (APCD). CARB establishes air quality standards and is responsible for control of mobile emission sources, while the local APCDs are responsible for enforcing standards and regulating stationary sources. CARB has established 14 air basins statewide.

Federal Clean Air Act

USEPA is charged with implementing national air quality programs. USEPA's air quality mandates are drawn primarily from the FCAA. The FCAA was passed in 1963 by the U.S. Congress and has been amended several times. The 1970 FCAA amendments strengthened previous legislation and laid the

foundation for regulatory scheme of the 1970s and 1980s. In 1977, Congress again added several provisions, including non-attainment requirements for areas not meeting NAAQS and the Prevention of Significant Deterioration program. The 1990 FCAA amendments represent the latest in a series of federal efforts to regulate the protection of air quality in the U.S. The FCAA allows states to adopt more stringent standards or to include other pollution species.

NATIONAL AMBIENT AIR QUALITY STANDARDS

As discussed above, the FCAA requires the USEPA to establish primary and secondary NAAQS for a number of criteria pollutants. The air pollutants for which standards have been established are considered the most prevalent air pollutants that are known to be hazardous to human health. NAAQS have been established for the following pollutants: O_3, CO, SO_2, PM_{10}, $PM_{2.5}$, and lead (Pb).

TITLE III OF THE FEDERAL CLEAN AIR ACT

HAPs are the air contaminants identified by the USEPA as known or suspected to cause cancer, other serious illnesses, birth defects, or death. The FCAA requires USEPA to set standards for these pollutants and reduce emissions of controlled chemicals. Specifically, Title III of the FCAA requires USEPA to promulgate National Emissions Standards for Hazardous Air Pollutants (NESHAP) for certain categories of sources that emit one or more pollutants that are identified as HAPs. The FCAA also requires USEPA to set standards to control emissions of HAPs through mobile source control programs. These include programs that reformulated gasoline, national low emissions vehicle standards, Tier 2 motor vehicle emission standards, gasoline sulfur control requirements, and heavy-duty engine standards.

HAPs tend to be localized and are found in relatively low concentrations in ambient air. However, they can result in adverse chronic health effects if exposure to low concentrations occurs for long periods of time. Many HAPs originate from human activities, such as fuel combustion and solvent use. Emission standards may differ between “major sources” and “area sources” of the HAPs/TACs. Under the FCAA, major sources are defined as stationary sources with the potential to emit more than ten tons per year (tpy) of any one HAP or more than 25 tons per year (tpy) of any combination of HAPs; all other sources are considered area sources. Mobile source air toxics (MSAT) are a subset of the 188 HAPs. Of the 21 HAPs identified by the USEPA as MSATs, six priority HAPs have been identified, including: diesel exhaust, benzene, formaldehyde, acetaldehyde, acrolein, and 1,3-butadiene. While vehicle miles traveled in the United States is expected to increase by 64% over the period from 2000 to 2020, emissions of MSATs are anticipated to decrease substantially as a result of efforts to control mobile source emissions (by 57-67% depending on the contaminant).

State

California Clean Air Act

The California Clean Air Act (CCAA), signed into law in 1988, requires all areas of the State to achieve and maintain the CAAQS by the earliest practical date. CARB is the State air pollution control agency and is a part of the California Environmental Protection Agency (CalEPA). CARB is the agency responsible for coordination and oversight of the State and local air pollution control programs in California, and for implementing the requirements of the CCAA. CARB oversees local district compliance with California and federal laws, approves local air quality plans, submits the Strategic Implementation Plans (SIP) to the USEPA, monitors air quality, determines and updates area

designations and maps, and sets emissions standards for new mobile sources, consumer products, small utility engines, off-road vehicles, and fuels.

The CCAA requires CARB to establish CAAQS. Similar to the NAAQS, CAAQS have been established for the following pollutants: O_3, CO, NO_2, SO_2, PM_{10}, $PM_{2.5}$, Pb, vinyl chloride, hydrogen sulfide, sulfates, and visibility-reducing particulates. In most cases, the CAAQS are more stringent than the NAAQS. The CCAA requires that all local air districts in the State endeavor to achieve and maintain the CAAQS by the earliest practical date. The CCAA specifies that local air districts should focus particular attention on reducing the emissions from transportation and area-wide emission sources, and provides districts with the authority to regulate indirect sources.

Tanner Air Toxics Act and Air Toxics Hot Spots Information and Assessment Act

TACs in California are primarily regulated through the Tanner Air Toxics Act (AB 1807) and the Air Toxics Hot Spots Information and Assessment Act of 1987 (AB 2588) (Hot Spots Act). As discussed above, HAPs/TACs are a broad class of compounds known to cause morbidity or mortality (cancer risk). HAPs/TACs are found in ambient air, especially in urban areas, and are caused by industry, agriculture, fuel combustion, and commercial operations (e.g., dry cleaners). Because chronic exposure can result in adverse health effects, TACs are regulated at the regional, state and federal level.

AB 1807 sets forth a formal procedure for CARB to designate substances as TACs. To date, CARB has identified more than 21 TACs and adopted USEPA's list of HAPs as TACs. In 1998, diesel PM was added to CARB's list of TACs. Once a TAC is identified, CARB adopts an Airborne Toxic Control Measure for sources that emit that particular TAC. If a safe threshold exists at which no toxic effect occurs from a substance, the control measure must reduce exposure below that threshold. If no safe threshold exists, the measure must incorporate Best Available Control Technology (BACT) to minimize emissions.

The Hot Spots Act requires existing facilities that emit toxic substances above a specified level to prepare a toxic emissions inventory and a risk assessment if the emissions are significant, notify the public of significant risk levels, and prepare and implement risk reduction measures.

DIESEL EXHAUST AND DIESEL PARTICULATE MATTER

Diesel exhaust is the predominant TAC in urban air and is estimated to represent about two-thirds of the cancer risk from TACs (based on the statewide average). Diesel exhaust is a complex mixture of gases, vapors, and fine particles that include particulate matter, benzene and formaldehyde, which have been previously identified as TACs by CARB, and are listed as carcinogens either under State Proposition 65 or under the Federal Hazardous Air Pollutants program.

CARB has adopted and implemented a number of regulations for stationary and mobile sources to reduce emissions of diesel PM. Several of these regulatory programs affect medium and heavy duty diesel trucks that represent the bulk of diesel PM emissions from California highways. These regulations include the solid waste collection vehicle (SWCV) rule, in-use public and utility fleets, and the heavy-duty diesel truck and bus regulations. In September 2000, CARB adopted the Diesel Reduction Plan, which recommends control measures to reduce risks associated with diesel PM and achieve an 85 percent reduction in diesel PM relative to 2000 levels by 2020 (CARB 2017d). In 2011, CARB approved the On-Road Heavy-Duty Diesel Vehicles (In-Use) Regulation that requires existing on-road heavy-duty diesel fueled vehicles to meet specific performance requirements between 2012 and 2023, with all affected diesel vehicles required to have 2010 model-year engines or the

equivalent by 2023. These requirements are phased in over the compliance period and depend on the model year of the vehicle. As emissions are reduced, risks associated with exposure to emissions also are expected to be reduced.

CARB AIR QUALITY AND LAND USE HANDBOOK

In April 2005, CARB released the final version of its *Air Quality and Land Use Handbook: A Community Health Perspective*. This guidance document is intended to encourage local land use agencies to consider the risks from air pollution before they approve the siting of sensitive land uses near sources of air pollution, particularly TACs (e.g., freeway and high traffic roads, commercial distribution centers, rail yards, ports, refineries, dry cleaners, gasoline stations, and industrial facilities). These advisory recommendations include general setbacks or buffers from air pollution sources. However, unlike industrial or stationary sources of air pollution, the siting of new sensitive land uses does not require air quality permits or approval by air districts, and, as noted above, the CARB handbook provides guidance rather than binding regulations.

Regional

Monterey Bay Air Resources District (MBARD)

MBARD regulates air quality in the NCCAB, and is responsible for attainment planning related to criteria air pollutants and for district rule development and enforcement. It also reviews air quality analyses prepared for CEQA assessments and has published the *CEQA Air Quality Guidelines* documents (last revised February 2008). The purpose of the guidelines is to assist in the review and evaluation of air quality impacts from projects which are subject to CEQA. The Guidelines are an advisory document intended to provide lead agencies, consultants, and project proponents with uniform procedures for assessing potential air quality impacts and preparing the air quality section of environmental documents. The Guidelines are also intended to help these entities anticipate areas of concern from the MBARD in its role as a lead, commenting, and/or responsible agency for air quality.

MBARD has established rules and regulations to reduce the generation of criteria pollutants, including the following:

- **MBARD Rule 402 – Nuisances.** Prohibits the discharge from any source whatsoever such quantities of air contaminants or other materials which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public; or which endanger the comfort, repose, health, or safety of any such persons or the public; or which cause, or have a natural tendency to cause, injury or damage to business or property.
- **MBARD Rule 426 – Architectural Coatings.** Limits the VOC content for architectural coatings; specifically, limits the VOC content of flat coatings to 50 grams/ liter (g/L).

AIR QUALITY MANAGEMENT PLAN (AQMP)

In accordance with the CCAA, MBARD has developed the *2012-2015 Air Quality Management Plan for the Monterey Bay Region* (2017). The plan updates the 2012 AQMP with a revised air quality trends analysis that reflects revisions to the one- and eight-hour standards, as well as an updated emission inventory, which includes the latest information on stationary, area and mobile emission sources.

4.1.4 Impact Analysis

a. Methodology and Significance Thresholds

Methodology

The analysis of air quality impacts conforms to the methodologies recommended in the MBARD's *CEQA Air Quality Guidelines* (2008). The handbook includes thresholds for emissions associated with both construction and operation of proposed projects. Project air pollutant emissions were quantified using the California Emissions Estimator Model (CalEEMod, Version 2016.3.1). CalEEMod worksheets showing model inputs and results are provided in Appendix B.

Construction Emissions

CalEEMod quantifies construction emissions associated with the use of off-road equipment, on-road worker commute, construction delivery and haul trucks, and application of architectural coatings. The program calculates construction emissions by phase primarily based on the construction equipment to be used (e.g., crawler tractors, graders, dozers, scrapers, etc.), hours of use, equipment specifications, the estimated area of disturbance calculated for each piece of equipment, the number of construction vehicle trips, and the lengths of trips.

As described in Section 2.5.3, *Construction and Grading*, the proposed project would require 14,006 cubic yards (cy) of fill material and would generate 355 cy of cut material; the remaining 13,651 cy of required fill material would need to be imported in order to raise the project site above the mapped flood plain. In addition, the Preliminary Geotechnical Report (Pacific Crest Engineering [PCE] 2017; refer to Appendix F) recommends the removal of up to four inches of earth across the entire project site, the removal of 24 inches of earth beneath structure foundations, and the removal of 18 inches of earth beneath pavement foundations. Based on Rincon staff calculations provided in Appendix B, these recommendations in combination with required cut and fill material would result in 8,832 cy of net exported material and 22,483 cy of net imported material. CalEEMod was adjusted to reflect these assumptions as a reasonable worst-case scenario.

Operational Emissions

Operational emissions associated with on-site development were estimated using CalEEMod. Operational emissions include mobile source emissions, energy use emissions, and area source emissions associated with energy consumption, and area source emissions. Mobile source emissions are generated by motor vehicle trips to and from the project site associated with operation of the project. Project trip generation rates and percentages of primary, diverted and pass-by trips used in CalEEMod were taken from the traffic study prepared in December 2017 for the project by Keith Higgins Traffic Engineer (KHTE) (Appendix G). Energy use emissions are generated by natural gas consumption for space and water heating and cooling. Area source emissions are generated by landscape maintenance equipment, consumer products, and architectural coatings, for example. The project's proximity to transit was also accounted for in CalEEMod through the application of the model's Mitigation Measure LUT-5, "Increase Transit Accessibility."

Thresholds of Significance

The analysis of the project's air quality impacts follows the guidance and methodologies recommended in the MBARD *CEQA Air Quality Guidelines* (February 2008) and Appendix G of the

CEQA Guidelines. Appendix G of the *CEQA Guidelines* contains the following checklist of effects that may be deemed potentially significant:

1. Conflict with or obstruct implementation of the applicable air quality plan;
2. Violate any air quality standards or contribute substantially to an existing or projected air quality violation;
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 qualitative thresholds for ozone precursors);
4. Expose sensitive receptors to substantial pollutant concentrations; and/or
5. Create objectionable odors affecting a substantial number of people.

Threshold 1 is discussed under Section 4.9, *Effects Found Not to be Significant*. The project would be consistent with MBARD's 2012-2015 AQMP; therefore, there would be no impact.

The *CEQA Guidelines* further state that the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the determinations above. MBARD has issued criteria for determining the level of significance for project specific impacts within its jurisdiction in accordance with the above thresholds. Based on criteria applied in or adapted from the MBARD's *Guidelines for Implementing the California Environmental Quality Act* (Monterey Bay Unified Air Pollution District [MBUAPCD] 2016), the proposed project's impacts on air quality would be significant if the project would:

- Be inconsistent with the adopted AQMP
- Cause or contribute to a violation of any California or National AAQS
- During construction or operation, emit greater than:
  - 137 pounds per day of oxides of nitrogen (NOx)
  - 137 pounds per day of volatile organic compounds (VOC)
  - 82 pounds per day of respirable particulate matter (PM10)
  - 55 pounds per day of fine particulate matter (PM2.5)
  - 550 pounds per day of carbon monoxide (CO)

MBARD indicates that the following traffic effects should stand as screening thresholds to determine whether a project would have the potential to generate a significant CO impact (MBUAPCD 2008):

- Intersections or road segments that currently operate at LOS D or better would operate at LOS E or F with addition of the project's traffic;
- V/C ratio at intersection or road segments at LOS E or F increases by 0.05 or more;
- Delay at intersection at LOS E or F increases by 10 seconds or more; or
- Reserve capacity at unsignalized intersection at LOS E or F decreases by 50 or more.

In the case that a project exceeds one or more of these screening thresholds, another bright-line threshold would then be applied to determine whether the project would actually generate a significant CO impact. The Bay Area Air Quality Management District (BAAQMD) has established a volume of 44,000 vehicles per hour as the level above which traffic volumes may contribute to a

violation of CO standards (BAAQMD 2011). This bright-line threshold is applied in the following impact analysis if the project exceeds any of the MBARD screening thresholds presented above.

b. Project Impacts and Mitigation Measures

Threshold 2:	Would the project violate any air quality standards or contribute substantially to any existing or projected air quality violation?

Impact AQ-1 CONSTRUCTION AND OPERATION OF THE PROPOSED PROJECT WOULD NOT GENERATE AIR POLLUTANTS IN QUANTITIES THAT EXCEED MBARD SIGNIFICANCE THRESHOLDS. THEREFORE, THE PROPOSED PROJECT WOULD NOT VIOLATE, OR CONTRIBUTE SUBSTANTIALLY TO THE VIOLATION OF AN AIR QUALITY STANDARD. THIS IMPACT WOULD BE LESS THAN SIGNIFICANT.

Construction Emissions

Construction emissions are temporary in nature, but have the potential to represent a significant short-term impact with respect to air quality. Operation of off-road construction equipment, mobile sources (i.e., delivery vehicles, construction worker vehicles, etc.), and architectural coatings generate particulate matter, NO_x, and VOC emissions. Generation of these emissions vary as a function of the types and number of heavy-duty, off-road equipment used and the intensity and frequency of their operation, as well as vehicle trips per day associated with delivery of construction materials, the importing and exporting of soil, vendor trips, and worker commute trips, and also the VOC concentration of coatings. Fugitive dust emissions are among the pollutants of greatest concern with respect to construction activities. General site grading operations are the primary sources of fugitive dust emissions. However, these emissions can vary greatly, depending on the level of activity, the specific operations taking place, the number and types of equipment operated, vehicle speeds, local soil conditions, weather conditions, and the amount of earth disturbance. The proposed project would involve site-preparation, grading, excavation, and paving using typical construction equipment. Maximum daily project construction emissions (lbs/day) were estimated using CalEEMod and are presented in Table 10. As shown therein, temporary emissions during construction would not exceed MBARD thresholds for any criteria pollutant.

Table 10 Estimated Construction Emissions

	Maximum Daily Emissions (lbs/day)					
	VOC	NO_x	CO	SO_X	PM_{10}	$PM_{2.5}$
Maximum Daily Construction Emissions	7.0	99.9	33.1	0.2	15.1	6.7
MBARD Significance Threshold	137	137	550	150	82	N/A
Exceeds Threshold?	No	No	No	No	No	N/A

See Appendix B for CalEEMod worksheets. Emission data presented is the highest of the winter and summer outputs.

Operational Emissions

Long-term operational emissions associated with the proposed project are those attributed to vehicle trips (mobile emissions), the use of natural gas (energy source emissions), and consumer products, architectural coatings, and landscape maintenance equipment (area source emissions). CalEEMod was used to calculate emissions based on the proposed land uses for the project site and the number of trips generated.

As shown in Table 11, the proposed project would not exceed MBARD significance thresholds for either ozone or PM_{10}, the two criteria pollutants for which the NCCAB is in non-attainment, or other criteria pollutants.

Table 11 Estimated Operational Emissions

	Maximum Daily Emissions (lbs/day)					
	VOC	NO_x	CO	SO_X	PM_{10}	$PM_{2.5}$
Area	1.1	<0.1	<0.1	0.0	<0.1	<0.1
Energy	<0.1	0.2	0.1	<0.1	<0.1	<0.1
Mobile	13.0	49.9	136.8	0.3	42.0	11.1
Total	14.0	50.0	136.8	0.3	42.1	11.1
MBARD Significance Threshold	137	137	550	150	82	N/A
Exceeds Threshold?	No	No	No	No	No	N/A

Note: Totals may not add up due to rounding.

See Appendix B for CalEEMod worksheets. Emission data presented is the highest of the winter and summer outputs.

Emissions generated by project construction and operation would not exceed MBARD significance thresholds. Therefore, the project would not violate air quality standards or contribute to existing violations and impacts would be less than significant. However, in accordance with policies contained in the Conservation and Open Space Element of the 2010 Monterey County General Plan, Mitigation Measures are recommended to control dust and criteria pollutant emissions during construction activities.

Mitigation Measure

As the impact would be less than significant, no mitigation is required. However, the following measures are *recommended* to ensure project consistency with General Plan policies OS-10.8 and OS-10.9 and to further minimize the less than significant air quality impacts from construction activities.

AQ-1(a) Measures to Reduce Fugitive Dust

- Water all active construction areas at least twice daily. Frequency should be based on the type of operation, soil, and wind exposure
- Prohibit all grading activities during periods of high wind (over 15 mph)
- Apply chemical soil stabilizers on inactive construction areas (disturbed lands within construction projects that are unused for at least four consecutive days)
- Apply non-toxic binders (e.g., latex acrylic copolymer) to exposed areas after cut and fill operations and hydro seed area
- Haul trucks shall maintain at least 2'0" of freeboard
- Cover all trucks hauling dirt, sand, or loose materials
- Plant tree windbreaks on the windward perimeter of construction projects if adjacent to open land
- Plant vegetative ground cover in disturbed areas as soon as possible
- Cover inactive storage piles
- Install wheel washers at the entrance to construction sites for all exiting trucks

- Pave all roads on construction sites
- Sweep streets if visible soil material is carried out from the construction site
- Post a publicly visible sign which specifies the telephone number and person to contact regarding dust complaints. This person shall respond to complaints and take corrective action within 48 hours. The phone number of the Monterey Bay 8-3 Unified Air Pollution Control District shall be visible to ensure compliance with Rule 402 (Nuisance)
- Limit the area under construction at any one time

AQ-1(b) Standard Mitigation for Construction Equipment

- Maintain all construction equipment in proper condition according to manufacturer's specifications
- Fuel all off-road and portable diesel powered equipment with ARB-certified motor vehicle diesel fuel (non-taxed version suitable for use off-road)
- Use diesel construction equipment meeting ARB's Tier 2 certified engines or cleaner off-road heavy-duty diesel engines, and comply with the State off-Road Regulation
- Use on-road heavy-duty trucks that meet the ARB's 2007 or cleaner certification standard for on-road heavy-duty diesel engines and comply with the State On-Road Regulation; construction or trucking companies with fleets that that do not have engines in their fleet that meet the engine standards identified in the above two measures (e.g. captive or NOx exempt area fleets) may be eligible by proving alternative compliance
- All on- and off-road diesel equipment shall not idle for more than 5 minutes. Signs shall be posted in the designated queuing areas and or job sites to remind drivers and operators of the 5 minute idling limit
- Prohibit diesel idling within 1,000 feet of sensitive receptors
- Prohibit staging and queuing areas within 1,000 feet of sensitive receptors
- Electrify equipment when feasible
- Substitute gasoline-powered in place of diesel-powered equipment, where feasible
- Use alternatively fueled construction equipment on-site where feasible, such as compressed natural gas (CNG), liquefied natural gas (LNG), propane or biodiesel.

MONITORING ACTION FOR AQ-1(A) AND (B)

The project applicant shall require construction contractors to incorporate the above standard Mitigation Measures, as applicable, to reduce PM, ROG, NO_X, and DPM emissions from construction activities. Mitigation Measures shall be listed on project construction plans and the project proponent shall perform periodic site inspections during construction to ensure that Mitigation Measures are being implemented.

Significance After Mitigation

Impacts would be less than significant.

Threshold 3:	Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed qualitative thresholds for ozone precursors)?

Impact AQ-2 OPERATION OF THE PROJECT WOULD NOT GENERATE PM10 EMISSIONS IN QUANTITIES EXCEEDING MBARD'S SIGNIFICANCE THRESHOLDS AND THE PROJECT WOULD BE CONSISTENT WITH THE AQMP. THEREFORE, THE PROJECT WOULD NOT RESULT IN A CUMULATIVELY CONSIDERABLE NET INCREASE IN PM10 OR OZONE. THIS IMPACT WOULD BE LESS THAN SIGNIFICANT.

The NCCAB is currently in non-attainment for ozone and PM_{10} standards. According to MBARD, a project that does not exceed MBARD's construction or operational thresholds and is consistent with the 2012-2015 AQMP would not have cumulatively considerable impacts on regional air quality (MBARD 2017). MBARD's *CEQA Air Quality Guidelines* further state that a project would result in a cumulatively considerable increase of PM_{10} if its PM_{10} emissions exceed the significance threshold of 82 lbs/day. The *CEQA Air Quality Guidelines* also state that a project that is inconsistent with the AQMP would have a cumulatively considerable impact on regional ozone levels. As demonstrated in Table 10 and Table 11 above, the project would emit less than 82 lbs/day during construction and operation, and, as discussed in Section 4.9, *Effects Found Not to be Significant* (See Air Quality, Threshold 1), the project would be consistent with the AQMP. Therefore, the project would not result in a cumulatively considerable increase in criteria pollutants for which the NCCAB is in non-attainment. This impact would be less than significant.

Mitigation Measure

No mitigation is required.

Threshold 2:	Would the project violate any air quality standards or contribute substantially to any existing or projected air quality violation?
Threshold 4:	Would the project expose sensitive receptors to substantial pollutant concentrations?

Impact AQ-3 THE PROJECT WOULD NOT GENERATE A VOLUME OF TRAFFIC THAT WOULD RESULT IN A VIOLATION OF CO AMBIENT AIR QUALITY STANDARDS. THIS IMPACT WOULD BE LESS THAN SIGNIFICANT.

Areas with high vehicle density, such as congested intersections and parking garages, have the potential to create high concentrations of carbon monoxide (CO), known as CO "hotspots," which can expose sensitive receptors to these pollutant concentrations. Specifically, hotspots can be created at intersections where traffic levels are sufficiently high such that the local CO concentration exceeds the NAAQS of 35.0 ppm or the state CAAQS of 20.0 ppm.

As discussed in Section 4.8, *Transportation and Circulation*, the project would significantly impact traffic conditions in the study area. Section 5.4 of the *CEQA Air Quality Guidelines* states that a project could potentially cause or substantially contribute to violation of the CO AAQS if it would degrade intersections or road segments from LOS D or better to LOS E or F or increase delay at an intersection currently at LOS E or F by 10 seconds or more. As discussed in Section 4.8, *Transportation and Circulation*, the project would degrade existing conditions at Intersection 3 (Highway 1/Rio Road) from D to E during PM peak hour and at Segment 7 (Carmel Valley Road between Schulte Road and Rancho San Carlos Road) from D to E in the westbound direction during

the Saturday peak hour. Therefore, project traffic impacts are further evaluated against the BAAQMD's brightline threshold to determine if the project would contribute to the creation of CO hotspots.

As stated above in Section 4.1.4.e, *Methodology and Significance Thresholds*, the BAAQMD has established a volume of 44,000 vehicles per hour as the level above which traffic volumes may contribute to a violation of CO standards (BAAQMD 2011). Table 12 shows the intersection(s) and roadway segment(s) that have been determined by the traffic study prepared for this project to result in a significant impact due to implementation of the project (KHTE 2017). As shown in Table 12, weekday AM, PM, and Saturday peak hour traffic volumes in the project area would not exceed 44,000 vehicles under Existing Plus Project or Cumulative Plus Project conditions. Therefore, the project would not result in volumes of traffic that would create, or substantially contribute to the exceedance of CO AAQSs. This impact would be less than significant.

Table 12 Impacted Nearby Intersections and Roadways

	Location	Peak AM Hour Traffic Volumes	Peak PM Hour Traffic Volumes	Peak Saturday Hour Traffic Volumes	Exceeds BAAQMD's 44,000 vehicles per hour Threshold?
Existing Plus Project Conditions					
Intersections					
Intersection 3	State Route 1 & Rio Road	2,057	2,743	2,927	**No**
Roadway Segments					
Segment 2	Southbound State Route 1 between Ocean Avenue and Carmel Valley Road	1,599	1,488	1,615	**No**
Segment 4	State Route 1 between Rio Road and River Road	778	1,224	1,313	**No**
Segment 7	Carmel Valley Road between Schulte Road and Rancho San Carlos Road	1,456	1,521	1,396	**No**
Segment 12	Rio Roach between Carmel Rancho Boulevard and State Route 1	1,172	1,705	1,787	**No**
Cumulative Plus Project					
Intersections					
Intersection 3	State Route 1 & Rio Road	2,277	2,984	3,060	**No**
Roadway Segments					
Segment 4	State Route 1 between Rio Road and Ribera Road	997	1,575	1,670	**No**
Segment 7	Carmel Valley Road between Schulte and Rancho San Carlos Road	1,678	1,744	1,694	**No**
Segment 12	Rio Road between Carmel Rancho Boulevard and State Route 1	1,235	1,786	1,867	**No**

Mitigation Measure

No mitigation is required.

Threshold 4:	Would the project expose sensitive receptors to substantial pollutant concentrations?

Impact AQ-4 THE PROJECT WOULD NOT GENERATE SUBSTANTIAL LEVELS OF DIESEL EXHAUST DURING CONSTRUCTION. THEREFORE, THE PROJECT WOULD NOT EXPOSE SENSITIVE RECEPTORS TO SUBSTANTIAL CONCENTRATIONS OF TACS. THIS IMPACT WOULD BE LESS THAN SIGNIFICANT.

Exposure to localized concentrations of toxic air contaminants (TAC) was qualitatively assessed based on the project's potential to result in increased exposure of sensitive receptors to new or existing TAC emission sources. Construction emission estimates shown under Impact AQ-1 are based on a reasonable "worst-case" scenario and conservatively assume that all equipment would run simultaneously for at least six hours during each phase. The project could potentially expose sensitive receptors to temporary health hazards associated with TACs due to the operation of construction equipment. However, concentrations of mobile source diesel PM would only be present during temporary construction activities. High concentrations of diesel exhaust PM_{10} have a recognized carcinogenic and chronic health effect, but no short-term acute effect is currently recognized. In addition, the project site is not surrounded by tall buildings or other topographic features that would block air movement, allowing short-term construction emissions to disperse. Therefore, temporary construction activity would not result in missions that would expose sensitive receptors to substantial concentrations of TACs that could result in a significant health risk impact. Therefore, the project would not expose adjacent residences to hazardous levels of diesel PM over a long duration.

Furthermore, CARB's *Air Quality and Land Use Handbook: A Community Health Perspective* identifies retails shops and stores as having the potential to produce air pollutants that could be harmful to sensitive land uses, such as schools, residences, daycare centers, playgrounds, or medical facilities (CARB 2005). However, Table 10 and Table 11 both illustrate that the proposed project would not introduce quantities of air pollutants during construction or operation that would exceed MBARD significance thresholds. CARB also recommends that the siting of new sensitive land uses be avoided when in close proximity of certain land uses such as freeways and high-traffic roads, distribution centers, rail yards, ports, refineries, chrome platers, dry cleaners using perchlorethylene, and gasoline dispensing facilities (CARB 2005). However, the proposed project is not considered by CARB as a sensitive land use. Therefore, the proposed project would not introduce new sensitive land uses to long term exposure of air pollutants. This impact would be less than significant.

Mitigation Measure

No mitigation is required.

Threshold 5:	Would the project create objectionable odors affecting a substantial number of people?

Impact AQ-5 **THE PROPOSED PROJECT WOULD NOT CREATE OBJECTIONABLE ODORS THAT WOULD AFFECT A SUBSTANTIAL NUMBER OF PEOPLE. IMPACTS RELATED TO ODORS WOULD BE LESS THAN SIGNIFICANT.**

Land uses typically producing objectionable odors include agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting, refineries, landfills, dairies, and fiberglass molding (MBARD 2008). The proposed project does not include any uses that would be associated with objectionable odors. Odor emissions from the proposed project would be limited to odors associated with vehicle and engine exhaust and trash receptacles, and would be comparable with existing commercial uses near the site.

Construction activities would potentially generate odors from vehicle exhaust and fumes from fuel and architectural coatings. Construction-related odors would be temporary and would cease upon completion. As the project site is in a low density area without tall buildings to block air movement and hold odors, construction-related odors would disperse and dissipate and would not cause substantial odors at the closest sensitive receptors.

During operations, potential retail and commercial tenants at the project site may include restaurants. Food preparation, particularly cooking, may create odors that disperse through the project site and nearby proximity. Odors from potential restaurant tenants would be similar to the odors created by existing restaurants in the area, such as those in the Crossroads Carmel shopping center across Rio Road from the project site. Because construction odors would be temporary and dissipate, and operational odors would be similar to existing odors in the area, impacts of the proposed project would be less than significant.

Mitigation Measure

No mitigation is required.

Cumulative Impacts

The geographic scope for considering cumulative impacts to air quality is the North Central Coast Air Basin (NCCAB). As described in Section 3.3, *Cumulative Development*, five projects are planned or pending within the Carmel Valley; additional projects are likely planned throughout the NCCAB as well. Air pollution impacts are cumulative by nature as it is the accumulation of high concentrations of pollutants, usually from multiple sources, that results in impacts to health and the environment. Significance thresholds for operational and construction emissions established by MBARD are designed to address the cumulative impacts of a project's emissions on regional air quality; thus, a project that would not exceed MBARD thresholds would not have a cumulatively significant adverse impact to regional air quality.

The project would generate VOC and NO_x emissions, both precursors to O_3 (ozone), during construction activities and operation. As shown in Table 10 and Table 11, neither VOC nor NO_x emissions would exceed MBARD thresholds during construction or operations. Additionally, as discussed under Impact AQ-1 , the project would be consistent with the 2012-2015 AQMP, and as discussed under Impact AQ-4, the project would not generate traffic levels under cumulative plus project conditions that would result in a violation of the CO AAQS. Therefore, the project would not have a cumulatively considerable impact to regional air quality.

Project construction activities, if occurring simultaneously with construction activities for other projects in the Carmel Valley, could result in elevated levels of air pollutants in the local area. However, incorporation of Mitigation Measures AQ-1(a) and (b) would reduce the project's construction emissions the maximum extent possible and the project's construction emissions would be below MBARD's significance thresholds for construction emissions. Therefore, the project would have a less than significant contribution to cumulative impacts resulting from localized project construction impacts.

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