

3.2 Air Quality

This section describes the existing conditions, potential construction and operational air quality impacts that would result from implementation of the proposed Larkspur Ferry Service Expansion and Parking Project (Project). Where applicable, this section also identifies mitigation measures to reduce significant impacts. Impacts related to the No-Project Alternative are discussed in Chapter 5, Alternatives to the Project. This air quality analysis is based on assumptions related to construction equipment and schedule for construction emissions. Operational analysis is based on the Project Traffic Impact Analysis (Appendix G) and existing fleet and future Liwa-class vessel operation characteristics. Appendix B includes air emissions modeling files.

3.2.1 Existing Conditions

3.2.1.1 Regulatory Setting

The Golden Gate Bridge, Highway and Transportation District, as the owner of the Larkspur Ferry Terminal, is the California Environmental Quality Act (CEQA) Lead Agency for the Project and has prepared this Draft Environmental Investigation Report to evaluate potential impacts and identify required mitigation to avoid or reduce potentially significant impacts.

The federal Clean Air Act (CAA) and its subsequent amendments form the basis for the nation's air pollution control effort. The U.S. Environmental Protection Agency (EPA) is responsible for implementing most aspects of the CAA. A key element of the CAA is the National Ambient Air Quality Standards (NAAQS) for criteria pollutants. The CAA delegates enforcement of the NAAQS to the states. In California, the California Air Resources Board (CARB) is responsible for enforcing air pollution regulations and ensuring the NAAQS and California Ambient Air Quality Standards (CAAQS) are met. CARB, in turn, delegates regulatory authority for stationary sources and other air quality management responsibilities to local air agencies. The Bay Area Air District (BAAD), formerly the Bay Area Air Quality Management District (BAAQMD), is the local air agency for the Project area. The following sections provide more detailed information on federal, state, and local air quality regulations that apply to the proposed Project.

Federal

Clean Air Act and National Ambient Air Quality Standards

The CAA was first enacted in 1963 and has been amended in 1965, 1967, 1970, 1977, and 1990. The CAA establishes federal air quality standards, known as NAAQS, for six criteria pollutants including ozone (O₃), nitrogen dioxide (NO₂), carbon monoxide (CO), particulate matter with aerodynamic diameter less than or equal to 10 (PM₁₀)/particulate matter with aerodynamic diameter less than or equal to 2.5 (PM_{2.5}), sulfur dioxide (SO₂), and lead. The CAA also mandates that the states submit and implement a State Implementation Plan (SIP) for local areas not meeting those standards. The plans must include pollution control measures that demonstrate how the standards will be met.

The 1990 CAA amendments identify specific emission-reduction goals for areas not meeting the NAAQS. These amendments require both a demonstration of reasonable further progress toward attainment and incorporation of additional sanctions for failure to attain or meet interim milestones. Table 3.2-1 shows the NAAQS currently in effect for each criteria pollutant and the CAAQS (discussed further as follows).

Table 3.2-1. Federal and State Ambient Air Quality Standards

Criteria Pollutant	Average Time	California Standards	National Standards ^[a]	
			Primary	Secondary
Ozone	1-hour	0.09 ppm	None	None
	8-hour	0.070 ppm	0.070 ppm	0.070 ppm
Carbon Monoxide (CO)	8-hour	9.0 ppm	9 ppm	None
	1-hour	20 ppm	35 ppm	None
Coarse Particulate Matter (PM ₁₀)	24-hour	50 µg/m ³	150 µg/m ³	150 µg/m ³
	Annual mean	20 µg/m ³	None	None
Fine Particulate Matter (PM _{2.5})	24-hour	None	35 µg/m ³	35 µg/m ³
	Annual mean	12 µg/m ³	9.0 µg/m ³	15 µg/m ³
Nitrogen Dioxide (NO ₂)	Annual mean	0.030 ppm	53 ppb	53 ppb
	1-hour	0.18 ppm	100 ppb	None
Sulfur Dioxide (SO ₂)				
	24-hour	0.04 ppm	None	None
	3-hour	None	None	0.5 ppm
	1-hour	0.25 ppm	75 ppb	None
Lead	30-day average	1.5 µg/m ³	None	None
	3-month average	None	0.15 µg/m ³	0.15 µg/m ³
Sulfates	24-hour	25 µg/m ³	None	None
Visibility-Reducing Particles	8-hour	^[b]	None	None
Hydrogen Sulfide	1-hour	0.03 ppm	None	None
Vinyl Chloride	24-hour	0.01 ppm	None	None

Source: CARB 2024

^[a] National standards are divided into primary and secondary standards. Primary standards are intended to protect public health, whereas secondary standards are intended to protect public welfare and the environment.

^[b] CAAQS for visibility-reducing particles is defined by an extinction coefficient of 0.23 per kilometer, which is visibility of 10 miles or more because of particles when relative humidity is less than 70%.

ppb = part(s) per billion

ppm = part(s) per million

µg/m³ = microgram(s) per cubic meter

Non-Road Diesel Rule

EPA has established a series of increasingly strict emission standards for new offroad diesel equipment, on-road diesel trucks, and locomotives. New equipment, including heavy-duty trucks and offroad construction, is required to comply with these emission standards (EPA 2026).

Corporate Average Fuel Economy Standards

The Corporate Average Fuel Economy Standards (CAFE) were first enacted in 1975 to improve the average fuel economy of cars and light-duty trucks. The National Highway Traffic Safety Administration sets the CAFE standards, which are regularly updated to require additional improvements in fuel economy. The standards were last updated in October 2012 to apply to new passenger cars, light-duty trucks, and medium-duty passenger vehicles, covering model years 2017 through 2025, and are equivalent to 54.5 miles per gallon. However, On August 2, 2018, National Highway Traffic Safety Administration and EPA proposed to amend the fuel efficiency standards for passenger cars and light trucks and establish new standards covering model years 2021 through 2026 by maintaining the current model year 2020 standards through 2026 in accordance with the Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule. On September 19, 2019, EPA and NHTSA issued a final action on the One National Program Rule, which is considered Part 1 of the SAFE Vehicles Rule and a precursor to the proposed fuel efficiency standards. The One National Program Rule enables EPA and NHTSA to provide nationwide uniform fuel economy and greenhouse gas (GHG) vehicle standards, specifically by (1) clarifying that federal law preempts state and local tailpipe GHG standards, (2) affirming NHTSA's statutory authority to set nationally applicable fuel economy standards, and (3) withdrawing California's CAA preemption waiver to set state-specific standards.

EPA and NHTSA published their decisions to withdraw California's waiver and finalize regulatory text related to the preemption on September 27, 2019, in Volume 84, Number 188 of the Federal Register, page 51310. The agencies also announced that they will later publish the second part of the SAFE Vehicles Rule (that is, the standards). California, 22 other states, the District of Columbia, and two cities filed suit against the proposed One National Program Rule on September 20, 2019.¹ The lawsuit requests a "permanent injunction prohibiting Defendants from implementing or relying on the Preemption Regulation," but does not stay its implementation during legal deliberations. Part 1 of the SAFE Vehicles Rule went into effect on November 26, 2019, and Part 2 went into effect on March 30, 2020. On December 5, 2025, the NHTSA published a notice of proposed rulemaking, entitled the "Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule III for Model Years 2022 to 2031 Passenger Cars and Light Trucks" (SAFE III). The notice of proposed rulemaking proposes a "complete reset" of the CAFE program, first established by Congress in 1975. The U.S. Department of Transportation estimates that the proposed standards would reduce the "upfront cost" of a new vehicle by an average of approximately \$900 in 2031, compared to the projected cost under existing standards.

State

California Clean Air Act and California Ambient Air Quality Standards

In 1988, the state legislature adopted the California Clean Air Act (CCAA), which established a statewide air pollution control program. The CCAA requires all air districts in the state to endeavor to meet the CAAQS by the earliest practical date. Unlike the CAA, the CCAA does not set precise attainment deadlines. Instead, the CCAA establishes increasingly stringent requirements for areas that will require more time to achieve the standards. CAAQS are generally more stringent than NAAQS and incorporate additional standards for sulfates, hydrogen sulfide, visibility-reducing particles, and vinyl chloride. Table 3.2-1 shows the CAAQS and NAAQS.

CARB and local air districts bear responsibility for meeting the CAAQS, which are to be achieved through district-level air quality management plans incorporated into a SIP. In California, EPA has delegated

¹ *California et al. v. United States Department of Transportation et al.*, 1:19-cv-02826, U.S. District Court for the District of Columbia

authority to prepare SIPs to CARB, which, in turn, has delegated that authority to individual air districts. CARB traditionally has established state air quality standards, maintaining oversight authority in air quality planning, developing programs for reducing emissions from motor vehicles, developing air emission inventories, collecting air quality and meteorological data, and approving SIPs.

The CCAA substantially adds to the authority and responsibilities of air districts. The CCAA designates air districts as lead air quality planning agencies, requires air districts to prepare air quality plans, and grants air districts authority to implement transportation control measures. The CCAA also emphasizes the control of “indirect and area-wide sources” of air pollutant emissions. The CCAA gives local air pollution control districts explicit authority to regulate indirect sources of air pollution.

Air Toxic Control Measure

CARB developed multiple measures under its Air Toxic Control Measure to address specific mobile- and stationary-source categories that can have an impact on the public health of communities. The measures mainly focused on reducing public exposure to diesel particulate matter (DPM) and toxic air contaminant (TAC) emissions. Airborne Toxic Control Measure for Stationary Compression Ignition Engines (California Code of Regulations Title 17, § 93115) is aimed at reducing DPM and criteria pollutant emissions from stationary diesel-fueled compression ignition engines through fuel requirements, operational restrictions, and emission limits. The Air Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling (California Code of Regulations Title 13, § 2485) required heavy-duty trucks with a gross vehicle weight rating greater than 10,000 pounds, including buses and sleeper berth-equipped trucks, to not idle the primary engine for more than 5 minutes at any given time or operate an auxiliary power system for more than 5 minutes within 100 feet of a restricted area.

Statewide Truck and Bus Regulation

CARB also focused its efforts to reduce DPM, oxides of nitrogen (NO_x), and other criteria pollutants from diesel-fueled vehicles by adopting the Truck and Bus Regulation in 2008. This regulation applied to any diesel-fueled, dual-fuel, or alternative diesel-fueled vehicle that would travel on public highways, yard trucks with on-road engines, yard trucks with offroad engines used for agricultural operations, school buses, and vehicles with a gross vehicle weight greater than 14,000 pounds. The purpose of the regulation is to require nearly all trucks and buses registered in the state to have a 2010 or newer model engine year by 2023. Compliance schedules have been established for lighter vehicles (14,000 to 26,000 gross vehicle weight rating) and heavier vehicles (over 26,001 gross vehicle weight rating) (CARB 2020a). Beginning January 1, 2020, only vehicles that meet the requirements of the Trucks and Bus Regulation will be allowed to register with the California Department of Motor Vehicles (CARB 2026a).

Commercial Harbor Craft Regulation

The original Commercial Harbor Craft Regulation was adopted in 2008 and amended in 2010. The regulation requires vessel owners to replace older engines with newer and cleaner engines to reduce the emissions of air pollutants. In 2022, a new set of amendments were adopted to expand the applicability of the regulation to more vessel types and require cleaner upgrades and newer technology. The 2022 Amendments require diesel engines on existing vessels to be replaced with Tier 3 or 4 engines and went into effect on January 1, 2023.

Air Toxic “Hot Spots” Act – California Health & Safety Code Sections 44300-44384

California regulates TACs primarily through the Toxic Air Contaminant Identification and Control Act (Tanner Act) and the Air Toxics “Hot Spots” Information and Assessment Act of 1987 (“Hot Spots” Act).

The Air Toxics "Hot Spots" Information and Assessment Act requires the development of a statewide inventory of TAC emissions from stationary sources. The program requires affected facilities to: (1) prepare an emissions inventory plan that identifies relevant TACs and sources of TAC emissions; (2) prepare an emissions inventory report quantifying TAC emissions; and (3) prepare an health risk assessment (HRA), if necessary, to quantify the health risks to the exposed public. Facilities with significant health risks must notify the exposed population and, in some instances, must implement risk management plans to reduce the associated health risks.

Local

Bay Area Air District

At the local level, responsibilities of air quality districts include overseeing stationary-source emissions, approving permits, maintaining emissions inventories, maintaining air quality stations, overseeing agricultural burning permits, and reviewing air quality-related sections of environmental documents required by the CEQA. The air quality districts are also responsible for establishing and enforcing local air quality rules and regulations that address the requirements of federal and state air quality laws and for ensuring that NAAQS and CAAQS are met.

The proposed Project falls under the jurisdiction of BAAD. BAAD has local air quality jurisdiction over projects in the San Francisco Bay Area Air Basin (SFBAAB), including Marin County. BAAD developed advisory emission thresholds to assist CEQA lead agencies in determining the level of significance of a project's emissions, which are outlined in its CEQA Air Quality Guidelines (BAAQMD 2022a). BAAD has also adopted air quality plans to improve air quality, protect public health, and protect the climate, including the 2017 Clean Air Plan: Spare the Air, Cool the Climate (BAAQMD 2017a).

The 2017 Clean Air Plan was adopted by BAAD on April 19, 2017. The 2017 Clean Air Plan updates the prior 2010 Bay Area ozone (O₃) plan and outlines feasible measures to reduce O₃; provides a control strategy to reduce particulate matter (PM), air toxics, and GHGs in a single, integrated plan; and establishes emission control measures to be adopted or implemented. The 2017 Clean Air Plan contains the following primary goals; consistency with these goals is evaluated in this section:

- **Protect Air Quality and Health at the Regional and Local Scale:** Attain all state and national air quality standards and eliminate disparities among Bay Area communities in cancer health risk from TACs.
- **Protect the Climate:** Reduce Bay Area GHG emissions to 40% below 1990 levels by 2030 and 80% below 1990 levels by 2050. The 2017 Clean Air Plan is the most current applicable air quality plan for the air basin, and consistency with this plan is the basis for determining whether the proposed Project would conflict with or obstruct implementation of an air quality plan.

In addition to air quality plans, BAAD adopts rules and regulations to improve existing and future air quality. The proposed Project may be subject to the following rules:

- **Regulation 2, Rule 5 (New Source Review of Toxic Air Contaminants):** This regulation outlines guidance for evaluating TAC emissions and their potential health risks.
- **Regulation 6, Rule 1 (PM):** This regulation restricts emissions of PM darker than a 1 on the Ringlemann Chart to less than 3 minutes in any 1 hour.
- **Regulation 7 (Odorous Substances):** This regulation establishes general odor limitations on odorous substances and specific emission limitations on certain odorous compounds.
- **Regulation 8, Rule 3 (Architectural Coatings):** This regulation limits the quantity of reactive organic gas (ROG) in architectural coatings.

- Regulation 11, Rule (Hazardous Pollutants – Asbestos Demolition, Renovation, and Manufacturing): This regulation, which incorporates EPA's asbestos National Emissions Standards for Hazardous Air Pollutants regulations, controls emissions of asbestos to the atmosphere during demolition, renovation, and transport activities.

City of Larkspur

The City of Larkspur 2040 General Plan was adopted in 2024. The Community Health & Safety, Goals, Policies, and Action Programs outline goals and policies that will improve air quality in the City of Larkspur. The relevant policies are as follows (City of Larkspur 2024):

Goal SAF-9 Improved Air Quality in Larkspur

- Policy SAF-9.1: Seek to comply with state and federal Ambient Air Quality Standards.
- Policy SAF-9.2 Seek to reduce auto travel and, thereby, the pollutants from auto emissions.
- Policy SAT-9.3: Ensure that construction activity and traffic generated by new development does not lead to nonattainment of state and federal ambient air quality standards in Marin County.
- Policy SAF-9.4: Ensure sufficient buffers between sensitive land uses (e.g., residential, schools, and public facilities) and sources of air pollution.

3.2.1.2 Environmental Setting

The Project area is within the SFBAAB. Ambient air quality is affected by climatological conditions, topography, and the types and amounts of pollutants emitted. The following sections summarize how air pollution moves through the air, water, and soil within the air basin and how it is chemically changed in the presence of other chemicals and particles. This section also summarizes regional and local climate conditions, existing air quality conditions, and sensitive receptors that may be affected by Project-generated emissions.

Pollutants of Concern

Criteria Pollutants

The federal and state governments have established ambient air quality standards for six criteria pollutants. Pollutants such as CO, NO₂, SO₂, and lead are considered local pollutants that tend to accumulate in the air locally. PM₁₀ and PM_{2.5} are both regional and local pollutants. O₃ is treated as regional pollutants. The primary pollutants that would be generated by the Project are O₃ precursors (that is, NO_x and ROG), CO, PM₁₀, and PM_{2.5}.

Criteria pollutants have potential human health effects at elevated concentrations. The ambient air quality standards for these pollutants are set to protect public health and the environment with an adequate margin of safety (CAA Section 109). Epidemiological, controlled human exposure, and toxicology studies evaluate potential health and environmental effects of criteria pollutants and form the scientific basis for new and revised ambient air quality standards.

The principal characteristics and possible health and environmental effects from exposure to the primary criteria pollutants generated by the Project are discussed as follows.

Ozone (O₃) is photochemical oxidant that is formed when ROG and NO_x (both byproducts of the internal combustion engine) react with sunlight. ROG are compounds made up primarily of hydrogen and carbon

atoms. Internal combustion associated with motor vehicle use is the major source of hydrocarbons. Other sources of ROGs are emissions associated with the use of paints and solvents, the application of asphalt paving, and the use of household consumer products such as aerosols. The two major forms of NO_x are nitric oxide and NO₂. Nitric oxide is a colorless, odorless gas that forms from atmospheric nitrogen and oxygen when combustion takes place under high temperature or high pressure. NO₂ is a reddish-brown, irritating gas formed by the combination of nitric oxide and oxygen. In addition to serving as an integral participant in O₃ formation, the NO₂ component of NO_x also acts as an acute respiratory irritant and increases susceptibility to respiratory pathogens.

O₃ poses a higher risk to those who already suffer from respiratory diseases (such as asthma), children, older adults, and people who are active outdoors. Exposure to O₃ at certain concentrations can make breathing more difficult, cause shortness of breath and coughing, inflame and damage the airways, aggravate lung diseases, increase the frequency of asthma attacks, and cause chronic obstructive pulmonary disease. Studies show associations between short-term O₃ exposure and non-accidental mortality, including deaths from respiratory issues. Studies also suggest long-term exposure to O₃ may increase the risk of respiratory-related deaths (EPA 2020). The concentration of O₃ at which health effects are observed depends on an individual's sensitivity, level of exertion (that is, breathing rate), and duration of exposure. Studies show large individual differences in the intensity of symptomatic responses, with one study finding that for individuals exposed to 400 ppb of O₃ for 2 hours, including 1 hour of heavy exercise, the least responsive individual experienced no symptoms or lung function changes while the most sensitive individual experienced a 50% reduction in forced expiratory volume along with severe coughing and shortness of breath (EPA 2016). Although the results vary, evidence suggests that sensitive populations (for example, asthmatics) may be affected on days when the 8-hour maximum O₃ concentration reaches 80 ppb (EPA 2016). The average background level of O₃ in the Bay Area is approximately 45 ppb (BAAQMD 2017a).

In addition to human health effects, O₃ has been tied to crop damage, typically in the form of stunted growth, leaf discoloration, cell damage, and premature death. O₃ can also act as a corrosive and oxidant, resulting in property damage, such as the degradation of rubber products and other materials.

Carbon monoxide (CO) is a colorless, odorless toxic gas produced by incomplete combustion of hydrocarbons, such as gasoline or diesel fuel. High CO levels are of greatest concern during the winter when periods of light winds combine with the formation of ground-level temperature inversions from evening through early morning. These conditions trap pollutants near the ground, reducing the dispersion of vehicle emissions. Moreover, motor vehicles exhibit increased CO emission rates at low air temperatures. The primary adverse health effect associated with CO is interference with normal oxygen transfer to the blood, which may result in tissue oxygen deprivation. Exposure to CO at high concentrations can also cause fatigue, headaches, confusion, dizziness, and chest pain. There are no ecological or environmental effects of CO at or near existing background CO levels (CARB 2020b).

PM consists of finely divided solids or liquids such as soot, dust, aerosols, fumes, and mists. Two forms of particulates are now generally considered: inhalable coarse particles, or PM₁₀, and inhalable fine particles, or PM_{2.5}. Particulate discharge into the atmosphere results primarily from industrial, agricultural, construction, and transportation activities. However, wind on arid landscapes also contributes substantially to local particulate loading.

Particulate pollution can be transported over long distances and may adversely affect humans, especially people who are naturally sensitive or susceptible to breathing problems.

Numerous studies have linked PM exposure to premature death in people with preexisting heart or lung disease, nonfatal heart attacks, irregular heartbeat, aggravated asthma, decreased lung function, and

increased respiratory symptoms. For PM_{2.5}, short-term exposures (up to 24-hours duration) have been associated with premature mortality, increased hospital admissions for heart or lung causes, acute and chronic bronchitis, asthma attacks, emergency room visits, respiratory symptoms, and restricted activity days. These adverse health effects have been reported primarily in infants, children, and older adults with preexisting heart or lung diseases. In addition, of all the common air pollutants, PM_{2.5} is associated with the greatest proportion of adverse health effects related to air pollution, both in the U.S. and worldwide, based on the World Health Organization's Global Burden of Disease Project. Long-term (months to years) exposure to PM_{2.5} has been linked to premature death, particularly in people who have chronic heart or lung diseases, and reduced lung function growth in children (CARB 2026a).

Short-term exposures to PM₁₀ have been associated primarily with worsening of respiratory diseases, including asthma and chronic obstructive pulmonary disease, leading to hospitalization and emergency department visits. The effects of long-term exposure to PM₁₀ are less clear, although several studies suggest a link between long-term PM₁₀ exposure and respiratory mortality (CARB 2026a)

Depending on its composition, both PM₁₀ and PM_{2.5} can also affect water quality and acidity, deplete soil nutrients, damage sensitive forests and crops, affect ecosystem diversity, and contribute to acid rain (EPA 2020).

Toxic Air Contaminants

Although ambient air quality standards have been established for criteria pollutants, no ambient standards exist for TACs. Many pollutants are identified as TACs because of their potential to increase the risk of developing cancer or because of their acute or chronic health risks. For TACs that are known or suspected carcinogens, CARB has consistently found that there are no levels or thresholds below which exposure is risk free. Individual TACs vary greatly in the risks they present. At a given level of exposure, one TAC may pose a hazard that is many times greater than another.

TACs are identified and their toxicity is studied by the California Office of Environmental Health Hazard Assessment (OEHHA). The primary TACs of concern associated with the proposed Project are asbestos and DPM.

Asbestos is the name given to several naturally occurring fibrous silicate minerals. Before the adverse health effects of asbestos were identified, asbestos was widely used as insulation and fireproofing in buildings, and it can still be found in some older buildings. It is also found in its natural state in rock or soil. The inhalation of asbestos fibers into the lungs can result in a variety of adverse health effects, including inflammation of the lungs, respiratory ailments (such as asbestosis, which is scarring of lung tissue that results in constricted breathing), and cancer (including lung cancer and mesothelioma, which is cancer of the linings of the lungs and abdomen).

DPM is generated by diesel-fueled equipment and vehicles. Within the Bay Area, BAAD has found that of all controlled TACs, emissions of DPM are responsible for about 82% of the total ambient cancer risk (BAAQMD 2017a). Short-term exposure to DPM can cause acute irritation (for example, eye, throat, and bronchial), neurophysiological symptoms (such as lightheadedness and nausea), and respiratory symptoms (such as cough and phlegm). EPA has determined that diesel exhaust is "likely to be carcinogenic to humans by inhalation" (EPA 2003).

Odors

Offensive odors can be unpleasant and lead to citizen complaints to local governments and air districts. According to CARB's *Air Quality and Land Use Handbook*, land uses associated with odor complaints

typically include sewage treatment plants, landfills, recycling facilities, manufacturing facilities, and agricultural activities (CARB 2005). CARB provides recommended screening distances for siting new receptors near existing odor sources.

Climate and Meteorology

Although the primary factors that determine air quality are the locations of air pollutant sources and the amount of pollutants emitted from those sources, meteorological conditions and topography are also important factors. Atmospheric conditions, such as wind speed, wind direction, and air temperature gradients, interact with the physical features of the landscape to determine the movement and dispersal of air pollutants. Unique geographic features throughout the state define 15 air basins with distinctive regional climates. The air quality study area is in the Marin County Basin portion of the SFBAAB.

Marin County is bounded on the west by the Pacific Ocean, on the east by San Pablo Bay, on the south by the Golden Gate Bridge, and on the north by the Petaluma Gap. Most of Marin County's population lives in the eastern part of the county in small, sheltered valleys (BAAQMD 2017b).

Although there are a few mountains above 1,500 feet in height, most of the terrain is only 800 to 1,000 feet high, which usually is not high enough to block the marine layer. Because of the wedge shape of the county, northeast Marin County is farther from the ocean than is the southeastern section. This extra distance from the ocean allows the marine air to be moderated by Bayside conditions as it travels to northeastern Marin County. In southern Marin County, the distance from the ocean is short, and elevations are lower, resulting in higher incidence of maritime air in that area (BAAQMD 2017b).

Wind speeds are highest along the west coast of Marin County, averaging about 8 to 10 miles per hour. The complex terrain in central Marin County creates sufficient friction to slow the air flow. At Hamilton Air Force Base, in Novato, the annual average wind speeds are only 5 miles per hour. The prevailing wind directions throughout Marin County are generally from the northwest (BAAQMD 2017b).

In the summer months, areas along the coast are usually subject to onshore movement of cool marine air. In the winter, proximity to the ocean keeps the coastal regions relatively warm, with temperatures varying little throughout the year. Coastal temperatures are usually in the high 50s in the winter and the low 60s in the summer. The warmest months are September and October (BAAQMD 2017b).

The eastern side of Marin County has warmer weather than the western side because of its distance from the ocean and because the hills that separate the eastern portion of the county from western portion occasionally block the flow of the marine air. The temperatures of cities next to the Bay are moderated by the cooling effect of the Bay in the summer and the warming effect of the Bay in the winter. For example, San Rafael experiences average maximum summer temperatures in the low 80s and average minimum winter temperatures in the low 40s. Inland towns such as Kentfield experience average maximum temperatures that are 2 degrees cooler in the winter and 2 degrees warmer in the summer (BAAQMD 2017b).

Air pollution potential is highest in eastern Marin County, where most of the population is in semi-sheltered valleys. In the southeast, the influence of marine air keeps pollution levels low. As development moves farther north, there is greater potential for air pollution to build up because the valleys are more sheltered from the sea breeze. While Marin County does not have many polluting industries, the air quality on its eastern side—especially along the United States Highway 101 (US 101) corridor—may be affected by emissions from increasing motor vehicle use within and through the county (BAAQMD 2017b).

Existing Air Quality Conditions

Ambient Criteria Pollutant Concentrations

Several ambient air quality monitoring stations are in the SFBAAB to monitor progress toward air quality standards attainment of the NAAQS and CAAQS. The NAAQS and CAAQS are discussed further under Section 3.2.1.1, Regulatory Setting. The nearest monitoring station to the proposed Project is CARB's San Rafael monitoring station, which is within 1.7 miles of the Project area. This monitoring station reported data for all pollutants except CO. CO data for Marin County were obtained using EPA monitoring data. Data for 2025 are not currently available from CARB or EPA database; therefore, monitoring data of 2022 to 2024 are used for this Project.

Table 3.2-2 summarizes data for criteria air pollutant concentration levels from the San Rafael Station for 2022 to 2024 and shows that there have been no exceedances to the NAAQS or CAAQS for all pollutants in 2022 to 2024.

Table 3.2-2. Ambient Air Quality Data at the San Rafael Monitoring Station (2022 to 2024)

Pollutant and Standards	2022	2023	2024
Ozone (O ₃)			
Maximum 1-Hour Concentration (ppm)	0.074	0.066	0.045
Maximum 8-Hour Concentration (ppm)	0.066	0.053	0.043
Number of Days Standard Exceeded^[a]			
CAAQS 1-Hour (>0.09 ppm)	0	0	0
CAAQS 8-Hour (>0.070 ppm)	0	0	0
NAAQS 8-Hour (>0.070 ppm)	0	0	0
Carbon Monoxide (CO)			
Maximum 8-Hour Concentration (ppm)	0.8	0.8	0.7
Maximum 1-Hour Concentration (ppm)	1.3	1.4	1.0
Number of Days Standard Exceeded^[a]			
NAAQS 8-Hour (>9 ppm)	0	0	0
CAAQS 8-Hour (>9.0 ppm)	0	0	0
NAAQS 1-Hour (>35 ppm)	0	0	0
CAAQS 1-Hour (>20 ppm)	0	0	0
Nitrogen Dioxide (NO ₂)			
National Maximum 1-Hour Concentration (ppb) ^[b]	35.3	29.9	25.9
State Maximum 1-Hour Concentration (ppb) ^[c]	35	39	25
Annual Average Concentration (ppb)	6	5	NA
Number of Days Standard Exceeded^[a]			
CAAQS 1-Hour (>180 ppb)	0	0	0
CAAQS Annual (>30 ppb)	0	0	0

Pollutant and Standards	2022	2023	2024
NAAQS 1-Hour (>100 ppb)	0	0	0
NAAQS Annual (>53 ppb)	0	0	0
Particulate Matter (PM ₁₀)			
National Maximum 24-Hour Concentration (µg/m ³)	38.2	41.9	NA
State Maximum 24-Hour Concentration (µg/m ³)	40	43.1	NA
State Annual Average Concentration (µg/m ³)	13.7	12.7	NA
Number of Days Standard Exceeded^[a]			
NAAQS 24-Hour (>150 µg/m ³)	0	0	0
CAAQS 24-Hour (>50 µg/m ³)	0	0	0
CAAQS Annual (>20 µg/m ³)	0	0	0
Fine Particulate Matter (PM _{2.5})			
National Maximum 24-Hour Concentration (µg/m ³)	30.8	34.7	27.8
State Maximum 24-Hour Concentration (µg/m ³)	30.8	34.7	27.8
National Annual Average Concentration (µg/m ³)	6.8	5.3	5.0
State Annual Average Concentration (µg/m ³)	6.9	5.4	5.0
Number of Days Standard Exceeded^[a]			
NAAQS 24-Hour (>35 µg/m ³)	0	0	0
NAAQS Annual (>9.0 µg/m ³)	0	0	0
CAAQS Annual (>12.0 µg/m ³)	0	0	0

Sources: CARB 2026b; EPA 2026

^[a] An exceedance of a standard is not necessarily a violation because of the regulatory definition of a violation.

^[b] National statistics are based on standard conditions data. In addition, national statistics are based on samplers using federal reference or equivalent methods.

^[c] State statistics are based on California approved samplers.

NA = not available

Existing TAC Sources and Health Risks

BAAQMD maintains an inventory of health risks associated with all permitted stationary sources within the SFBAAB. The inventory was last updated in 2025 and is publicly available online. There are no existing stationary TAC sources within 1,000 feet of the Project area, as shown in BAAD's Stationary Source Screening Map (BAAD 2025).

Aside from stationary sources, emissions of TACs around the Project area are also generated from mobile sources and railways. US 101 is to the west of the Project site. Vehicles traveling on US 101 would cause mobile source air toxics emissions near the Project area.

Regional Attainment Status

Local monitoring data are used to designate areas as nonattainment, maintenance, attainment, or unclassified for the ambient air quality standards. The four designations are defined as follows:

- **Attainment:** Assigned to areas where pollutant concentrations meet the air quality standard
- **Nonattainment:** Assigned to areas where monitored pollutant concentrations consistently violate the air quality standard
- **Maintenance:** Assigned to areas that were previously designated as nonattainment but has been redesignated to attainment under a maintenance plan
- **Unclassified:** Assigned to areas where data are insufficient to determine whether a pollutant is violating the standards, generally treated as in attainment

Table 3.2-3 summarizes the attainment status of Marin County.

Table 3.2-3. Federal and State Attainment Status for Marin County Portion of the San Francisco Bay Area Air Basin

Criteria Pollutant	Federal Designation	State Designation
Ozone (8-hour)	Marginal Nonattainment	Nonattainment
Carbon Monoxide (CO)	Attainment/Maintenance	Attainment
Particulate Matter (PM ₁₀)	Attainment/Unclassified	Nonattainment
Fine Particulate Matter (PM _{2.5})	Moderate Nonattainment	Attainment
Nitrogen Dioxide (NO ₂)	Attainment/Unclassified	Attainment
Sulfur Dioxide (SO ₂)	Attainment/Unclassified	Attainment
Lead	Attainment/Unclassified	Attainment
Sulfates	(No Federal Standard)	Attainment
Hydrogen Sulfide	(No Federal Standard)	Unclassified
Visibility-Reducing Particles	(No Federal Standard)	Unclassified

Sources: CARB 2026c; EPA 2026

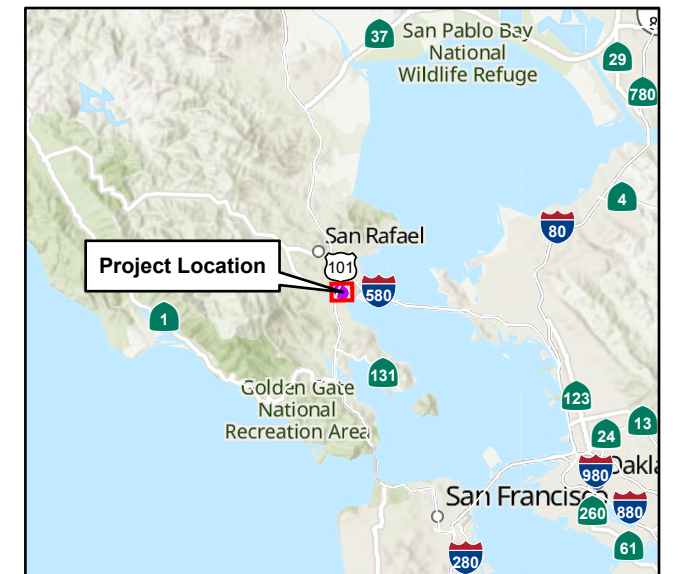
P = portion of the county

Locations of Sensitive Receptors

Sensitive land uses are defined as locations where human populations, especially children, seniors, and sick persons, are present and where there is reasonable expectation of continuous human exposure according to the averaging period for the air quality standards (that is, 24-hour, 8-hour, or 1- hour). According to BAAD, typical sensitive land uses are residences, hospitals, and schools. Parks and playgrounds where sensitive receptors (such as children and seniors) are present are also considered sensitive land uses (BAAQMD 2022a). Places of employment (such as commercial/industrial uses) are not considered sensitive land uses because health-sensitive individuals (including children and seniors) are not present.

The Project is in an area with mixed residential and commercial land use. Single-family housing areas are approximately 500 feet to the northwest of the Project site across US 101. Residential units are also approximately 550 feet south of the Project site.

Figure 3.2-1 illustrates sensitive receptors within 1/4 mile of the Project area.



LEGEND

- Project Footprint (13.70 acres)
- Parking Structure
- 1/4 Mile from Project

Sensitive Receptors

- Residential
- Commercial

Service Layer Credits: World Topographic Map: Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, (c) OpenStreetMap contributors, and the GIS User Community
 Bing Maps Hybrid: © 2026 Microsoft Corporation © Maxar ©CNES (2026) Distribution Airbus DS © Mapbox © 2026 TomTom
 World Hillshade: Esri, CGIAR, USGS

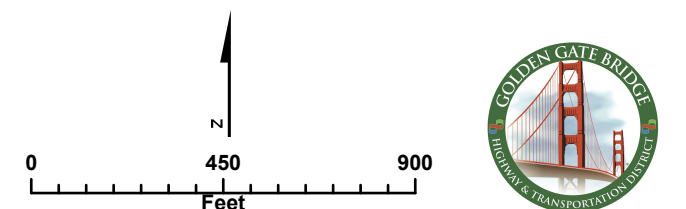


Figure 3.2-1
Land Use and Sensitive Receptors
Near the Project Site
Larkspur Ferry Service and Parking Expansion
Golden Gate Bridge Highway and Transportation District
Marin County, California

3.2.2 Environmental Impacts

The air quality impacts were evaluated for the No-Build and Build Alternatives.

3.2.2.1 Methodology

Construction Emissions

This analysis is conducted following BAAD's CEQA guidance (BAAQMD 2022a). Short-term construction emissions of ROG, CO, NO_x, PM₁₀, PM_{2.5}, and SO₂ were evaluated. Project construction would result in exhaust emissions (from fuel combustion in offroad construction equipment and vehicles) and fugitive dust emissions (from earthmoving activities and vehicle travel on paved and unpaved roads). Construction emissions were estimated using CalEEMod Version 2022.1 (CAPCOA 2022). Construction emissions modeled include those from the following sources:

- Exhaust emissions of ROG, NO_x, CO, SO₂, PM₁₀, and PM_{2.5} from offroad construction equipment
- Exhaust emissions of ROG, NO_x, CO, SO₂, PM₁₀, and PM_{2.5} from on-road vehicle trips, including worker commutes, concrete truck trips, haul truck trips, and other miscellaneous offsite travel
- Fugitive dust emissions of PM₁₀ and PM_{2.5} from onsite earthmoving activities and offsite vehicle travel on paved and unpaved roads

The construction of the Project would occur in two phases. Construction on the North Lot would occur from 2033 and 2034, and the construction of the Main Lot would occur from 2037 to 2040. Construction at the Main Lot includes two scenarios—H-Pile (HP) and Auger Cast Pile (ACP). Project-specific information on the construction schedule, equipment types, and daily usage rates for each activity during the Project construction was used in the CalEEMod modeling based on the current Project design. Default settings in CalEEMod were used when Project-specific information was not available. The Project will implement a mitigation measure to use Tier 4 offroad construction equipment whenever feasible and practical. Therefore, both unmitigated and mitigated construction emissions were calculated for the construction phases. Tier 4 emission standards were used in CalEEMod to calculate the mitigated emissions. Emissions summaries are in Appendix B-1, Construction and Operation Emission Summaries, and CalEEMod output files are in Appendix B-2, CalEEMod Output Files.

Operational Emissions

Operation emissions from the Project include the air pollutants emitted from the diesel engines on the ferries and the emissions from the vehicles driven by the passengers to and from the ferry terminals. For the No-Build Alternative, vehicle trips made by passengers that have to drive to San Francisco because of ferry operation capacity limit are also included. Maintenance activities are anticipated to be similar to existing conditions; therefore, emissions changes because of maintenance activities changes would be negligible and are not evaluated further.

Ferry Operation

Ferry operation emissions were calculated for the existing conditions and the No-Build and Build Alternatives for 2035 and 2050. Emissions were estimated using the engine emission factors, anticipated engine working load factors, and engine operating hours.

Existing engines on ferries ranged from model years 1990 to 2010, which covers Pre-Tier 1 to Tier 2 engines. For the emission calculations, emission factors of a Tier 1 engine were used as an average for the

existing condition. Engines used on ferries in 2035 and 2050 would meet marine engine Tier 4 plus diesel particulate filter emission standards, complying with CARB's Commercial Harbor Craft Rule.

Ferry trip information was based on the number of daily crossings of a typical weekday and the crossing of large event special service. The maximum number of anticipated daily crossing was used for each alternative to be conservative.

For comparison purposes, engine sizes of the existing and future engines are assumed to have the same horsepower rating. A load factor of 0.42 was applied according to EPA's Inventory Guidance: Methodologies for Estimating Port-Related and Goods Movement Mobile Source Emissions (EPA 2022). In addition, a 36% fuel reduction was applied to future engine fuel consumption rate to account for the improved ferry performance in future year because of implementation of newer technologies and optimization of ferry operation conditions (Gray 2024).

Vehicle Trips

Operation emissions from vehicle trips to and from the port are estimated for the existing and future No-Build and Build Alternatives. Vehicle trips include those made by ferry passengers, as well as trips by transit buses. For the No-Build Alternative, non-ferry driving trips for the unmet demand because of ferry capacity or parking constraints are also included. For the non-ferry trips, it is assumed these riders would have to drive to San Francisco instead of taking the ferry. Emissions from vehicle trips were modeled using Caltrans CT-EMFAC2021.

Local Risks and Hazards Assessment

In addition to the emission thresholds, BAAD have also developed Local Risks and Hazard thresholds for TACs and PM_{2.5}.

Given that the proposed Project would introduce DPM and PM_{2.5} emissions to an area near existing sensitive receptors, a screening level air dispersion modeling and HRA were performed. The screening modeling used EPA's AERSCREE dispersion model (EPA 2021). The HRA analysis follows the OEHHA Air Toxics Hot Spots Program Guidance Manual (OEHHA 2015) and BAAD *California Environmental Quality Act Air Quality Guidelines Appendix E: Recommended Methods For Screening and Modeling Local Risks and Hazards* (BAAQMD 2022b). DPM was used as a surrogate for the HRA following the OEHHA guidance (OEHHA 2015).

The HRA analyzes health risks at nearby sensitive receptors because of onsite DPM emissions from construction activities. Increases of DPM emissions are not expected during Project operation, as discussed in Section 3.2.2.3, Impacts. Therefore, the HRA was not conducted for operation emissions. Details of the HRA are described as follows.

DPM and PM_{2.5} Emissions

The local risks and hazards assessment were performed for the DPM and PM_{2.5} from onsite construction equipment and vehicles. The onsite DPM emissions associated with construction activities were assumed to be equal to the PM₁₀ exhaust emissions from the construction equipment and onsite vehicles. For the PM_{2.5} hazard analysis, the emissions included the exhaust emissions from the onsite equipment and vehicles, as well as the fugitive dust emissions from the material handling and earthmoving activities, in accordance with BAAD CEQA Guidance (BAAQMD 2022b).

Screening Air Dispersion Modeling

The HRA uses EPA's screening level air dispersion model, AERSCREEN, to estimate the worst-case ground level concentrations of the pollutants. AERSCREEN is an EPA-recommended air dispersion model screening tool that is used to provide conservative, worst-case concentration estimates from a single source without requiring site-specific location information and meteorological data. The North Lot and the Main Lot were modeled as two separate area sources. Key modeling parameters used in the AERSCREEN are described as follows:

- Source Type: Area source
- Source Parameters: Release height is 1.3 meters above the ground represented onsite exhaust emissions and fugitive dust emissions for non-truck sources. Initial vertical dimension is 1.21 meters, which is from the default parameters in BAAD's CEQA guidance for non-truck construction emission sources.
- Ambient air temperatures were included in the models based on weather data for Larkspur, California.
- Average windspeed, anemometer height, and moisture were used in the modeling.
- Flagpole receptors were included in the models at a height of 1.5 meters, in accordance with BAAD guidance.
- Both sites were modeled assuming urban land use, with an estimated population of 12,620 (U.S. Census Bureau 2025).

Unit emission rate (1 gram per second) was used for modeling. AERSCREEN outputs are the 1-hour maximum concentration. This 1-hour concentration was converted to annual average concentration using a persistent factor of 0.1, in accordance with BAAD CEQA Guidance. Appendix B-4 presents AERSCREEN output files.

Cancer and Chronic Risk Calculations

Cancer and non-cancer chronic risks were analyzed following the OEHHA 2015 HRA guidance (OEHAA 2015) and BAAD HRA guidance (BAAQMD 2022b). The modeled DPM concentrations from AERSCREEN were used to estimate the ground-level concentrations of the pollutants. The cancer risk calculations incorporate OEHHA's age-specific factors that account for increased sensitivity to carcinogens during early-in-life exposure. The approach for estimating cancer risk from long-term inhalation, with exposure to carcinogens, requires calculating a range of potential doses and multiplying by cancer potency factors in units corresponding to the inverse dose to obtain a range of cancer risks. For cancer risk, the risk for each age group is calculated using the appropriate daily breathing rates, age sensitivity factors, and exposure durations following the OEHHA and BAAD guidance. The cancer risks calculated for individual age groups are summed over the construction duration to estimate the cancer risk for each receptor. Cancer risks assume a 2-year exposure for the North Lot construction and a 4-year exposure for the Main Lot construction. Chronic risks were calculated using Reference Exposure Level of DPM. DPM does not have approved acute risk values; therefore, acute risks were not analyzed for the Project.

Carbon Monoxide Hot Spots Modeling

The analysis of CO impacts was conducted using BAAD's CO screening criteria in its CEQA guideline (BAAQMD 2022a), which is based on intersection traffic volumes and conditions.

3.2.2.2 Thresholds of Significance

The following State CEQA Guidelines Appendix G thresholds identify significance criteria to be considered for determining whether a project could have significant impacts related to air quality.

Would the proposed Project:

- Conflict with or obstruct implementation of the applicable air quality plan?
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is a nonattainment area for an applicable federal or state ambient air quality standard?
- Expose sensitive receptors to substantial pollutant concentrations?
- Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

The primary pollutants of concern generated by the proposed Project are O₃ precursors (ROG and NO_x), CO, PM, and TACs. The following sections discuss thresholds and analysis considerations for regional and local Project-generated criteria pollutants with respect to their human health implications. Thresholds and guidance for evaluating potential odors associated with the project area also presented.

Regional Project-Generated Criteria Pollutant Emissions (Ozone Precursors and Regional Particulate Matter)

This analysis evaluates the impacts of regional emissions generated by the proposed Project using a two-tiered approach that considers guidance recommended by BAAD in its *California Environmental Quality Act Air Quality Guidelines* (BAAQMD 2022a).

This analysis considers whether the proposed Project would conflict with the most recent air quality plan (BAAQMD 2022a) and compares emissions to BAAD's Project-level emission thresholds. Table 3.2-4 summarizes BAAD's CEQA thresholds. These thresholds are recommended by the air district to evaluate the significance of a project's regional criteria pollutant emissions (BAAQMD 2022a). According to BAAD, projects with emissions exceeding thresholds shown in Table 3.2-4 would be expected to have a significant impact on regional air quality because an exceedance of the thresholds is anticipated to contribute to CAAQS and NAAQS violations.

Table 3.2-4. Bay Area Air Quality Management District Project-Level Regional Criteria Pollutant Emission Thresholds

Analysis	Thresholds
Regional Criteria Pollutants (Construction)	ROG: 54 lb/day NO _x : 54 lb/day PM ₁₀ : 82 lb/day(exhaust only); dust PM _{2.5} : 54 lb/day(exhaust only) PM ₁₀ and PM _{2.5} fugitive dust: Best management practices
Regional Criteria Pollutants (Operations)	ROG: 54 lb/day NO _x : 54 lb/day PM ₁₀ : 82 lb/day PM _{2.5} : 54 lb/day

Source: BAAQMD 2017a

lb/day = pound(s) per day

Health-Based Thresholds for Project-Generated Pollutants of Human Health Concern

The California Supreme Court's decision in *Sierra Club v. County of Fresno* (6 Cal. 5th 502) (hereafter referred to as the Friant Ranch Decision) reviewed the long-term, regional air quality analysis contained in the Environmental Investigation Report for the proposed Community Plan Update and Friant Ranch Specific Plan. The Friant Ranch Specific Plan project is a 942-acre master-plan development in unincorporated Fresno County within the San Joaquin Valley Air Basin, an air basin currently in nonattainment under the NAAQS and CAAQS for O₃ and PM_{2.5}. The Court found that the Environmental Investigation Report's air quality analysis was inadequate because it failed to provide enough detail "for the public to translate the bare [criteria pollutant emissions] numbers provided into adverse health impacts or to understand why such a translation is not possible at this time." The Court's decision clarifies that environmental documents must attempt to connect a project's air quality impacts to specific health effects or explain why it is not technically feasible to perform such an analysis.

Regional Project-Generated Criteria Pollutants (Ozone Precursors and Regional PM)

Adverse health effects induced by regional criteria pollutant emissions generated by the proposed Project (O₃ precursors and PM) are highly dependent on a multitude of interconnected variables (such as cumulative concentrations, local meteorology and atmospheric conditions, the number and character of exposed individuals [for example, age, gender]). For these reasons, O₃ precursors (ROG and NO_x) contribute to the formation of ground-level O₃ on a regional scale. Emissions of ROG and NO_x generated in one area may not equate to a specific O₃ concentration in that same area. Similarly, some types of particulate pollutant may be transported over long distances or formed through atmospheric reactions. As such, the magnitude and locations of specific health effects from exposure to increased O₃ or regional PM concentrations are the product of emissions generated by numerous sources throughout a region, as opposed to a single individual project.

Models and tools have been developed to correlate regional criteria pollutant emissions to potential community health impacts. While there are models capable of quantifying O₃ and secondary PM formation and associated health effects, these tools were developed to support regional planning and policy analysis and have limited sensitivity to small changes in criteria pollutant concentrations induced by individual projects. Therefore, translating Project-generated criteria pollutants to the locations where specific health effects could occur or the resultant number of additional days of nonattainment is not possible with any degree of accuracy.

Technical limitations of existing models to correlate Project-level regional emissions to specific health consequences are recognized by air quality management districts throughout the state, including the San Joaquin Valley Air Pollution Control District (SJVAPCD) and South Coast Air Quality Management District (SCAQMD), which provided amici curiae briefs for the Friant Ranch legal proceedings.² In its brief, SJVAPCD acknowledges that while health risk assessments for localized air toxics, such as DPM, are commonly prepared, "it is not feasible to conduct a similar analysis for criteria air pollutants because currently available computer modeling tools are not equipped for this task" (SJVAPCD 2015). SJVAPCD further notes that emissions solely from the Friant Ranch Specific Plan project (which equate to less than one-tenth of 1% of the total NO_x and volatile organic compounds in the valley) are not likely to yield valid information, and that any such information should not be "accurate when applied at the local level."

SCAQMD (2015) presents similar information in its brief, stating that "it takes a large amount of additional precursor emissions to cause a modeled increase in ambient ozone levels."

² The amici curiae briefs for Friant Ranch are available at: <https://www.courts.ca.gov/41312.htm>.

As discussed, air districts develop region-specific CEQA thresholds of significance in consideration of existing air quality concentrations and attainment designations under the NAAQS and CAAQS. The NAAQS and CAAQS are informed by a wide range of scientific evidence that demonstrates there are known safe concentrations of criteria pollutants. While recognizing that air quality is a cumulative problem, air districts typically consider impacts from projects that generate criteria pollutant and O₃ precursor emissions below these thresholds to be minor in nature and to not adversely affect air quality such that the NAAQS or CAAQS would be exceeded. Emissions generated by the proposed Project could increase photochemical reactions and the formation of tropospheric O₃ and secondary PM, which, at certain concentrations, could lead to increased incidence of specific health consequences. Although these health effects are associated with O₃ and particulate pollution, the effects are a result of cumulative and regional emissions. Therefore, the proposed Project's incremental contribution cannot be traced to specific health outcomes on a regional scale, and a quantitative correlation of project-generated regional criteria pollutant emissions to specific human health impacts is not included in this analysis. There are no numerical thresholds related to specific health outcomes from regional emissions; however, Project-generated emissions are analyzed as follows.

Localized Project-Generated Criteria Pollutant Emissions (Carbon Monoxide and Particulate Matter) and Air Toxics (Diesel Particulate Matter)

Localized pollutants generated by a project can potentially affect populations near the emissions source. Because these pollutants dissipate with distance, emissions from individual projects can result in direct and material health impacts on adjacent sensitive receptors. The localized pollutants of concern that would be generated by the proposed Project are CO, PM, and DPM. The applicable thresholds for each pollutant are described as follows.

Carbon Monoxide

Heavy traffic congestion can contribute to high levels of CO, and individuals exposed to such hot spots may have a greater likelihood of developing adverse health effects. BAAQMD has adopted screening criteria that provide a conservative indication of whether project-generated traffic would cause a potential CO hot spot. If the screening criteria are not met, a quantitative analysis through site-specific dispersion modeling of project-related CO concentrations would not be necessary, and the proposed Project would not cause localized violations of the CAAQS for CO. BAAQMD's CO screening criteria are summarized as follows (BAAQMD 2022a):

- The Project is consistent with an applicable congestion management program established by the county congestion management agency for designated roads or highways, the regional transportation plan, and local congestion management agency plans.
- Project-generated traffic would not increase traffic volumes at affected intersections to more than 44,000 vehicles per hour.
- Project-generated traffic would not increase traffic volumes at affected intersections to more than 24,000 vehicles per hour where vertical or horizontal mixing is substantially limited (for example, tunnel, parking garage, bridge underpass, natural or urban street canyon, below-grade roadway).

BAAQMD does not consider construction-generated CO a significant pollutant of concern because construction activities typically do not generate substantial quantities of this pollutant (BAAQMD 2022a).

Particulate Matter

BAAQMD adopted an incremental $PM_{2.5}$ concentration-based significance threshold in which a “substantial” contribution at the project level for an individual source is defined as total (that is, exhaust and fugitive) $PM_{2.5}$ concentrations exceeding $0.3 \mu\text{g}/\text{m}^3$. In addition, BAAQMD considers projects to have a cumulatively considerable $PM_{2.5}$ impact if sensitive receptors are exposed to $PM_{2.5}$ concentrations from local sources within 1,000 feet, including existing sources, project-related sources, and reasonably foreseeable future sources, that exceed $0.8 \mu\text{g}/\text{m}^3$ (BAAQMD 2022a).

BAAQMD has not established PM_{10} thresholds of significance. BAAQMD's $PM_{2.5}$ thresholds apply to both new receptors and new sources. However, BAAQMD considers fugitive PM_{10} from earthmoving activities to be less than significant with application of BAAQMD's Basic Construction Mitigation Measures (BAAQMD 2022a).

Diesel Particle Matter

DPM has been identified as a TAC and is particularly concerning because long-term exposure can lead to cancer, birth defects, and damage to the brain and nervous systems. BAAQMD has adopted incremental cancer and hazard thresholds to evaluate receptor exposure to single sources of DPM emissions. The “substantial” DPM threshold defined by BAAQMD is exposure of a sensitive receptor to an individual emissions source, resulting in an excess cancer risk level of more than 10 in 1 million or a non-cancer (that is, chronic or acute) hazard index greater than 1.0 (BAAQMD 2022a). The air district also considers projects to have a cumulatively considerable DPM impact if they contribute to DPM emissions that, when combined with cumulative sources within 1,000 feet of sensitive receptors, result in excess cancer risk levels of more than 100 in 1 million or a hazard index greater than 10.0. BAAQMD considers a project to have a significant cumulative impact if it introduces new receptors at a location where the combined exposure of all cumulative sources within 1,000 feet exceeds cumulative thresholds (BAAQMD 2022a).

Lead and Asbestos

BAAQMD considers a project to have a significant impact if it does not comply with the applicable regulatory requirements for lead and asbestos outlined in BAAQMD's Regulation 11, Rules 1 and 2. However, the Project would not involve demolition or renovation of old structures.

Odors

BAAQMD and CARB have identified several types of land uses as being commonly associated with odors, such as landfills, wastewater treatment facilities, and animal processing centers (BAAQMD 2022a; CARB 2005). BAAQMD's *California Environmental Quality Act Air Quality Guidelines* recommend that project analyses identify the location of existing and planned odor sources and include policies to reduce potential odor impacts in the Project area.

3.2.2.3 Impacts

Within this section, Alternative 1 and Alternative 2 impacts are discussed together as the Build Alternatives when the associated impacts are substantively the same. Where necessary to differentiate between Build Alternatives, the impact analysis is separated by Build Alternative.

Conflict with or Obstruct Implementation of the Applicable Air Quality Plan?

Construction and Operations

Build Alternatives

The CAA requires that a SIP or an air quality control plan be prepared for areas with air quality violating the NAAQS. The SIP sets forth the strategies and pollution control measures that states will use to attain the NAAQS. The CCAA requires attainment plans to demonstrate a 5% per year reduction in nonattainment air pollutants or their precursors, averaged every consecutive 3-year period, unless an approved alternative measure of progress is developed. Air quality attainment plans outline emissions limits and control measures to achieve and maintain these standards by the earliest practical date. The current air quality attainment plan for the SFBAAB is the 2017 Clean Air Plan (BAAQMD 2017a).

Air quality plans provide an overview of the region's air quality and identify the pollution control measures needed to expeditiously attain and maintain air quality standards. These air quality plans propose emission-reduction measures that are designed to bring the region into attainment of the CAAQS and NAAQS. Federal, state, and regional air quality regulations and rules were developed by incorporating the requirements from the air quality plans to ensure the implementation of these plans. The Project will comply with applicable federal, state, and local regulations, as further discussed in the following paragraphs. Because the regional air regulations and rules are developed to ensure the implementation of the regional air quality plans, compliance with these regulations indicates that the Project's activities will not obstruct implementation of the air quality plans of the region.

In addition to the air quality regulations and rules, BAAD adopted emission thresholds for CEQA evaluation to ensure that the Project emissions will not conflict with or hinder the implementation of the air quality plans. Therefore, consistency with the air quality plans and standards is also analyzed by evaluating whether the Project's emissions will exceed BAAD's CEQA significance thresholds.

As discussed in the following sections, construction emissions of criteria pollutants would be less than the BAAD CEQA significance thresholds (Table 3.2-5a and Table 3.2-5b). Health risks and hazard impacts from DPM and PM_{2.5} emissions at nearby offsite workers and residents would be lower than the BAAD CEQA thresholds with implementation of MM-AQ-CNST-1. Operational criteria pollutant emissions would have a net decrease compared to the existing condition. The Project would have long-term benefits to regional air quality during operation. The Project would not conflict with or obstruct implementation of the applicable air quality plan with mitigation to reduce the impacts to local health and hazard because of PM_{2.5} and DPM emissions.

Therefore, with implementation of MM-AQ-CNST-1, the Project will not conflict with or obstruct implementation of the applicable air quality plan, and the impact is *less-than-significant with mitigation*.

Mitigation Measures

Refer to MM-AQ-CNST-1.

Result in a Cumulatively Considerable Net Increase of Any Criteria Pollutant for which the Project Region is a Nonattainment Area for an Applicable Federal or State Ambient Air Quality Standard?

Under federal standards, SFBAAB has been designated by the EPA as nonattainment for O₃ and PM_{2.5}. Under state standards, the area is designated by CARB as nonattainment for O₃ and PM₁₀. In its CEQA Guidelines, the BAAD has provided project-level thresholds of significance for criteria pollutants for which the SFBAAB is in nonattainment. These are the levels at which the BAAD has determined that an individual

project's contribution to the cumulative impact (nonattainment) is cumulatively considerable (BAAQMD 2022a). In other words, if an individual project's contribution (even with incorporation of all feasible mitigation measures) exceeds the thresholds, the Project will have a significant and adverse impact. Alternately, if an individual project's contribution is less than the Project-level thresholds of significance, the Project will have a less-than-significant impact.

Construction

Alternative 1

Construction of the North Lot could occur as early as 2033 and 2034. The Main Lot would be constructed second, potentially starting in 2037 and completing in 2040. Construction of the Project Build Alternatives would generate criteria pollutant emissions from the following activities: demolition, site preparation, grading, construction workers and heavy-duty trucks traveling to and from the Project site, fuel combustion by onsite construction equipment, the application of architectural coatings, and paving activities. These construction activities have the potential to temporarily create emissions of dust, fumes, equipment exhaust, and other air contaminants. The unmitigated criteria air pollutant emissions that would be generated during construction for Alternative 1 are presented in Tables 3.2-5a and 3.2-5b. Emission summaries and CalEEMod output files are in Appendix B-1, Construction and Operation Emission Summaries and Appendix B-2, CalEEMod Output Files, respectively.

As shown in Table 3.2-5a, construction emissions of Alternative 1 would be less than the BAAD significance thresholds for all criteria pollutants. Therefore, construction emissions of Alternative 1 would not result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is a nonattainment area for an applicable federal or state ambient air quality standard, and impacts would be **less than significant**. No mitigation required. In addition, the Project would implement MM-AQ-CNST-1 to mitigate local health risk and hazard impacts. The mitigated emissions are shown in Table 3.2-5b and show additional reduction of criteria pollutants.

Table 3.2-5a. Daily Construction Emissions: Unmitigated

Location	Estimated Construction Year	Average Daily Emissions (lb/day)						
		ROG	NO _x	CO	PM ₁₀ Exhaust	PM ₁₀ Dust	PM _{2.5} Exhaust	PM _{2.5} Dust
North Lot Construction	2033	0.365	3.316	5.256	0.072	3.598	0.067	0.527
	2034	5.222	4.615	8.340	0.084	3.108	0.078	0.432
Main Lot - H Pile Construction Scenario	2037	1.445	13.532	18.242	0.322	11.999	0.302	1.834
	2038	1.076	9.376	15.412	0.234	5.525	0.219	0.909
	2039	21.827	7.211	12.215	0.113	3.644	0.105	0.644
	2040	4.396	0.985	1.723	0.010	0.423	0.010	0.081
Main Lot – Auger Cast Pile	2037	1.208	11.240	15.907	0.255	12.511	0.240	1.785
	2038	1.006	8.346	14.585	0.211	5.142	0.197	0.814
	2039	21.824	7.042	12.124	0.111	3.421	0.103	0.610

Location	Estimated Construction Year	Average Daily Emissions (lb/day)						
		ROG	NO _x	CO	PM ₁₀ Exhaust	PM ₁₀ Dust	PM _{2.5} Exhaust	PM _{2.5} Dust
Construction Scenario	2040	4.396	0.983	1.722	0.010	0.420	0.010	0.081
BAAQMD CEQA Thresholds		54	54	NA	82	Best management practices	84	Best management practices
Exceeding Threshold?		No	No	NA	No	No	No	No

Table 3.2-5b. Daily Construction Emissions: Mitigated

Location	Estimated Construction Year	Average Daily Emissions (lb/day)						
		ROG	NO _x	CO	PM ₁₀ Exhaust	PM ₁₀ Dust	PM _{2.5} Exhaust	PM _{2.5} Dust
North Lot Construction	2033	0.23	2.07	6.59	0.03	3.60	0.03	0.53
	2034	5.05	2.62	10.27	0.04	3.11	0.04	0.43
Main Lot – H Pile Construction Scenario	2037	0.892	9.951	26.088	0.164	11.999	0.162	1.834
	2038	0.648	6.504	21.070	0.115	5.525	0.113	0.909
	2039	21.630	5.603	17.472	0.068	3.644	0.067	0.644
	2040	4.377	0.816	2.556	0.008	0.423	0.008	0.081
Main Lot – Auger Cast Pile Construction Scenario	2037	0.769	8.788	22.966	0.149	12.511	0.147	1.785
	2038	0.608	5.772	20.022	0.105	5.142	0.103	0.814
	2039	21.628	5.434	17.381	0.066	3.421	0.065	0.610
	2040	4.377	0.814	2.555	0.008	0.420	0.008	0.081
BAAQMD CEQA Threshold		54	54	NA	82	Best management practices	84	Best management practices
Exceeding Threshold?		No	No	NA	No	No	No	No

Alternative 2

Alternative 2 construction involves less construction activities and shorter construction duration compared to Alternative 1. Therefore, Alternative 2 is expected to have lower emissions than the unmitigated

emissions shown in Table 3.2-5a for Alternative 1. Therefore, construction emissions for Alternative 2 also would not result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is a nonattainment area for an applicable federal or state ambient air quality standard, and impacts would be ***less than significant***. No mitigation required. Similarly, implement MM-AQ-CNST-1 to mitigate local health risk, and hazard impacts criteria pollutants would be further reduced.

Operations

Build Alternatives

Criteria pollutant emissions from the proposed Project include the vehicle emissions from trips to and from the ferry terminal and the engine exhaust emissions from the ferry operation, as discussed in Section 3.2.2.1, Methodology. Ferry trips will remain unchanged in 2035 between the No-Build Alternative and Build Alternatives. In 2050, ferry trips would increase under the Build Alternatives compared to the No-Build Alternative. Trip numbers are the same among all Build Alternatives. Emissions from ferry operation in each analysis year are shown in Table 3.2-6. Detailed operation emission calculations are shown in Appendix B-1, Construction and Operation Emission Summaries, and CT-EMFAC modeling files are in Appendix B-3, CT-EMFAC Output Files.

Vehicle trips include those made by personal vehicles and the transit shuttle. In addition, emission evaluation also included the vehicle trips to San Francisco made by the passengers that have to drive instead of using the ferry service because of limited capacity under the No-Build Alternative. Emissions from vehicle trips are shown in Table 3.2-7.

Total operation emissions and the net emission increase during Project operation are in Table 3.2-8 and Table 3.2-9, respectively. As shown in Table 3.2-9, operational emissions in future years of all Project Build Alternatives would be lower than the baseline existing conditions, resulting in net operational emissions decreases. Therefore, the Project would not result in a cumulatively considerable net increase of any criteria pollutant for which the Project region is a nonattainment area for an applicable federal or state ambient air quality standard, and Project impacts would be ***less than significant***. No mitigation required.

Table 3.2-6. Daily Operations Emissions from Ferry Operation

Year/Alternative	ROG	NO _x	CO	PM ₁₀	PM _{2.5}
	lb/day	lb/day	lb/day	lb/day	lb/day
2025 Existing	313.88	2,165.74	2,667.94	125.55	125.55
2035 No Build	28.12	261.14	749.28	1.00	1.00
2035 Alternative 1	28.12	261.14	749.28	1.00	1.00
2035 Alternative 2	28.12	261.14	749.28	1.00	1.00
2050 No Build	28.12	261.14	749.28	1.00	1.00
2050 Alternative 1	47.63	442.26	1,268.95	1.70	1.70
2050 Alternative 2	47.63	442.26	1,268.95	1.70	1.70

Table 3.2-7. Daily Operations Emissions from Vehicle Trips

Year/Alternative	ROG	NO _x	CO	PM ₁₀	PM _{2.5}
	lb/day	lb/day	lb/day	lb/day	lb/day
2025 Existing	4.56	6.74	81.54	14.26	2.51
2035 No Build	7.01	7.31	122.12	31.07	5.35
2035 Alternative 1	5.62	5.16	106.14	30.48	5.20
2035 Alternative 2	6.70	7.03	116.71	29.76	5.13
2050 No Build	18.39	16.88	347.82	99.65	17.00
2050 Alternative 1	14.01	12.86	265.00	75.92	12.95
2050 Alternative 2	12.07	11.09	226.74	65.72	11.24

Table 3.2-8. Total Daily Operations Emissions from Ferry Operation and Vehicle Trips

Year/Alternative	ROG	NO _x	CO	PM ₁₀	PM _{2.5}
	lb/day	lb/day	lb/day	lb/day	lb/day
2025 Existing	318.43	2,172.48	2,749.48	139.81	128.06
2035 No Build	35.13	268.46	871.40	32.07	6.36
2035 Alternative 1	33.74	266.30	855.42	31.49	6.21
2035 Alternative 2	34.83	268.18	865.99	30.76	6.14
2050 No Build	46.51	278.02	1,097.10	100.65	18.01
2050 Alternative 1	61.64	455.12	1,533.95	77.62	14.65
2050 Alternative 2	59.69	453.35	1,495.68	67.42	12.94

Table 3.2-9. Net Emission Change of Daily Operations Emissions from Existing Conditions

General	ROG	NO _x	CO	PM ₁₀	PM _{2.5}
	lb/day	lb/day	lb/day	lb/day	lb/day
2035 No Build	-283.30	-1,904.02	-1,878.08	-107.74	-121.70
2035 Alternative 1	-284.69	-1,906.17	-1,894.06	-108.33	-121.85
2035 Alternative 2	-283.60	-1,904.30	-1,883.49	-109.05	-121.93
2050 No Build	-271.92	-1,894.45	-1,652.38	-39.16	-110.06
2050 Alternative 1	-256.79	-1,717.36	-1,215.53	-62.19	-113.41
2050 Alternative 2	-258.74	-1,719.13	-1,253.80	-72.39	-115.12

General	ROG	NO _x	CO	PM ₁₀	PM _{2.5}
	lb/day	lb/day	lb/day	lb/day	lb/day
BAAQMD CEQA Thresholds	54	54	NA	82	54
Exceeding Threshold?	No	No	No	No	No

Mitigation Measures

No mitigation required.

Expose Sensitive Receptors to Substantial Pollutant Concentrations?

Construction and Operations

Build Alternatives

Carbon Monoxide Hotspots

The Project's Build Alternatives would involve increased ferry trips and the expanded parking facilities at the Project site. Based on intersection volumes from the Transportation Impact Analysis for the proposed Project, maximum peak-hour intersection volume would be 5,932 vehicles at Sir Francis Drake Boulevard and US 101 northbound on/off-ramps. Given this amount is substantially less than BAAD's hourly screening level of 44,000 vehicles per hour, the vehicle trips of the Project would not result in a CO hotspot, and impacts would be *less than significant*.

DPM/PM_{2.5}

DPM is a carcinogen emitted by diesel internal combustion engines. Construction activities would generate DPM that could expose adjacent receptors and onsite receptors for 2 years during North Lot construction and 4 years during Main Lot construction. For the HRA, DPM emissions were assumed to be the same as PM₁₀ exhaust emissions from diesel construction equipment and onsite vehicles.

Health impacts from DPM include cancer risk and chronic non-cancer risk. The HRA results also included evaluation of annual concentrations of PM_{2.5} from exhaust and fugitive dust sources. Cancer risk was evaluated for Project construction only because the Project is not anticipated to have substantial amount of DPM emissions from passenger vehicles travel to the ferry terminal parking garages. Tables 3.2-10 present the unmitigated health risks for the maximum exposed offsite residential and worker receptors. The cancer risks are the cumulative health risks from the North Lot construction and the Main Lot construction. HRA risk calculation files are in Appendix B-4, Health Risk Assessment and PM_{2.5} Concentrations Evaluation.

As shown in Table 3.2-10, DPM emissions from the Project would exceed the cancer risk threshold for both construction options. Therefore, health risk impacts would be *significant without mitigation*.

Table 3.2-10. Health Risk Results: Unmitigated

Activity	Cancer Risk Resident (cumulative North and Main Lots)	Cancer Risk Worker (cumulative North and Main Lots)	Chronic HI (maximum North and Main Lots)
Construction with HP Option	16.67	1.33	0.023
Construction with ACP Option	14.33	1.05	0.023
BAAQMD Threshold	10	10	1
Exceed Threshold?	Yes	No	No

Annual PM_{2.5} concentrations were modeled for each construction year doing the North and Main Lot construction. Table 3.2-11 summarizes the maximum modeled concentrations among all construction years. The maximum PM_{2.5} annual concentrations would be less than the threshold without mitigation, as shown in Table 3.2-11.

Table 3.2-11. Maximum Annual PM_{2.5} Concentrations: Unmitigated

Activity	PM _{2.5} (µg/m ³) Maximum of all construction years
Construction North Lot	0.26
Construction Main Lot with HP	0.19
Construction Main Lot with ACP	0.16
BAAQMD Threshold	0.3

Because the cancer risk would exceed the BAAD health risk threshold, the following mitigation measure will be implemented to reduce the health risk from DPM emissions:

MM-AQ-CNST-1: Use Clean Diesel-Powered Equipment during Construction to Control Construction-Related Emissions

The Project sponsor will ensure that all offroad diesel-powered equipment over 50 horsepower used during construction meets the EPA Tier 4 Final emission standards to reduce DPM. The construction contractor shall submit evidence of the use of equipment meeting the Tier 4 Final emission standards for project construction to the District before the commencement of construction activities.

In case a Tier 4 engine is not available for a particular equipment, the District or its delegates shall approve an exception of the Tier 4 requirements if the following conditions are met:

- A good faith effort to the satisfaction of the District or its delegates to demonstrate that such Tier 4 engine is not available. The good faith effort shall be documented with signed written correspondence by the appropriate construction contractors along with documented correspondence with at least two construction equipment rental firms.
- The equipment shall meet Tier 3 emission standards unless using such engine is deemed not practical for certain engine types. For purpose of this condition, "not practical" means that there are no available engines or retrofit control device that has been verified by EPA or CARB to control the engine in questions to Tier 3 emissions levels and the highest level of available control is meeting Tier 2 standards, or, the construction equipment is intended to be onsite for 10 working days or less.

Health risks and annual PM_{2.5} concentrations after implementing MM-AQ-CNST-1 are shown in Tables 3.2-12 and 3.2-13, respectively.

Table 3.2-12 shows the health risk results for the Project construction with implementation of MM-AQ-CNST-1. As shown in Table 3.2-12, cancer risk would be reduced to levels less than BAAD health risk thresholds. Annual PM_{2.5} concentrations remain less than the threshold with the mitigation. Therefore, the Project would not expose sensitive receptors to substantial pollution concentrations and impacts would be *less than significant with mitigation*.

Table 3.2-12. Health Risk Results: Mitigated

	Cancer Risk Resident (cumulative North and Main Lots)	Cancer Risk Worker (cumulative North and Main Lots)	Chronic Hazard Index (maximum North and Main Lots)
Construction with HP	6.70	0.40	0.0083
Construction with ACP	6.42	0.30	0.0083
BAAQMD Threshold	10	10	1
Exceeding Threshold?	No	No	No

Table 3.2-13. Annual PM_{2.5} Concentrations: Mitigated

	PM _{2.5} (µg/m ³) Maximum of all construction years
Construction North Lot	0.20
Construction Main Lot with HP	0.14
Construction Main Lot with ACP	0.13
BAAQMD Threshold	0.3
Exceeding Threshold?	No

Mitigation Measures

MM-AQ-CNST-1: Use Clean Diesel-Powered Equipment during Construction to Control Construction Related Emissions

The Project sponsor will ensure that all offroad diesel-powered equipment over 50 horsepower used during construction meets the EPA Tier 4 Final emission standards to reduce DPM. The construction contractor shall submit evidence of the use of equipment meeting the Tier 4 Final emission standards for project construction to the District before the commencement of construction activities.

In case a Tier 4 engine is not available for a particular equipment, the District or its delegates shall approve an exception of the Tier 4 requirements if the following conditions are met:

- A good faith effort to the satisfaction of the District or its delegates to demonstrate that such Tier 4 engine is not available. The good faith effort shall be documented with signed written correspondence by the appropriate construction contractors along with documented correspondence with at least two construction equipment rental firms.

- The equipment shall meet Tier 3 emission standards unless using such engine is deemed not practical for certain engine types. For purpose of this condition, "not practical" means that there are no available engines or retrofit control device that has been verified by EPA or CARB to control the engine in questions to Tier 3 emissions levels and the highest level of available control is meeting Tier 2 standards, or, the construction equipment is intended to be onsite for 10 working days or less.

Result in Other Emissions (Such as those Leading to Odors) Adversely Affecting a Substantial Number of People?

Construction and Operations

Build Alternatives

BAAD and CARB have identified the following types of land uses as being commonly associated with odors; although this list is not exhaustive, it is intended to help lead agencies recognize the types of facilities where more analysis may be warranted:

- Sewage treatment plants
- Coffee roasters
- Asphalt plants
- Metal smelters
- Landfills
- Recycling facilities
- Waste transfer stations
- Petroleum refineries
- Biomass operations
- Auto body shops
- Coating operations
- Fiberglass manufacturers
- Foundries
- Rendering plants
- Livestock operations

There are sensitive receptors within 1,000 feet of the Project area. Potential odor emitters during construction activities include diesel exhaust, asphalt paving, and the use of architectural coatings and solvents. Construction-related activities would be temporary, and construction activities would not be likely to result in nuisance odors that would violate BAAD Regulation 7. Odors during operation could emanate from vehicle exhaust. These odors would be limited to areas adjacent to the Project area. Although such brief exhaust odors may be considered adverse, they would not affect a substantial number of people.

Additionally, the proposed Project is not associated with any of the land uses listed and would not result in odorous emissions. Odors from diesel exhaust currently exist in the Project area.

Passenger vehicles travel near the Project, and the ferry operation are not expected to cause odor to affect the nearby residents or workers. Mandatory compliance with BAAD regulations ensures no construction or operational activities proposed would create a level of objectionable odors that would adversely affect a substantial number of people, and impacts would be *less than significant*. No mitigation required.

Mitigation Measures

No mitigation required.