

4.2 Air Quality

This section discusses the Specific Plan's potential impacts to regional and local air quality. The vehicle miles traveled (VMT) estimate used in emissions analysis are based on the *Transportation Impact Analysis* prepared by Kittelson & Associates, dated September 2017. The traffic study is included as Appendix D to this EIR.

4.2.1 Setting

a. Climate and Topography

The Specific Plan Area is located in the San Francisco Bay Area Air Basin (SFBAAB). Air quality in the SFBAAB is affected by the emission sources located in the region, as well as by natural factors. Atmospheric conditions such as wind speed and direction, air temperature gradients, and local and regional topography influence air quality. The SFBAAB is affected by a Mediterranean climate of warm, dry summers and cool, damp winters. Topographical features, the location of the Pacific high-pressure system, and varying circulation patterns resulting from temperature gradients affect the speed and direction of local winds. The winds play a major role in the dispersion of pollutants. Strong winds can carry pollutants far from their source; a lack of wind will allow pollutants to concentrate in an area (Life Science!, Inc. 2004).

Air dispersion also affects pollutant concentrations. As altitude increases, air temperature normally decreases. Inversions occur when colder air becomes trapped below warmer air, restricting the air masses' ability to mix. Pollutants also become trapped, which promotes the production of secondary pollutants. Subsidence inversions, which can occur during the summer in the SFBAAB, result from high-pressure cells that cause the local air mass to sink, compress, and become warmer than the air closer to the earth. Pollutants accumulate as this stagnating air mass remains in place for one or more days (CDFG and USFWS 2004).

The Specific Plan Area is in the Northern Alameda and Western Contra Costa Counties climatological sub region where marine air traveling through the Golden Gate is a dominant weather factor. The Oakland-Berkeley Hills cause the westerly flow of air to split off the north and south of Oakland causing diminishing wind speeds and temperatures averaging from the mid-50s to mid-70s degrees Fahrenheit. The air pollution potential is lowest for the parts of the sub region closest to the bay and air pollution in San Leandro is marginally higher because of the lower frequency of strong winds (BAAQMD 2017).

b. Air Pollutants of Primary Concern

The Federal and State Clean Air Acts mandate the control and reduction of certain air pollutants. Under these laws, the U.S. Environmental Protection Agency (U.S. EPA) 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 climate and topographic influences discussed above. The primary determinant of concentrations of non-reactive pollutants, such as carbon monoxide (CO) and suspended particulate matter, is proximity to major sources. Ambient CO levels usually closely follow the spatial and temporal distributions of vehicular traffic. A discussion of primary criteria pollutants is provided below.

Ozone

Ozone (O_3) is a colorless gas with a pungent odor. Most ozone in the atmosphere is formed as a result of the interaction of ultraviolet light, reactive organic gases (ROG), and oxides of nitrogen (NO_x). ROG (the organic compound fraction relevant to ozone formation, and sufficiently equivalent for the purposes of this analysis to volatile organic compounds, or VOC), is composed of non-methane hydrocarbons (with some specific exclusions), and NO_x is made of different chemical combinations of nitrogen and oxygen, mainly nitric oxide (NO) and nitrogen dioxide (NO_2). As highly reactive molecule, ozone readily combines with many different components of the atmosphere. Consequently, high levels of O_3 tend to exist only while high ROG and NO_x levels are present to sustain the O_3 formation process. Once the precursors have been depleted, O_3 levels rapidly decline. Because these reactions occur on a regional rather than local scale, O_3 is considered a regional pollutant.

Carbon Monoxide

CO is an odorless, colorless gas and 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 cause 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 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 National Ambient Air Quality Standards (NAAQS) of 35.0 parts per million (ppm) or the State AAQS of 20.0 ppm.

Nitrogen Dioxide

NO_2 is a by-product of fuel combustion, with the primary source being motor vehicles and industrial boilers and furnaces. The principal form of nitrogen oxide produced by combustion is NO, but NO reacts rapidly to form NO_2 , creating the 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 parts per million (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 particulate matter no more than 10 microns in diameter (PM_{10}) and acid rain.

Suspended Particulates

PM_{10} is small particulate matter measuring no more than 10 microns in diameter, while $PM_{2.5}$ is fine particulate matter measuring no more than 2.5 microns in diameter. Suspended particulates are mostly dust particles, nitrates, and sulfates. They are a by-product of fuel combustion and wind erosion of soil and unpaved roads, and are directly emitted into the atmosphere through these processes. Suspended particulates are also created in the atmosphere through chemical reactions. The characteristics, sources, and potential health effects associated with the small particulates (those between 2.5 and 10 microns in diameter) and fine particulates ($PM_{2.5}$) can be very different. The small particulates generally come from windblown dust and dust kicked up from mobile sources. The fine particulates are generally associated with combustion processes as well as being formed in the atmosphere as a secondary pollutant through chemical reactions. Fine particulate

matter is more likely to penetrate deeply into the lungs and poses a serious health threat to all groups, but particularly to the elderly, children, and those with respiratory problems. More than half of the small and fine particulate matter that is inhaled into the lungs remains there, which can cause permanent lung damage. These materials can damage health by interfering with the body's mechanisms for clearing the respiratory tract or by acting as carriers of an absorbed toxic substance.

Lead

Lead (Pb) is a metal found naturally in the environment, as well as in manufacturing products. The major sources of Pb emissions historically have been mobile and industrial sources. In the early 1970s, the U.S. EPA set national regulations to gradually reduce the lead content in gasoline. In 1975, unleaded gasoline was introduced for motor vehicles equipped with catalytic converters. The U.S. EPA completed the ban prohibiting the use of leaded gasoline in highway vehicles in December 1995. As a result of the U.S. EPA's regulatory efforts to remove Pb from gasoline, atmospheric lead concentrations have declined substantially over the past several decades. The most dramatic reductions in lead emissions occurred prior to 1990 due to the removal of Pb from gasoline sold for most highway vehicles. Pb emissions were further reduced substantially between 1990 and 2008, with reductions occurring in the metals industries at least in part as a result of national emissions standards for hazardous air pollutants (U.S. EPA 2013). As a result of phasing out leaded gasoline, metal processing currently is the primary source of Pb emissions. The highest level of lead in the air is generally found near lead smelters. Other stationary sources include waste incinerators, utilities, and lead-acid battery manufacturers.

Toxic Air Contaminants

Public exposure to TACs is a significant environmental health issue in California. The California Health and Safety Code defines a TAC as "an air pollutant which may cause or contribute to an increase in mortality or in serious illness, or which may pose a present or potential hazard to human health." The majority of the estimated health risks from TACs can be attributed to relatively few compounds, the most important being particulate matter from diesel-fueled engines. According to BAAQMD, particulate matter emitted from diesel engines contributes more than 85 percent of the cancer risk within the Air Basin and cancer risk from TAC is highest near major diesel PM sources. Almost all diesel exhaust particles are 10 microns or less in diameter. Because of their extremely small size, these particles can be inhaled and eventually trapped in the bronchial and alveolar regions of the lungs (City San Leandro 2016i). Current Ambient Air Quality

CARB and the US EPA established ambient air quality standards for major pollutants, including O₃, CO, NO₂, sulfur dioxide (SO₂), Pb, and PM₁₀ and PM_{2.5}. Standards have been set at levels intended to be protective of public health. California standards are more restrictive than federal standards for each of these pollutants except for lead and the eight-hour average for CO.

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 exceeded, 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 3 summarizes the California Ambient Air Quality Standards (CAAQS) and the NAAQS for each of these pollutants as well as the attainment status of the SFBAAB. As shown in the table, the SFBAAB is in nonattainment

for the federal standards for O₃ and PM_{2.5}. The SFBAAB is in nonattainment for the state standard for O₃, PM₁₀, and PM_{2.5}.

Table 3 Ambient Air Quality Standards & Basin Attainment Status

Pollutant	Averaging Time	California Standards		National Standards	
		Concentration	Attainment Status	Concentration	Attainment Status
Ozone	8 Hour	0.070 ppm	N	0.070 ppm	N
	1 Hour	0.09 ppm	N		
Carbon Monoxide	8 Hour	9.0 ppm	A	9 ppm	A
	1 Hour	20 ppm	A	35 ppm	A
Nitrogen Dioxide	1 Hour	0.18 ppm	A	0.100 ppm	U
	Annual Arithmetic Mean	0.030 ppm		0.053 ppm	A
Sulfur Dioxide	24 Hour	0.04 ppm	A	0.14 ppm	A
	1 Hour	0.25 ppm	A	0.075 ppm	A
	Annual Arithmetic Mean			0.030 ppm	A
Particulate Matter (PM ₁₀)	Annual Arithmetic Mean	20 µg/m ³	N		
	24 Hour	50 µg/m ³	N	150 µg/m ³	U
Particulate Matter - Fine (PM _{2.5})	Annual Arithmetic Mean	12 µg/m ³	N	12 µg/m ³	U/A
	24 Hour			35 µg/m ³	N
Sulfates	24 Hour	25 µg/m ³	A		
Lead	Calendar Quarter			1.5 µg/m ³	A
	Rolling 3 Month Average			0.15 µg/m ³	
	30 Day Average	1.5 µg/m ³)			A
Hydrogen Sulfide	1 Hour	0.03 ppm	U		
Vinyl Chloride (chloroethene)	24 Hour	0.010 ppm	No information available		
Visibility Reducing Particles	8 Hour(10:00 to 18:00 PST)		U		

A=Attainment N=Nonattainment U=Unclassified; mg/m³=milligrams per cubic meter ppm=parts per million µg/m³=micrograms per cubic meter

Source: BAAQMD 2017, <http://www.baaqmd.gov/research-and-data/air-quality-standards-and-attainment-status>

The closest Bay Area Air Quality Management District (BAAQMD)-operated monitoring station to the Specific Plan Area is the Oakland-9925 International Boulevard Monitoring Station, which is approximately 2.0 miles northwest of the Specific Plan Area. Table 4 summarizes the representative annual air quality data for the Specific Plan Area between 2014 and 2016 at the Oakland-9925

International Boulevard Monitoring Station for all criteria pollutants, except PM₁₀ since it was unavailable. Data for PM₁₀ is from the next closest station, the Oakland West Monitoring Station, which is located approximately 8 miles northwest of the Specific Plan Area.

Table 4 Ambient Air Quality Data

Pollutant	2014	2015	2016
Ozone (ppm), Worst 1-Hour	0.083	0.094	0.082
Number of days of State exceedances (>0.09 ppm)	0	0	0
Ozone (ppm), 8-Hour Average	0.068	0.074	0.057
Number of days of State exceedances (>0.07 ppm)	0	2	0
Number of days of Federal exceedances (>0.07 ppm)	0	2	0
Nitrogen Dioxide (ppm), Worst 1-Hour	0.082	0.048	0.059
Number of days of State exceedances (>0.25 ppm)	0	0	0
Number of days of Federal exceedances (>0.075 ppm)	0	0	0
Particulate Matter <10 microns, µg/m ³ , Worst 24 Hours	40.8	22.5	18.7
Number of days above State standard (>50 µg/m ³)	0	0	0
Number of days above Federal standard (>150 µg/m ³)	0	0	0
Particulate Matter <2.5 microns, µg/m ³ , Worst 24 Hours	37.6	44.7	15.5
Number of days above Federal standard (>35 µg/m ³)	1	1	0

ppm = parts per million; µg/m³ = micrograms per cubic meter

* There was insufficient (or no) data available to determine the value.

Oakland-9925 International Boulevard Monitoring Station was used for all pollutants, except PM₁₀, which used data from the Concord-2975 Treat Boulevard Monitoring Station.

Source: CARB 2017

c. Regulatory Setting

The Federal Clean Air Act governs air quality in the United States. In addition to being subject to federal requirements, air quality in California is also governed by more stringent regulations under the California Clean Air Act. At the federal level, the U.S. EPA administers the Clean Air Act (CAA). The CAA is administered by the CARB at the State level and by the Air Quality Management Districts at the regional and local levels. The BAAQMD regulates air quality at the regional level, which includes the nine-county Bay Area.

Federal

The U.S. EPA is responsible for enforcing the federal CAA. The U.S. EPA is also responsible for establishing the NAAQS. The NAAQS are required under the 1977 CAA and subsequent amendments. The EPA regulates emission sources that are under the exclusive authority of the federal government, such as aircraft, ships, and certain types of locomotives. The agency has jurisdiction over emission sources outside state waters (e.g. beyond the outer continental shelf) and establishes various emission standards, including those for vehicles sold in states other than California. Automobiles sold in California must meet the stricter emission standards established by the CARB.

State

In California, the CARB, which became part of the California Environmental Protection Agency in 1991, is responsible for meeting the State requirements of the federal CAA, administering the California CAA, and establishing the CAAQS. The California CAA, as amended in 1992, requires all air districts in the State to endeavor to achieve and maintain the CAAQS. The CAAQS are generally more stringent than the corresponding federal standards and incorporate additional standards for sulfates, hydrogen sulfide, vinyl chloride and visibility reducing particles. The CARB regulates mobile air pollution sources, such as motor vehicles. The agency is responsible for setting emission standards for vehicles sold in California and for other emission sources, such as consumer products and certain off-road equipment. The CARB established passenger vehicle fuel specifications, which became effective on March 1996. The CARB oversees the functions of local air pollution control districts and air quality management districts, which in turn administer air quality activities at the regional and county level.

Regional

The BAAQMD is responsible for assuring that the federal and State ambient air quality standards are attained and maintained in the Bay Area. The BAAQMD is also responsible for adopting and enforcing rules and regulations concerning air pollutant sources, issuing permits for stationary sources of air pollutants, inspecting stationary sources of air pollutants, responding to citizen complaints, monitoring ambient air quality and meteorological conditions, awarding grants to reduce motor vehicle emissions, conducting public education campaigns, as well as many other activities.

The BAAQMD adopted the 2017 Clean Air Plan (2017 Plan) on April 19, 2017 as an update to the 2010 Clean Air Plan. The 2017 Plan, which focuses on protecting public health and the climate, defines an integrated, multi-pollutant control strategy that includes all feasible measures to reduce emissions of O₃ precursors (including transport of ozone and its precursors to neighboring air basins), PM, and toxic air contaminants (TACs). To protect public health, the control strategy will decrease population exposure to PM and TACs in communities that are most impacted by air pollution with the goal of eliminating disparities in exposure to air pollution between communities. The control strategy will protect the climate by reducing GHG emissions and developing a long-range vision of how the Bay Area could look and function in a year 2050 post-carbon economy (BAAQMD 2017b).

Local

The City's 2035 General Plan Environmental Hazards Chapter contains the following goal and related policies specific to air quality:

Goal EH-7. Promote and participate in efforts to improve the region's air quality.

Policy EH-3.1: Clean Air Plan Implementation. Cooperate with the appropriate regional, state, and federal agencies to implement the regional Clean Air Plan and enforce air quality standards.

Policy EH-3.2: Transportation Control Measures. Promote strategies that help improve air quality and reduce greenhouse gas emissions by reducing the necessity of driving. These strategies include more reliable public transportation, carpooling and vanpooling programs, employer transportation demand management (TDM) programs, better provisions for

bicyclists and pedestrians, and encouraging mixed use and higher density development around transit stations.

Policy EH-3.3: Land Use Compatibility. Discourage new uses with potential adverse air quality impacts, including the emission of toxic air contaminants and fine particulates, near residential neighborhoods, schools, hospitals, nursing homes, and other locations where public health could potentially be affected.

Policy EH-3.4: Design, Construction, and Operation. Require new development to be designed and constructed in a way that reduces the potential for future air quality problems, such as odors and the emission of any and all air pollutants. This should be done by:

- a. Requiring construction and grading practices that minimize airborne dust and particulate matter;
- b. Ensuring that best available control technology is used for operations that could generate air pollutants;
- c. Encouraging energy conservation and low-polluting energy sources;
- d. Promoting landscaping and tree planting to absorb carbon monoxide and other pollutants; and
- e. Implementing the complementary strategies to reduce greenhouse gases identified in the Climate Action Plan.

Action EH-3.4.B: Health Risk Assessments. Implement Bay Area Air Quality Management District Guidelines and State Office of Environmental Health Hazard Assessment policies and procedures requiring health risk assessments for residential development and other sensitive land use projects within 1,000 feet of major sources of toxic air contaminants, including freeways and roadways with over 10,000 vehicles per day. As appropriate, identify mitigation measures (such as air filtration systems) to reduce the potential exposure to particulate matter, carbon monoxide, diesel fumes, and other potential health hazards. Measures identified in the HRA shall be included in the environmental document and/or incorporated into the site development plan as a component of the proposed project.

Policy EH-3.5: Odors. Ensure prompt response to complaints about odor problems and other potential air quality nuisances and hazards reported by residents and businesses.

Policy EH-3.8: Regulatory Changes. Stay apprised of changes in state and federal air quality regulations and implement programs as required to ensure local compliance.

Policy EH-3.9: Alternative Fuel Vehicles. Promote the development of infrastructure which supports the use of alternative fuel (i.e., electric) vehicles, including electric charging stations and preferential parking for electric vehicles.

d. Sensitive Receptors

The ambient air quality standards described above were established to represent the levels of air quality considered sufficient, with an adequate margin of safety, to protect public health and welfare. They are designed to protect that segment of the public most susceptible to respiratory distress, such as children under 14; the elderly over 65; persons engaged in strenuous work or exercise; and people with cardiovascular and chronic respiratory diseases. According to BAAQMD,

sensitive receptors include residences, schools and school yards, parks and playgrounds, daycare centers, nursing homes, and medical facilities (BAAQMD 2017a). The majority of sensitive receptor locations are therefore residences, schools, and hospitals. Commercial land uses dominate the Specific Plan Area; however, pockets of sensitive receptors occur in the following areas:

- The Summerhill Terrace Apartments are located in the southern corner of the Specific Plan Area, to the west of Hesperian Boulevard, and north of the Union Pacific Railroad tracks.
- A row of multi-family residences lines the east side of Hesperian Boulevard from Thornally Drive to Springlake Drive.
- The Hesperian Villas, a multi-family apartment complex, is located on the west side of Hesperian Boulevard, south of Cherrybrooke Commons.
- Several single-family residences are located on Olive Court between the east side of Hesperian Boulevard and the BART tracks.

In addition, residential neighborhoods in San Leandro and unincorporated Alameda County surround the Specific Plan Area to the west, north, and east.

The BAAQMD recommends that general plans include buffer zones to separate sensitive receptors from sources of TACs and odors. In April 2005, the CARB released the final version of the *Air Quality and Land Use Handbook*, which is intended to encourage local land use agencies to consider the risks from air pollution prior to making decisions that approve the siting of new sensitive receptors (e.g. homes or daycare centers) near sources of air pollution. Unlike industrial or stationary sources of air pollution, siting of new sensitive receptors does not require air quality permits, but could create air quality problems. The primary purpose of the handbook is to highlight the potential health impacts associated with proximity to common air pollution sources, so that those issues are considered in the planning process. CARB makes recommendations regarding the siting of new sensitive land uses near freeways, truck distribution centers, dry cleaners, gasoline dispensing stations, and other air pollution sources. These recommendations are based primarily on modeling information and may not be entirely reflective of conditions in the Specific Plan Area. The *Air Quality and Land Use Handbook* notes that siting of new sensitive land uses within these distances may be possible, but recommends that site-specific studies be conducted to identify actual health risks. CARB acknowledges that land use agencies have to balance other siting considerations such as housing and transportation needs, economic development priorities and other quality of life issues. CARB recommends avoiding siting new sensitive land uses within 500 feet of a freeway, urban roads with 100,000 vehicles per day, or rural roads with 50,000 vehicles per day (CARB 2005).

4.2.2 Impact Analysis

a. Methodology and Significance Thresholds

This analysis uses BAAQMD's May 2017 *CEQA Air Quality Guidelines* to evaluate potential air quality impacts associated with implementation of the proposed Specific Plan. The plan-level thresholds in the May 2017 BAAQMD *CEQA Air Quality Guidelines* were used for this analysis to determine whether the impacts of the Specific Plan exceed the thresholds identified in Appendix G of the *CEQA Guidelines*.

Significance Thresholds

Air quality impacts would be significant if they would exceed the following thresholds of significance, which are based on Appendix G of the *CEQA Guidelines* and the May 2017 BAAQMD *CEQA Air Quality Guidelines*:

- Conflict with or obstruct implementation of the applicable air quality plan;
- Violate any air quality standard or contribute substantially to an existing or projected air quality violation;
- 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);
- Expose sensitive receptors to substantial pollutant concentrations; and/or
- Create objectionable odors affecting a substantial number of people.

Short-Term Emissions

The BAAQMD's 2017 *CEQA Air Quality Guidelines* have no plan-level significance thresholds for construction air pollutants emissions. However, they do include individual project-level thresholds for temporary construction-related and long-term operational emissions of air pollutants. These thresholds represent the levels at which a project's individual emissions of criteria air pollutants or precursors would result in a cumulatively considerable contribution to the Basin's existing air quality conditions (BAAQMD 2017).

Long-Term Emissions

The BAAQMD's 2017 *CEQA Air Quality Guidelines* contain specific operational plan-level significance thresholds for criteria air pollutants. Plans must show the following over the planning period:

- Consistency with current air quality plan control measures
- VMT or vehicle trips (VT) increase is less than or equal to the Specific Plan's projected population increase

If a plan can demonstrate consistency with both of these criteria then impacts are considered less than significant.

Methodology for Estimating Emissions

SHORT-TERM EMISSIONS

Construction-related emissions are generally short-term in duration, but may still cause adverse air quality impacts. Potential demolition of the existing 161,000 square feet of retail space and construction of development proposed in the Specific Plan would generate temporary emissions from three primary sources: the operation of construction vehicles (e.g., scrapers, loaders, dump trucks, etc.); ground disturbance during site preparation and grading, which creates fugitive dust; and the application of asphalt, paint, or other oil-based substances.

Development associated with implementation of the proposed Specific Plan would result in temporary construction-related and long-term operational emissions. At this time, there are no specific projects associated with the proposed Specific Plan. Therefore, projects are not defined to a

level that would allow project-level analysis and thus it would be speculative to include project-level impacts as part of this analysis. Rather, impacts for the Specific Plan as a whole are discussed qualitatively.

LONG-TERM EMISSIONS

Per plan-level guidance from the BAAQMD 2017 *CEQA Air Quality Guidelines* long-term operational emissions associated with implementation of the proposed Specific Plan are discussed qualitatively using a comparison of the Specific Plan to the 2017 Clean Air Plan goals, policies, and control measures. In addition, a comparison of rate and increase and population is recommended by BAAQMD for determining significance of criteria pollutants. If the proposed Specific Plan does not meet either criterion then impacts would be potentially significant.

TOXIC AIR CONTAMINANTS

According to the BAAQMD CEQA Guidelines (2017), for general and area plans to have a less-than-significant impact with respect to potential TACs special overlay zones need to be established around existing and proposed land uses that emit TACs. Special overlay zones should be included in proposed plan policies, land use maps, and implementing ordinances. The thresholds of significance for plans with regard to community risk and hazard impacts are:

1. The land use diagram must identify:
 - a) Special overlay zones around existing and planned sources of TACs;
 - b) Special overlay zones of at least 500 feet (or Air District-approved modeled distance) on each side of all freeways and high-volume roadways.
2. The plan must also identify goals, policies, and objectives to minimize potential impacts and create overlay zones for sources of TACs and receptors.

Also, according to BAAQMD, the Lead Agency should refer to CARB's 2005 *Air Quality and Land Use Handbook* when evaluating whether the proposed general or area plan includes adequate buffer distances between TAC sources and sensitive receptors. As stated above, CARB recommends avoiding siting new sensitive land uses within 500 feet of a freeway or urban roads with 100,000 vehicles per day.

b. Project Impacts and Mitigation Measures

Threshold:	Would the Specific Plan violate any air quality standard or contribute substantially to an existing or projected air quality violation?
Threshold:	Would the Specific Plan result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions, which exceed quantitative thresholds for ozone precursors)?
Threshold:	Would the Specific Plan expose sensitive receptors to substantial pollutant concentrations?

IMPACT AQ-1 BUILDOUT OF THE PROPOSED SPECIFIC PLAN WOULD RESULT IN THE TEMPORARY GENERATION OF AIR POLLUTANTS DURING CONSTRUCTION, WHICH WOULD AFFECT LOCAL AIR QUALITY. COMPLIANCE WITH THE BAAQMD BASIC CONSTRUCTION MITIGATION MEASURES WOULD REQUIRE FUTURE PROJECTS WITHIN THE SPECIFIC PLAN AREA TO IMPLEMENT MEASURES TO REDUCE CONSTRUCTION EMISSIONS. IMPACTS WOULD BE SIGNIFICANT BUT MITIGABLE.

Construction of individual projects that could be developed under the proposed Specific Plan would involve activities that result in air pollutant emissions. Construction activities such as demolition, grading, construction worker travel to and from project sites, delivery and hauling of construction supplies and debris to and from project sites, and fuel combustion by on-site construction equipment would generate pollutant emissions. These construction activities would temporarily create emissions of dust, fumes, equipment exhaust, and other air contaminants, particularly during site preparation and grading. The extent of daily emissions, particularly ROG_s and NO_x emissions, generated by construction equipment, would depend on the quantity of equipment used and the hours of operation for each project. The extent of PM_{2.5} and PM₁₀ emissions would depend upon the following factors: 1) the amount of disturbed soils; 2) the length of disturbance time; 3) whether existing structures are demolished; 4) whether excavation is involved; and 5) whether transporting excavated materials offsite is necessary. Dust emissions can lead to both nuisance and health impacts. According to the BAAQMD *CEQA Air Quality Guidelines* from 2017 PM₁₀ is the greatest pollutant of concern during construction.

As discussed above, BAAQMD's *CEQA Air Quality Guidelines* from 2017 have no plan-level significance thresholds for construction air pollutant emissions. However, the guidelines include project-level thresholds for construction emissions. If a project's construction emissions fall below the project-level thresholds, the project's impacts to regional air quality are considered individually and cumulatively less than significant. The BAAQMD has also identified feasible fugitive dust control measures for construction activities. These Basic Construction Mitigation measures are recommended for all projects (BAAQMD 2017). In addition, the BAAQMD and CARB have regulations that address the handling of hazardous air pollutants such as lead and asbestos. Lead and asbestos emissions could occur from demolition activities and asbestos emissions. BAAQMD rules and regulations address both the handling and transport of these contaminants. Construction associated with development of projects under the proposed Specific Plan would temporarily increase air pollutant emissions, possibly creating localized areas of unhealthy air pollution levels or air quality nuisances. However, development under the proposed Specific Plan would be required to comply with the 2035 General Plan Mitigation Measure AQ-2B-1, which requires applicants for future development projects to comply with the current BAAQMD basic control measures for reducing construction emissions of PM₁₀, including watering exposed ground areas twice a day

during construction and maintaining a 15 mile per hour speed limit on the project site. With adherence to these requirements, impacts would be less than significant.

TOXIC AIR CONTAMINANTS

Pursuant to the recent ruling in the *California Building Industry Association (CBIA) v BAAQMD* (2015), impacts of the environment on the project is not an impact under CEQA. Nonetheless, BAAQMD's CEQA Guidelines include methodology for jurisdictions wanting to evaluate the potential impacts from placing sensitive receptors proximate to major air pollutant sources. For assessing community risk and hazards for siting a new receptor, sources within a 1,000-foot radius of a project site are typically considered. Sources are defined as freeways, high volume roadways (with volume of 10,000 vehicles or more per day or 1,000 trucks per day), and permitted sources (BAAQMD 2017).

Under the proposed Specific Plan, new auto service/sales uses, industrial uses, dry cleaners, or gasoline dispensing stations would not be allowed in the Specific Plan Area. Therefore, the proposed Specific Plan would not increase the number of stationary or permitted sources that emit TACs in the Specific Plan Area. However, there are several high volume roadways and freeways in and around the Specific Plan Area, including I-238, I-580, I-880, East 14th Street, Hesperian Boulevard, Fairmont Drive, Halycon Drive, and 150th Avenue. The proposed Specific Plan would involve placing new sensitive receptors in proximity to these high volume roadways and freeways. In accordance with 2035 General Plan Action EH-3.4.B, health risk assessments would be required for new residential development and other sensitive other sensitive land use projects within 1,000 feet of major sources of TACs, including freeways and roadways with over 10,000 vehicles per day. As appropriate, mitigation measures (such as air filtration systems) to reduce the potential exposure to particulate matter, carbon monoxide, diesel fumes, and other potential health hazards identified in the HRA would be incorporated into the site development plan as a component of the proposed project. In addition, placement of sensitive receptors proximate to existing sources of air pollutants would not substantially worsen the concentrations of air pollutants; therefore, the proposed project would not exacerbate the air quality hazard. Impacts related to TACs would be less than significant.

Mitigation Measures

Mitigation Measure AQ-2B-1 from the City's 2035 General Plan EIR, as revised to reflect the latest BAAQMD CEQA Guidelines (May 2017), is required.

AQ-2B-1 Construction Emissions

As part of the City's development approval process, the City shall require applicants for future development projects to comply with the current Bay Area Air Quality Management District's basic control measures for reducing construction emissions of PM₁₀ (Table 8-2, Basic Construction Mitigation Measures Recommended for All Proposed Projects, of the May 2017 BAAQMD CEQA Guidelines).

Significance After Mitigation

MM AQ-2B-1 from the City's 2035 General Plan EIR would ensure that applicants for future projects in the Specific Plan Area include control measures to reduce construction-related emissions. With adherence to this measure, impacts related to air pollution emissions would be less than significant.

Threshold: Would the Specific Plan conflict with or obstruct implementation of the applicable air quality plan?
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IMPACT AQ-2 THE PROPOSED SPECIFIC PLAN WOULD BE CONSISTENT WITH BAAQMD'S 2017 CLEAN AIR PLAN. THIS IMPACT WOULD BE LESS THAN SIGNIFICANT.

Specific Plan Consistency with Current Air Quality Plan

The most recently adopted air quality plan in the San Francisco Bay Area Air Basin is the 2017 Plan. The 2017 Plan is a roadmap showing how the San Francisco Bay Area will achieve compliance with the State one-hour ozone standard as expeditiously as practicable, and how the region will reduce transport of ozone and ozone precursors to neighboring air basins. The 2017 Plan does not include control measures that apply directly to individual development projects; instead, the control strategy includes stationary-source control measures to be implemented through the BAAQMD regulations; mobile-source control measures to be implemented through incentive programs and other activities; and transportation control measures to be implemented through transportation programs in cooperation with the Metropolitan Transportation Commission (MTC), local governments, transit agencies, and others. The 2017 Plan also represents the Bay Area's most recent triennial assessment of the region's strategy to attain the state one-hour ozone standard. In this, the 2017 Plan replaces the 2010 Plan. Under BAAQMD's methodology, a determination of consistency with *CEQA Guidelines* thresholds should demonstrate that a project:

- Supports the primary goals of the Clean Air Plan;
- Includes applicable control measures from the Clean Air Plan; and
- Does not disrupt or hinder implementation of any Clean Air Plan control measures.

The following includes a discussion of consistency with these three criteria.

Support the Primary Goals of the Clean Air Plan

The primary goals of the 2017 Plan are to:

- Protect air quality and health at the regional and local scale; and
- Protect the climate.

Any project that would not support these goals would not be considered consistent with the 2017 Plan. On an individual project basis, consistency with BAAQMD quantitative thresholds is interpreted as demonstrating support for the Plan goals. Approval of the proposed Specific Plan would not result in significant and unavoidable criteria pollutant emissions or other significant air quality impacts or not increase population and employment at a greater rate than assumed in the 2017 Plan. In addition, as discussed in Section 4.6, *Greenhouse Gas Emissions*, the proposed Specific Plan would not exceed the 2035 efficiency threshold and would not result in significant GHG effects. Further, the proposed Specific Plan includes policies that would reduce vehicle trips and emissions. Area-wide Mobility Policy 2 involves providing a complete streets network to prioritize safety and access for drivers, transit users, pedestrians, and bicyclists. Area-wide Mobility Policy 3 provides multiple transportation options to reduce reliance on personal vehicles and Area-wide Mobility Policy 4 encourages active transportation and requires facilities in the Specific Plan Area that would promote walking, cycling, and use of transit. Area-wide Mobility Policy 7 provides pedestrian and bicycle connectivity while Area-wide Mobility Policy 8 redevelops the Specific Plan Area to establish new streets that would provide alternate routes for shorter trips and improve automobile efficiency.

Finally, Area-wide Mobility Policy 9 establishes a system of smaller blocks within the Specific Plan Area to improve circulation and create a pedestrian-scaled network of streets and connections. In addition, the Specific Plan is a TOD project that is located next to the Bay Fair BART station and AC Transit bus station. A TOD is designed to reduce emissions through land use strategy by focusing on transit oriented development. Therefore, the proposed Specific Plan would support the primary goals of the 2017 Plan.

Include Applicable Clean Air Plan Control Strategies

The Bay Area 2017 Clean Air Plan contains 85 control strategies aimed at reducing air pollution and protecting the climate in the Bay Area. For consistency with climate planning efforts at the state level, the control strategies in the 2017 Plan are based on the same economic sector framework used by CARB, which encompass stationary sources, transportation, energy, buildings, agriculture, natural and working lands, waste management, water, and super-greenhouse gas pollutants. Table 5 identifies applicable control measures and correlates the measures to specific elements of the proposed Specific Plan.

Table 5 2017 Clean Air Plan Control Measures

Control Measures	Consistency
Transportation	
<p>TR2: Trip Reduction Programs. Implement the regional Commuter Benefits Program (Rule 14-1) that requires employers with 50 or more Bay Area employees to provide commuter benefits. Encourage trip reduction policies and programs in local plans, e.g., general and specific plans while providing grants to support trip reduction efforts. Encourage local governments to require mitigation of vehicle travel as part of new development approval, to adopt transit benefits ordinances in order to reduce transit costs to employees, and to develop innovative ways to encourage rideshare, transit, cycling, and walking for work trips. Fund various employer-based trip reduction programs.</p>	<p>Consistent: The Specific Plan is a Transportation Oriented Development (TOD) Plan and would allow compatible, transit-oriented land uses near the Bay Fair BART Station and multiple bus routes. The Specific Plan includes network and design concepts intended to improve connections and enhance walkability along and across existing corridors, while providing new multi-modal connections in the Specific Plan Area. The following improvements to existing arterial and collector streets would encourage trip reduction:</p> <ul style="list-style-type: none"> ▪ East 14th Street. The design recommendations for East 14th Street are intended to prioritize transit circulation, given the high level of transit activity and the street’s designation as one of AC Transit’s Major Corridors. Pedestrian accommodations are also prioritized to ensure safe access to transit. ▪ Hesperian Boulevard. The design recommendations for Hesperian Boulevard are intended to provide improved facilities for bicyclists and pedestrians with increased separation from automobile traffic and transit vehicles. The Specific Plan recommends reducing the number of through lanes in each direction from three to two to provide space for bike lanes and planting zones. ▪ Fairmont Drive. The design recommendations for Fairmont Drive are intended to provide improved facilities for bicyclists and pedestrians with increased separation from automobile traffic. <p>Finally, the Specific Plan outlines parking management and transportation demand management (TDM) strategies to reduce traffic and the Specific Plan Area’s overall automobile trip generation in comparison with more traditional suburban developments. Strategies to reduce traffic include implementing residential and employer TDM programs.</p>

Control Measures	Consistency
<p>TR9: Bicycle and Pedestrian Access and Facilities. Encourage planning for bicycle and pedestrian facilities in local plans, e.g., general and specific plans, fund bike lanes, routes, paths and bicycle parking facilities.</p>	<p>Consistent. The Specific Plan would promote walkability because the Specific Plan’s standards and guidelines for the local pedestrian network are designed to ensure a safe and comfortable pedestrian environment as development in the Specific Plan Area occurs over time. The Specific Plan would address current walkability challenges in the Specific Plan Area by connecting the pedestrian network and providing safe movement for pedestrians. Standards related to the bicycle network in the Specific Plan are intended to provide bicycle connections between BART, housing, business, and public spaces within the Specific Plan Area. The proposed Specific Plan includes the following bicycle network design standards:</p> <ul style="list-style-type: none"> ▪ Bicycle network. Any new development and new streets in the Specific Plan Area shall provide bicycle facilities and connections consistent with Figure 8, though the exact location and facility design may be adjusted in coordination with the City. Bicycle connectivity with the Specific Plan Area should be established through a network of low-speed streets. The use of Class II or Class IV bike lanes is encouraged; however, streets within the Specific Plan Area without bicycle lanes should still allow for cyclists to share the travel lane comfortably with auto traffic. ▪ Bicycle priority street. A bicycle priority street shall be established to connect the Bay Fair BART Station with East 14th Street and with residential areas to the north and east, as shown in Figure 8. This facility may be designed as either a Class II buffered bike lane or a Class IV separated bike lane. ▪ Shared lanes. Other local streets in the Specific Plan Area, shown as “Shared Lane” streets in Figure 8 of the Specific Plan, shall accommodate bicyclists through a Class III shared bike facility at a minimum. However, a Class II bike lane with or without a buffer is preferred and encouraged, and may also be used on streets with this designation.
<p>TR11: Value Pricing. Implement and/or consider various value pricing strategies.</p>	<p>Consistent. The Specific Plan provides guidelines related to the provision of shared public parking within the Specific Plan Area. The provision of shared public parking is an important element in reducing the area’s overall parking supply and allowing for development patterns supportive of walking and transit use. In addition, the Specific Plan includes parking requirements for private development projects within the Specific Plan Area and lists measures that would qualify for reductions in the automobile parking requirements with approval from the City.</p>
<p>TR13: Parking Policies. Encourage parking policies and programs in local plans, e.g., reduce minimum parking requirements; limit the supply of off-street parking in transit-oriented areas; unbundle the price of parking spaces; support implementation of demand-based pricing (such as “SF Park”) in high-traffic areas.</p>	<p>Consistent. Chapter 3 of the Specific Plan provides guidelines related to the provision of shared public parking within the Specific Plan Area. The provision of shared public parking is an important element in reducing the area’s overall parking supply and allowing for development patterns supportive of walking and transit use. In addition, the Specific Plan includes parking requirements for private development projects within the Specific Plan Area and lists measures that would qualify for reductions in the automobile parking requirements with approval from the City.</p>

Control Measures	Consistency
Energy	
<p>EN2: Decrease Electricity Demand. Work with local governments to adopt additional energy-efficiency policies and programs. Support local government energy efficiency program via best practices, model ordinances, and technical support. Work with partners to develop messaging to decrease electricity demand during peak times.</p>	<p>Consistent. One of the objectives of the Specific Plan is to create a sustainable urban environment including incorporating green building features, green infrastructure and ecology, and sustainable energy systems. The Specific Plan Development Guidelines + Standards Chapter includes the following building performance standards that would conserve energy:</p> <ul style="list-style-type: none"> ▪ CalGreen development; ▪ LEED neighborhood development certification for new development over five acres in size; ▪ Solar ready buildings; and ▪ Sustainable roofs for new construction, additions, and alterations. <p>The Infrastructure and Services Chapter of the Specific Plan contains Energy Policies to decrease electricity demand in the Specific Plan Area including:</p> <ul style="list-style-type: none"> ▪ Renewable Energy. Support the development and application of renewable energy technologies such as active, passive, and photovoltaic solar energy; fuel cells; and other sustainable sources. ▪ Energy Micro-grid. Strongly encourage new and existing buildings to integrate and contribute to City efforts to develop an energy micro-grid which produces and distributes energy in a non-centralized system reliant on renewable sources such as solar. ▪ District Energy. Allow and encourage shared heating and cooling between multiple buildings and other “district” energy and shared energy systems in the Bay Fair area ▪ Energy Innovation. Support new and innovative energy technology, with the objective of reducing dependence on fossil fuels, reducing greenhouse gas emissions, and using energy more efficiently. ▪ Green Building. Ensure the enforcement of California Green Building Code requirements and the continued use of green building checklists during the permitting of major residential and non-residential construction. ▪ Wind Turbines. As available, promote the City’s guidelines for use of wind turbines where aesthetic and environmental concerns can be sufficiently addressed. ▪ Electrical Service. Encourage partnerships with PG&E for the procurement of electrical service from renewable, sustainable and green sources. ▪ Under State law, development under the Specific Plan would be required to comply with all energy standards of Title 24 that are in effect at the time of development. The 2016 Title 24 standards are approximately 28% more efficient than the 2013 standards. The 2013 Title 24 standards are approximately 30% more efficient than the 2008 standards, which in turn are approximately 15% more efficient than the 2005 standards.

Control Measures	Consistency
Buildings	
<p>BL1: Green Buildings. Collaborate with partners such as KyotoUSA to identify energy-related improvements and opportunities for on-site renewable energy systems in school districts; investigate funding strategies to implement upgrades. Identify barriers to effective local implementation of the CALGreen (Title 24) statewide building energy code; develop solutions to improve implementation/enforcement. Work with ABAG’s BayREN program to make additional funding available for energy-related projects in the buildings sector. Engage with additional partners to target reducing emissions from specific types of buildings.</p>	<p>Consistent. The Specific Plan Development Guidelines + Standards Chapter contains building performance standards. This standards include:</p> <ul style="list-style-type: none"> ▪ New development shall achieve the mandatory elements of CalGreen as required by state law, but should seek opportunities to exceed, pursue, and achieve CalGreen Tier 1 or 2. ▪ LEED for new neighborhood development ▪ Solar ready buildings ▪ Green buildings that are LEED or GreenPoint Rated ▪ Sustainable roofs solar reflective roofs or vegetation roofs <p>The Infrastructure and Services Chapter of the Specific Plan contains energy reduction policies including Energy Policy 6 to ensure enforcement of California Green Building Code requirements and the continued use of green building checklists during the permitting of major residential and non-residential construction. The Specific Plan would be required to comply with all energy standards of Title 24 that are in effect at the time of development. The 2016 Title 24 standards are approximately 28% more efficient than the 2013 standards. The 2013 Title 24 standards are approximately 30% more efficient than the 2008 standards, which in turn are approximately 15% more efficient than the 2005 standards.</p>
Water Control Measures	
<p>WR2: Support Water Conservation. Develop a list of best practices that reduce water consumption and increase on-site water recycling in new and existing buildings; incorporate into local planning guidance.</p>	<p>Consistent. Objective 15 of the Specific Plan is Environmental Sustainability to create a sustainable urban environment including water efficiency and conservation. The Specific Plan Development Guidelines + Standards Chapter includes water performance standards including indoor water reuse for new construction, integration of stormwater catchment and treatment into new buildings, and stormwater harvesting. Additionally, landscaping would be compliant with the State Water Efficient Landscape Ordinance and Bay Friendly Landscape Basics (Stop Waste) that would reduce the amount of water used as irrigation for landscaping.</p>

Table 5 shows that the Specific Plan would not disrupt or hinder implementation of any 2017 Plan control measures, but would implement a number of strategies outlined in the 2017 Plan to improve local emissions. Therefore, the Specific Plan would be consistent with the applicable Control Strategies contained in the 2017 Plan for the San Francisco Bay Area Air Basin.

Hinder Implementation of CAP Control Measures

The proposed Specific Plan would be required to be consistent with BAAQMD rules and regulations, including dust and diesel particulate matter reduction measures and would not otherwise cause the disruption, delay or otherwise hinder the implementation of any air quality plan control measure. Buildout of the Specific Plan would not preclude any planned transit or bike pathways, and would not otherwise disrupt regional planning efforts to reduce VMT and meet federal and State air quality standards.

Specific Plan VMT and Population

According to the BAAQMD 2017 CEQA Air Quality Guidelines, the threshold for criteria air pollutants and precursors includes an assessment of the rate of increase of plan VMT and population. As shown in Table 36 in Section 4.13, *Transportation and Traffic*, compared to 2035 No Project Conditions, the proposed Specific Plan would decrease per capita daily VMT from 30.0 to 22.1. Therefore, the rate of increase from proposed VMT from plan buildout would not exceed the rate of increase from the proposed population. Impacts to criteria pollutants would be less than significant.

Mitigation Measures

No mitigation measures are required.

Threshold: Create objectionable odors affecting a substantial number of people

IMPACT AQ-3 THE PROPOSED SPECIFIC PLAN WOULD NOT CREATE OBJECTIONABLE ODORS THAT WOULD AFFECT NEIGHBORING PROPERTIES. 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. The proposed Specific Plan does not include uses that would be associated with objectionable odors. New industrial uses would not be allowed in the Specific Plan Area under the proposed Specific Plan. Odor emissions from the proposed Specific Plan would be limited to odors associated with vehicle and engine exhaust and idling as well as odors from other uses such as restaurants. However, uses under the proposed Specific Plan would not include known sources of objectionable odors for long-term operations. During construction activities, only temporary odors from vehicle exhaust and construction equipment engines would occur. Construction-related odors would cease upon completion. In addition, new development in the Specific Plan Area would be required to adhere to 2035 General Plan Policy EH-3.4, which requires new development to be designed and constructed in a way that reduces odors. Therefore, the proposed Specific Plan would not result in significant impacts related to objectionable odors during construction or operation.

Mitigation Measures

No mitigation measures are required.

c. Cumulative Impacts

According to BAAQMD's *CEQA Air Quality Guidelines*, an air quality plan refers to clean air plans, state implementation plans (SIPS), ozone plans, and other potential air quality plans developed by BAAQMD. To date, BAAQMD's most current air quality plan is the 2017 CAP. As described above, buildout under the Specific Plan would be required to comply with basic and optional control measures in the CAP, which would reduce air pollution resulting from construction activities.

The Specific Plan would not conflict with or obstruct continued implementation of the 2017 CAP and the proposed VMT would not exceed the proposed increase in population, which means that the Specific Plan would not have a cumulatively considerable contribution to regional air quality, according to BAAQMD guidance for CAP consistency. Therefore, cumulative impacts to air quality would be less than significant.