4.2 AIR QUALITY

This section discusses existing air quality, summarizes existing air quality regulations, and evaluates potential air quality impacts associated with the proposed Tirador Residential Development Project (proposed project). This section summarizes the pertinent information and findings provided in the *Air Quality and Greenhouse Gas Emissions Assessment* (LSA 2020) that was prepared for the project. The *Air Quality and Greenhouse Gas Emissions Assessment* is provided in Appendix B of this Draft Environmental Impact Report (EIR).

4.2.1 Scoping Process

The City of San Juan Capistrano (City) received 11 comment letters during the public review period of the Initial Study/Notice of Preparation (IS/NOP). For copies of the IS/NOP comment letters, refer to Appendix A of this EIR. One of the comment letters included comments related to Air Quality.

The letter from South Coast Air Quality Management District (SCAQMD) received on December 3, 2019, recommends the use of SCAQMD's *CEQA Air Quality Handbook* (1993, currently being revised), the latest version of California Emissions Estimator Model (CalEEMod), and SCAQMD's regional and localized significance thresholds in the air quality analysis; recommends the preparation of a mobile health risk assessment (HRA) if the proposed project would generate or attract vehicular trips, especially heavy-duty diesel-fueled vehicles; and suggests potential mitigation measures that could be applied if potentially significant air quality impacts are identified.

4.2.2 Methodology

The *Air Quality and Greenhouse Gas Emissions Assessment* (LSA 2020) was prepared for the proposed project. Air emissions from construction and operation of the proposed project were evaluated in accordance with methodologies recommended by the California Air Resources Board (CARB) and the SCAQMD. The latest version of CalEEMod (v2016.3.2), which was released by the SCAQMD in conjunction with the California Air Pollution Control Officers Association (CAPCOA) and other California air quality districts on October 17, 2017, was used to determine construction and operational air quality emissions of the proposed project. CalEEMod is a statewide land use emissions computer model designed to quantify potential criteria pollutant emissions associated with both construction and operations from a variety of land use projects. Project construction-generated air pollutant emissions were primarily calculated using CalEEMod model defaults for Orange County. However, the length of construction is based on estimates provided by the Project Applicant; construction of the proposed project is anticipated to start in 2021 and is estimated to last approximately 20 months. Operational air pollutant emissions were based on area source and energy use emissions as well as the estimated traffic trip generation rates from the *Traffic Impact Analysis for the Tirador Residential Development Project, San Juan Capistrano, Orange County, California* (TIA) (LSA 2019) (Appendix H), which account for project-related vehicle emissions. Project-related emissions were modeled under the assumption that construction of the proposed project would occur in 11 phases (as shown in Table E of the *Air Quality and Greenhouse Gas Emissions Assessment*). The construction equipment list (as shown in Table F of the *Air Quality and Greenhouse Gas Emissions Assessment*) is used in the CalEEMod model to calculate on-site emissions for each construction phase.

4.2.3 Existing Environmental Setting

San Juan Capistrano, which includes the project site, is within the 6,745-square-mile (sq mi) South Coast Air Basin (Basin), which is under SCAQMD jurisdiction. The Basin includes all of Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino Counties. The air quality in the region is influenced by many factors, including topography, meteorology, and existing air pollutant sources. Ambient air quality is typically characterized by climate conditions, the meteorological influences on air quality, and the quantity and type of pollutants released. The Basin is subject to a combination of topographical and climatic factors that reduce the potential for high levels of regional and local air pollutants. The following discussion describes the characteristics of the Basin and local air quality conditions in the vicinity of the project site.

4.2.3.1 Regional Climate

Climate in the Basin is determined by its terrain and geographical location. The Basin is a coastal plain with connecting broad valleys and low hills. The Pacific Ocean forms the southwestern border, and high mountains surround the rest of the Basin, which lies in the semi-permanent high-pressure zone of the eastern Pacific, resulting in a climate that is mild and tempered by cool ocean breezes. This climatological pattern is rarely interrupted; however, periods of extremely hot weather, winter storms, or Santa Ana wind conditions do occur.

The annual average temperatures range from the low 60s to the high 80s, measured in degrees Fahrenheit (°F). Coastal areas have less variability in annual minimum and maximum temperatures as compared to inland areas. January is typically the coldest month, and August is typically the warmest month in this area of the Basin.

Rainfall in the Basin varies by season and year. Most rainfall occurs between November and April. Summer rainfall is normally restricted to widely scattered thundershowers near the coast, with slightly heavier shower activity in the east and over the mountains.

Although the climate of the Basin can be characterized as semi-arid climate, the air near the land surface is typically moist due to the presence of a marine layer, or a shallow layer of sea air. With very low average wind speeds, there is a limited capacity to disperse air contaminants horizontally. The dominant daily wind pattern is an onshore 6 miles per hour (mph) daytime breeze and an offshore 3 mph nighttime breeze. The typical wind flow pattern fluctuates only with occasional winter storms or strong northeasterly (Santa Ana) winds from the mountains and deserts northeast of the Basin. Summer wind flow patterns represent worst-case conditions because this is the period of higher temperatures and more sunlight, which result in ozone (O_3) formation.

Temperature normally decreases with altitude, and a reversal of this atmospheric state, where temperature increases with altitude, is called an inversion. The height from the Earth to the inversion base is known as the mixing height. Persistent low inversions and cool coastal air tend to create morning fog and low stratus clouds. Cloudy days are less likely in the eastern portions of the Basin and are about 25 percent more likely along the coast. The vertical dispersion of air pollutants in the Basin is limited by temperature inversions in the atmosphere close to the Earth's surface.

Inversions are generally lower in the nighttime when the ground is cooler than during daylight hours when the sun warms the ground and, in turn, the surface air layer. As this heating process continues, the temperature of the surface air layer approaches the temperature of the inversion base, causing heating along its lower edge. If enough warming takes place, the inversion layer becomes weak and opens up to allow the surface air layers to mix upward. This can be seen in the middle-to-late afternoon on a hot summer day when the smog appears to clear up suddenly. Winter inversions typically break earlier in the day, preventing excessive smog buildup.

The combination of stagnant wind conditions and low inversions produces the greatest pollutant concentrations. On days of no inversions or high wind speeds, ambient air pollutant concentrations are lowest. During periods of low inversions and low wind speeds, air pollutants generated in urbanized areas are transported predominantly onshore into Riverside and San Bernardino Counties. In the winter, the greatest pollution problem is the accumulation of carbon monoxide (CO) and nitrogen oxides (NOx) due to extremely low inversions and air stagnation during the night and early morning hours. In the summer, the longer daylight hours and the brighter sunshine combine to cause a reaction between hydrocarbons and NOx to form photochemical smog.

4.2.3.2 Criteria Air Pollutants

Certain air pollutants have been recognized as causing notable health problems and consequential damage to the environment either directly or in reaction with other pollutants due to their presence in elevated concentrations in the atmosphere. Criteria pollutants are regulated through the development of human health-based and/or environmentally based criteria for setting permissible levels. Criteria pollutants, their typical sources, and health effects are discussed below.

- **Carbon Monoxide (CO):** CO is a colorless, odorless gas produced by the incomplete combustion of carbon-containing fuels (e.g., gasoline or wood). CO concentrations tend to be the highest during the winter morning, when little to no wind and surface-based inversions trap the pollutant at ground levels. Because CO is emitted directly from internal combustion engines, motor vehicles operating at slow speeds are the primary source of CO in the Basin. The highest ambient CO concentrations are generally found near congested transportation corridors and intersections. Health effects of CO exposure include chest pain with exercise and electrocardiograph changes indicative of decreased oxygen supply to the heart. Inhaled CO has no direct toxic effect on the lungs, but exerts its effect on tissues by interfering with oxygen transport and competing with oxygen to combine with hemoglobin present in the blood to form carboxyhemoglobin. Individuals with a deficient blood supply to the heart are the most susceptible to the adverse effects of CO exposure. Individuals most at risk include fetuses, patients with diseases involving heart and blood vessels, and patients with chronic hypoxemia (oxygen deficiency) as seen at high altitudes.

- **Sulfur Dioxide (SO_2):** SO_2 is a colorless, extremely irritating gas or liquid. It enters the atmosphere primarily from the burning of high-sulfur-content fuel oils and coal and from chemical processes at chemical plants and refineries. When SO_2 oxidizes in the atmosphere, it forms sulfates (SO_4). Collectively, these pollutants are referred to as oxides of sulfur (SO_X). A few minutes of exposure to low levels of SO_2 can result in airway constriction in some asthmatics, all of whom are sensitive to its effects. In asthmatics, an increase in resistance to air flow as well as

a reduction in breathing capacity leading to severe breathing difficulties are observed after acute exposure to SO_2. In contrast, healthy individuals do not exhibit similar acute responses even after exposure to higher concentrations of SO_2.

- **Oxides of Nitrogen (NO_X):** NO_X consist of nitric oxide (NO), nitrogen dioxide (NO_2) and nitrous oxide (N_2O) and are formed when nitrogen (N_2) combines with oxygen (O_2). Their lifespan in the atmosphere ranges from 1 to 7 days for NO and NO_2 and to 170 years for N_2O. NO_X are typically created during combustion processes and are major contributors to smog formation and acid deposition. Of the seven types of NO_X compounds, NO_2 is the most abundant in the atmosphere. NO_2 absorbs blue light, resulting in a brownish-red cast to the atmosphere and reduced visibility. Because ambient concentrations of NO_2 are related to traffic density, commuters in heavy traffic may be exposed to higher concentrations of NO_2 than those indicated by regional monitors. An increase in acute respiratory illness, including infections and respiratory symptoms in children (not infants), is associated with long-term exposure to NO_2 at levels found in homes with gas stoves that are higher than ambient levels found in Southern California. An increase in resistance to air flow and airway contraction is observed after short-term exposure to NO_2 in healthy individuals. Larger decreases in lung functions are observed in individuals with asthma or chronic obstructive pulmonary disease (e.g., chronic bronchitis, emphysema) because they are more susceptible to NO_2 effects than healthy individuals.

- **Ozone (O_3):** O_3 is a highly reactive and unstable gas that is formed when volatile organic compounds (VOCs) and NO_X, both of which are byproducts of internal combustion engine exhaust, undergo slow photochemical reactions in the presence of sunlight. O_3 concentrations are generally highest during the summer months when direct sunlight, light wind, and warm temperature conditions are favorable to the formation of this pollutant. Short-term exposure (lasting for a few hours) to O_3 at levels typically observed in Southern California can result in breathing pattern changes, reduction of breathing capacity, increased susceptibility to infections, inflammation of the lung tissue, and some immunological changes. Individuals exercising outdoors, children, and people with preexisting lung disease (e.g., asthma and chronic pulmonary lung disease) are the most susceptible to O_3 effects.

- **Particulate Matter Less Than 10 Microns in Size (PM_{10}):** PM_{10} consists of tiny solid or liquid particles of soot, dust, smoke, fumes, and aerosols. The size of the particles (10 microns or smaller, about 0.0004 inch or less) allows them to easily enter the lungs where they may be deposited, resulting in adverse health effects. PM_{10} also causes visibility reduction. A consistent correlation between elevated ambient coarse particulate matter levels and an increase in mortality rates, respiratory infections, number and severity of asthma attacks, and the number of hospital admissions has been observed in different parts of the United States and various areas around the world. The elderly, people with pre-existing respiratory or cardiovascular disease, and children are more susceptible than adults to the effects of high levels of PM_{10}.

- **Particulate Matter Less Than 2.5 Microns in Size ($PM_{2.5}$):** $PM_{2.5}$ consists of tiny solid or liquid particles that are 2.5 microns or smaller (which is often referred to as fine particles). These particles are formed in the atmosphere from primary gaseous emissions that include sulfates formed from SO_2 release from power plants and industrial facilities and nitrates formed from

NO_X release from power plants, automobiles, and other types of combustion sources. The chemical composition of fine particles highly depends on location, time of year, and weather conditions. In addition to the health effects of PM_{10}, discussed above, daily fluctuations in $PM_{2.5}$ concentration levels have been related to hospital admissions for acute respiratory conditions in children, school and kindergarten absences, decreased lung growth and respiratory volumes in children, and increased medication use in children and adults with asthma. The elderly, people with pre-existing respiratory or cardiovascular disease, and children are more susceptible to the effects of high levels of $PM_{2.5}$.

- **Lead (Pb):** Lead is a heavy metal that is highly persistent in the environment. In the past, the primary source of lead in the air was emissions from vehicles burning leaded gasoline. As a result of the removal of lead from gasoline, there have been no violations at any of the SCAQMD's regular air monitoring stations since 1982. Currently, emissions of lead are largely limited to stationary sources such as lead smelters. Fetuses, infants, and children are more sensitive than others to the adverse effects of lead exposure. Exposure to low levels of lead can adversely affect the development and function of the central nervous system, leading to learning disorders, distractibility, inability to follow simple commands, and lower intelligence. Lead can be stored in the bone from early-age environmental exposure, and elevated lead levels in blood can occur due to a breakdown of bone tissue during pregnancy, hyperthyroidism (increased secretion of hormones from the thyroid gland), and osteoporosis (breakdown of bony tissue). Fetuses and breast-fed babies can be exposed to higher levels of lead because of their mothers being previously exposed to lead. In adults, increased lead levels are associated with increased blood pressure. Lead poisoning can cause anemia, lethargy, seizures, and death; however, it appears that lead has no direct effect on the respiratory system.

- **Volatile Organic Compounds (VOCs) and Reactive Organic Gases (ROG):** VOCs are hydrocarbon compounds (i.e., any compound containing various combinations of hydrogen and carbon atoms) that exist in the ambient air. VOCs contribute to the formation of smog through atmospheric photochemical reactions and may be toxic. Compounds of carbon (also known as organic compounds) have different levels of reactivity (i.e., they do not react at the same speed or do not form O_3 to the same extent when exposed to photochemical processes). VOCs often have an odor (e.g., gasoline, alcohol, and the solvents used in paints). Exceptions to the VOC designation include: CO, carbon dioxide (CO_2), carbonic acid, metallic carbides or carbonates, and ammonium carbonate. Similar to VOCs, ROGs are also precursors in forming O_3 and consist of compounds containing methane, ethane, propane, butane, and longer chain hydrocarbons, which are typically the result of some type of combustion/decomposition process. Smog is formed when ROGs and NO_X react in the presence of sunlight. The SCAQMD uses the terms VOC and ROG interchangeably. VOCs and ROGs are considered criteria pollutants since they are a precursor to O_3, which is a criteria pollutant. Offensive odors can potentially affect human health in several ways. First, odorant compounds can irritate the eye, nose, and throat, which can reduce respiratory volume. Second, the VOCs and ROGs that cause odors can stimulate sensory nerves to cause neurochemical changes that might influence health, for instance, by compromising the immune system. Finally, unpleasant odors can trigger memories or attitudes linked to unpleasant odors, causing cognitive and emotional effects such as stress.

4.2.3.3 Regional Air Quality

The CARB coordinates and oversees both State and federal air pollution control programs in the State. The CARB oversees activities of local air quality management agencies and maintains air quality monitoring stations throughout the State in conjunction with the United States Environmental Protection Agency (USEPA) and local air quality districts. CARB has divided the State into 15 air basins based on meteorological and topographical factors of air pollution. Data collected at these stations are used by CARB and the USEPA to classify air basins as attainment, nonattainment, nonattainment-transitional, or unclassified, based on air quality data for the most recent three calendar years compared with the ambient air quality standards (AAQS). As discussed in further detail in Section 4.2.4, Regulatory Setting, the federal government and the State of California have both established health-based AAQS for the criteria air pollutants. Areas that meet the AAQS are classified as attainment areas, while areas that do not meet these standards are classified as nonattainment areas.

Attainment areas may be:

- Attainment/unclassified ("unclassifiable" in some lists), which have never violated the air quality standard of interest or do not have enough monitoring data to establish attainment or nonattainment status;

- Attainment/maintenance (National Ambient Air Quality Standards [NAAQS] only), which violated an NAAQS that is currently in use (was nonattainment) in or after 1990, but now attains the standard and is officially re-designated as attainment by the USEPA with a maintenance State Implementation Plan (SIP); or

- Attainment (usually only for California Ambient Air Quality Standards [CAAQS], but sometimes for NAAQS), which have adequate monitoring data to show attainment, have never been nonattainment, or, for NAAQS, have completed the official maintenance period.

Additional restrictions are imposed on nonattainment areas as required by the USEPA. The air quality data collected from monitoring stations are also used to monitor progress in attaining air quality standards. Table 4.2.A lists the attainment status for the criteria pollutants in the Basin.

4.2.3.4 Local Air Quality

The SCAQMD, together with the CARB, maintains ambient air quality monitoring stations in the Basin. The air quality monitoring station closest to the site is the Mission Viejo station, which monitors air pollutant data for ozone, CO, nitrogen dioxide (NO_2), and SO_2, PM_{10} and $PM_{2.5}$. Nitrogen dioxide and SO_2 data were obtained from the Costa Mesa Monitoring Station. The air quality trends from these two stations are used to represent the ambient air quality in the vicinity of the project site.

Table 4.2.A: Attainment Status of Criteria Pollutants in the South Coast Air Basin

Pollutant	State	Federal
O_3 1-hour	Nonattainment	N/A
O_3 8-hour	Nonattainment	Extreme Nonattainment[1]
PM_{10}	Nonattainment	Attainment/Maintenance
$PM_{2.5}$	Nonattainment	Nonattainment
CO	Attainment	Attainment/Maintenance
NO_2	Attainment	Unclassified/Attainment (1-hour) Attainment/Maintenance (Annual)
SO_2	Attainment	Unclassified/Attainment
Lead	Attainment[2]	Unclassified/Attainment[1]
All others	Attainment/Unclassified	Attainment/Unclassified

Source: CARB. Air Quality Standards and Area Designations. Website: http://www.arb.ca.gov/desig/desig.htm (accessed November 2019).

[1] Area has a design value of 0.175 ppm and above.

[2] Except in Los Angeles County.

CARB = California Air Resources Board
CO = carbon monoxide
N/A = not applicable
NO_2 = nitrogen dioxide
O_3 = ozone
PM_{10} = particulate matter less than 10 microns in size
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
ppm = parts per million
SO_2 = sulfur dioxide

Between 2016 and 2018, the ambient air quality data indicate that CO, PM_{10}, $PM_{2.5}$, NO_2, and SO_2 levels are consistently below the relevant State and federal standards. The State 1-hour O_3 standard was exceeded between 2 and 5 times and the State 8-hour O_3 standard was exceeded between 8 and 27 times between 2016 and 2018. The Federal 8-hour O_3 standard was exceeded between 9 and 25 times between 2016 and 2018. The State 24-hour and annual PM_{10} standards were exceeded at least once between 2017 and 2018.

4.2.3.5 Sensitive Receptors

Certain land uses are considered sensitive to air quality. Examples of these include residential areas, educational facilities, hospitals, childcare facilities, and senior housing. The closest off-site sensitive receptors are the residential and school land uses located northeast of the proposed project site. The nearest existing residential units (i.e., assisted living residences) are approximately 220 feet (ft) northeast of proposed project boundary. The nearest school to the project site is St. Margaret's Episcopal School, which is located 1,000 ft northeast of the project site.

4.2.3.6 Existing Project Site Emissions

The project site is currently undeveloped and vacant. The existing project site is characterized by dirt and scattered ruderal vegetation, is irregular in shape, and is relatively flat with a slight slope to the east/southeast. There are no current emissions associated with the undeveloped site.

4.2.4 Regulatory Setting

4.2.4.1 Federal Regulations

Clean Air Act. The USEPA is responsible for implementing the federal Clean Air Act (CAA). The federal CAA was first enacted in 1955, and has been amended numerous times in subsequent years (i.e., 1963, 1965, 1967, 1970, 1977, and 1990). The CAA authorizes the federal government to set federal air quality standards for pollutant emissions. The CAA also specifies future dates for achieving compliance with the NAAQS. Pursuant to the federal CAA, the USEPA is responsible for setting and enforcing the NAAQS for six major pollutants (O_3, CO, NO_X, SO_2, PM_{10}, $PM_{2.5}$, and lead), which are termed "criteria" pollutants. Criteria pollutants are defined as those pollutants for which the federal and State governments have established AAQS, or criteria, for outdoor concentrations in order to protect public health.

The 1990 amendments to the CAA that identify specific emission reduction goals for areas not meeting the NAAQS require a demonstration of reasonable further progress toward attainment and incorporate additional sanctions for failure to attain or to meet interim milestones. The NAAQS were amended in July 1997 to include an additional standard for O_3 and to adopt an NAAQS for $PM_{2.5}$. All air basins have been formally designated as attainment or non-attainment for each NAAQS. The NAAQS attainment status for the Basin was previously summarized in Table 4.2.A, above.

4.2.4.2 State Regulations

California Clean Air Act. Assembly Bill (AB) 2595, the California Clean Air Act (CCAA), was signed into law in 1988 and requires all areas of the State to achieve and maintain the CAAQS. The CCAA mandates achievement of the maximum degree of emission reductions possible from vehicular and other mobile sources in order to attain the CAAQS by the earliest practical date. The CARB, which became part of the California Environmental Protection Agency (Cal/EPA) in 1991, is responsible for ensuring implementation of the CCAA and federal CAA and for regulating emissions from consumer products and motor vehicles within California. The CARB established the CAAQS for all pollutants for which the federal government has NAAQS and, in addition, establishes standards for sulfates, visibility, hydrogen sulfide, and vinyl chloride. However, at this time, hydrogen sulfide and vinyl chloride are not measured at any monitoring stations in the Basin because they are not considered to be a regional air quality problem. Generally, the CAAQS are more stringent than the NAAQS. All air basins have been formally designated as attainment or non-attainment for each CAAQS.

Non-attainment areas are required to prepare Air Quality Management Plans (AQMPs) that include specified emission reduction strategies in an effort to meet clean air goals. These plans are required to include:

- Application of Best Available Retrofit Control Technology to existing sources;
- Developing control programs for area sources (e.g., architectural coatings and solvents) and indirect sources (e.g., motor vehicle use generated by residential and commercial development);
- A District permitting system designed to allow no net increase in emissions from any new or modified permitted sources of emissions;

- Implementing reasonably available transportation control measures and assuring a substantial reduction in growth rate of vehicle trips and miles traveled;

- Significant use of low emission vehicles by fleet operators; and

- Sufficient control strategies to achieve a 5 percent or more annual reduction in emissions or 15 percent or more in a period of 3 years for ROGs, NO_X, CO, and PM_{10}. However, air basins may use an alternative emission reduction strategy that achieves a reduction of less than 5 percent per year under certain circumstances.

California State Implementation Plan. The CAA mandates that each state submit and implement State Implementation Plans (SIPs). States containing areas violating the national ambient air quality standards are required to revise their SIPs to include additional control measures aimed at reducing air pollution. The SIP is required to include strategies and control measures to attain the NAAQS by deadlines established by the CAA. The USEPA reviews all SIPs to determine conformance with the CAA.

State law mandates CARB to serve as the lead agency for all purposes related to SIPs, which are prepared by local air quality districts and other agencies and submitted to CARB for review and approval. Subsequently, CARB forwards SIP revisions to the USEPA for approval and publication in the Federal Register. The 2016 Air Quality Management Plan (AQMP) is the SIP for the Basin and is a regional blueprint for implementing air quality standards within areas under the SCAQMD jurisdiction, which is discussed further below.

4.2.4.3 Regional Regulations

South Coast Air Quality Management District. The SCAQMD is the air pollution control agency for Orange County, as well as the urban portions of Los Angeles, Riverside, and San Bernardino Counties. The agency's primary responsibility is ensuring that the federal and state ambient air quality standards are attained and maintained in the Basin. The SCAQMD 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, and conducting public education campaigns, as well as many other activities. All projects within the Basin are subject to SCAQMD rules and regulations in effect at the time of construction.

As stated previously, the AQMP is the SIP for the Basin. The AQMP is a regional blueprint for implementing air quality standards within the Basin and some portions of the Salton Sea Air Basin that are under SCAQMD's jurisdiction. The AQMP asserts that the most effective way to reduce air pollution impacts is to reduce emissions from mobile sources. Additionally, the AQMP relies on partnerships between governmental agencies at the federal, state, regional, and local level. These agencies, which are comprised of USEPA, CARB, local governments, Southern California Association of Governments (SCAG) and the SCAQMD, are the primary agencies that implement the AQMP programs. The AQMP incorporates the latest scientific and technical information and planning assumptions, including SCAG's latest Regional Transportation Plan/Sustainable Communities

Strategy (RTP/SCS), updated emission inventory methodologies for various source categories, and SCAG's latest growth forecasts, as well as includes integrated strategies and measures to meet the NAAQS.

The SCAQMD has established regional and localized significance thresholds for regulated pollutants, which are discussed below.

- **Regional Significance Thresholds:** The SCAQMD regional significance thresholds for regulated pollutants are shown in Table 4.2.B. Pursuant to SCAQMD guidelines, these thresholds of significance are used to assess the impacts of project-related construction and operational emissions on regional and local ambient air quality. According to SCAQMD guidelines, any projects with daily emissions that exceed the regional thresholds of significance should be considered as having an individually and cumulatively significant air quality impact.

Table 4.2.B: SCAQMD Regional Significance Thresholds

Criteria Pollutant	Emissions Threshold (lbs/day)	
	Construction	Operation
ROG/VOC	75	55
NO_X	100	55
PM_{10}	150	150
$PM_{2.5}$	55	55
SO_X	150	150
CO	550	550

Source: *Air Quality and Greenhouse Gas Emissions Analysis* (LSA 2020).
CO = carbon monoxide
lbs/day = pounds per day
NO_X = oxides of nitrogen
PM_{10} = particulate matter less than 10 microns in size
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
ROG = reactive organic gas
SO_2 = sulfur dioxide

- **Localized Significance Thresholds (LSTs):** The SCAQMD published its *Final Localized Significance Threshold Methodology* in July 2008 (SCAQMD 2008a) recommending that all air quality analyses include an assessment of both construction and operational impacts on the air quality of nearby sensitive receptors from emissions of CO, NOx, PM_{10}, and $PM_{2.5}$. LSTs represent the maximum emissions from a project that would not be expected to result in an exceedance of the NAAQS or CAAQS. LSTs are based on the ambient concentrations of that pollutant within the project's Source Receptor Area (SRA) and the distance to the nearest sensitive receptor. For this project, the appropriate SRA is Capistrano Valley (SRA 21). Sensitive receptors near the project site include existing residential homes located approximately 220 ft northeast of the project boundary.

  Based on the SCAQMD recommended methodology[1] and the construction equipment planned, no more than 5 acres[1] would be disturbed on any one day; thus, the 5-acre LSTs have been used

[1] SCAQMD. *Fact Sheet for Applying CalEEMod to Localized Significance Thresholds*. Website: www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/caleemod-guidance.pdf (accessed April 2018).

for construction emissions. On-site operational emissions would occur from stationary and mobile sources. On-site vehicle emissions are the largest source of emissions and it is assumed that the on-site travel routes for the proposed project would occupy up to 5 acres of the surface area. Therefore, the 5-acre thresholds would apply during project operations.

Table 4.2.C shows the LSTs for a 5-acre project site in SRA 21 with sensitive receptors located within 25 meters of the project site.[2]

Table 4.2.C: SCAQMD Local Significance Thresholds

Project Size	Emissions Threshold (lbs/day) Construction / Operations			
	NO_X	CO	PM_{10}	$PM_{2.5}$
5 acre	193 / 193	2,327 / 2,327	41 / 10	13 / 3.3

Source: *Air Quality and Greenhouse Gas Emissions Analysis* (LSA 2020).
CO = carbon monoxide
lbs/day = pounds per day
NO_X = oxides of nitrogen
PM_{10} = particulate matter less than 10 microns in size
$PM_{2.5}$ = particulate matter less than 2.5 microns in size

4.2.4.4 Local Regulations

City of San Juan Capistrano General Plan. The City of San Juan Capistrano General Plan was approved by the City Council in December 1999, with the exception of the Housing Element, which was updated and adopted by the City Council in January 2014 and further revised in September 2017. In May 2002, the City Council approved a General Plan Amendment, which included a variety of changes to several of the General Plan Elements.

The City's General Plan is the principal land use document guiding development within the City. The City's General Plan is a comprehensive plan that establishes goals, objectives, and policies intended to guide growth and development in the City. The General Plan also serves as a blueprint for development throughout the community and is the vehicle through which the community needs, desires, and aspirations are balanced. The San Juan Capistrano General Plan is the fundamental tool for influencing the quality of life in the City.

Conservation and Open Space Element. While air quality is not a State-mandated element of a general plan, the AQMP requires air quality to be addressed in general plans. Air quality is included within the Conservation and Open Space Element (1999) of the City's General Plan to fulfill AQMP requirements. The Conservation and Open Space Element contains the following goals and policies aimed at improving air quality within the City through proper planning for land use, transportation, and energy use.

1 A maximum disturbance of 1.95 acres would occur during the grading phase from the use of one rubber-tired dozer, and one grader for 8 hours per day.

2 Since development projects typically result in negligible construction and long-term operation SO emissions, SCAQMD does not provide an LST for this pollutant.

Goal 6.0: Improve air quality.

Policy 6.1: Cooperate with the South Coast Air Quality Management District and Southern California Association of Governments in their efforts to implement the regional Air Quality Management Plan.

Policy 6.2: Cooperate and participate in regional air quality management planning, programs and enforcement measures.

Policy 6.3: Implement City-wide traffic flow improvements.

Policy 6.4: Achieve a greater balance between jobs and housing in San Juan Capistrano.

Policy 6.5: Integrate air quality planning with land use and transportation planning.

Policy 6.6: Promote energy conservation and recycling by the public and private sectors.

4.2.5 Thresholds of Significance

The thresholds for air quality impacts used in this analysis are consistent with Appendix G of the *State CEQA Guidelines* and the City's *Local Guidelines for Implementing the California Environmental Quality Act* (2019). The proposed project may be deemed to have a significant impact with respect to air quality if it would:

Threshold 4.2.1: Conflict with or obstruct implementation of the applicable air quality plan.

Threshold 4.2.2: 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.

Threshold 4.2.3: Expose sensitive receptors to substantial pollutant concentrations.

Threshold 4.2.4: Result in other emissions (such as those leading to odors adversely affecting a substantial number of people).

The Initial Study, included as Appendix A, substantiates that impacts associated with Threshold 4.2.4 would be less than significant because implementation of the proposed project involves the development of a residential community, and as such, is not anticipated to produce emissions that could lead to objectionable odors affecting a substantial number of people. Therefore, this threshold will not be addressed in the following analysis.

4.2.6 Project Impacts

Threshold 4.2.1: Would the project conflict with or obstruct implementation of the applicable air quality plan?

Less Than Significant Impact. Projects are considered consistent with, and would not conflict with or obstruct implementation of the AQMP, if the growth in socioeconomic factors (e.g., population, employment) is consistent with the underlying regional plans used to develop the AQMP. The future emissions forecasts are primarily based on demographic and economic growth projections provided by SCAG. Thus, demographic growth forecasts for various socioeconomic categories (e.g., population, housing, and employment by industry) developed by SCAG for its 2016 Regional Transportation Plan (SCAG 2016) were used to estimate future emissions in the Final 2016 AQMP (SCAQMD 2016).

Chapter 12, Sections 12.2 and 12.3 of the SCAQMD *CEQA Air Quality Handbook* (1993) outlines two criteria for determining consistency with the 2016 AQMP. A project would be consistent with the AQMP if the project (1) would not increase the frequency or severity of an existing air quality violation or cause or contribute to new a new violation or delay the timely attainment of air quality standards or the interim emissions reductions specified in the AQMP, and (2) would not exceed the growth assumptions in the AQMP based on the year of project build out, would be consistent with land use planning strategies set forth by SCAQMD, and would implement all feasible air quality mitigation measures.

Criterion 1. The proposed project would result in short-term construction and long-term operational pollutant emissions that are all less than the CEQA significance emissions thresholds established by the SCAQMD, as demonstrated below under Threshold 4.2.2; therefore, the proposed project would not result in an increase in the frequency or severity of any air quality standards violation and will not cause a new air quality standard violation. Pollutant emissions generated during project construction and operation would not 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. Therefore, the proposed project would be consistent with the AQMP under the first criterion.

Criterion 2. The SCAQMD's second criterion for determining project consistency focuses on whether or not the proposed project exceeds the assumptions utilized in preparing the forecasts presented its air quality planning documents. Project consistency with population, housing, and employment assumptions that were used in the development of SCAQMD air quality plans ensures a project is consistent with regional air quality planning efforts. The *CEQA Air Quality Handbook* (1993) indicates that consistency with AQMP growth assumptions must be analyzed for new or amended General Plan elements, Specific Plans, and significant projects. Significant projects include airports, electrical generating facilities, petroleum and gas refineries, designation of oil drilling districts, water ports, solid waste disposal sites, and offshore drilling facilities; therefore, the proposed project is not defined as a significant project. The project site currently has a General Plan Land Use designation of Planned Community, along with smaller portions designated General Open Space and Community Park. Development of the project site would not require any General Plan Amendment as proposed uses within each designated area are consistent with the applicable General Plan designations. As such, the proposed project is not anticipated to exceed the AQMP assumptions for the project site and is found to be consistent with the AQMP for the Basin.

In order to further reduce emissions, the project would comply with SCAQMD emission reduction measures including SCAQMD Rules 402, 403, and 1113. SCAQMD Rule 402 prohibits the discharge, from any source, air contaminants or other material that cause injury, detriment, nuisance, or annoyance to the public, or that endanger the comfort, repose, health, or safety of the public, or that cause, or have a natural tendency to cause, injury or damage to business or property. SCAQMD Rule 403 requires fugitive dust sources to implement Best Available Control Measures for all sources, and all forms of visible particulate matter are prohibited from crossing any property line. Rule 403 is intended to reduce PM_{10} emissions from transportation, handling, construction, or storage activities that have the potential to generate fugitive dust. SCAQMD 1113 requires manufacturers, distributors, and end-users of architectural and industrial maintenance coatings to reduce reactive organic gas (ROG) emissions from the use of architectural coatings. The project is required to comply with these emission reduction measures during construction as outlined in Regulatory Compliance Measures AQ-1 through AQ-3 (refer to Section 4.2.8, Regulatory Compliance Measures and Mitigation Measures, below). For the reasons stated above, the proposed project is considered to be consistent with the second criterion.

Summary. The proposed project would not conflict with or obstruct implementation of the 2016 AQMP because (1) the project's construction and operational emissions would not exceed the SCAQMD regional significance thresholds, and (2) the proposed project is consistent with the current General Plan land use designations on the project site and would not exceed the growth assumptions in the AQMP, is consistent with land use planning strategies set forth by SCAQMD, and includes implementation of all feasible air quality rules to reduce emissions. Therefore, impacts related to the conflict with or obstruction of implementation of the applicable air quality plan would be less than significant, and no mitigation is required.

Threshold 4.2.2: Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?

Less Than Significant Impact.

Construction. Construction related emissions are temporary and short-term. Project-related construction emissions include those from operation of construction vehicles (i.e., excavators, trenchers, and dump trucks), the creation of fugitive dust during clearing and grading, and the use of asphalt or other oil-based substances during paving activities, which can release VOCs. Construction emissions would vary daily depending on the weather, soil conditions, the amount of activity taking place, and the nature of dust control efforts. During construction, approximately 10.45 acres of the 16.1-acre project site will be developed for residential use. Therefore, the construction activity would disturb approximately 10.45 acres of soil. Based on SCAQMD guidance for localized significant threshold analysis, the maximum daily site grading of 1.95 acres would occur per day.

As specified in Regulatory Compliance Measures AQ-1 through AQ-3 (refer to Section 4.2.8, Regulatory Compliance Measures and Mitigation Measures), construction of the proposed project would comply with SCAQMD standard conditions, including Rule 402 (Nuisance) to control nuisance emissions, Rule 403 (Fugitive Dust) to control fugitive dust, and Rule 1113 (Architectural Coatings) to control VOC emissions from paint. Compliance with SCAQMD standard conditions are regulatory requirements and were considered in the analysis of construction emissions. Table 4.2.D presents the worst-case construction emissions based on the construction schedule (Table E of the *Air Quality and Greenhouse Gas Emissions Assessment*) and construction equipment (Table F of the *Air Quality and Greenhouse Gas Emissions Assessment*) anticipated for project construction.

As previously discussed, the portion of the Basin in which the project site is located is in nonattainment of the NAAQS for O_3 and $PM_{2.5}$. The Basin is in nonattainment of the CAAQS for O_3, $PM_{2.5}$, and PM_{10}. Table 4.2.D shows that construction equipment/vehicle emissions during construction periods would not exceed any of the SCAQMD established daily emissions thresholds for which the project region is nonattainment under the CAAQS or NAAQS. Therefore, the proposed project would not exceed the SCAQMD construction emissions thresholds and short-term (construction) air quality impacts would be less than significant. No mitigation is required.

Operation. Long-term air pollutant emission impacts are those associated with stationary sources and mobile sources involving any project-related changes. Project-related operations would result in the long-term emission of ROG, NO_X, SO_X, CO, PM_{10}, and $PM_{2.5}$ primarily associated with motor vehicle use. Vehicle trips to and from the project site would generate mobile source emissions. Vehicles traveling on paved roads would be a source of fugitive emissions due to the generation of road dust and tire wear particulates. Mobile source emissions are dependent on both overall daily vehicle trip generation and the effect of the project on peak-hour traffic volumes and traffic operations in the vicinity of the project site. Project-related stationary-source emissions would come from area and energy sources.

Operational emissions associated with the proposed project (including energy use for appliances, landscaping equipment, use of consumer products, and motor vehicles) were calculated using CalEEMod. Based on the CalEEMod default values for vehicle trip generation, the model estimated that 132 residential units would generate approximately 890 trips per weekday, which is consistent with the trip generation estimates developed in the project's TIA (LSA 2019).

Table 4.2.D: Short-Term Regional Construction Emissions

Construction Phase	Total Regional Pollutant Emissions (lbs/day)							
	VOC	NO_X	CO	SO_2	Fugitive PM_{10}	Exhaust PM_{10}	Fugitive $PM_{2.5}$	Exhaust $PM_{2.5}$
Site Preparation	3.96	40.54	21.70	0.04	7.25	2.05	3.93	1.88
Existing Utility Relocation	3.96	40.54	21.70	0.04	7.25	2.05	3.93	1.88
Grading	4.82	65.69	36.92	0.12	4.93	2.05	1.82	1.89
Backbone Infrastructure	1.07	9.71	9.86	0.01	0.15	0.65	0.04	0.60
Building Construction Model Phase 1	2.59	21.33	21.86	0.05	1.83	0.98	0.49	0.92
Building Construction (Phase 2)	2.59	21.33	21.86	0.05	1.83	0.98	0.49	0.92
Building Construction (Phase 3)	2.36	19.29	21.32	0.05	1.83	0.83	0.49	0.78
Paving (Phase 1)	1.47	11.16	15.01	0.02	0.17	0.57	0.04	0.52
Architectural Coating (Phase 1)	54.43	1.47	2.61	0.01	0.31	0.83	0.08	0.78
Building Construction (Phase 4)	2.36	19.29	21.32	0.05	1.83	0.57	0.49	0.52
Paving (Phase 2)	1.47	11.16	15.01	0.02	0.17	0.08	0.04	0.08
Architectural Coating (Phase 2)	54.43	1.47	2.54	0.01	0.31	0.83	0.08	0.78
Paving (Phase 3)	1.47	11.16	14.97	0.02	0.17	0.57	0.04	0.52
Architectural Coating (Phase 3)	54.43	1.47	2.54	0.01	0.31	0.08	0.08	0.08
Paving (Phase 4)	1.47	11.16	14.97	0.02	0.17	0.57	0.04	0.52
Architectural Coating (Phase 4)	54.43	1.47	2.61	0.01	0.31	0.08	0.08	0.08
Peak Daily Emissions	**54.43**	**65.69**	**36.92**	**0.12**	**9.29**		**5.81**	
SCAQMD Thresholds	**75.00**	**100.00**	**550.00**	**150.00**	**150.00**		**55.00**	
Exceedance?	**No**	**No**	**No**	**No**	**No**		**No**	

Source: Compiled by LSA Associates, Inc. (January 2020).
Note: Column totals may not add due to rounding from the model results.

CO = carbon monoxide
NO_X = nitrogen oxides
PM_{10} = particulate matter less than 10 microns in size
SO_2 = sulfur dioxide
lbs/day = pounds per day
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
SCAQMD = South Coast Air Quality Management District
VOC = volatile organic compounds

As previously discussed, the portion of the Basin in which the project site is located is in nonattainment of the NAAQS for O_3 and $PM_{2.5}$. The Basin is in nonattainment of the CAAQS for O_3, $PM_{2.5}$, and PM_{10}. Table 4.2.E summarizes the project's maximum daily emissions during operation. As shown in Table 4.2.E, while the project would result in the increased emissions of criteria pollutants, emissions during operation of the proposed project would not exceed the thresholds of significance for any criteria pollutants for which the project region is nonattainment under the CAAQS or NAAQS. No mitigation is required.

Table 4.2.E: Regional Operational Emissions

Source	Pollutant Emissions (lbs/day)					
	VOC	NOx	CO	SO_X	PM_{10}	$PM_{2.5}$
Area	4.19	1.99	11.73	0.01	0.21	0.21
Energy	0.08	0.68	0.29	<0.01	0.05	0.05
Mobile	1.38	5.69	18.87	0.07	6.80	1.85
Total Emissions	**5.65**	**8.35**	**30.89**	**0.09**	**7.07**	**2.12**
SCAQMD Thresholds	**55.00**	**55.00**	**550.00**	**150.00**	**150.00**	**55.00**
Exceedance?	**No**	**No**	**No**	**No**	**No**	**No**

Source: Compiled by LSA (January 2020).
Note: Column totals may not add due to rounding from the model results.

CO = carbon monoxide
lbs/day = pounds per day
NOx = nitrogen oxides
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
PM_{10} = particulate matter less than 10 microns in size
SCAQMD = South Coast Air Quality Management District
SOx = sulfur oxides
VOC = volatile organic compounds

Threshold 4.2.3: Would the project expose sensitive receptors to substantial pollutant concentrations?

Less Than Significant Impact.

Construction. In order to identify impacts to sensitive receptors, the SCAQMD recommends addressing LSTs for construction. As previously described, the SCAQMD has issued guidance on applying CalEEMod modeling to LSTs for projects greater than five acres. Further, CalEEMod calculates construction emissions based on the number of equipment hours and the maximum daily soil disturbance activity possible for each piece of equipment. Based on SCAQMD guidance for localized significant threshold analysis, the maximum daily site grading of 1.95 acres would occur per day. Table 4.2.F shows the maximum on-site construction emissions of CO, NOx, PM_{10}, and $PM_{2.5}$ during construction when measured against LST thresholds. As shown in Table 4.2.F, the proposed project would not exceed the LSTs for construction emissions. Therefore, impacts from localized construction-related emissions would be less than significant and no mitigation is required.

Table 4.2.F: Summary of On-Site Construction Emissions, Localized Significance

Construction	Emission Rates (lbs/day)			
	NOx	CO	PM_{10}[1]	$PM_{2.5}$[1]
On-Site Construction Emissions	46	31	9.1	5.2
Localized Significance Threshold	**193**	**2,327**	**41**	**13.0**
Exceedance?	**No**	**No**	**No**	**No**

Source: Compiled by LSA (January 2020).
Notes: On-site emissions represent maximum daily construction emissions.
SRA – Capistrano Valley Area, 5 acres, receptors at 67 meters

[1] Total PM_{10} and $PM_{2.5}$ daily emissions with fugitive dust mitigation measures implemented.

CO = carbon monoxide
lbs/day = pounds per day
NOx = nitrogen oxides
PM_{10} = particulate matter less than 10 microns in size
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
SRA = source receptor area

Table 4.2.G shows the calculated emissions for the proposed operational activities compared with the appropriate LSTs. For a worst-case scenario assessment, the emissions shown in Table 4.2.G include all on-site project-related stationary sources and 5 percent of the project-related new mobile sources, which is an estimate of the amount of project-related new vehicle traffic that would occur on site.

Table 4.2.G: Long-Term Operational Localized Impacts Analysis

Emissions Sources	Pollutant Emissions (lbs/day)			
	NOx	**CO**	**PM_{10}**	**$PM_{2.5}$**
Total On-Site Emissions	2.3	13	0.6	0.3
LST Thresholds	**193**	**2,327**	**10.0**	**3.3**
Exceedance?	**No**	**No**	**No**	**No**

Source: Compiled by LSA (January 2020).
Notes: Column totals may not add due to rounding from the model results.
SRA – Capistrano Valley Area, 5 acres, receptors at 67 meters.
CO = carbon monoxide
lbs/day = pounds per day
LST = localized significance thresholds
NOx = nitrogen oxides
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
PM_{10} = particulate matter less than 10 microns in size
SRA = Source Receptor Area

Table 4.2.G shows that the operational emission rates would not exceed the LSTs for the residential homes located 220 ft (67 meters) to the northeast of the project site. Therefore, impacts from localized operation-related emissions would be less than significant and no mitigation is required.

CO Hot Spot. CO hot spots are caused by vehicular emissions, primarily when idling at congested intersections. Based on the analysis presented below, a CO "hot-spot" analysis is not needed to determine whether a change in the level of service (LOS) of an intersection in the vicinity of the project site would have the potential to result in exceedance of either the CAAQS or NAAQS.

Vehicular trips associated with the proposed project would contribute to congestion at intersections and along roadway segments in the vicinity of the proposed project site. Localized air quality impacts would occur when emissions from vehicular traffic increase as a result of the proposed project. The primary mobile-source pollutant of local concern is CO, a direct function of vehicle idling time and, thus, of traffic flow conditions. CO transport is extremely limited; under normal meteorological conditions, it disperses rapidly with distance from the source. However, under certain extreme meteorological conditions, CO concentrations near a congested roadway or intersection may reach unhealthful levels, affecting local sensitive receptors (residents, schoolchildren, the elderly, and hospital patients, etc.).

Typically, high CO concentrations are associated with roadways or intersections operating at unacceptable levels of service or with extremely high traffic volumes. In areas with high

ambient background CO concentrations, modeling is recommended, to determine a project's effect on local CO levels.

When the SCAQMD *CEQA Air Quality Handbook* (1993) was published, the Basin was designated nonattainment under the CAAQS and NAAQS for CO. With the turnover of older vehicles, introduction of cleaner fuels, and implementation of control technology on industrial facilities, CO concentrations in the Basin have steadily declined. In 2007, the Basin was re-designated as attainment for CO under both the CAAQS and NAAQS. As identified within SCAQMD's 2003 AQMP (SCAQMD 2005a), peak carbon monoxide concentrations in the Basin were a result of unusual meteorological and topographical conditions and not a result of congestion at a particular intersection. All areas of the Basin have continued to remain below the federal standards (35 ppm 1-hour and 9 ppm 8-hour standards) since 2003 (SCAQMD 2016).

An assessment of project-related impacts on localized ambient air quality requires that future ambient air quality levels be projected. Existing CO concentrations in the immediate project vicinity are not available. Ambient CO levels monitored at the Anaheim Monitoring Station showed a highest recorded 1-hour concentration of 1.4 ppm (the State standard is 20 ppm) and a highest 8-hour concentration of 0.8 ppm (the State standard is 9 ppm) during the past 3 years. The highest CO concentrations would normally occur during peak traffic hours; hence, CO impacts calculated under peak traffic conditions represent a worst-case analysis. Reduced speeds and vehicular congestion at intersections result in increased CO emissions. Given the extremely low level of CO concentrations in the project area and the lack of traffic impacts at any intersections, project-related vehicles are not expected to contribute significantly to CO concentrations exceeding the State or federal CO standards. Because no CO hot spot would occur, as identified in the proposed project, there would be no project-related impacts on CO concentrations.

Mobile Health Risk Assessment. The IS/NOP comment letter submitted by the SCAQMD recommends the preparation of a mobile health risk assessment (HRA) if the proposed project would generate or attract vehicular trips, especially heavy-duty diesel-fueled vehicles. While this project would result in the generation of vehicular trips (890 average daily trips), a mobile HRA was not performed because the proposed residential project would not generate or attract heavy-duty diesel-fueled vehicles. Further, under CEQA, lead agencies are generally not required to consider the effect that the existing environment (such as existing freeways) will have on sensitive receptors (refer to *California Building Industry Association v. Bay Area Air Quality Management District* [No. S213478, Decided December 17, 2015]).[1] The proposed project would not affect the number of heavy-duty diesel-fueled vehicles traveling along the I-5 and would not exacerbate air quality associated with such vehicles. The effect of the heavy-duty diesel-fueled vehicles traveling along I-5 on the proposed project is therefore outside of the scope of environmental review pursuant to CEQA, and no mobile health risk assessment is required.

[1] *California Building Industry Association v. Bay Area Air Quality Management District* [No. S213478, Decided December 17, 2015]). Website: https://caselaw.findlaw.com/ca-supreme-court/1721100.html (accessed February 2020).

4.2.7 Level of Significance Prior to Mitigation

Prior to mitigation, the proposed project would result in less than significant impacts. However, the following regulatory compliance measures are existing SCAQMD regulations that are applicable to the proposed project and are considered in the analysis of potential impacts related to air quality. The City of San Juan Capistrano considers these requirements to be mandatory; therefore, they are not mitigation measures.

4.2.8 Regulatory Compliance Measures and Mitigation Measures

4.2.8.1 Regulatory Compliance Measures

The proposed project would comply with the following Regulatory Compliance Measures. The City considers these to be mandatory; therefore, they are not considered mitigation.

Regulatory Compliance Measure AQ-1

South Coast Air Quality Management District (SCAQMD) Rule 402, Nuisance. Prohibits the discharge from any source whatsoever such quantities of air contaminants or other material that cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health, or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property. This rule does not apply to odors emanating from agricultural operations necessary for the growing of crops or the raising of fowl or animals.

Regulatory Compliance Measure AQ-2

South Coast Air Quality Management District (SCAQMD) Rule 403, Fugitive Dust. The Project Applicant shall ensure the construction contractor implements fugitive dust control measures in compliance with SCAQMD Rule 403. The Project Applicant shall include the following fugitive dust control measures for SCAQMD Rule 403 compliance in the project plans and specifications:

- All clearing, grading, earth-moving, or excavation activities shall cease when winds exceed 25 miles per hour (mph) per SCAQMD guidelines in order to limit fugitive dust emissions.
- The construction contractor shall ensure that all disturbed unpaved roads and disturbed areas within the project site are watered, with complete coverage of disturbed areas, at least three (3) times daily during dry weather and preferably mid-

morning, afternoon, and after work is done for the day.

- The contractor shall ensure that traffic speeds on unpaved roads and project site areas are reduced to 15 mph or less.

Regulatory Compliance Measure AQ-3

SCAQMD Rule 1113. The Project Applicant shall ensure the construction contractor implements measures to control volatile organic compound (VOC) emissions from architectural coatings in compliance with SCAQMD Rule 1113. The Project Applicant shall include the following control measures for SCAQMD Rule 1113 compliance in the project plans and specifications:

- Only "Low-Volatile Organic Compounds" paints (no more than 50 grams/liter of VOC) shall be used.

4.2.8.2 Mitigation Measures

No mitigation is required for the proposed project.

4.2.9 Level of Significance after Mitigation

Implementation of Regulatory Compliance Measures AQ-1 through AQ-3 would further reduce less than significant project-related air quality impacts. No significant unavoidable impacts related to air quality would occur with implementation of these standard measures. All anticipated impacts related to air quality would be considered less than significant, and no mitigation is required.

4.2.10 Cumulative Impacts

As defined in Section 15130 of the *State CEQA Guidelines*, cumulative impacts are the incremental effects of an individual project when viewed in connection with the effects of past, current, and probable future projects within the cumulative impact area for air quality. The cumulative impact area for air quality related to the proposed project is the Basin.

Air pollution is inherently a cumulative impact measured across an air basin. The discussion under Threshold 4.2.2, above, includes an analysis of the proposed project's contribution to cumulative air impacts. To summarize the conclusion with respect to that analysis, the incremental effect of projects that do not exceed the project-specific thresholds are generally not considered to be cumulatively considerable per SCAQMD guidelines. The proposed project's construction- and operation-related regional daily emissions are less than the SCAQMD significance thresholds for all criteria pollutants. In addition, adherence to SCAQMD rules and regulations on a project-by-project basis would substantially reduce potential impacts associated with the related cumulative projects and basin-wide air pollutant emissions. Therefore, the proposed project would not have a cumulatively considerable increase in emissions, and the proposed project's cumulative air quality impacts would be less than significant. No mitigation is required.

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