4.2 AIR QUALITY

This section analyzes the potential for adverse impacts with respect to air quality that would result from implementation of the proposed project. The Initial Study/Notice of Preparation (IS/NOP) (Appendix A) identified the potential for impacts associated with violation of air quality standards or substantial contribution to an existing or projected air quality violation; conflict with or obstruct implementation of the applicable air quality plan; expose sensitive receptors to substantial pollutant concentrations; or, cumulatively result in a considerable net increase in criteria pollutants for which the project region is not in attainment.

No issues related to air quality were scoped out in the IS/NOP. Data used to prepare this section was taken from various sources, including the South Coast Air Quality Management District (SCAQMD) CEQA Air Quality Handbook, the SCAQMD Air Quality Analysis Guidance Handbook, the 2007 Air Quality Management Plan (AQMP), and the Transit Zoning Code (SD 84A and SD 84B) Traffic Study (December 2007).

4.2.1 Environmental Setting

Climate

The City of Santa Ana is situated on the Santa Ana River, which is located in the Santa Ana Valley in the southwestern portion of California, approximately 10 miles from the Pacific Ocean. The City is located within the South Coast Air Basin (Basin), named so because its geographical formation is that of a basin, with the surrounding mountains trapping the air and its pollutants in the valleys or basins below. This 6,600-square-mile area includes all of Orange County and the non-desert portions of Los Angeles, San Bernardino, and Riverside Counties. The regional climate within the Basin is considered semi-arid and is characterized by warm summers, mild winters, infrequent seasonal rainfall, moderate daytime onshore breezes, and moderate humidity. The air quality within the Basin is influenced by a wide range of emission sources, such as dense population centers, heavy vehicular traffic, and industry, and meteorology.

A semi-permanent, subtropical high-pressure cell over the Pacific Ocean largely controls the climate of the Basin by moderating the difference in seasonal temperatures. The annual average temperature varies little throughout the Basin, with the average in the middle 60s, measured in degrees Fahrenheit (°F). Coastal areas have a more pronounced oceanic influence, and show less variability in annual minimum and maximum temperatures than inland areas. The City of Santa Ana is located in northern Orange County, which is in the southern portion of the Basin. The annual average temperature in the City is 75.0°F, with temperature ranges from approximately 68.0°F in January to 82.0°F in July.

Although the climate of the Basin can be characterized as semi-arid, the air near the land surface is quite moist on most days because of the presence of a marine layer. This shallow layer of sea air is an important modifier of Basin climate. Humidity restricts visibility in the Basin. The annual average relative humidity is 71 percent along the coast and 59 percent inland. Because the ocean effect is dominant,

periods of heavy early morning fog are frequent and low stratus clouds are a characteristic feature. These effects decrease with distance from the coast. The year-round humidity of Santa Ana is generally 53 percent, and the sun shines approximately 300 days out of the year. The majority of annual rainfall in the Basin occurs between November and April. Summer rainfall is minimal and generally limited to scattered thundershowers in coastal regions and slightly heavier showers in the eastern portion of the Basin, along the coastal side of the mountains. Average rainfall in the City of Santa Ana is 12.99 inches annually with a seasonal maximum of 30.59 inches in 1997–1998 and occurs almost exclusively from late October to early April. The influence of rainfall on the contaminant levels in the Basin is minimal.

The Basin experiences a persistent temperature inversion, which is characterized by increasing temperature with increasing altitude. This inversion limits the vertical dispersion of air contaminants, holding them relatively near the ground. As the sun warms the ground and lower air layer, the temperature of the lower air layer approaches the temperature of the base of the inversion (upper) layer until the inversion layer finally breaks, allowing vertical mixing with the lower layer. The mixing height for this inversion structure is normally situated 1,000 to 1,500 feet above mean sea level.

The vertical dispersion of air contaminants in the Basin is also affected by wind conditions. The combination of stagnant wind conditions and low inversions produces the greatest pollutant concentrations. On days of no inversion or high wind speeds, ambient air pollutant concentrations are the lowest. During periods of low inversions and low wind speeds, air pollutants generated in urbanized areas in the Basin are transported predominantly on-shore into Riverside and San Bernardino Counties. The Santa Ana winds are strong, dry, north or northeasterly winds that occur during the fall and winter months, and disperse air contaminants in the Basin. The Santa Ana winds often last for several days at a time.

Winds in the vicinity of the proposed project site blow predominantly from the south-southwest, with relatively low velocities. Wind speeds at the proposed project site average about 4.75 miles per hour. Summer wind speeds are, on average, slightly higher than winter wind speeds. Peak gust velocities can reach as high as 68 miles per hour.[3]

Air Quality Background

Air pollutant emissions within the Basin are generated by stationary and mobile sources. Stationary sources can be divided into two major subcategories: point and area sources. Point sources are usually required to have a permit from the SCAQMD in order to operate. Point sources typically occur at specific identified locations, and are usually associated with manufacturing and industry. Some examples of point sources are boilers or combustion equipment that produce electricity or generate heat, such as heating, ventilation, and air conditioning (HVAC) units. Area sources are widely distributed and produce many small emissions, thus the SCAQMD does not require permits to operate. The area-wide use of area sources contributes to regional air pollution. Examples of area sources include residential and commercial water heaters, painting operations, portable generators, lawn mowers, agricultural fields,

[3] National Oceanic and Atmospheric Administration, National Climatic Data Center, Climatic Wind Data for the United States, 1930-1996, http://www.ncdc.noaa.gov/oa/mpp/freedata.html, Accessed October 31, 2007.

landfills, and consumer products, such as barbeque lighter fluid and hairspray. Mobile sources are classified as either on-road or off-road sources and account for the majority of the air pollutant emissions within the Basin. Examples of mobile sources are emissions from motor vehicles, including tailpipe and evaporative emissions. On-road sources are those that are legally operated on roadways and highways. Off-road sources include aircraft, ships, trains, and construction vehicles.

Mobile sources account for the majority of the air pollutant emissions within the Basin. However, air pollutants can also be generated by the natural environment, such as when fine dust particles are pulled off the ground surface and suspended in the air during high winds.

Both the federal and state governments have established ambient air quality standards for outdoor concentrations of specific pollutants which are referred to as "criteria pollutants," in order to protect public health. The national and state ambient air quality standards have been set at concentration levels that will protect the most sensitive persons from illness or discomfort with a margin of safety. Applicable ambient air quality standards are identified later in this section. The SCAQMD is responsible for bringing air quality in the Basin into attainment with the national and state ambient air quality standards.

The criteria pollutants for which federal and state standards have been promulgated and that are most relevant to air quality planning and regulation in the Basin are ozone, carbon monoxide, fine suspended particulate matter, nitrogen dioxide, sulfur dioxide, and lead. In addition, toxic air contaminants are of concern in the Basin. Each of these is briefly described below.

- **Ozone (O_3)** is a gas that is formed when volatile organic compounds (VOCs) and nitrogen oxides (NO_X), both byproducts of internal combustion engine exhaust, undergo slow photochemical reactions in the presence of sunlight. Ozone 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.
- **Carbon Monoxide (CO)** is a colorless, odorless gas produced by the incomplete combustion of fuels. CO concentrations tend to be the highest during the winter morning, with little to no wind, when surface-based inversions trap the pollutant at ground levels. Motor vehicles operating at slow speeds are the primary source of CO in the Basin because the CO is emitted directly from internal combustion engines. The highest ambient CO concentrations are generally found near congested transportation corridors and intersections.
- **Respirable Particulate Matter (PM_{10})** and **Fine Particulate Matter ($PM_{2.5}$)** consist of extremely small, suspended particles or droplets 10 microns and 2.5 microns or smaller in diameter, respectively. Some sources of particulate matter, like pollen and windstorms, are naturally occurring. However, in populated areas, most particulate matter is caused by road dust, diesel soot, combustion products, abrasion of tires and brakes, and construction activities.
- **Nitrogen Dioxide (NO_2)** is a nitrogen oxide compound that is produced by the combustion of fossil fuels, such as in internal combustion engines (both gasoline and diesel powered), as well as point sources, especially power plants. Of the seven types of nitrogen oxide compounds, NO_2 is the most abundant in the atmosphere. Commuters in heavy traffic may be exposed to higher concentrations of NO_2 than those indicated by regional monitors, because ambient concentrations of NO_2 are related to traffic density.

- **Sulfur Dioxide (SO_2)** is a colorless, extremely irritating gas or liquid which enters the atmosphere as a pollutant, mainly as a result of burning high sulfur-content fuel oils and coal, as well as from chemical processes occurring at chemical plants and refineries. When sulfur dioxide oxidizes in the atmosphere, it forms sulfates (SO_4). Collectively, these pollutants are referred to as sulfur oxides (SO_X).
- **Lead (Pb)** is a solid heavy metal that can exist in air pollution as an aerosol particle component. An aerosol is a collection of solid, liquid, or mixed-phase particles suspended in the air. Lead was first regulated as an air pollutant in 1976. Leaded gasoline was first marketed in 1923 and was used in motor vehicles until around 1970. The exclusion of lead from gasoline helped to decrease emissions of lead in the United States from 219,000 to 4,000 short tons per year between 1970 and 1997. Even though leaded gasoline has been phased out in most countries, some still use leaded gasoline. Lead ore crushing, lead-ore smelting, and battery manufacturing are currently the largest sources of lead in the atmosphere in the United States. Other sources include dust from soils contaminated with lead-based paint, solid waste disposal, and crustal physical weathering. The mechanisms by which lead can be removed from the atmosphere (sinks) include deposition to soils, ice caps, oceans, and inhalation. Lead accumulates in bones, soft tissue, and blood and can affect the kidneys, liver, and nervous system. The more serious effects of lead poisoning include behavior disorders, mental retardation, and neurological impairment. Low levels of lead in fetuses and young children can result in nervous system damage, which can cause learning deficiencies and low IQs. Lead may also contribute to high blood pressure and heart disease.

  Lead concentrations once exceeded the state and national air quality standards by a wide margin but have not exceeded state or national air quality standards at any regular monitoring station since 1982. Lead is no longer an additive to normal gasoline, which is the main reason concentration of lead in the air is low. The proposed Project will not emit lead, and therefore, lead is eliminated from further review in this analysis.
- **Toxic Air Contaminants (TACs)** refer to a diverse group of air pollutants that are capable of causing chronic (i.e., of long duration) and acute (i.e., severe but of short duration) adverse effects on human health. TACs include both organic and inorganic chemical substances that may be emitted from a variety of common sources including gasoline stations, motor vehicles, dry cleaners, industrial operations, painting operations, and research and teaching facilities. Toxic air contaminants are different than "criteria" pollutants in that ambient air quality standards have not been established for them, largely because there are hundreds of air toxics and their effects on health tend to be local rather than regional.

State standards have been promulgated for other criteria air pollutants, including SO_4, hydrogen sulfide, Pb, and visibility-reducing particles. The state also recognizes vinyl chloride as a TAC, but with an undetermined threshold level of exposure for adverse health effects. Vinyl chloride and hydrogen sulfide emissions are generally generated from mining, milling, refining, smelting, landfills, sewer plants, cement manufacturing, or the manufacturing or decomposition of organic matter. The state standards for sulfate and visibility reducing particles are not exceeded anywhere in the Basin. Lead is typically only emitted during demolition of structures expected to include lead-based paint and materials. However, the developer would be required to follow federal and state regulations that govern the renovation and demolition of structures where materials containing lead are present.

Health Effects of Air Pollutants

Ozone

Individuals exercising outdoors, children, and people with preexisting lung disease, such as asthma and chronic pulmonary lung disease, are considered to be the most susceptible sub-groups for ozone effects. Short-term exposure (lasting for a few hours) to ozone 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. Elevated ozone levels are associated with increased school absences. In recent years, a correlation between elevated ambient ozone levels and increases in daily hospital admission rates, as well as mortality, has also been reported. An increased risk for asthma has been found in children who participate in multiple sports and live in high ozone communities.

Ozone exposure under exercising conditions is known to increase the severity of the responses described above. Animal studies suggest that exposure to a combination of pollutants that includes ozone may be more toxic than exposure to ozone alone. Although lung volume and resistance changes observed after a single exposure diminish with repeated exposures, biochemical and cellular changes appear to persist, which can lead to subsequent lung structural changes.

Carbon Monoxide

Individuals with a deficient blood supply to the heart are the most susceptible to the adverse effects of CO exposure. The effects observed include earlier onset of chest pain with exercise, and electrocardiograph changes indicative of worsening 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 (COHb). Hence, conditions with an increased demand for oxygen supply can be adversely affected by exposure to CO. 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.

Reduction in birth weight and impaired neurobehavioral development have been observed in animals chronically exposed to CO, resulting in COHb levels similar to those observed in smokers. Recent studies have found increased risks for adverse birth outcomes with exposure to elevated CO levels; these include pre-term births and heart abnormalities.

Particulate Matter

A consistent correlation between elevated ambient fine particulate matter (PM_{10} and $PM_{2.5}$) 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. In recent years, some studies have reported an association between long-term exposure to air

pollution dominated by fine particles and increased mortality, reduction in life span, and an increased mortality from lung cancer.

Daily fluctuations in $PM_{2.5}$ concentration levels have also been related to hospital admissions for acute respiratory conditions in children, to school and kindergarten absences, to a decrease in respiratory lung volumes in normal children, and to increased medication use in children and adults with asthma. Recent studies show lung function growth in children is reduced with long-term exposure to particulate matter.

The elderly, people with pre-existing respiratory or cardiovascular disease, and children appear to be more susceptible to the effects of high levels of PM_{10} and $PM_{2.5}$.

Nitrogen Dioxide

Population-based studies suggest that 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, which are higher than ambient levels found in Southern California. Increase in resistance to air flow and airway contraction is observed after short-term exposure to NO_2 in healthy subjects. Larger decreases in lung functions are observed in individuals with asthma or chronic obstructive pulmonary disease (e.g., chronic bronchitis, emphysema) than in healthy individuals, indicating a greater susceptibility of these sub-groups.

In animals, exposure to levels of NO_2 considerably higher than ambient concentrations results in increased susceptibility to infections, possibly due to the observed changes in cells involved in maintaining immune functions. The severity of lung tissue damage associated with high levels of ozone exposure increases when animals are exposed to a combination of ozone and NO_2.

Sulfur Dioxide

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, increase in resistance to airflow, as well as 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.

Animal studies suggest that despite SO_2 being a respiratory irritant, it does not cause substantial lung injury at ambient concentrations. However, very high levels of exposure can cause lung edema (fluid accumulation), lung tissue damage, and sloughing off of cells lining the respiratory tract.

Some population-based studies indicate that the mortality and morbidity effects associated with fine particles show a similar association with ambient SO_2 levels. In these studies, efforts to separate the effects of SO_2 from those of fine particles have not been successful. It is not clear whether the two pollutants act synergistically or one pollutant alone is the predominant factor.

Lead

Fetuses, infants, and children are more sensitive than others to the adverse effects of Pb exposure. Exposure to low levels of Pb 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 quotient. In adults, increased Pb levels are associated with increased blood pressure.

Pb poisoning can cause anemia, lethargy, seizures, and death, although it appears that there are no direct effects of Pb on the respiratory system. Pb can be stored in the bone from early age environmental exposure, and elevated blood Pb levels can occur due to 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 Pb because of previous environmental Pb exposure of their mothers.

Odors

The science of odor as a health concern is still new. Merely identifying the hundreds of VOCs that cause livestock odors poses a big challenge. Offensive livestock 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 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.

Toxic Air Contaminant Emissions

Toxic Air Contaminants (TACs) are airborne substances that are capable of causing chronic and acute adverse effects on human health. They include both organic and inorganic chemical substances that may be emitted from a variety of common sources including gasoline stations, motor vehicles, dry cleaners, industrial operations, painting operations, and research and teaching facilities. TACs are different from the "criteria" pollutants previously discussed in that ambient air quality standards have not been established for them.

Regional Air Quality

Measurements of ambient concentrations of the criteria pollutants are used by the United States Environmental Protection Agency (U.S. EPA) and the California Air Resources Board (ARB) to assess and classify the air quality of each air basin, county, or, in some cases, a specific urbanized area. The classification is determined by comparing actual monitoring data with national, State, and federal standards. If a pollutant concentration in an area is lower than the standard, the area is classified as being in "attainment." If the pollutant exceeds the standard, the area is classified as a "non-attainment" area. If there is not enough data available to determine whether the standard is exceeded in an area, the area is designated "unclassified."

The entire Basin is designated as a federal-level extreme nonattainment area for ozone, meaning that federal ambient air quality standards are not expected to be met for more than eighteen years, and as a serious nonattainment area for CO and PM_{10}. The area is also a federal-level nonattainment area for $PM_{2.5}$, as designated by the U.S. EPA. It is in attainment for the state NO_X standard. The Basin is a State-level extreme nonattainment area for ozone, and is a state-level nonattainment area for $PM_{2.5}$ and PM_{10}. It is in attainment for the state CO standard, and it is in attainment for both the federal and State ambient air quality standards for SO_2, Pb, and NO_2, which is a pure form of NO_X (ARB 2006).

The SCAQMD divides the Basin into forty source receptor areas (SRAs) in which thirty-six monitoring stations operate to monitor the various concentrations of air pollutants in the region. The City of Santa Ana is located within SRA 17, which covers the Central Orange County area. The ARB also collects ambient air quality data through a network of air monitoring stations throughout the state. These data are summarized annually and are published in the ARB's California Air Quality Data Summaries. The Anaheim-Pampas Lane monitoring station is the nearest monitoring station to the project site. The Anaheim-Pampas Lane station currently monitors emission levels of ozone, CO, NO_2, PM_{10}, and $PM_{2.5}$ but does not monitor the pollutant levels of SO_2 and H_2S.

Table 4.2-1 (Summary of Ambient Air Quality in the Proposed Project Vicinity) identifies the national and state ambient air quality standards for the relevant air pollutants and identifies the ambient pollutant concentrations that have been measured at the Central Orange County monitoring stations from 2006 through 2008.

Table 4.2-1 Summary of Ambient Air Quality in the Proposed Project Vicinity

Air Pollutants Monitored Within SRA 17—Central Orange County Area	*Year*		
	2006	*2007*	*2008*
Ozone (O_3)			
Maximum 1-hour concentration measured	0.11 ppm	0.127 ppm	0.105 ppm
Number of days exceeding national 0.12 ppm 1-hour standard	0	1	0
Number of days exceeding state 0.09 ppm 1-hour standard	5	2	2
Maximum 8-hour concentration measured	0.088 ppm	0.099 ppm	0.086 ppm
Number of days exceeding national 0.08 ppm 8-hour standard	1	1	1
Number of days exceeding state 0.07 ppm 8-hour standard	3	7	10
Nitrogen Dioxide (NO_2)			
Maximum 1-hour concentration measured	0.11 ppm	0.10 ppm	0.09 ppm
Number of days exceeding state 0.25 ppm 1-hour standard	0	0	0
Annual average	0.020 ppm	0.0208 ppm	0.0203 ppm
Does measured annual average exceed national 0.0534 ppm annual average standard?	No	No	No

Table 4.2-1 Summary of Ambient Air Quality in the Proposed Project Vicinity

Air Pollutants Monitored Within SRA 17—Central Orange County Area	Year 2006	2007	2008
Carbon Monoxide (CO)			
Maximum 1-hour concentration measured	5 ppm	4 ppm	4ppm
Number of days exceeding national 35.0 ppm 1-hour standard	0	0	0
Number of days exceeding state 20.0 ppm 1-hour standard	0	0	0
Maximum 8-hour concentration measured	3.0 ppm	2.9 ppm	3.6 ppm
Number of days exceeding national 9.0 ppm 8-hour standard	0	0	0
Number of days exceeding state 9.0 ppm 8-hour standard	0	0	0
Suspended Particulates (PM_{10})			
Maximum 24-hour concentration measured	103 µg/m^3	75+ µg/m^3	61µg/m^3
Number of days exceeding national 150 µg/m^3 24-hour standard	0	0+	0
Number of days exceeding state 50.0 µg/m^3 24-hour standard	7	5(9)+	3(5%)
Annual Average Concentration µg/m^3	*	31.0+ µg/m^3	28.6
Suspended Particulates ($PM_{2.5}$)			
Maximum 24-hour concentration measured	56.2 µg/m^3	79.4 µg/m^3	67.9 µg/m^3
Number of days exceeding national 150 µg/m^3 24-hour standard	0	0	0
Sulfur Dioxide (SO_2)[a]			
Maximum 24-hour concentration measured	0.05 ppm	0.004 ppm	0.003 ppm
Number of days exceeding federal 0.14 ppm 24-hour standard	0	0	0
Number of days exceeding state 0.04 ppm 24-hour standard	0	0	0

SOURCE: Air Resources Board, Air Quality Data Statistics, Top 4 Measurements and Days Above the Standard, http://www.arb.ca.gov/adam/welcome.html, Accessed November 13, 2007; South Coast Air Quality Management District, Historical Data by Year, http://www.aqmd.gov/smog/historicaldata.htm, Accessed November 12, 2007.

ppm = parts by volume per million of air.

µg/m3 = micrograms per cubic meter.

a. Sulfur Dioxide (SO_2) concentrations were measured at the Costa Mesa-Verde monitoring station SRA18.

* Information not provided by AQMD.

According to air quality data shown in Table 4.2-1, the national 1-hour ozone standard has not been exceeded in the past three years in Central Orange County. However, the state 1-hour ozone standard was exceeded a total of 9 days over the past 3 years. The national 8-hour ozone standard was exceeded a total of three days over the past three years, while the state 8-hour ozone standard was exceeded a total of 20 days over the past three years. No national or state standards for CO or NO_2 have been exceeded over the last three years within the Central Orange County area. The Particulate Matter (PM_{10}) was not exceeded over the last three years for national 24-hour standards; however, the state 24-hour standard was exceeded a total of 15 days from 2006 through 2008. The Particulate Matter ($PM_{2.5}$) was not exceeded for the national 24-hour standards. Ambient air quality levels were not available for sulfur dioxide; however, concentrations at the Costa Mesa-Verde monitoring station did not exceed national or state 24-hour standards.

Sensitive Receptors

Some land uses are considered more sensitive to air pollution than others due to the types of population groups or activities involved. Sensitive population groups include children, the elderly, the acutely ill, and the chronically ill, especially those with cardio-respiratory diseases. Residential areas are considered to be sensitive to air pollution because residents (including children and the elderly) tend to be at home for extended periods of time, resulting in sustained exposure to any pollutants present. Schools are also considered as sensitive, as children are present for extended durations and engage in regular outdoor activities. Recreational land uses are considered moderately sensitive to air pollution because exercise places a high demand on respiratory functions, which can be impaired by air pollution.

Standard Conditions and Uniform Codes

All projects constructed in the Basin are subject to Standard Conditions and Uniform Codes. Compliance with these provisions is mandatory and, as such, does not constitute mitigation under CEQA. Those conditions specific to air quality are included below:

- Adherence to SCAQMD Rule 403, which sets requirements for dust control associated with grading and construction activities.
- Adherence to SCAQMD Rules 431.1 and 431.2, which require the use of low sulfur fuel for stationary construction equipment.
- Adherence to SCAQMD Rule 1108, which sets limitations on ROG content in asphalt.
- Adherence to SCAQMD Rule 1113, which sets limitations on ROG content in architectural coatings.
- Adherence to Title 24 energy-efficient design requirements as well as the provision of window glazing, wall insulation, and efficient ventilation methods in accordance with the requirements of the Uniform Building Code.

During construction, the Project would be subject to SCAQMD Rule 403 (fugitive dust). SCAQMD Rule 403 does not require a permit for construction activities, per se, but rather, sets forth general and specific requirements for all construction sites (as well as other fugitive dust sources) in the South Coast Air Basin. The general requirement prohibits a person from causing or allowing emissions of fugitive dust from construction (or other fugitive dust source) such that the presence of such dust remains visible in the atmosphere beyond the property line of the emissions source. SCAQMD Rule 403 also prohibits a construction site from causing an incremental PM_{10} concentration impact at the property line of more than 50 micrograms per cubic meter as determined through PM_{10} high-volume sampling, but the concentration standard and associated PM_{10} sampling do not apply if specific measures identified in the rules are implemented and appropriately documented.

In accordance with Rule 403, the SCAQMD requires that contractors implement Best Available Control Technology (BACT) for construction activities. Rule 403 identifies a set of specific measures for projects less than 50 acres. These requirements are included in Table 4.2-2 (Required Best Available Control Measures for Fugitive Dust). Note that these measures are regulatory requirements and as such, do not constitute mitigation under CEQA.

Table 4.2-2 Required Best Available Control Measures for Fugitive Dust

(Applicable to All Construction Activity Sources)

Source Category	Control Measures	Guidance
Backfilling	Stabilize backfill material when not actively handling; and Stabilize backfill material during handling; and Stabilize soil at completion of activity	Mix backfill soil with water prior to moving; and Dedicate water truck or high capacity hose to backfilling equipment; and Empty loader bucket slowly so that no dust plumes are generated; and Minimize drop height from loader bucket.
Clearing and grubbing	Maintain stability of soil through pre-watering of site prior to clearing and grubbing; and Stabilize soil during clearing and grubbing activities; and Stabilize soil immediately after clearing and grubbing activities.	Maintain live perennial vegetation where possible; and Apply water in sufficient quantity to prevent generation of dust plumes.
Clearing forms	Use water spray to clear forms; or Use sweeping and water spray to clear forms; or Use vacuum system to clear forms.	Use of high-pressure air to clear forms may cause exceedance of Rule requirements.
Crushing	Stabilize surface soils prior to operation of support equipment; and Stabilize material after crushing.	Follow permit conditions for crushing equipment; and Pre-water material prior to loading into crusher; and Monitor crusher emissions opacity; and Apply water to crushed material to prevent dust plumes.
Cut and fill	Pre-water soils prior to cut and fill activities; and Stabilize soil during and after cut and fill activities.	For large sites, pre-water with sprinklers or water trucks and allow time for penetration; and Use water trucks/pulls to water soils to depth of cut prior to subsequent cuts.
Demolition—mechanical/manual	Stabilize wind erodible surfaces to reduce dust; and Stabilize surface soil where support equipment and vehicles will operate; and Stabilize loose soil and demolition debris; and Comply with AQMD Rule 1403.	Apply water in sufficient quantities to prevent the generation of visible dust plumes.
Disturbed soil	Stabilize disturbed soil throughout the construction site; and Stabilize disturbed soil between structures	Limit vehicular traffic and disturbances on soils where possible; and If interior block walls are planned, install as early as possible; and Apply water or a stabilizing agent in sufficient quantities to prevent the generation of visible dust plumes.

Table 4.2-2 Required Best Available Control Measures for Fugitive Dust

(Applicable to All Construction Activity Sources)

Source Category	Control Measures	Guidance
Earth-moving activities	Pre-apply water to depth of proposed cuts; and Re-apply water as necessary to maintain soils in a damp condition and to ensure that visible emissions do not exceed 100 feet in any direction; and Stabilize soils once earth-moving activities are complete.	Grade each Project phase separately, timed to coincide with construction phase; and Upwind fencing can prevent material movement onsite; and Apply water or a stabilizing agent in sufficient quantities to prevent the generation of visible dust plumes.
Importing/exporting of bulk materials	Stabilize material while loading to reduce fugitive dust emissions; and Maintain at least six inches of freeboard on haul vehicles; and Stabilize material while transporting to reduce fugitive dust emissions; and Stabilize material while unloading to reduce fugitive dust emissions; and	Use tarps or other suitable enclosures on haul trucks; and Check belly-dump truck seals regularly and remove any trapped rocks to prevent spillage; and Comply with track-out prevention/mitigation requirements; and
	Comply with Vehicle Code Section 23114.	Provide water while loading and unloading to reduce visible dust plumes.
Landscaping	Stabilize soils, materials, slopes	Apply water to materials to stabilize; and Maintain materials in a crusted condition; and Maintain effective cover over materials; and Stabilize sloping surfaces using soil binders until vegetation or ground cover can effectively stabilize the slopes; and Hydro seed prior to rain season.
Road shoulder maintenance	Apply water to unpaved shoulders prior to clearing; and Apply chemical dust suppressants and/or washed gravel to maintain a stabilized surface after completing road shoulder maintenance.	Installation of curbing and/or paving of road shoulders can reduce recurring maintenance costs; and Use of chemical dust suppressants can inhibit vegetation growth and reduce future road shoulder maintenance costs.
Screening	Pre-water material prior to screening; and Limit fugitive dust emissions to opacity and plume length standards; and Stabilize material immediately after screening.	Dedicate water truck or high capacity hose to screening operation; and Drop material through the screen slowly and minimize drop height; and Install wind barrier with a porosity of no more than 50% upwind of screen to the height of the drop point.
Staging areas	Stabilize staging areas during use; and Stabilize staging area soils at project completion.	Limit size of staging area; and Limit vehicle speeds to 15 miles per hour; and Limit number and size of staging area entrances/exits.

Table 4.2-2 Required Best Available Control Measures for Fugitive Dust
(Applicable to All Construction Activity Sources)

Source Category	Control Measures	Guidance
Stockpiles/bulk material handling	Stabilize stockpiled materials, and stockpiles within 100 yards of offsite occupied buildings must not be greater than eight feet in height or must have a road bladed to the top to allow water truck access or must have an operational water irrigation system that is capable of complete stockpile coverage.	Add or remove material from the downwind portion of the storage pile; and Maintain storage piles to avoid steep sides or faces.
Traffic areas for construction activities	Stabilize all off-road traffic and parking areas; and Stabilize all haul routes; and Direct construction traffic over established haul routes.	Apply gravel/paving to all haul routes as soon as possible to all future roadway areas; and Barriers can be used to ensure vehicles are used only on established parking areas/haul routes.
Trenching	Stabilize surface soils where trencher or excavator and support equipment will operate; and Stabilize soils at the completion of trenching activities.	Pre-watering of soils prior to trenching is an effective preventive measure. For deep trenching activities, pre-trench to 18 inches, soak soils via the pre-trench, and resume trenching; and Washing mud and soils from equipment at the conclusion of trenching activities can prevent crusting and drying of soil on equipment.
Truck loading	Pre-water material prior to loading; and Ensure that freeboard exceeds six inches (CVC 23114)	Empty loader bucket such that no visible dust plumes are created; and Ensure that the loader bucket is close to the truck to minimize drop height while loading.
Turf overseeding	Apply sufficient water immediately prior to conducting turf vacuuming activities to meet opacity and plume length standards; and Cover haul vehicles prior to exiting the site.	Haul waste material immediately offsite.
Unpaved roads/parking lots	Stabilize soils to meet the applicable performance standards; and Limit vehicular travel to established unpaved roads (haul routes) and unpaved parking lots.	Restricting vehicular access to established unpaved travel paths and parking lots can reduce stabilization requirements.
Vacant land	In instances where vacant lots are 0.10 acre or larger and have a cumulative area of 500 square feet or more that are driven over and/or used by motor vehicles and/or off-road vehicles, prevent motor vehicle and/or off-road vehicle trespassing, parking, and/or access by installing barriers, curbs, fences, gates, posts, signs, shrubs, trees, or other effective control measures.	

The conditions included in Table 4.2-2 apply to construction activities conducted during normal wind conditions (i.e., with wind gusts less than 25 miles per hour). The contingency measures, included in Table 4.2-3 (Contingency Control Measures for Fugitive Dust During High Winds in Excess of 25 mph), shall be applied to those periods when instantaneous wind gusts meet or exceed 25 miles per hour (mph).

Table 4.2-3	Contingency Control Measures for Fugitive Dust During High Winds in Excess of 25 mph
Fugitive Dust Source Category	***Control Measures***
Earth-moving	Cease all active operations; or Apply water to soil not more than 15 minutes prior to moving such soil.
Disturbed surface areas	On the last day of active operations prior to a weekend, holiday, or any other period when active operations will not occur for not more than four consecutive days: apply water with a mixture of chemical stabilizer diluted to not less than 1/20 of the concentration required to maintain a stabilized surface for a period of six months; or Apply chemical stabilizers prior to wind event; or Apply water to all unstabilized disturbed areas three times per day. If there is any evidence of wind driven fugitive dust, watering frequency is increased to a minimum of four times per day; or Establish a vegetative ground cover within 21 days after active operations have ceased. Ground cover must be of sufficient density to expose less than 30 percent of unstabilized ground within 90 days of planting, and at all times thereafter; or Utilize any combination of these control actions such that, in total, these actions apply to all disturbed surface areas.
Unpaved roads	Apply chemical stabilizers prior to wind event; or Apply water twice per hour during active operation; or Stop all vehicular traffic.
Open storage piles	Apply water twice per hour; or Install temporary coverings.
Paved road track-out	Cover all haul vehicles; or Comply with the vehicle freeboard requirements of Section 23114 of the California Vehicle Code for both public and private roads.
All categories	Any other control measures approved by the Executive Officer and the USEPA as equivalent to the methods specified in this table may be used.

Local Air Quality

According to the City of Santa Ana General Plan, the area has experienced improved air quality due to more stringent vehicle emissions standards, the elimination of older polluting vehicles, and cleaner burning fuels. In addition, larger stationary emission sources are gradually being eliminated or undergoing retrofitting with the best available pollution control technology (BACT).

Motor vehicles (off highway and highway) are the primary source of pollutants in the vicinity of the proposed project. Local emissions sources also include stationary activities, such as space and water heating, landscape maintenance from leaf blowers and lawn mowers, consumer products, and mobile sources. Traffic-congested roadways and intersections have the potential to generate localized high levels of CO. Localized areas where ambient concentrations exceed national and/or state standards for CO are termed "CO hotspots." Chapter 5 of the SCAQMD's CEQA Air Quality Handbook identifies CO as a localized problem requiring additional analysis when a project is likely to subject sensitive receptors to CO hotspots. The SCAQMD defines typical sensitive receptors as residences, schools, playgrounds,

childcare centers, athletic facilities, long-term health care facilities, rehabilitation centers, convalescent centers, and retirement homes.

The SCAQMD recommends the use of CALINE4, a dispersion model for predicting CO concentrations, as the preferred method of estimating pollutant concentrations at sensitive receptors near congested roadways and intersections. For each intersection analyzed, CALINE4 adds roadway-specific CO emissions calculated from peak hour turning volumes to ambient CO air concentrations. This methodology assumes worst-case conditions and provides a screening of maximum, worst-case CO concentrations.

Maximum existing CO concentrations were calculated for four of the intersections within the study area that would be affected by project-related traffic and represent the lowest level of service (D, E, or F) as determined in the traffic report prepared by KOA Corporation (Appendix G). As all other intersections are expected to operate at a better LOS, those intersections would produce lower CO concentrations. The results of these calculations are presented in Table 4.2-4 (Existing Localized Carbon Monoxide Concentrations) for representative receptor locations at 25, 50, and 100 feet from each roadway. These distances were selected because they represent locations where a person may be living or working for one to 8 hours at a time. The National 1-hour standard is 35.0 parts per million (ppm), and the state 1-hour standard is 20.0 ppm. The 8-hour national and state standards are both 9.0 ppm. As shown in Table 4.2-4, no intersection currently exceeds National or State standards for 1-hour or 8-hour CO concentrations. Therefore, CO hotspots do not exist at these intersections.

Table 4.2-4 Existing Localized Carbon Monoxide Concentrations

Intersection	*AM/PM*	*Level of Service*	*Peak Hour Volume*	*1-Hr Conc. (ppm)*	*8-Hr Conc. (ppm)*	*Exceeds Standard?*
State Standards	—	—	—	20	9	—
Grand Ave. at Santa Ana Blvd.	PM	D	4,729.0	3.7	1.2	No
Lacy Street at Santa Ana	PM	D	1,328.0	2.7	0.5	No
Grand Ave. at 1st	PM	D	4,925.0	3.6	1.1	No
Grand Ave. at I-5	PM	E	4,671.0	4.1	1.5	No

SOURCE: PBS&J 2010. Calculation sheets are provided in Appendix B.

a. National 1-hour standard is 35.0 parts per million. State 1-hour standard is 20.0 parts per million.

b. National 8-hour standard is 9.0 parts per million. State 8-hour standard is 9.0 parts per million.

c. Data for the 1-hour concentration was taken from the highest peak hour result, A.M. Peak Hour or P.M. Peak Hour, whichever is greater.

4.2.2 Regulatory Framework

Air quality within the Basin is addressed through the efforts of various federal, state, regional, and local government agencies. These agencies work jointly, as well as individually, to improve air quality through legislation, regulations, planning, policy-making, education, and a variety of programs. The agencies responsible for improving the air quality within the Basin are discussed below.

Federal

United States Environmental Protection Agency

The U.S. EPA is responsible for setting and enforcing the National Ambient Air Quality Standards for atmospheric pollutants. It regulates emission sources that are under the exclusive authority of the federal government, such as aircraft, ships, and certain locomotives.

As part of its enforcement responsibilities, the EPA requires each state with federal nonattainment areas to prepare and submit a State Implementation Plan (SIP) that demonstrates the means to attain the federal standards. The SIP must integrate federal, State, and local plan components and regulations to identify specific measures to reduce pollution, using a combination of performance standards and market-based programs within the timeframe identified in the SIP.

State

California Air Resources Board

The ARB, a part of the California EPA, is responsible for the coordination and administration of both federal and state air pollution control programs within California. In this capacity, the ARB conducts research, sets state ambient air quality standards, compiles emission inventories, develops suggested control measures, provides oversight of local programs, and prepares the SIP. The ARB establishes emissions standards for motor vehicles sold in California, consumer products (e.g., hairspray, aerosol paints, and barbecue lighter fluid), and various types of commercial equipment. It also sets fuel specifications to further reduce vehicular emissions.

Regional

South Coast Air Quality Management District

The SCAQMD is the agency principally responsible for comprehensive air pollution control in the Basin. To that end, the SCAQMD, a regional agency, works directly with the Southern California Association of Governments (SCAG), county transportation commissions, and local governments and cooperates actively with all federal and state government agencies. The SCAQMD develops rules and regulations, establishes permitting requirements for stationary sources, inspects emissions sources, and enforces such measures through educational programs or fines, when necessary.

The SCAQMD is directly responsible for reducing emissions from stationary (area and point), mobile, and indirect sources. It has responded to this requirement by preparing a sequence of AQMPs. The most recent of these was adopted by the Governing Board of the SCAQMD on June 1, 2007, to update and revise the previous 2003 AQMP. The 2007 AQMP was prepared to comply with the federal and State Clean Air Acts and amendments, to accommodate growth, to reduce the high pollutant levels in the Basin, to meet federal and State ambient air quality standards, and to minimize the fiscal impact that pollution control measures have on the local economy. The purpose of the 2007 AQMP for the Basin is

to set forth a comprehensive program that will lead the area into compliance with all federal and State air quality planning requirements. The 2007 AQMP proposes attainment demonstration of the federal $PM_{2.5}$ standards through a more focused control of sulfur oxides (SO_X), directly emitted $PM_{2.5}$, and nitrogen oxides (NO_X) supplemented with volatile organic compounds (VOC) by 2015. The 8-hour ozone control strategy builds upon the $PM_{2.5}$ strategy, augmented with additional NO_X and VOC reductions to meet the standard by 2024 assuming a time extension is obtained. The 2007 AQMP also addresses several federal planning requirements and incorporates significant new scientific data, primarily in the form of updated emissions inventories, ambient measurements, new meteorological episodes, and new air quality modeling tools. The 2007 AQMP builds upon the approaches taken in the 2003 AQMP for the South Coast Air Basin for the attainment of the federal ozone air quality standard. However, the 2007 AQMP highlights the significant amount of reductions needed and the urgent need to identify additional strategies, especially in the area of mobile sources, to meet all federal criteria pollutant standards within the timeframes allowed under federal Clean Air Act.

The Final 2007 AQMP control measures consist of four components: (1) The District's Stationary and Mobile Source Control Measures; (2) CARB's Proposed State Strategy; (3) District Staff's Proposed Policy Options to Supplement CARB's Control Strategy; and (4) Regional Transportation Strategy and Control Measures provided by SCAG. The Final 2007 AQMP builds upon improvements accomplished from the previous plans, and aims to incorporate all feasible control measures while balancing costs and socioeconomic impacts. Further, the combined control strategies selected to attain the federal $PM_{2.5}$ and 8-hour ozone standards must complement each other, representing the most effective route to achieve and maintain the standards.

The Final 2007 AQMP relies on a comprehensive and integrated control approach aimed at achieving the $PM_{2.5}$ standard by 2015 through implementation of short-term and midterm control measures and achieving the 8-hour ozone standard by 2024 based on implementation of additional long-term measures. In order to demonstrate attainment by the prescribed deadlines, emission reductions needed for attainment must be in place by 2014 and 2023, respectively.

Under the 2007 AQMP, the SCAQMD is enhancing two of its proposed control measures for $PM_{2.5}$ (i.e., wood-burning fireplaces, wood stoves, and commercial under-fired charbroilers). SCAQMD also proposes the following control approaches that would help achieve the long-term reductions needed for ozone attainment: extensive retirement of high-emitting light duty vehicles and accelerated penetration of partial zero-emissions vehicles and zero-emission vehicles; expanded modernization and retrofit of heavy-duty trucks and buses, expanded Inspection and Maintenance Program, and advanced near-zero and zero-emitting cargo transportation technologies; expanded modernization and retrofit of off-road equipment; more stringent gasoline and diesel specifications and extensive use of diesel alternatives; more stringent emission standards and programs for new and existing ocean-going vessels and harbor craft; more stringent emission standards for jet aircraft (engine standards, clean fuels, retrofit controls); ultra low-VOC formulations and reactivity-based controls on consumer products; and accelerated use of renewable energy and development of hydrogen technology and infrastructure.

In order to achieve necessary reductions for meeting air quality standards, all four agencies (i.e., AQMD, CARB, U.S. EPA, and SCAG) would have to aggressively develop and implement control strategies

through their respective plans, regulations, and alternative approaches for pollution sources within their primary jurisdiction. Even though SCAG does not have direct authority over mobile source emissions, it will commit to the emission reductions associated with implementation of the 2004 Regional Transportation Plan and 2006 Regional Transportation Improvement Program which are imbedded in the emission projections. Similarly, the Ports of Los Angeles and Long Beach have authority they must utilize to assist in the implementation of various strategies if the region is to attain clean air by federal deadlines.

Local

City of Santa Ana

Local jurisdictions, such as the City of Santa Ana, have the authority and responsibility to reduce air pollution through their police power and decision-making authority. Specifically, the City is responsible for the assessment and mitigation, as necessary, of air emissions resulting from its land use decisions. The City of Santa Ana is also responsible for the implementation of transportation control measures within their jurisdiction as outlined in the 2007 AQMP. In accordance with CEQA requirements and the CEQA review process, the City assesses the air quality impacts of new development projects, mitigates potentially significant air quality impacts by conditional discretionary permits, and monitors and enforces implementation of such mitigation.

City of Santa Ana General Plan

The Santa Ana General Plan contains several policies and goals related to the protection of public health through the reduction of air pollution emissions.

Conservation Element

Goal 1 Protect the public health, safety, and welfare through effective management of natural resources.

Objective 1.1 Reduce air pollution emissions to achieve national ambient air quality standards.

Policy

Support local and regional land use and transportation plans that increase mass transit usage and reduce vehicle trips.

Enforce emission standards contained in local ordinances.

Energy Element

Goal 1 To reduce consumption of non-renewable energy.

Goal 2 To support development and utilization of new energy sources.

Objective 1.1 Reduce transportation-related energy consumption

Objective 1.2 Reduce land use related energy consumption

Objective 1.3 Reduce construction-related energy consumption

Objective 1.4 Increase public awareness of energy conservation needs and means

Objective 2.1 Utilize efficient new sources of energy in City facilities and vehicles

Objective 2.2 Cooperate with other cities and regional agencies and private industry on resource and energy recovery projects

Circulation Element

Goal 1 Provide and maintain a comprehensive circulation system that facilities the efficient movement of people and goods throughout the City, and enhances its economic viability

Goal 2 Provide design and construction that facilitates safe utilization of the City's transportation systems

Goal 3 Provide a full spectrum of travel alternatives for the community's residents, employees, and visitors

Goal 4 Fully coordinate transportation and land use planning activities

Consistency Analysis

The protection of public health through the reduction of air pollution emissions is not only directly tied to specific goals and policies calling for the achieving the national and state ambient air quality standards. Reduction in air pollution emissions is also tied to the City's policies on circulation and energy consumption. With alternative methods of transportation, an interconnected circulation system, and integration of a mix of land uses, vehicle trips can be greatly reduced, thus reducing overall emission of criteria air pollutants. The production of energy also creates emissions of criteria air pollutants. With policies in the City aimed at reducing its overall dependence on non-renewable energy resources, it can significantly reduce the amount of air pollution emissions related to its consumption of energy.

Because the purpose of the Transit Zoning Code (SD 84A and SD 84B) is to facilitate the infill and re-development of the project area to improve the pedestrian streetscape and encourage transit-oriented development opportunities, the Transit Zoning Code (SD 84A and SD 84B) is generally consistent with these goals and policies related to air quality. The Transit Zoning Code (SD 84A and SD 84B) also seeks to maintain a mix of uses which encourages a more active community more apt to use other transportation modes instead of increasing single-occupancy vehicle trips, and thus, increasing air pollution emissions.

4.2.3 Project Impacts and Mitigation

Analytic Method

The analysis in this section focuses on the nature and magnitude of the change in the air quality environment due to implementation of the proposed project. Air pollutant emissions associated with the proposed project would result from operation of the proposed development and from project-related traffic volumes. Construction activities would also generate emissions in the project area and on roadways resulting from construction-related traffic. The net increase in project site emissions generated by these activities and other secondary sources have been quantitatively estimated and compared to thresholds of significance established by the SCAQMD.

Construction Emissions

Construction emissions from the proposed project are analyzed according to the thresholds established by the SCAQMD and published in the SCAQMD CEQA Air Quality Handbook. The construction activities associated with the specific projects would create diesel emissions and would generate emissions of dust. Construction equipment used for development of specific projects within the Transit Zoning Code (SD 84A and SD 84B) area would also generate VOC, CO, NO_X, SO_X, and PM_{10} pollutants.

The Redevelopment Agency-owned property that is the subject of the Station District – Phase 1 development project consists of 49 parcels comprising approximately seven non-contiguous acres. The Developer concept for these properties includes the development of a maximum of 155 rental units (including a potential senior housing project) and a maximum of 65 for-sale units for a total of 220 new residential units. Phase 1 of the development proposal also includes the addition of approximately 1.5 acres of new public open space that would include a public park, a public tot lot, and a 10,000 square foot community building. The redevelopment of these properties requires the demolition of 15 structures, totaling approximately 30,000 square feet of building area. Projected air emissions were calculated using URBEMIS2007 version 9.2.4 distributed by the CARB. The URBEMIS2007 model uses EMFAC2007 emissions factors for vehicle traffic and OffRoad2007 for construction equipment. The proposed Developer Project will be completed in one phase with construction estimated to begin in June 2010 and be completed by November 2011.

Although Phase 1 has enough detail as to the amount and timing of the construction activities, the remaining construction details would be difficult, if not impossible, to quantify due to the variables associated with daily construction activity (e.g., construction schedule, number and types of equipment, etc.), the URBEMIS 2007 computer model developed for the ARB to model project emissions is not feasible for use in determining impacts associated with such potential construction emissions. Instead, a qualitative analysis is used to project the potential significance of project implementation with regards to construction emissions.

Operational Emissions

Operational emissions associated with the proposed project are estimated using the URBEMIS 2007 computer model developed for the ARB and recommended by the SCAQMD, the information provided in Chapter 3 (Project Description), and trip generation rates from the traffic report (Appendix G). Operational emissions would be comprised of mobile source emissions and area source emissions. Mobile source emissions are generated by the increase in motor vehicle trips to and from the project site associated with operation of the proposed project. Area source emissions are generated by natural gas consumption for space and water heating, and landscape maintenance equipment. To determine if an air quality impact would occur, the increase in emissions was compared with the SCAQMD's regional emissions thresholds. For the analysis, it was assumed that 20 percent of the development would have natural gas fireplaces, while the remaining 80 percent would not have any hearth option.

Localized CO Concentrations for Operation

As stated previously, CO concentrations were calculated based on CALINE4 screening. This methodology assumes worst-case conditions and provides a screening of maximum, worst-case CO concentrations. For this analysis, CO concentrations for eighteen roadway intersections determined to operate at LOS D, E, or F at buildout of the Transit Zoning Code (SD 84A and SD 84B) were modeled and analyzed. All other roadway intersections, due to lesser congestion and traffic, are expected to generate lower CO concentrations that would not exceed the federal or state 1-hour and 8-hour standards.

Localized Sensitive Receptor Concentrations for Construction

In addition to the mass annual and daily regional thresholds, Project construction has the potential to raise local ambient pollutant concentrations. This could present a significant impact if these concentrations were to exceed the AAQSs included in Table 4.2-1 at receptor locations.

Localized Significance Thresholds (LSTs) were developed and adopted by the SMAQMD in response to the SCAQMD Governing Board's Environmental Justice Enhancement Initiative. LSTs are upper limits on construction-phase pollutant emissions to assure that a project would not cause or contribute to violations of the most stringent applicable federal or state ambient air quality standards; they vary based on location of the project construction site (i.e., the specific SMAQMD-defined source-receptor area in which the site is located), size of the site, and distance of the nearest sensitive receptor to the site.

The potential for this impact is demonstrated through dispersion modeling, however for construction sites 5 acres or less a screening-level analysis based on LST lookup tables developed by SCAQMD can be used. In accordance with the SCAQMD criteria, peak daily emissions for CO, NO_X, PM_{10}, and $PM_{2.5}$ were modeled to determine their concentration and contribution to the ambient concentrations within the project vicinity. The analysis makes use of methodology included in the SCAQMD *Final Localized Significance Threshold Methodology* (*Methodology*). In accordance with the *Methodology*, dispersion modeling is only to include exhaust and dust emissions associated with those pieces of equipment that actually

operate on-site and omits vehicle trips that are distributed over a large area. Because the project site is limited to 5 acres or less, a screening-level analysis was used.

In the *Methodology*, the SCAQMD notes receptor locations as "off-site locations where persons may be exposed to the emissions from project activities. Receptor locations include residential, commercial, and industrial land use areas; and any other areas where persons can be situated for an hour or longer at a time." Receptor locations are to consider the actual location of the receptors. However, if these locations are unknown, or varied, they may be assumed to be located at distances of 25, 50, 100, 200, and 500 meters. In cases where proximate receptors may be closer than 25 meters, as per the *Methodology*, a value of 25 meters is to be used in the analysis as a worst-case scenario. Because the project area is urbanized with a sensitive receptor nearby, the recommended SCAQMD default distances were used for this analysis.

Thresholds of Significance

The following thresholds of significance are based on Appendix G of the 2007 CEQA Guidelines. For purposes of this EIR, implementation of the proposed project may have a significant adverse impact on air quality if it would result in any of the following:

- 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 proposed project region is in non-attainment under an applicable federal or State ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)
- Expose sensitive receptors to substantial pollutant concentrations
- Create objectionable odors affecting a substantial number of people

As the agency principally responsible for comprehensive air pollution control in the Basin, the SCAQMD recommends that projects should be evaluated in terms of air pollution control thresholds established by the SCAQMD and published in the CEQA Air Quality Handbook. These thresholds were developed by the SCAQMD to provide quantifiable levels so that projects can be compared with the same standard. The City utilizes the SCAQMD's thresholds that are recommended at the time that development projects are proposed to assess the significance of quantifiable impacts. The following quantifiable thresholds are currently recommended by the SCAQMD and are used to determine the significance of air quality impacts associated with the proposed project.

Construction Emissions Thresholds

The SCAQMD recommends that projects with construction-related emissions that exceed any of the following emissions thresholds should be considered significant:

- 550 pounds per day of CO
- 75 pounds per day of VOC

- 100 pounds per day of NO_X
- 150 pounds per day of SO_X
- 150 pounds per day of PM_{10}

Operational Emissions Thresholds

The SCAQMD recommends that projects with operational emissions that exceed any of the following emissions thresholds should be considered significant; these thresholds apply to individual development projects only; they do not apply to cumulative development:

- 550 pounds per day of CO
- 55 pounds per day of VOC
- 55 pounds per day of NO_X
- 150 pounds per day of SO_X
- 150 pounds per day of PM_{10}

In order to assess cumulative impacts, the SCAQMD recommends that projects be evaluated to determine whether they would be consistent with 2007 AQMP performance standards and project-specific emissions thresholds. In the case of the proposed project, air pollutant emissions would be considered to be cumulatively considerable if the new sources of emissions exceeded SCAQMD emissions thresholds.

Effects Found to Be Less Than Significant

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

Impact 4.2-1 **Construction and operation of the proposed project would not create objectionable odors affecting a substantial number of people. Implementation of mitigation measure MM4.2-1 would ensure that this impact would remain *less than significant*.**

Construction Activities would involve the use of heavy equipment creating exhaust pollutants from on-site earth movement and from equipment bringing concrete and other building materials to the site. With regards to nuisance odors, any air quality impacts will be confined to the immediate vicinity of the equipment itself. By the time such emissions reach any sensitive receptor sites away from the project site, they will be diluted to well below any level of air quality concern. An occasional "whiff" of diesel exhaust from trucks accessing the site from public roadways may result. Such brief exhaust odors may be adverse, but are not a significant air quality impact. Additionally, some odor would be produced from the application of asphalt, paints, and coatings. Again, any exposure of the general public to these common odors would be of short duration and while potentially adverse, are below significance thresholds.

Odors associated with operation of industrial uses could also be a concern in the project vicinity. Industrial uses can result in industrial type odors, such as from factories, food-processing facilities, warehouses, paper mills, recycling centers, etc. Currently there are 1,080,000 square feet of industrial uses

located within the Transit Zoning Code (SD 84A and SD 84B) area. The Transit Zoning Code includes an Industrial Overlay (IO) Zone which allows properties currently zoned Industrial (M1 and M2) to maintain their existing industrial land uses. Through long-term implementation of the Code it is anticipated that a reduction in the total square footage of land devoted to industrial uses would significantly decrease thereby reducing the potential for objectionable industrial odors affecting a substantial number of people. Prior to that time any odors associated with existing industrial operations would remain. Because new industrial sources of odor would not be created as part of the proposed project, industrial odors would not result in a considerable impact.

However, other potential operational airborne odors could result from cooking activities associated with the new residential units and restaurants. These odors would be similar to existing residential and restaurant uses in the vicinity and would be confined to the immediate vicinity of the Transit Zoning Code (SD 84A and SD 84B). Restaurants are also typically required to have ventilation systems that avoid substantial adverse odor impacts. The other potential source of odors would be new trash receptacles within the Transit Zoning Code (SD 84A and SD 84B). The following mitigation measure shall be implemented:

MM4.2-1 *Trash receptacles within the Transit Zoning Code (SD 84A and SD 84B) will be required to have lids that enable convenient collection and loading and will be emptied on a regular basis, in compliance with City of Santa Ana regulations for the collection of solid waste.*

Implementation of mitigation measure MM4.2-1 would ensure the proposed project would not create substantial objectionable odors and this impact would remain ***less than significant***.

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

Impact 4.2-2 **Construction of the proposed project would not raise local ambient pollutant concentrations above the significance thresholds with the incorporation of mitigation measures MM4.2-2 through MM4.2-6. This impact is *less than significant*.**

Project construction has the potential to raise local ambient pollutant concentrations. The major source of these air quality impacts is associated with the Particulate Matter produced during grading activities. Table 4.2-5 (Unmitigated and Mitigated Localized Construction Emissions Concentrations) presents the peak unmitigated and mitigated localized construction emissions as well as the allowable emissions as a function of receptor distance from the Project boundary. The closest sensitive receptors are the existing residential developments located in the northeast section of the development area and Garfield Elementary School located adjacent to the southeast section of the development. With implementation of Rule 403 and Mitigation Measures MM4.2-2 through MM4.2-6 discussed below, the Project would not create short-term quantities of criteria pollutants above the significance thresholds published by SCAQMD as shown below in Table 4.2-6. (Transit Zoning Code [SD 84A and SD 84B] Buildout [2035] Localized Carbon Monoxide Concentrations)

Construction Period Mitigation Measures

MM4.2-2 *The construction contractor should ensure that no more than 5 acres per day are actively graded or developed.*

MM4.2-3 *The construction contractor should ensure that all active disturbed surfaces should be watered three times per day throughout the construction period.*

MM4.2-4 *The construction contractor should ensure that the mass grading, fine grading, and structure construction are conducted at separate time periods and do not overlap with one another.*

Table 4.2-5 Unmitigated and Mitigated Localized Construction Emissions Concentrations

Distance	CO (lbs/day)		NO_2 (lbs/day)		PM_{10} (lbs/day)		$PM_{2.5}$ (lbs/day)	
	UNM*	MIT*	UNM*	MIT*	UNM*	MIT*	UNM*	MIT*
Peak Daily On-site Emissions	53.14	53.14	51.50	51.50	102.70	8.73	23.35	3.73
Allowable emissions at 25 meters	1,253		183		13		7	
Allowable emissions at 50 meters	1,734		167		39		9	
Allowable emissions at 100 meters	2,498		180		55		15	
Allowable emissions at 200 meters	4,018		202		88		32	
Allowable emissions at 500 meters	9,336		245		188		109	
Exceed allowable emissions?	No	No	No	No	**Yes**	No	**Yes**	No

* UNM column for each criteria pollutant under peak daily onsite emissions shows emissions before mitigation measures are incorporated.
MIT column for each criteria pollutant under peak daily onsite emissions shows emissions after mitigation measures are incorporated.

MM4.2-5 *The construction contractor should ensure that all haul roads are watered three (3) times per day.*

MM4.2-6 *The construction contractor should ensure that all traffic on unpaved roads is reduced to 15 mph or less.*

Impact 4.2-3 **Operation of the proposed project would increase local traffic volumes, but would not expose sensitive receptors to substantial localized carbon monoxide (CO) concentrations. This would be considered a *less-than-significant* impact.**

Similar to existing CO concentrations, the simplified CALINE4 screening procedure was used to predict future CO concentrations. CO concentrations were calculated for eighteen intersections evaluated in the traffic report (included in its entirety as Appendix G) that are expected to operate at LOS D, E, or F (unacceptable levels) at project buildout (2035 with Project scenario in the traffic report). Intersections operating at LOS D, E, or F typically generate high CO concentrations that could exceed the federal or state 1-hour and 8-hour standards and are analyzed at project buildout to show the maximum effect of implementation of the Transit Zoning Code (SD 84A and SD 84B) on ambient CO concentrations. The results of air emissions modeling are shown in Table 4.2-6 (Transit Zoning Code [SD 84A and SD 84B]

Buildout [2035] Localized Carbon Monoxide Concentrations). As shown, future CO concentrations near these intersections would not exceed the national 35.0 ppm and State 20.0 ppm 1-hour ambient air quality standards or the national or state 9.0 ppm 8-hour ambient air quality standards when the Transit Zoning Code (SD 84A and SD 84B) reaches full buildout in 2035. Therefore, sensitive receptors located in close proximity to these intersections would not be exposed to substantial pollutant concentrations, and the potential impacts of the Transit Zoning Code (SD 84A and SD 84B) would be ***less than significant***. No mitigation is required. It should be noted that the CO concentrations shown in Table 4.2-6 are lower than the existing CO concentrations shown in Table 4.2-4 due to anticipated improvements in vehicle emission rates projected for the future by the ARB.

Table 4.2-6 Transit Zoning Code (SD 84A and SD 84B) Buildout With Project (2035) Localized Carbon Monoxide Concentrations

Intersection	*AM/PM*	*Level of Service*	*Peak Hour Volume*	*1-Hr Conc. (ppm)*	*8-Hr Conc. (ppm)*	*Exceeds Standard?*
State Standards				20	9	
17th Street at I-5 NB	PM	E	5,932.0	3.1	0.8	No
Broadway at 1st Street	PM	D	5,124.0	2.7	0.5	No
Broadway at 3rd Street	PM	D	2,336.0	2.4	0.3	No
Flower Street at Civic Center	PM	F	6,170.0	2.7	0.5	No
French Street at Santa Ana	PM	D	1,098.0	2.3	0.2	No
Grand Avenue at 1st Street	PM	E	8,051.0	2.9	0.6	No
Grand Avenue at 4th Street	PM	D	5,563.0	2.7	0.5	No
Grand Avenue at I-5 NB	PM	F	7,121.0	2.1	0.1	No
Grand Avenue at Santa Ana	PM	F	7,574.0	2.6	0.4	No
Lacy Street at 1st Street	PM	F	4,002.0	2.6	0.4	No
Lacy Street at 4th Street	PM	D	2,228.0	2.4	0.3	No
Lacy Street at Civic Center Drive	PM	F	1,417.0	2.3	0.2	No
Lacy Street at Santa Ana Blvd.	PM	F	2,054.0	2.4	0.3	No
Main Street at 1st Street	PM	F	6,831.0	2.8	0.6	No
Main Street at 4th Street	PM	D	4,138.0	2.6	0.4	No
Main Street at 5th Street	PM	D	4,576.0	2.6	0.4	No
Main Street at Civic Center Drive	PM	E	4,939.0	2.6	0.4	No
U2-4 at Santa Ana Blvd.	PM	F	3,256.0	2.6	0.4	No

SOURCE: PBS&J 2010. Calculation sheets are provided in Appendix B.

a. National 1-hour standard is 35.0 parts per million. State 1-hour standard is 20.0 parts per million.

b. National 8-hour standard is 9.0 parts per million. State 8-hour standard is 9.0 parts per million.

c. Data for the 1-hour concentration was taken from the highest peak hour result, A.M. Peak Hour or P.M. Peak Hour, whichever is greater.

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

Impact 4.2-4 **Long-term cumulative development pursuant to the adoption of the Transit Zoning Code would not conflict with or obstruct implementation of the Air Quality Management Plan. This impact would be considered *less than significant*.**

The 2007 AQMP, as discussed previously, was prepared to accommodate growth, to reduce the high levels of pollutants within the areas under the jurisdiction of SCAQMD, and to return clean air to the region. Projects that are considered to be consistent with the AQMP would not interfere with attainment, because this growth is included in the projections used to formulate the AQMP. Therefore, projects, uses, and activities that are consistent with the applicable assumptions used in the development of the AQMP would not jeopardize attainment of the air quality levels identified in the AQMP, even if they exceed the SCAQMD's recommended daily emissions thresholds.

Population projections for the City of Santa Ana assumed a population increase of 15,930 residents (without the project) between the years 2010 and 2035 (see Table 4.9-2 (SCAG Population Growth Projections, 2005–2035) in Section 4.9 [Population, Housing, and Employment]). This population growth estimate was used to formulate the 2007 AQMP. The direct population growth estimated to be associated with the full build-out of properties with development potential within the Transit Zoning Code (SD 84A and SD 84B) area, which is also projected to occur over the next 20 to 25 years, is approximately 12,225 people, or approximately 76 percent of the projected growth. Projected growth rates assume some level of new housing construction that contributes to future population growth. Given that the vast majority of the Transit Zoning Code (SD 84A and SD 84B) area is built-out and not anticipated to increase in density, the units that could be constructed under the new standards contained within the Transit Zoning Code (SD 84A and SD 84B) would accommodate the projected new population growth in the City and guide it toward the most desirable location for compact development.

Furthermore, according to the 2009 Housing Element of the General Plan, there was a potential for only 1,651 residential units to be developed on the City's remaining undeveloped and underutilized properties. Even if all of these units were developed, the population increase that could be accommodated would only range between 4,953 and 7,760 persons (depending on a pph factor of 3.0 or 4.7). Therefore, in order to accommodate the forecasted population growth that is anticipated to continue to occur, infill and reutilization of underdeveloped land has become a priority in the City. The Transit Zoning Code (SD 84A and SD 84B) will further the City's ability to respond to projected population growth consistent with the growth projections prepared by SCAG.

The anticipated population increase of 12,225 new residents as a result of the long-term cumulative development pursuant to the Transit Zoning Code is consistent with the SCAG growth projections for Santa Ana and, therefore, would not conflict with or obstruct implementation of the Air Quality Management Plan. This impact would be considered ***less than significant***.

Effects Found to Be Significant

Threshold	Would the project violate any air quality standard or contribute substantially to an existing or projected air quality violation?

Impact 4.2-5 **Construction activities associated with the construction of individual projects within the Transit Zoning Code area, including the Developer project, could contribute substantially to an existing or projected air quality violation for criteria air pollutants. This is considered a potentially significant impact. Compliance with the identified project requirement and implementation of mitigation measures MM4.2-2 through MM4.2-10 would reduce this impact, but not to a less-than-significant level. Therefore, this impact would be considered *significant and unavoidable*.**

The Developer Project will be developed in a phased manner. For the purposes of environmental evaluation, the first increment of development consists of forty-nine Agency owned parcels, comprising approximately seven non-contiguous acres. The initial phase of the project is assumed to be constructed by 2011 as a conservative construction scenario. The Project would not create short-term quantities of criteria pollutants above the significance thresholds published by SCAQMD as shown below in Table 4.2-7 (Construction Emissions and Criteria Values, Santa Ana Redevelopment Agency Parcels).

Table 4.2-7 Construction Emissions and Criteria Values, Santa Ana Redevelopment Agency Parcels

Source	CO (lbs/day)	NO_X (lbs/day)	ROG (lbs/day)	SO_X (lbs/day)	PM_{10} (lbs/day)	$PM_{2.5}$ (lbs/day)
6/1/2010–6/28/2010						
Demolition						
Fugitive Dust	0.00	0.00	0.00	0.00	3.95	0.82
Exhaust	18.17	30.40	3.85	0.01	1.82	1.66
Demolition Subtotals	*18.17*	*30.40*	*3.85*	*0.01*	*5.77*	*2.48*
Total	***18.17***	***30.40***	***3.85***	***0.01***	***5.77***	***2.48***
SCAQMD Threshold	550	100	75	150	150	55
Significant?	No	No	No	No	No	No
6/29/2010–07/30/2010						
Mass Grading						
Fugitive Dust	0.00	0.00	0.00	0.00	100.00	20.88
Exhaust	13.51	25.05	3.04	0.00	1.26	1.16
Mass Grading Subtotals	*13.51*	*25.05*	*3.04*	*0.00*	*101.26*	*22.04*
Total	***13.51***	***25.05***	***3.04***	***0.00***	***101.26***	***22.04***
SCAQMD Threshold	550	100	75	150	150	55
Significant?	No	No	No	No	No	No

Table 4.2-7 Construction Emissions and Criteria Values, Santa Ana Redevelopment Agency Parcels						
Source	*CO (lbs/day)*	*NO_X (lbs/day)*	*ROG (lbs/day)*	*SO_X (lbs/day)*	*PM_{10} (lbs/day)*	*$PM_{2.5}$ (lbs/day)*
8/2/2010–8/13/2010						
Fine Grading						
Fugitive Dust	0.00	0.00	0.00	0.00	100.00	20.88
Exhaust	18.79	33.75	4.21	0.00	1.81	1.66
Fine Grading Subtotals	*18.79*	*33.75*	*4.21*	*0.00*	*101.81*	*22.54*
Total	***18.79***	***33.75***	***4.21***	***0.00***	***101.81***	***22.54***
SCAQMD Threshold	550	100	75	150	150	55
Significant?	No	No	No	No	No	No
8/16/2010–8/20/2010						
Fine Grading						
Fugitive Dust	0.00	0.00	0.00	0.00	100.00	20.88
Exhaust	18.79	33.75	4.21	0.00	1.81	1.66
Fine Grading Subtotals	*18.79*	*33.75*	*4.21*	*0.00*	*101.81*	*22.54*
Trenching	9.26	17.75	2.09	0.00	0.89	0.81
Total	***28.05***	***51.50***	***6.30***	***0.00***	***102.70***	***23.35***
SCAQMD Threshold	550	100	75	150	150	55
Significant?	No	No	No	No	No	No
8/23/2010–9/14/2010						
Building Construction	40.67	23.73	4.93	0.04	1.69	1.45
Paving	12.47	20.47	5.42	0.01	1.55	1.40
Total	***53.14***	***44.20***	***10.35***	***0.05***	***3.24***	***2.85***
SCAQMD Threshold	550	100	75	150	150	55
Significant?	No	No	No	No	No	No
9/15/2010–12/31/2010						
Building Construction	40.67	23.73	4.93	0.04	1.69	1.45
Total	***40.67***	***23.73***	***4.93***	***0.04***	***1.69***	***1.45***
SCAQMD Threshold	550	100	75	150	150	55
Significant?	No	No	No	No	No	No
1/3/2011–10/14/2011						
Building Construction	38.26	22.17	4.56	0.04	1.61	1.37
Total	***38.26***	***22.17***	***4.56***	***0.04***	***1.61***	***1.37***
SCAQMD Threshold	550	100	75	150	150	55
Significant?	No	No	No	No	No	No

Table 4.2-7 Construction Emissions and Criteria Values, Santa Ana Redevelopment Agency Parcels						
Source	*CO (lbs/day)*	*NO_X (lbs/day)*	*ROG (lbs/day)*	*SO_X (lbs/day)*	*PM_{10} (lbs/day)*	*$PM_{2.5}$ (lbs/day)*
10/17/2011–11/30/2011						
Building Construction	38.26	22.17	4.56	0.04	1.61	1.37
Coating	2.48	0.14	60.13	0.00	0.02	0.01
Total	***40.74***	***22.31***	***64.69***	***0.04***	***1.63***	***1.38***
SCAQMD Threshold	550	100	75	150	150	55
Significant?	No	No	No	No	No	No

Future phases of development are anticipated to be constructed through the buildout horizon year of 2035. During construction of individual projects, four basic types of activities could potentially occur and generate emissions. First, demolition of existing structures within the Transit Zoning Code (SD 84A and SD 84B) area could occur and some debris from the demolished buildings would be exported from the area. Second, individual sites would be prepared, excavated, and graded to accommodate new building foundations and new parking, and project sites would be graded. Next, projects would be constructed. Finally, new landscaping would be planted around new facilities and the facilities would be readied for use, including the application of architectural coatings and the paving of surfaces, including surface parking.

The thresholds of significance that have been recommended by the SCAQMD for construction emissions were developed for individual development projects and are based on the SCAQMD's New Source Review emissions standards for individual sources.

Many of the individual projects that could be developed under the proposed project may be small and thus would not generate construction emissions that exceed the SCAQMD's recommended thresholds of significance. To the extent that construction of these individual projects overlaps, then the combined emissions from these small, individual projects could exceed the recommended SCAQMD thresholds, particularly for CO, NO_X, and PM_{10}, for which the Basin is currently in nonattainment. In addition to the smaller-scale projects, some of the individual development projects could also be large enough to generate construction emissions that exceed the SCAQMD thresholds. As the specific size, location, and construction techniques and scheduling that will be utilized for each individual development project occurring within the Transit Zoning Code (SD 84A and SD 84B) area, with the exception of the Developer Project, are not currently known, the provision of precise emission estimates for each individual development project, or a combination of these projects, is not currently feasible and would require the City to speculate regarding such potential future projects' potential environmental impacts. As such, the City is not required to engage in such speculation (CEQA Guidelines, Section 15145). Nevertheless, construction activities conducted as part of the implementation of the Transit Zoning Code (SD 84A and SD 84B) could exceed SCAQMD thresholds and result in a potentially significant impact.

Mitigation measures MM4.2-7 through MM4.2-20 would be implemented to reduce these emissions. While implementation of mitigation measures MM4.2-2 through MM4.2-20 would reduce construction-related emissions, they may not reduce these emissions to levels below the SCAQMD thresholds as the amount of emissions generated for each project would vary depending on its size, the land area that would need to be disturbed during construction, and the length of the construction schedule, as well as the number of developments being constructed concurrently as part of the Transit Zoning Code (SD 84A and SD 84B). Under these conditions, no further feasible mitigation measures are available and this impact would be considered ***significant and unavoidable***. The City will make site-specific determinations of significance during the review of these individual development projects to determine which projects for which construction emissions may exceed significance thresholds.

MM4.2-7 *Project applicants shall require by contract specifications that all diesel-powered equipment used will be retrofitted with after-treatment products (e.g., engine catalysts) to the extent that they are readily available in the South Coast Air Basin. Contract specifications shall be included in project construction documents, which shall be reviewed by the City of Santa Ana prior to issuance of a grading permit.*

MM4.2-8 *Project applicants shall require by contract specifications that all heavy-duty diesel-powered equipment operating and refueling at the project site use low-NO_X diesel fuel to the extent that it is readily available and cost effective (up to 125 percent of the cost of California Air Resources Board diesel) in the South Coast Air Basin (this does not apply to diesel-powered trucks traveling to and from the project site). Contract specifications shall be included in project construction documents, which shall be reviewed by the City of Santa Ana prior to issuance of a grading permit.*

MM4.2-9 *Project applicants shall require by contract specifications that alternative fuel construction equipment (i.e., compressed natural gas, liquid petroleum gas, and unleaded gasoline) be utilized to the extent that the equipment is readily available and cost effective in the South Coast Air Basin. Contract specifications shall be included in project construction documents, which shall be reviewed by the City of Santa Ana prior to issuance of a grading permit.*

MM4.2-10 *Project applicants shall require by contract specifications that construction equipment engines be maintained in good condition and in proper tune per manufacturer's specification for the duration of construction. Contract specifications shall be included in project construction documents, which shall be reviewed by the City of Santa Ana prior to issuance of a grading permit.*

MM4.2-11 *Project applicants shall require by contract specifications that construction operations rely on the electricity infrastructure surrounding the construction site rather than electrical generators powered by internal combustion engines to the extent feasible. Contract specifications shall be included in project construction documents, which shall be reviewed by the City of Santa Ana prior to issuance of a grading permit.*

MM4.2-12 *As required by South Coast Air Quality Management District Rule 403—Fugitive Dust, all construction activities that are capable of generating fugitive dust are required to implement dust control measures during each phase of project development to reduce the amount of particulate matter entrained in the ambient air. These measures include the following:*

- *Application of soil stabilizers to inactive construction areas*
- *Quick replacement of ground cover in disturbed areas*

- *Watering of exposed surfaces three times daily*
- *Watering of all unpaved haul roads three times daily*
- *Covering all stock piles with tarp*
- *Reduction of vehicle speed on unpaved roads*
- *Post signs on-site limiting traffic to 15 miles per hour or less*
- *Sweep streets adjacent to the project site at the end of the day if visible soil material is carried over to adjacent roads*
- *Cover or have water applied to the exposed surface of all trucks hauling dirt, sand, soil, or other loose materials prior to leaving the site to prevent dust from impacting the surrounding areas*
- *Install wheel washers where vehicles enter and exit unpaved roads onto paved roads to wash off trucks and any equipment leaving the site each trip*

MM4.2-13 *The developer shall require by contract specifications that construction-related equipment, including heavy-duty equipment, motor vehicles, and portable equipment, shall be turned off when not in use for more than 30 minutes. Diesel-fueled commercial motor vehicles with gross vehicular weight ratings of greater than 10,000 pounds shall be turned off when not in use for more than 5 minutes. Contract specifications shall be included in the proposed project construction documents, which shall be approved by the City of Santa Ana.*

MM4.2-14 *The developer shall require by contract specifications that construction parking be configured to minimize traffic interference during the construction period and, therefore, reduce idling of traffic. Contract specifications shall be included in the proposed project construction documents, which shall be approved by the City of Santa Ana.*

MM4.2-15 *The developer shall require by contract specifications that temporary traffic controls are provided, such as a flag person, during all phases of construction to maintain smooth traffic flow. Contract specifications shall be included in the proposed project construction documents, which shall be approved by the City of Santa Ana.*

MM4.2-16 *The developer shall require by contract specifications that construction activities that affect traffic flow on the arterial system by scheduled to off-peak hours (9:00 A.M. to 3:00 P.M.). Contract specifications shall be included in the proposed project construction documents, which shall be approved by the City of Santa Ana.*

MM4.2-17 *Upon issuance of building or grading permits, whichever is issued earliest, notification shall be mailed to owners and occupants of all developed land uses within ¼ mile of any project within the Transit Zoning Code (SD 84A and SD 84B) boundaries greater than four stories in height or 25,000 sf in area providing a schedule for major construction activities that will occur through the duration of the construction period. In addition, the notification will include the identification and contact number for a community liaison and designated construction manager that would be available on site to monitor construction activities. The construction manager shall be responsible for complying with all project requirements related to PM_{10} generation. The construction manager will be located at the on-site construction office during construction hours for the duration of all construction activities. Contract information for the community liaison and construction manager will be located at the construction office, City Hall, the police department, and a sign on site.*

In addition, emission levels of VOCs, which are a precursor for ozone, would potentially exceed SCAQMD significance thresholds during the application of architectural coatings (paint and primer) during buildout of the proposed project. In order to reduce the VOC emissions levels associated with architectural coatings, the following mitigation measures would be implemented:

MM4.2-18 *The developer shall require by contract specifications that the architectural coating (paint and primer) products used would have a VOC rating of 125 grams per liter or less. Contract specifications shall be included in the proposed project construction documents, which shall be reviewed and approved by the City of Santa Ana.*

MM4.2-19 *The developer shall require by contract specifications that materials that do not require painting be used during construction to the extent feasible. Contract specifications shall be included in the proposed project construction documents, which shall be reviewed and approved by the City of Santa Ana.*

MM4.2-20 *The developer shall require by contract specifications that pre-painted construction materials be used to the extent feasible. Contract specifications shall be included in the proposed project construction documents, which shall be reviewed and approved by the City of Santa Ana.*

However, because construction emissions for an individual project may exceed the SCAQMD's recommended thresholds of significance and results in short-term air quality impacts, the impact of the proposed project, which takes into consideration the construction emissions generated from all of the development proposed under the proposed project, is anticipated to be ***significant and unavoidable***.

Threshold	Would the project violate any air quality standard or contribute substantially to an existing or projected air quality violation?

Impact 4.2-6 **Operation of the proposed project would exceed South Coast Air Quality Management District standards for VOC, NO_X, CO, and PM_{10} and would result in a projected air quality violation. No feasible mitigation is available to reduce this impact to a less-than-significant level. Therefore, this impact would be considered *significant and unavoidable*.**

Operational emissions generated by both stationary and mobile sources would result from normal day-to-day activities in the Transit Zoning Code (SD 84A and SD 84B) area as new projects are completed and occupied. Stationary, area source emissions would be generated by the consumption of natural gas for space and water heating devices, and the operation of landscape maintenance equipment. Mobile emissions would be generated by the motor vehicles traveling to and from the project site.

The analysis of daily operational emissions from the proposed project has been prepared utilizing the URBEMIS 2007 ver. 9.2.4 computer model recommended by the SCAQMD. The results of the URBEMIS 2007 ver. 9.2.4 calculations for the daily operational emissions of the proposed project are presented in Table 4.2-8 (Proposed Project Daily Operational Emissions).

As shown, operation of the proposed project would generate emissions that exceed the thresholds of significance recommended by the SCAQMD for VOC, NO_X, CO, and PM_{10}. The exceedance of the SCAQMD thresholds for these four criteria pollutants is primarily due to the increase in motor vehicles

traveling to and from the project site. As no feasible mitigation is available to reduce these emissions, this impact would remain ***significant and unavoidable***.

The Project as a whole is significant for operational emissions due to the size of the project area. The Project is at programmatic level analysis as the development consists of various individual project components. Programmatic mitigation measures (MM4.2-21 thru MM4.2-36), discussed below, will be incorporated into the individual components of the Transit Zoning Code (SD 84A and SD 84B) as they are being prepared. With programmatic mitigation incorporated at the individual component level, the components themselves may be less than significant on a site-by-site basis, but will be required to do individual air quality impact analyses to determine their independent significance levels. With the following operational period mitigation incorporated into the Project, long-term operational emissions will be reduced; however, on a Transit Zoning Code (SD 84A and SD 84B) level they will still remain significant.

Table 4.2-8 Proposed Project Daily Operational Emissions

Source	CO (lbs/day)	NO_X (lbs/day)	ROG (lbs/day)	SO_X (lbs/day)	PM_{10} (lbs/day)	$PM_{2.5}$ (lbs/day)
Operational Sources						
Single Family Housing	134.08	15.19	12.81	0.34	55.92	10.87
Condo/Townhouse General	963.24	109.11	94.05	2.47	401.76	78.06
Condo/Townhouse High Rise	70.61	8	7.3	0.18	29.45	5.72
City Park	0.9	0.11	0.14	0	0.39	0.08
Strip Mall	591.62	70.17	55.73	1.57	257.31	49.89
Area Sources						
Natural Gas	21.07	45.87	3.53	0.00	0.09	0.09
Hearth	1768.56	49.23	638.31	4.94	274.18	263.93
Landscape	20.67	0.21	3.23	0.00	0.06	0.06
Consumer Products	0.00	0.00	209.05	0.00	0.00	0.00
Architectural Coatings	0.00	0.00	8.87	0.00	0.00	0.00
Total Emissions	***3570.75***	***297.89***	***1033.02***	***9.50***	***1019.16***	***408.70***
SCAQMD Thresholds	550	55	55	150	150	55
Significant Impact?	**Yes**	**Yes**	**Yes**	No	**Yes**	No

SOURCE: PBS&J 2010. Calculation sheets are provided in Appendix B.

In order to reduce the operational emissions levels the following mitigation measures would be implemented:

MM4.2-21 *As individual components of the Transit Zoning Code (SD 84A and SD 84B) are implemented, an air quality impact analyses will be completed to determine their independent significance levels. Mitigation is to be incorporated at the individual component level to bring the individual components to less than significant on a site-by-site basis.*

MM4.2-22 *Prior to issuance of a building permit, the applicant shall demonstrate that the design of the proposed buildings or structures exceeds current Title 24 requirements (Title 24, Part 6 of the California Code of Regulations; The Energy Commission adopted the 2008 Standards on April 23, 2008, and the Building Standards Commission approved them for publication on September 11, 2008. The 2008 Residential Compliance Manual was adopted by the Commission on December 17, 2008, and the 2008 Non-residential Compliance Manual was adopted January 14, 2009.Energy Efficiency Standards for Residential and Non Residential Buildings, as amended November 1, 2005; Cool Roof Coatings performance standards as amended September 11, 2006) by a minimum of 20 percent, subject to review by the County Building Official. Documentation of compliance with this measure shall be provided to the Planning Department and Building Official for review and approval prior to issuance of the permit. Installation of the identified design features or equipment will be confirmed by the County Building Official prior to certificate of occupancy. Any combination of the following design features may be used to fulfill this mitigation provided that the total increase in efficiency meets or exceeds 20 percent:*

- *Increase in insulation such that heat transfer and thermal bridging is minimized*
- *Limit air leakage through the structure or within the heating and cooling distribution system to minimize energy consumption*
- *Incorporate dual-paned or other energy efficient windows*
- *Incorporate energy efficient space heating and cooling equipment*
- *Incorporate energy efficient light fixtures*
- *Incorporate energy efficient appliances*
- *Incorporate energy efficient domestic hot water systems*
- *Incorporate solar panels into the electrical system*
- *Incorporate cool roofs/light-colored roofing*
- *Or other measures that will increase the energy efficiency of building envelope in a manner that when combined with the other options listed above exceeds current Title 24 Standards (Title 24, Part 6 of the California Code of Regulations; Energy Efficiency Standards for Residential and Non Residential Buildings, as amended November 1, 2005; Cool Roof Coatings performance standards as amended September 11, 2006) by a minimum of 20 percent*

MM4.2-23 *Prior to issuance of a building permit, the applicant shall provide a landscape plan for the Project that includes shade trees around main buildings, particularly along southern elevations where practical, and will not interfere with loading dock locations or other operational constraints. Documentation of compliance with this measure shall be provided to the City Building Official for review and approval.*

MM4.2-24 *Prior to issuance of a building permit, the applicant shall demonstrate that the proposed building or structure designs incorporate exterior storage areas for recyclables and green waste and adequate recycling containers located in public areas. Documentation of compliance with this measure shall be provided to the City Building Official for review and approval. Installation of the identified design features or equipment will be confirmed by the City Building Official prior to issuance of certificate of occupancy.*

MM4.2-25 *The applicant shall provide education and publicity about reducing waste and available recycling services to future tenants. The education and publicity materials shall be provided to the City for review and approval by the Planning Department.*

MM4.2-26 *All showerheads, lavatory faucets, and sink faucets within the residential units shall comply with the California Energy Conservation flow rate standards.*

MM4.2-27 *Low-flush toilets shall be installed within all commercial and residential (including Congregate Care) units as specified in California State Health and Safety Code Section 17921.3.*

MM4.2-28 *All commercial/industrial/common area irrigation areas shall be capable of being operated by a computerized irrigation system which includes an onsite weather station/ET gage capable of reading current weather data and making automatic adjustments to independent run times for each irrigation valve based on changes in temperature, solar radiation, relative humidity, rain, and wind. In addition, the computerized irrigation system shall be equipped with flow-sensing capabilities, thus automatically shutting down the irrigation system in the event of a mainline break or broken head. These features will assist in conserving water, eliminating the potential of slope failure due to mainline breaks, and eliminating over-watering and flooding due to pipe and/or head breaks.*

MM4.2-29 *Landscape designers shall ensure that Project landscaping of commercial/industrial/common areas uses drought-tolerant and smog-tolerant trees, shrubs, and groundcover to ensure long-term viability and conserve water and energy.*

MM4.2-30 *Landscape designers shall ensure that the landscape plan includes drought resistant trees, shrubs, and groundcover within the parking lot and perimeter.*

MM4.2-31 *Project designers shall ensure that design features incorporate light-colored roofing materials that will deflect heat away from the building and conserve energy.*

MM4.2-32 *The Project designers shall ensure that designs include all illumination elements to have controls to allow selective use as an energy conservation measure.*

MM4.2-33 *Prior to issuance of a building permit, the applicant shall demonstrate that measures have been included to promote ride sharing programs such as, but not necessarily including, publishing ride sharing information for all of the tenants, designating a certain percentage of parking spaces for ride sharing vehicles, designating adequate passenger loading and unloading and waiting areas for ride sharing vehicles, and providing a website or message board for coordinating rides. Documentation of compliance with this measure shall be provided to the City Building Official for review and approval. Installation of the identified design features or equipment will be confirmed by the City Building Official prior to issuance of certificate of occupancy.*

MM4.2-34 *Prior to issuance of a building permit, the applicant shall demonstrate that measures have been included to provide adequate bicycle parking near building entrances to promote cyclist safety, security, and convenience. Documentation of compliance with this measure shall be provided to the City Building Official for review and approval. Installation of the identified design features or equipment will be confirmed by the City Building Official prior to issuance of certificate of occupancy.*

MM4.2-35 *Prior to issuance of any certificate of occupancy, the applicant shall demonstrate that all interior building lighting supports the use of compact fluorescent light bulbs or equivalently efficient lighting to the satisfaction of the City Building Official.*

MM4.2-36 *Tenants shall be responsible to ensure that preferential parking spaces are allocated to ultra-low emission vehicles and alternative fueled vehicles to encourage the use of alternative fuels and ultra-low emission vehicles.*

As shown, operation of the proposed project would generate emissions that exceed the thresholds of significance recommended by the SCAQMD for CO, NO_X, ROG, and PM_{10}. The exceedance of the SCAQMD thresholds for these four criteria pollutants is primarily due to the increase in motor vehicles traveling to and from the project site. As no feasible mitigation is available to reduce these emissions, this impact would remain ***significant and unavoidable***.

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

Impact 4.2-7 **Construction and operation of the proposed project could result in a cumulatively considerable net increase of criteria pollutants for which the proposed project region is in nonattainment under an applicable federal or state ambient air quality standard. This is considered a significant impact. Implementation of mitigation measures MM4.2-2 through MM4.2-39 would reduce this impact, but not to a less-than-significant level. Therefore, this impact would be considered *significant and unavoidable*.**

A significant impact may occur if a project would add a cumulatively considerable contribution of a federal or state non-attainment pollutant. Because the Basin is currently in nonattainment for ozone (for which VOC and NO_X are precursors) and PM_{10} under national and State standards, and is in nonattainment for CO under national standards, projects could cumulatively exceed an air quality standard or contribute to an existing or projected air quality exceedance. With regard to determining the significance of the proposed project contribution, the SCAQMD neither recommends quantified analyses of cumulative construction or operational emissions, nor provides separate methodologies or thresholds of significance to be used to assess cumulative construction or operational impacts. Instead, the SCAQMD recommends that a project's potential contribution to cumulative impacts should be assessed using the same significance criteria as those for project specific impacts; that is, individual development projects that generate construction-related or operational emissions that exceed the SCAQMD-recommended daily thresholds for project-specific impacts would also cause a cumulatively considerable increase in emissions for those pollutants for which the Basin is in nonattainment.

As discussed previously in Impact 4.2-5, the proposed project has the potential to exceed SCAQMD's recommended thresholds of significance and result in short-term air quality impacts; thus, the impact of the proposed project is anticipated to be significant. Many of the individual projects that could be developed under the proposed project may be small and thus would not generate construction emissions that exceed the SCAQMD's recommended thresholds of significance. However, to the extent that construction of these individual projects overlaps, the combined emissions from these small, individual projects could exceed the recommended SCAQMD thresholds, particularly for CO, NO_X, and PM_{10}, for which the Basin is currently in nonattainment. In addition to the smaller-scale projects, some of the

individual development projects could also be large enough to generate construction emissions that exceed the SCAQMD thresholds. Therefore, the emissions generated by construction of the proposed project would be cumulatively considerable and would constitute a substantial contribution to an existing or projected air quality violation. As described above in Impact 4.2-5, implementation of mitigation measures MM4.2-2 through MM4.2-6 would reduce these emissions, but not to a less-than-significant level.

As discussed in Impact 4.2-6, operation of the proposed project would generate emissions that exceed the thresholds of significance recommended by the SCAQMD for VOC, NO_X, CO, and PM_{10}. Because the Basin is in nonattainment for PM_{10}, VOC, and NO_X (VOC and NO_X being precursors of ozone), the proposed project would make a cumulatively considerable contribution to criteria pollutant emissions.

Because the proposed project would exceed SCAQMD thresholds for the pollutants and precursors of ozone for which the Basin is in non-attainment, the proposed project would make cumulatively considerable contributions of these pollutants during both construction and operation of the proposed project. Because no feasible mitigation beyond what is proposed for Impact 4.2-5 is available to further reduce these contributions to levels below SCAQMD thresholds, this impact is considered to be ***significant and unavoidable***.

For clarification, and as evident by the above analysis, this threshold essentially repeats the analysis provided in Impact 4.2-5 and Impact 4.2-6 and applies it to the cumulative condition, whereby any individual project that exceeds the SCAQMD recommended daily thresholds for project-specific impacts is considered to cause a cumulatively considerable increase in emissions for those pollutants for which the Basin is in nonattainment.

4.2.4 Cumulative Impacts

The geographic context for cumulative air quality impacts is SRA 17, which covers Central Orange County. This analysis, therefore, accounts for all anticipated cumulative growth within this geographic area, including ambient growth along with development of the related projects provided in Table 3-3 (List of Related Development Projects) in Chapter 3 (Project Description) of this EIR. As discussed in Impact 4.2-4, the significance of cumulative air quality impacts is typically determined according to the project-specific impact methodology recommended by the SCAQMD.

Cumulative development is consistent with the SCAG 2010-2035 growth projections and would not conflict with the conflict with, or obstruct implementation of, the 2007 AQMP. The direct population growth estimated to be associated with the full build-out of properties with development potential within the Transit Zoning Code (SD 84A and SD 84B) area, which is also projected to occur over the next 20 to 25 years, is approximately 12,225 people, or approximately 76 percent of the projected growth. Projected growth rates assume some level of new housing construction that contributes to future population growth. Given that the vast majority of the Transit Zoning Code (SD 84A and SD 84B) area is built-out and not anticipated to increase in density, the units that could be constructed under the new standards contained within the Transit Zoning Code (SD 84A and SD 84B) would accommodate the projected new population growth in the City and guide it toward the most desirable location for compact development.

Furthermore, according to the 2009 Housing Element of the General Plan, there was a potential for only 1,651 residential units to be developed on the City's remaining undeveloped and underutilized properties. Even if all of these units were developed, the population increase that could be accommodated would only range between 4,953 and 7,760 persons (depending on a pph factor of 3.0 or 4.7). Therefore, in order to accommodate the forecasted population growth that is anticipated to continue to occur, infill and reutilization of underdeveloped land has become a priority in the City. The Transit Zoning Code (SD 84A and SD 84B) will further the City's ability to respond to projected population growth consistent with the growth projections prepared by SCAG. The anticipated population increase of 12,225 new residents as a result of the long-term cumulative development pursuant to the Transit Zoning Code is consistent with the SCAG growth projections for Santa Ana and, therefore, would not conflict with or obstruct implementation of the Air Quality Management Plan. This impact would be considered ***less than significant***.

As the Basin is currently in nonattainment for ozone, CO, NO_X, PM_{10}, and $PM_{2.5}$, cumulative development could violate an air quality standard or contribute to an existing or projected air quality violation. Therefore, this is considered to be a significant cumulative impact within the Basin. With regard to determining the significance of the proposed project contribution, SCAQMD recommends that individual projects that exceed the SCAQMD recommended daily thresholds for project-specific impacts be considered to cause a cumulatively considerable increase in emissions for those pollutants for which the Basin is in nonattainment (Smith, 2005). As discussed previously under Impact 4.2-5, long-term cumulative development construction would cause an increase in daily, construction-related emissions of criteria air pollutants that would exceed the thresholds of significance recommended by the SCAQMD even with implementation of mitigation measures MM4.2-2 through MM4.2-10. Construction under the proposed project would make a cumulatively considerable contribution to this significant impact. In addition, as discussed in Impact 4.2-6, operation at full buildout of the proposed project would result in quantities of air emissions that exceed the SCAQMD thresholds for VOC, NO_X, CO, and PM_{10}, and would create a cumulatively considerable contribution to this significant impact. Consequently, the cumulative impact of the proposed project for construction emissions would be ***significant and unavoidable***.

It is unlikely that future projects will result in long-term future exposure of sensitive receptors to substantial pollutant concentrations, because CO levels are projected to be lower in the 2035 (buildout of the Santa Ana General Plan) due to improvements in vehicle emission rates predicted by the ARB. Therefore, the cumulative impact is considered to be less than significant. Cumulative development is not, therefore, expected to expose sensitive receptors to substantial CO concentrations. As discussed in Impact 4.2-2, the future CO concentrations at the eighteen study intersections determined to operate at LOS D, E, and F in 2035, are based on the projected future traffic volumes from the study intersections contained in the traffic study, which takes into account emissions from the proposed project, future ambient growth, and related projects in the project area. As shown in Table 4.2-6, future 1-hour and 8-hour CO concentrations near these study intersections would not exceed national or State ambient air quality standards. All other intersections are expected to operate at LOS C or higher. As a result, CO hotspots would not occur near these intersections in the future, and the contribution of the proposed project to CO hotspots would not be cumulatively considerable. Therefore, the cumulative impact of the proposed project would be ***less than significant***.

The relevant geographic area for odor impacts is the City, and related projects projected to be built include primarily residential, commercial, and office uses, and could include restaurants. Odors resulting from the construction of these projects are not likely to affect a substantial number of people, due to the fact that construction activities do not usually emit offensive odors. As discussed in Impact 4.2-1, although construction activities occurring in association with the proposed project could generate airborne odors associated with the operation of construction vehicles (e.g., diesel exhaust) and the application of interior and exterior architectural coatings, these emissions would only occur during daytime hours, would generally be restricted to the immediate vicinity of the construction site and activity, and standard construction requirements would be imposed on the developers/applicants associated with these construction projects. Odors from construction activities would not affect a substantial number of people. The odor impacts resulting from residential and office projects are not expected to affect a substantial amount of people, as activities typically associated with these uses do not emit offensive odors and solid waste from these projects would be stored in special areas and in containers, as required by mitigation measure MM4.2-1. In addition, restaurants are typically required to have ventilation systems that prevent substantial adverse odor impacts. Any odors originating from industrial uses would not be created as part of the proposed project; thus, the project's contribution to the cumulative odor impact is not considerable. Because a less-than-significant cumulative impact would occur with respect to objectionable odors, and the proposed project would not result in objectionable odors that would affect a substantial number of people, the cumulative impact of the proposed project would also be ***less than significant***.

4.2.5 References

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