5.2 AIR QUALITY

5.2.1 Environmental Setting

The project site is located within the City of Anaheim, which is part of the South Coast Air Basin (SCAB or Basin) and is under the jurisdiction of the South Coast Air Quality District (SCAQMD). The air quality assessment for the Proposed Project includes estimating emissions associated with short-term construction and long-term operation of the Proposed Project.

A number of air quality modeling tools are available to assess air quality impacts of projects. In addition, certain air districts, such as the SCAQMD, have created guidelines and requirements to conduct air quality analyses. The SCAQMD's current guidelines, *CEQA Air Quality Handbook*, *1993*, were adhered to in the assessment of air quality impacts for the Proposed Project.

Regional Air Quality

Both the State of California and the Federal government have established health-based Ambient Air Quality Standards (AAQS) for six air pollutants. As shown in Table 5.2-1, these pollutants include ozone (O_3), CO, nitrogen dioxide (NO_2), sulfur dioxide (SO_2) suspended coarse particulate matter equal to or less than 10 microns in diameter (PM_{10}), and lead. In July 1997, the U.S. Environmental Protection Agency (EPA) adopted new standards for eight-hour O_3 and for fine particulate matter less than 2.5 microns in diameter ($PM_{2.5}$). In addition, the State has set standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles. These standards are designed to protect the health and welfare of the populace with a reasonable margin of safety.

In addition to setting out primary and secondary AAQS, the State of California has established a set of episode criteria for O_3, CO, NO_2, SO_2, and PM_{10}. These criteria refer to episode levels representing periods of short-term exposure to air pollutants that actually threaten public health. Health effects are progressively more severe as pollutant levels increase from Stage One to Stage Three. Table 5.2-2 lists the health effects of these criteria pollutants and their potential sources. These health effects would not occur unless the standards are exceeded by a large margin or for a prolonged period of time. The State AAQS are more stringent than the Federal AAQS.

The California Clean Air Act (CCAA) provides the SCAQMD with the authority to manage transportation activities at indirect sources. Indirect sources of pollution are generated when minor sources collectively emit a substantial amount of pollution. Examples of this would be the motor vehicles at an intersection, a mall, and on highways. The SCAQMD also regulates stationary sources of pollution throughout its jurisdictional area. Direct emissions from motor vehicles are regulated by the California Air Resources Board (ARB).

Climate/Meteorology

Air quality in the planning area is not only affected by various emission sources (mobile, industry, etc.), but is also affected by atmospheric conditions such as wind speed, wind direction, temperature, rainfall, etc. The combination of topography, low mixing height, abundant sunshine, and emissions from the second largest urban area in the United States gives the SCAB the worst air pollution problem in the nation.

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

Table 5.2-1
Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards[1]		Federal Standards[2]		
		Concentration[3]	Method[4]	Primary[2,5]	Secondary[2,6]	Method[7]
Ozone (O_3)	1-Hour	0.09 ppm (180 µg/m^3)	Ultraviolet Photometry	0.12 ppm (235 µg/m^3) [8]	Same as Primary Standard	Ultraviolet Photometry
	8-Hour	—		0.08 ppm (157 µg/m^3)		
Respirable Particulate Matter (PM_{10})	24-Hour	50 µg/m^3	Gravimetric or Beta Attenuation*	150 µg/m^3	Same as Primary Standard	Inertial Separation and Gravimetic Analysis
	Annual Arithmetic Mean	20 µg/m^3*		50 µg/m^3		
Fine Particulate Matter ($PM_{2.5}$)	24-Hour	No Separate State Standard		65 µg/m^3	Same as Primary Standard	Inertial Separation and Gravimetic Analysis
	Annual Arithmetic Mean	12 µg/m^3*	Gravimetric or Beta Attenuation*	15 µg/m^3		
Carbon Monoxide (CO)	8-Hour	9.0 ppm (10 mg/m^3)	Nondispersive Infrared Photometry (NDIR)	9 ppm (10 mg/m^3)	None	Nondispersive Infrared Photometry (NDIR)
	1-Hour	20 ppm (23 mg/m^3)		35 ppm (40 mg/m^3)		
	8-Hour (Lake Tahoe)	6 ppm (7 mg/m^3)		—		
Nitrogen Dioxide (NO_2)	Annual Arithmetic Mean	—	Gas Phase Chemi-luminescence	0.053 ppm (100 µg/m^3)	Same as Primary Standard	Gas Phase Chemi-luminescence
	1-Hour	0.25 ppm (470 µg/m^3)		—		
Lead	30-day Average	1.5 µg/m^3	Atomic Absorption	—	—	High Volume Sampler and Atomic Absorption
	Calendar Quarter	—		1.5 µg/m^3	Same as Primary Standard	
Sulfur Dioxide (SO_2)	Annual Arithmetic Mean	—	Ultraviolet Fluorescence	0.030 ppm (80 µg/m^3)	—	Spectro-photometry (Pararosaniline Method)
	24-Hour	0.04 ppm (105 µg/m^3)		0.14 ppm (365 µg/m^3)	—	
	3-Hour	—		—	0.5 ppm (1300 µg/m^3)	
	1-Hour	0.25 ppm (655 µg/m^3)		—	—	

Table 5.2-1
Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards[1]		Federal Standards[2]		
		Concentration[3]	Method[4]	Primary[2,5]	Secondary[2,6]	Method[7]
Visibility-Reducing Particles	8-Hour	Extinction coefficient of 0.23 per kilometer – visibility of 10 miles or more (0.07–30 miles or more for Lake Tahoe) due to particles when relative humidity is less than 70 percent. Method: Beta Attenuation and Transmittance through Filter Tape.		No Federal Standards		
Sulfates	24-Hour	25 µg/m^3	Ion Chromatography			
Hydrogen Sulfide	1-Hour	0.03 ppm (42 µg/m^3)	Ultraviolet Fluorescence			
Vinyl Cloride[9]	24-Hour	0.01 ppm (26 µg/m^3)	Gas Chromatography			

[1] California standards for ozone; carbon monoxide (except Lake Tahoe); sulfur dioxide (1 and 24 hour); nitrogen dioxide; suspended particulate matter, PM_{10}; and visibility reducing particles are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

[2] National standards (other than ozone, particulate matter, and those based on annual averages or annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest eight-hour concentration in a year, averaged over three years, is equal to or less than the standard. For PM_{10}, the 24-hour standard is attained when 99 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. For $PM_{2.5}$, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard. Contact U.S. EPA for further clarification and current Federal policies.

[3] Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.

[4] Any equivalent procedure that can be shown to the satisfaction of the ARB to give equivalent results at or near the level of the air quality standard may be used.

[5] National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.

[6] National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

[7] Reference method as described by the EPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the EPA.

[8] New Federal eight-hour ozone and fine particulate matter standards were promulgated by U.S. EPA on July 18, 1997. Contact U.S. EPA for further clarification and current Federal policies.

[9] The ARB has identified lead and vinyl chloride as "toxic air contaminants" with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

Source: LSA (ARB July 2003).

Table 5.2-2
Summary of Health Effects of the Major Criteria Air Pollutants

Pollutants	Sources	Primary Effects
Ozone (O_3)	Atmospheric reaction of organic gases with nitrogen oxides in the presence of sunlight.	Aggravation of respiratory and cardiovascular diseases. Irritation of eyes. Impairment of cardiopulmonary function. Plant leaf injury.
Nitrogen Dioxide (NO_2)	Motor vehicle exhaust. High temperature stationary combustion. Atmospheric reactions.	Aggravation of respiratory illness. Reduced visibility. Reduced plant growth. Formation of acid rain.
Carbon Monoxide (CO)	By-products from incomplete combustion of fuels and other carbon containing substances, such as motor exhaust. Natural events, such as decomposition of organic matter.	Reduced tolerance for exercise. Impairment of mental function. Impairment of fetal development. Death at high levels of exposure. Aggravation of some heart diseases (angina).
Suspended Particulate Matter ($PM_{2.5}$ and PM_{10})	Stationary combustion of solid fuels. Construction activities. Industrial processes. Atmospheric chemical reactions.	Reduced lung function. Aggravation of the effects of gaseous pollutants. Aggravation of respiratory and cardio-respiratory diseases. Increased cough and chest discomfort. Soiling. Reduced visibility.
Sulfur Dioxide (SO_2)	Combustion of sulfur-containing fossil fuels. Smelting of sulfur bearing metal ores. Industrial processes.	Aggravation of respiratory diseases (asthma, emphysema). Reduced lung function. Irritation of eyes. Reduced visibility. Plant injury. Deterioration of metals, textiles, leather, finishes, coatings, etc.
Lead (Pb)	Contaminated soil (e.g., from leaded fuels and lead-based paints).	Impairment of blood function and nerve construction. Behavioral and hearing problems in children.

Source: LSA (ARB 2001).

The annual average temperature varies little throughout the Basin, ranging from the low to middle 60s, measured in degrees Fahrenheit. With a more pronounced oceanic influence, coastal areas show less variability in annual minimum and maximum temperatures than inland areas. The climatological station closest to the site is the Santa Ana Fire Station.[1] The monthly average maximum temperature recorded at this station in the past 56 years ranged from 68.1°F in January to 84.2°F in August, with an annual average maximum of 75.5°F. The monthly average minimum temperature recorded at this station in the past 56 years ranged from 45.0°F in January to 63.0°F in August, with an annual average minimum of 53.5°F. The climatological station next closest to the site is the Yorba Linda Station.[2] The monthly average maximum temperature recorded at the Yorba Linda Station in the past 56 years ranged from 67.5°F in January to 89.1°F in August, with an annual average maximum of 77.5°F. The monthly average minimum temperature recorded at the Yorba Linda Station in the past 56 years ranged from 42.0 °F in December and January to

[1] Western Regional Climate Center, www.wrcc@dri.edu.
[2] Ibid.

58.9°F in August, with an annual average minimum of 49.7°F. January is typically the coldest month, and August is typically the warmest month in this area of the Basin.

The majority of annual rainfall in the Basin occurs between November and April. Summer rainfall is minimal and is generally limited to scattered thundershowers in coastal regions and slightly heavier showers in the eastern portion of the Basin and along the coastal side of the mountains. The Santa Ana Fire Station climatological station also monitored precipitation in the Project Area. Average monthly rainfall measured in Santa Ana during that period varied from 2.99 inches in January to 0.33 inch or less between May and October, with an annual total of 12.91 inches. The Yorba Linda Station climatological station also monitored precipitation in the Project Area. Average monthly rainfall measured in Yorba Linda area during that period varied from 3.28 inches in January to 0.35 inch or less between May and October, with an annual total of 13.86 inches. Patterns in monthly and yearly rainfall totals are unpredictable due to fluctuations in the weather.

Although the SCAB has a semiarid climate, air near the surface is generally moist because of the presence of a shallow marine layer. With very low average wind speeds, there is a limited capacity to disperse air contaminants horizontally. The dominant daily wind pattern is an onshore 8 to 12 miles per hour (mph) daytime breeze and an offshore 3 to 5 mph nighttime breeze. The typical wind flow pattern fluctuates only with occasional winter storms or strong northeasterly (Santa Ana) winds from the mountains and deserts northeast of the SCAB. Summer wind flow patterns represent worst-case conditions, because this is the period of higher temperatures and more sunlight, which results in ozone formation.

During spring and early summer, pollution produced during any one day is typically blown out of the SCAB through mountain passes or lifted by warm, vertical currents adjacent to mountain slopes. Air contaminants can be transported 60 miles or more from the SCAB by ocean air during the afternoons. From early fall to winter, the transport is less pronounced because of slower average wind speed and the appearance of drainage winds earlier in the day. During stagnant wind conditions, offshore drainage winds may begin by late afternoon. Pollutants remaining in the SCAB are trapped and begin to accumulate during the night and the following morning. A low morning wind speed in pollutant source areas is an important indicator of air stagnation and the potential for buildup of primary air contaminants.

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

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

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 lowest. During periods of low inversions and low wind speeds, air pollutants generated in urbanized areas are transported predominantly onshore into Riverside and San Bernardino Counties. In the winter, the greatest pollution problem is accumulation of carbon monoxide and oxides of nitrogen due to extremely low

inversions and air stagnation during the night and early morning hours. In the summer, the longer daylight hours and the brighter sunshine combine to cause a reaction between hydrocarbons and oxides of nitrogen to form photochemical smog.

Air Pollution Constituents and Attainment Status

The following describes the criteria air pollutants and their attainment status in the SCAB based on ARB's Area Designations, Activities, and Maps (ARB 2004). Table 5.2-3 summarizes the attainment status in the SCAB for the major criteria pollutants.

Table 5.2-3
Attainment Status of Criteria Pollutants in the South Coast Air Basin

Pollutant	*State*	*Federal*
Ozone – 1-hour	Nonattainment	Extreme Nonattainment
Ozone – 8-hour	No State Standard	Severe 17 Nonattainment
PM_{10}	Nonattainment	Serious Nonattainment
$PM_{2.5}$	Not Established	Not Established (due 12/04)
CO	Attainment (except Los Angeles County)	Attainment (date finding in 2003 AQMP for the SCAB)
NO_2	Attainment	Attainment/Maintenance
SO_2	Attainment	Attainment
Lead	Attainment	Attainment
All others	Attainment/Unclassified	Attainment/Unclassified

Source: LSA (ARB 2004).

Ozone

Ozone (smog) is formed by photochemical reactions between oxides of nitrogen and reactive organic gases rather than being directly emitted. O_3 is a pungent, colorless gas typical of Southern California smog. Elevated O_3 concentrations result in reduced lung function, particularly during vigorous physical activity. This health problem is particularly acute in sensitive receptors such as the sick, the elderly, and young children. O_3 levels peak during summer and early fall. The entire SCAB is designated as a nonattainment area for both Federal and State one-hour O_3 standards. The EPA has classified the SCAB as an "extreme" nonattainment area for one-hour O_3 standard and has mandated that the SCAB achieve attainment by 2010. The EPA has officially designated the status for the SCAB regarding the eight-hour O_3 standard as "Severe 17," which means the SCAB has until 2021 to attain the Federal eight-hour O_3 standard.

Carbon Monoxide

Carbon monoxide (CO) is formed by the incomplete combustion of fossil fuels, almost entirely from automobiles. It is a colorless, odorless gas that can cause dizziness, fatigue, and impairments to central nervous system functions. Although the entire SCAB has not exceeded the Federal CO standards, the SCAQMD has not officially requested the redesignation of the CO attainment status. Based on the findings in the 2003 AQMP for the SCAB, no violations of Federal CO standards have been recorded in the past three years in the entire SCAB. Orange County has not exceeded the Federal CO standards in the past five years. Orange County has been designated by the ARB to be an attainment area for State CO standards.

Nitrogen Oxides

NO_2, a reddish-brown gas, and nitric oxide (NO), a colorless, odorless gas, are formed from fuel combustion under high temperature or pressure. These compounds are referred to as nitrogen oxides, or NOx. NOx is a primary component of the photochemical smog reaction. It also contributes to other pollution problems, including a high concentration of fine particulate matter, poor visibility, and acid deposition (i.e., acid rain). NO_2 decreases lung function and may reduce resistance to infection. The entire SCAB has not exceeded either Federal or State standards for nitrogen dioxide in the past five years with published monitoring data. It is designated as a maintenance area under the Federal standards and an attainment area under the State standards.

Sulfur Dioxide

Sulfur dioxide (SO_2) is a colorless irritating gas formed primarily from incomplete combustion of fuels containing sulfur. Industrial facilities also contribute to gaseous SO_2 levels. SO_2 irritates the respiratory tract, can injure lung tissue when combined with fine particulate matter, and reduces visibility and the level of sunlight. The entire SCAB is in attainment with both Federal and State SO_2 standards.

Lead

Lead is found in old paints and coatings, plumbing, and a variety of other materials. Once in the bloodstream, lead can cause damage to the brain, nervous system, and other body systems. Children are highly susceptible to the effects of lead. The entire SCAB is in attainment for the Federal and State standards for lead.

Particulate Matter

Particulate matter is the term used for a mixture of solid particles and liquid droplets found in the air. Coarse particles (all particles less than or equal to 10 micrometers in diameter, or PM_{10}) derive from a variety of sources, including windblown dust and grinding operations. Fuel combustion and resultant exhaust from power plants and diesel buses and trucks are primarily responsible for fine particle (less than 2.5 microns in diameter, or $PM_{2.5}$) levels. Fine particles can also be formed in the atmosphere through chemical reactions. PM_{10} can accumulate in the respiratory system and aggravate health problems such as asthma. The EPA's scientific review concluded that $PM_{2.5}$, which penetrates deeply into the lungs, is more likely than PM_{10} to contribute to the health effects listed in a number of recently published community epidemiological studies at concentrations that extend well below those allowed by the current PM_{10} standards. These health effects include premature death and increased hospital admissions and emergency room visits (primarily the elderly and individuals with cardiopulmonary disease); increased respiratory symptoms and disease (children and individuals with cardiopulmonary disease such as asthma); decreased lung functions (particularly in children and individuals with asthma); and alterations in lung tissue and structure and in respiratory tract defense mechanisms. The entire SCAB is a nonattainment area for the Federal and State PM_{10} standards. The attainment status of $PM_{2.5}$ in the SCAB was not officially established by the EPA or the ARB at the time this analysis was prepared. However, based on the monitored data, the SCAB is likely to be designated as a nonattainment area for $PM_{2.5}$.

Regulatory Settings

Federal Regulations/Standards

Pursuant to the Federal Clean Air Act (CAA) of 1970, the EPA established national ambient air quality standards (NAAQS). The NAAQS were established for six major pollutants, termed "criteria" pollutants. Criteria pollutants are defined as those pollutants for which the Federal and State governments have established AAQS, or criteria, for outdoor concentrations in order to protect public health.

Data collected at permanent monitoring stations are used by the EPA to classify regions as "attainment" or "nonattainment," depending on whether the regions met the requirements stated in the primary NAAQS. Nonattainment areas are imposed with additional restrictions as required by the EPA.

The EPA has designated SCAG as the Metropolitan Planning Organization (MPO) responsible for ensuring compliance with the requirements of the CAA for the SCAB.

The EPA established new national air quality standards for ground-level O_3 and $PM_{2.5}$ in 1997. On May 14, 1999, the Court of Appeals for the District of Columbia Circuit issued a decision ruling that the CAA, as applied in setting the new public health standards for ozone and particulate matter, was unconstitutional as an improper delegation of legislative authority to the EPA. On February 27, 2001, the U.S. Supreme Court upheld the way the government sets air quality standards under the CAA. The court unanimously rejected industry arguments that the EPA must consider financial cost as well as health benefits in writing standards. The justices also rejected arguments that the EPA took too much lawmaking power from Congress when it set tougher standards for ozone and soot in 1997. Nevertheless, the court threw out the EPA's policy for implementing new ozone rules, saying that the agency ignored a section of the law that restricts its decision-making authority. It ordered the Agency to come up with a more "reasonable" interpretation of the law. The EPA issued the final eight-hour O_3 nonattainment designations/boundaries on April 15, 2004. States will be provided three years, to April 2007, to develop eight-hour O_3 State Implementation Plans (SIPs) following the final designations. Various areas in the State of California have different attainment dates based on their corresponding classification.

State Regulations/Standards

The State of California began to set California ambient air quality standards (CAAQS) in 1969 under the mandate of the Mulford-Carrell Act. The CAAQS are generally more stringent than the NAAQS. In addition to the six criteria pollutants covered by the NAAQS, there are CAAQS for sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles. These standards are also listed in Table 5.2-1.

Originally, there were no attainment deadlines for CAAQS. However, the CCAA of 1988 provided a time frame and a planning structure to promote their attainment. The CCAA required nonattainment areas in the State to prepare attainment plans and proposed to classify each such area on the basis of the submitted plan, as follows: moderate, if CAAQS attainment could not occur before December 31, 1994; serious, if CAAQS attainment could not occur before December 31, 1997; and severe, if CAAQS attainment could not be conclusively demonstrated at all.

The attainment plans are required to achieve a minimum 5 percent annual reduction in the emissions of nonattainment pollutants unless all feasible measures have been implemented. The Basin is currently classified as a nonattainment area for three criteria pollutants.

Regional Air Quality Planning Framework

The 1976 Lewis Air Quality Management Act established the SCAQMD and other air districts throughout the State. The Federal CAA Amendments of 1977 required that each state adopt an implementation plan outlining pollution control measures to attain the Federal standards in nonattainment areas of the state.

The ARB coordinates and oversees both State and Federal air pollution control programs in California. The ARB oversees activities of local air quality management agencies and is responsible for incorporating air quality management plans for local air basins into a State Implementation Plan (SIP) for the EPA approval. The ARB maintains air quality monitoring stations throughout the State in conjunction with local air districts. Data collected at these stations are used by the ARB to classify air basins as "attainment" or "nonattainment" with respect to each pollutant and to monitor progress in attaining air quality standards. The ARB has divided

the State into 15 air basins. Significant authority for air quality control within them has been given to local air districts that regulate stationary source emissions and develop local nonattainment plans.

Regional Air Quality Management Plan

The SCAQMD and SCAG are responsible for formulating and implementing the AQMP for the Basin. Regional AQMPs were adopted for the Basin for 1979, 1982, 1989, 1991, 1994, 1997, and 2003.

The SCAQMD Governing Board approved the 1997 AQMP on November 15, 1996. After approval, the AQMP was submitted to the ARB for its review and approval. The ARB approved the O_3 and PM_{10} portions of the 1997 AQMP on January 23, 1997, and submitted the plan to the EPA as proposed revisions to the SIP. The EPA rejected the District's revision of its 1997 AQMP in January 1999. The rejection, however, covers only the provisions of the AQMP designed to attain the Federal O_3 standard. As a result of the rejection, the SCAQMD prepared a draft "Proposed 1999 Amendment to the 1997 Ozone SIP Revision for the South Coast Air Basin" on October 7, 1999, for public review and comment. The 1999 Amendment proposed to revise the O_3 portion of the 1997 AQMP that was submitted to the EPA as a revision to the South Coast Air Basin portion of the 1994 California O_3 SIP. The SCAQMD Governing Board adopted the "1999 Amendment to the 1997 Ozone SIP Revision for the South Coast Air Basin" on December 10, 1999. In addition, the SCAQMD Governing Board settled with three environmental organizations on its litigation of the 1994 O_3 SIP.

The SCAQMD adopted a comprehensive plan update, the 2003 AQMP, for the Basin on August 1, 2003. The 2003 AQMP seeks to demonstrate attainment with State and Federal air quality standards and will incorporate a revised emissions inventory, the latest modeling techniques, and updated control measures remaining from the 1997/1999 SIP and new control measures. The SCAQMD submitted the 2003 AQMP to the ARB and EPA for their review and approval in early August 2003. The ARB approved the 2003 AQMP in October 2003 and submitted its recommended modifications to the EPA for approval.

Local Air Quality

The SCAQMD, together with the ARB, maintain ambient air quality monitoring stations in the SCAB. The air quality monitoring station closest to the site is the Anaheim Loara School (Pampas Lane) station, and its air quality trends are representative of the ambient air quality in the Project Area. The pollutants monitored are CO, O_3, NO_2, and SO_2.[3] The levels of suspended particulate matter monitored at the Anaheim stations, the stations closest to the project site that monitors suspended particulate matter levels, are included in these tables for reference.

The Anaheim Loara School Station is located at 1630 Pampas Lane in Anaheim. The Anaheim monitoring station at Pampas Lane was not in operation until 2001, as its original location was off Harbor Boulevard in Anaheim. As a result, data from the former Anaheim Harbor Boulevard Station was incorporated to obtain values for air quality prior to operation of the Loara School Station. Data was taken from these locations because they are the closest monitoring stations that accurately resemble the ambient air quality conditions in the City of Anaheim.

The ambient air quality data in Table 5.2-4 shows that NO_2 and CO levels are below the relevant State and Federal standards at the Anaheim Harbor Boulevard Station and the Anaheim Loara School Station. O_3 levels exceeded the State one-hour standard at least once for the past five years and 14 times, most recently, in 2004. The Federal eight-hour O_3 standard was exceeded once in 2000 and eight times in 2004. The PM_{10} (three to six days a year) level exceeded the State standards in each of the past five years but has not

[3] Air quality data, 2000–2004; ARB Web site.

exceeded the Federal standards. $PM_{2.5}$ levels exceeded the Federal standard in each of the past five years, ranging from one to six days each year.

Table 5.2-4
Ambient Air Quality Monitoring Summary

Pollutant	Standard	Year	Maximum Concentration	Days Exceeding	
				State Standard	Federal Standard
Ozone 1-hour	State: 0.09 ppm Federal: 12 ppm	2000 2001 2002 2003 2004	0.132 ppm 0.107 0.103 0.136 0.120	9 2 3 11 14	1 0 0 2 0
Ozone 8-Hour	State: N/A Federal: 0.08 ppm	2000 2001 2002 2003 2004	N/A 0.070 0.078 0.087 0.097	N/A	N/A 0 0 1 8
Carbon Monoxide	State 8-hour: 9.0 ppm State 1-hour: 20 ppm Federal 8-hour: 9 ppm Federal 1-hour: 35 ppm	2000 2001 2002 2003 2004	6.73 ppm 3.76 5.26 3.89 3.77	0 0 0 0 0	0 0 0 0 0
Respirable Particulate (PM_{10})	State 24-hour: 50 $\mu g/m^3$ State Annual Arithmetic Mean: 20 $\mu g/m^3$ Federal 24-hour: 150 $\mu g/m^3$ Federal Annual Arithmetic Mean: 50 $\mu g/m^3$	2000 2001 2002 2003 2004	126.0.0 $\mu g/m^3$ 62.0 69.0 96.0 62.0	8 3 5 6 3	0 0 0 0 0
Fine Particulate ($PM_{2.5}$)[2]	State Annual Arithmetic Mean: 12 $\mu g/m^3$ Federal 24-hour: 65 $\mu g/m^3$ Federal Annual Arithmetic Mean: 15 $\mu g/m^3$	2000 2001 2002 2003 2004	113.9 $\mu g/m^3$ 70.8 68.6 115.5 52.9	N/A	6 1 1 3 0
Nitrogen Dioxide	State 1-hour: 0.25 ppm Federal Annual Arithmetic Mean: 0.053 ppm	2000 2001 2002 2003 2004	0.139 ppm 0.120 0.100 0.127 0.122	0 0 0 0 0	N/A

NM – Not monitored.
ppm: parts per million; $\mu g/m^3$: micrograms per cubic meter
Source: South Coast Air Quality Management District:
1. Anaheim Loara School Station located at 1630 Pampas Ln, Anaheim CA 92802
2. Anaheim Harbor Boulevard Station

5.2.2 Thresholds of Significance

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project would:

AQ-1 Conflict with or obstruct implementation of the applicable air quality plan.

AQ-2 Violate any air quality standard or contribute substantially to an existing or projected air quality violation.

AQ-3 Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable Federal or State ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors).

AQ-4 Expose sensitive receptors to substantial pollutant concentrations.

AQ-5 Create objectionable odors affecting a substantial number of people.

South Coast Air Quality Management District Thresholds

CEQA allows for the significance criteria established by the applicable air quality management or air pollution control district to be used to assess impacts of a project on air quality. The SCAQMD has established thresholds of significance for air quality for construction activities and project operation as shown in Table 5.2-5.

Table 5.2-5
SCAQMD Significance Thresholds

Air Pollutant	*Construction Phase*	*Operational Phase*
Reactive Organic Gases (ROC)	75 lbs/day	55 lbs/day
Carbon Monoxide (CO)	550 lbs/day	550 lbs/day
Nitrogen Oxides (NOx)	100 lbs/day	55 lbs/day
Sulfur Oxides (SOx)	150 lbs/day	150 lbs/day
Particulates (PM_{10})	150 lbs/day	150 lbs/day

In addition to the daily thresholds listed above, projects are also subject to the ambient air quality standards. These are addressed though an analysis of localized CO impacts. The California 1-hour and 8-hour CO standards are:

- 1-hour = 20 parts per million
- 8-hour = 9 parts per million

The significance of localized project impacts depends on whether ambient CO levels in the vicinity of the project are above or below State and Federal CO standards. If ambient levels are below the standards, a project is considered to have significant impacts if project emissions results exceed one or more of these standards. If ambient levels already exceed a State or Federal standard, then project emissions are considered significant if they increase ambient concentrations by a measurable amount. The SCAQMD defines a measurable amount as 1.0 ppm or more for the 1-hour CO concentration or 0.45 ppm or more for the 8-hour CO concentration.

5.2.3 Environmental Impacts

A number of air quality modeling tools are available to assess air quality impacts of projects. In addition, certain air districts, such as the SCAQMD, have created guidelines and requirements to conduct air quality analyses. The SCAQMD's current guidelines, CEQA Air Quality Handbook, April, 1993, were adhered to in the assessment of air quality impacts for the Proposed Project. The URBEMIS2002 model was used to estimate project related mobile and stationary source emissions in this air quality assessment.

The air quality assessment includes estimating emissions associated with short term construction and long-term operation of the Proposed Project. Criteria pollutants with regional impacts would be emitted by project related vehicular trips, as well as by emissions associated with stationary sources used on site. Localized air quality impacts, i.e., higher CO concentrations (CO hot spots) near intersections or roadway segments in the project vicinity, would be small and less than significant due to the generally low ambient CO concentrations in the Project Area. A local CO hot spot analysis was conducted. Project specific information was used in the modeling. Default values representative of the Proposed Project were used when project specific data were not available.

The net increase in pollutant emissions determine the significance and impact on regional air quality as a result of the Proposed Project. The results also allow the local government to determine whether the Proposed Project will deter the region from achieving the goal of reducing pollutants in accordance with the AQMP in order to comply with Federal and State ambient air quality standards.

The following impact analysis addresses thresholds of significance for which the Initial Study disclosed potentially significant impacts. The applicable thresholds are identified in parentheses after the impact statement.

IMPACT 5.2-1: CONSTRUCTION ACTIVITIES ASSOCIATED WITH THE PROPOSED PROJECT WOULD GENERATE SHORT-TERM EMISSIONS IN EXCEEDANCE OF SCAQMD'S THRESHOLD CRITERIA. (THRESHOLDS AQ-2 AND AQ-3)

Impact Analysis: Construction activities produce combustion emissions from various sources such as site grading, utility engines, on-site heavy-duty construction vehicles, equipment-hauling materials to and from the site, asphalt paving, and motor vehicles transporting the construction crew. Exhaust emissions from construction activities envisioned on site would vary daily as construction activity levels change.

Construction activities associated with new development occurring in the Project Area would temporarily increase localized PM_{10}, ROC, NOx, SOx, and CO concentrations in the project vicinity. The primary source of construction-related ROC and NOx emissions is gasoline- and diesel-powered, heavy-duty mobile construction equipment such as scrapers and motor graders. Primary sources of PM_{10} emissions would be clearing and demolition activities, excavation and grading operations, construction vehicle traffic on unpaved ground, and wind blowing over exposed earth surfaces.

Emissions generated from construction activities are anticipated to cause temporary increases in pollutant concentrations that could contribute to violations of Federal and State maximum concentration standards. The frequency and concentration of such violations would depend on several factors, including soil composition on site, the amount of soil disturbed, wind speed, the number and type of machinery used, the construction schedule, and the proximity of other construction and demolition projects. The included analysis is based on the URBEMIS2002 computer model. The results of the URBEMIS2002 computer modeling are included in Table 5.2-6. Therefore, the Proposed Project's impact is considered significant. The URBEMIS2002 model runs are included in Appendix D.

Table 5.2-6
Project Related Construction Phase Emissions
(In Pounds Per Day)

	CO	ROG	NOx	SO_2	PM_{10}
Demolition	75	10	87	<1	7
Grading	292	36	251	<1	87
Building Construction	280	4317	155	<1	8
Maximum from All Phases	**292**	**4317**	**251**	**<1**	**87**
SCAQMD Standard	550	75	100	150	150
Difference	–258	4,242	151	–150	–63
Significant?	No	**Yes**	**Yes**	No	No

Source: The Planning Center using the URBEMIS2002 emissions inventory model, December 2004.

As shown in Table 5.2-6, construction emissions for ROG and NOx would significantly exceed the SCAQMD threshold. For ROG, the building construction phase would exceed SCAQMD thresholds by over 4,000 lbs per day. The most significant contribution of ROG during this phase of construction is during spraying of architectural coatings. Architectural coatings contain volatile organic compounds (VOC) that are similar to ROC and are part of the O_3 precursors.

IMPACT 5.2-2: LONG-TERM OPERATION OF THE PROJECT WOULD GENERATE ADDITIONAL VEHICLE TRIPS AND ASSOCIATED EMISSIONS. (THRESHOLDS AQ-2 AND AQ-3)

Impact Analysis: Long-term air emission impacts are those associated with stationary sources and mobile sources related to any change related to the Proposed Project. The proposed development would consist of 9,500 housing units, 3,265,000 square feet of office, and 2,254,400 square feet of commercial. The stationary source emissions from this land use would come from its consumption of natural gas and electricity. Based on the traffic study prepared for this project by Parsons Brinckerhoff Quade & Douglas, Inc. (April 2005), the Proposed Project would generate 269,878 average daily trips. Using the default emission factors included in URBEMIS2002, emissions associated with project-related vehicular trips were calculated and are included in Table 5.2-7. As shown, project-related emissions would exceed the SCAQMD daily emissions thresholds for CO, ROG, NOx, and PM_{10}. Mobile sources represent the largest source of operational emissions for the project. Therefore, the Proposed Project's impact is considered significant. The URBEMIS2002 model runs are included in Appendix D.

Table 5.2-7
Project Related Operational Phase Emissions
(In Pounds Per Day)

Summer and Winter Emissions	CO	ROG	NOx	SO_2	PM_{10}
Stationary Sources (electricity/natural gas consumption, landscaping)	49	474	115	<1	<1
Mobile Sources	5,184	496	638	12	1,973
Total	5,233	970	753	12	1,973
SCAQMD Standard	550	55	55	150	150
Difference	4,683	915	698	–138	1,823
Significant?	**Yes**	**Yes**	**Yes**	No	**Yes**

Source: The Planning Center using the URBEMIS2002 emissions inventory model, December 2004.

IMPACT 5.2-3: THE PROPOSED PROJECT COULD EXPOSE SENSITIVE RECEPTORS TO SUBSTANTIAL POLLUTANT CONCENTRATIONS. (THRESHOLD AQ-4)

Impact Analysis: Vehicular trips associated with the Proposed Project would contribute to the congestion at intersections and along roadway segments in the project vicinity. Localized air quality effects would occur when emissions from vehicular traffic increase in local areas as a result of the Proposed Project. The primary mobile source pollutant of local concern is CO. CO is a direct function of vehicle idling time and, thus, traffic flow conditions. CO transport is extremely limited; it disperses rapidly with distance from the source under normal meteorological conditions. However, under certain extreme meteorological conditions, CO concentrations proximate to a congested roadway or intersection may reach unhealthful levels affecting local sensitive receptors (residents, school children, the elderly, hospital patients, etc). Typically, high CO concentrations are associated with roadways or intersections operating at unacceptable levels of service or with extremely high traffic volumes. In areas with high ambient background CO concentration, modeling is recommended to determine a project's effect on local CO levels.

The air quality impacts from the Proposed Project were evaluated for the build-out year of 2025. The intersection vehicle turn volumes were used in the Caltrans CALINE4 model to evaluate local CO concentrations at intersections most affected by project traffic. The projected CO concentrations are based off of the SCAQMD's Air Quality Analysis Handbook projected background CO concentration for the City of Anaheim of 3.9 ppm for the eight-hour period with a persistence factor of 0.7.

The traffic analysis prepared by Parsons Brinckerhoff Quade & Douglas, Inc.(April 2005) evaluated the future (2025) traffic conditions at six intersections in the project vicinity having high traffic volumes and low levels of service. The traffic analysis evaluated the traffic conditions under four different land use scenarios. Table 5.2-8 lists the CO concentrations that would result at the six intersections for the 2025. As shown in Table 5.2-8, none of the six intersections analyzed would have 8-hour CO concentration exceeding Federal and State standards of 9 ppm. The one-hour CO concentration at these intersections would also be below the State standard of 20.0 ppm and below the Federal standard of 35 ppm. The Proposed Project would not have a significant impact on local air quality for CO, and no mitigation measures would be required.

Table 5.2-8
Monoxide Dispersion Analysis for 2025 with Project
(In Parts Per Million)

Intersection	Project 1-Hour Concentration	SCAQMD 1-Hour Threshold	Significant Impact	Project 8 Hour Concentration	SCAQMD 8-Hour Threshold	Significant Impact
Manchester/Katella						
Northeast	6.4	20	No	5.1	9	No
Southeast	6.3	20	No	5.0	9	No
Southwest	6.3	20	No	5.0	9	No
Northwest	6.5	20	No	5.2	9	No
State College/Orangewood						
Northeast	6.4	20	No	5.1	9	No
Southeast	6.4	20	No	5.1	9	No
Southwest	6.3	20	No	5.0	9	No
Northwest	6.3	20	No	5.0	9	No
Howell/Katella						
Northeast	6.2	20	No	5.0	9	No
Southeast	6.1	20	No	4.9	9	No
Southwest	6.1	20	No	4.9	9	No
Northwest	6.2	20	No	5.0	9	No
Sportstown/Katella						
Northeast	6.2	20	No	5.0	9	No
Southeast	6.3	20	No	5.0	9	No
Southwest	6.3	20	No	5.0	9	No
Northwest	6.4	20	No	5.1	9	No
Santiago/Meats						
Northeast	6.1	20	No	4.9	9	No
Southeast	6.2	20	No	5.0	9	No
Southwest	6.1	20	No	4.9	9	No
Northwest	6.2	20	No	5.0	9	No
Chapman/Rampart						
Northeast	6.2	20	No	5.0	9	No
Southeast	6.1	20	No	4.9	9	No
Southwest	6.1	20	No	4.9	9	No
Northwest	6.2	20	No	5.0	9	No

IMPACT 5.2-4: THE PROPOSED PROJECT IS CONSISTENT WITH THE APPLICABLE AIR QUALITY MANAGEMENT PLAN. (THRESHOLD AQ-1)

Impact Analysis: CEQA requires that projects be consistent with the AQMP. A consistency determination plays an important role in local agency project review by linking local planning and individual projects to the AQMP. It fulfills the CEQA goal of informing decision-makers of the environmental efforts of the project under consideration at a stage early enough to ensure that air quality concerns are fully addressed. It also provides the local agency with on-going information as to whether they are contributing to clean air goals contained in the AQMP. Only new or amended General Plan elements, Specific Plans, and major projects need to undergo a consistency review. This is because the AQMP strategy is based on projections from local General Plans. Projects that are consistent with the local General Plan are considered consistent with the air quality-related Regional Plan.

Discussion with the SCAQMD (Susan Nakamura, Planning Manager, March 2, 2004) noted that if growth projections included in the 2003 AQMP are not exceeded, a project would generally be considered to be consistent with the 2003 AQMP if it incorporates emissions reduction measures included in the 2003 AQMP. The baseline socioeconomic forecasts included in Table 3-2 of the 2003 AQMP are based off SCAG's 2001 Regional Transportation Plan (RTP) for population, housing and employment growth within cities in Southern California. In the 2001 RTP and most recent update in of the RTP in 2004, SCAG uses a jobs/housing ratio to assess the relationship between housing and employment growth. Jobs/housing balance is a measure of the proximity between job and housing opportunities. Jobs/housing balance holds implications for local and regional air quality; the shorter the distance between job and housing opportunities, the less Vehicle Miles Traveled (VMT) and the greater the opportunity that residents and employees will rideshare, walk, or use public transit rather than single-occupant automobiles.

The Master Land Use Plan is balanced in that it provides for a wide-range of housing opportunities to serve future employees, thus has the opportunity to reduce VMT. While the average daily trips would increase from 259,946 under the current land use plan to 269,878 average daily trips under the project, compared to SCAG's 2004 RTP the Master Land Use Plan would improve the job/housing ratio by introducing housing units into a major regional employment center. As such, vehicle miles traveled under the Master Land Use Plan is expected to be less than that forecast under the AQMP due to the incorporation of housing in a job rich area. Therefore, the Proposed Project is considered consistent with the 2003 AQMP.

IMPACT 5.2-5: THE PROPOSED PROJECT WOULD NOT CREATE OBJECTIONABLE ODORS. (THRESHOLD AQ-5)

Impact Analysis: Project construction would involve the use of heavy equipment creating exhaust pollutants from on-site earth movement and from equipment bringing asphalt and other building materials to the site. With regards to nuisance odors, any air quality impacts would 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 are typically diluted to well below any level of air quality concern. An occasional "whiff" of diesel exhaust from passing equipment and trucks accessing the site from public roadways may result. Such brief exhaust odors are an adverse, but not significant, air quality impact.

Although no objectionable odors are anticipated to result from the operational phase of the Proposed Project, any unforeseen odors from minor food preparation at the residential units would be controlled by adherence to SCAQMD Rule 402. Therefore, no significant impact would result from the Proposed Project, and no mitigation measures are necessary.

5.2.4 Cumulative Impacts

In accordance with the SCAQMD methodology, any project that produces a significant air quality impact in an area that is out of attainment, adds to the cumulative impact. Cumulative projects within the local area include local development as well as general growth within the Project Area. However, as with most development, the greatest source of emissions is from mobile sources, which travel well outside the local area. Therefore, from an air quality standpoint, the cumulative analysis would extend beyond any local projects and, when wind patterns are considered, would cover an even larger area. Accordingly, the cumulative analysis for the project's air quality must be generic by nature.

The Project Area is out of attainment for ozone and PM_{10} particulate matter. Construction and operation of cumulative projects will further degrade the local air quality, as well as the air quality of the SCAB. Air quality will be temporarily degraded during construction activities that occur separately or simultaneously. However, the greatest cumulative impact on the quality of the regional air basin would be the incremental addition of pollutants mainly from increased traffic from residential, commercial, and office development and the use of heavy equipment and trucks associated with the construction of these projects.

Mitigation measures specified for the project will aid in mitigating these cumulative impacts to the extent feasible and can be applied to all similar cumulative projects. Mitigation for projects involving the use of diesel equipment and trucks include all vehicles and equipment being kept in tune, catalytic converters being used on all gasoline-powered equipment, low-emission diesel fuel being used, and diesel engines being substituted by electric or gasoline engines where feasible. Additionally, internal combustion engines should not be left idling for prolonged periods, and construction should be curtailed on high smog days. Daily watering of active construction areas and dirt roads will be required to reduce fugitive dust.

With respect to emissions that exceed State and Federal standards, a CO hot spot analysis was performed for year 2007 traffic when area build-out is expected. However, cumulative development in accordance with the adopted City of Anaheim General Plan, will contribute to the cumulative air quality problems in the SCAB mostly due to the generation of motor vehicle traffic. The addition of emissions from cumulative development to the SCAB, a nonattainment area, is considered a Significant Unavoidable Adverse Impact.

5.2.5 Existing Regulations and Standard Conditions

- Future development projects within the Project Area shall comply with Title 24 of the California Code of Regulations established by the Energy Commission regarding energy conservation standards.

5.2.6 Level of Significance Before Mitigation

Based on the analysis provided above, Impacts 5.2-3, 5.2-4, and 5.2-5 were determined to be less than significant. However, without mitigation Impacts 5.2-1 and 5.2-2 are considered **potentially significant**.

5.2.7 Mitigation Measures

Applicable Measures from MMP No. 106

The following mitigation measures were included in Updated and Modified Mitigation Monitoring Program No. 106 for The Platinum Triangle, and were previously adopted as part of the Stadium Area Master Land Use Plan EIR and the General Plan and Zoning Code Update EIR No. 330. Some of these measures are being revised as part of this Subsequent EIR. Additions are shown in **bold** and deletions are indicated in strikeout format.

5.2-1 On-going during grading and construction, **the property owner/developer shall be responsible for requiring contractors to implement** the following measures ~~will~~ **to** reduce ~~these~~ **construction-related** emissions; however, the resultant value is expected to remain significant.

a) The contractor ~~will~~ **shall** ensure that all construction equipment is being properly serviced and maintained to reduce operational emissions.

b) Where feasible, the contractor shall use low emission mobile construction.

c) The contractor shall utilize existing power sources (e.g., power poles) or clean-fuel generators rather than temporary power generators where feasible.

5.2-2 On-going during grading and construction, **the property owner/developer shall implement** the following measures ~~shall be implemented~~ in order to reduce PM_{10} emissions:

a) The property owner/developer shall implement standard mitigation measures in accordance with SCAQMD Rules 402 and 403, to control fugitive dust emissions and ensure that nuisance dust conditions do not occur during construction.

b) In addition to the standard measures, the property owner/developer shall implement supplemental measures as feasible to reduce fugitive dust emissions to the extent feasible during construction operations. To assure compliance, the City shall verify compliance that these measures have been implemented during normal construction site inspections. The measures to be implemented are listed below:

- Re-establish ground cover on the construction site through seeding and watering.
- Pave on-site haul roads.
- Phase grading to prevent the susceptibility of large areas to erosion over extended periods of time.
- Schedule activities to minimize the amounts of exposed excavated soil during and after the end of work periods.
- Dispose of surplus excavated material in accordance with local ordinances and use sound engineering practices.
- Restore landscaping and irrigation that are removed during construction in coordination with local public agencies.
- Sweep streets on a daily basis if silt is carried over to adjacent public thoroughfares or occurs as a result of hauling.
- Suspend grading operations during high winds in accordance with Rule 403 requirements.
- Wash off trucks leaving site.
- Maintain a minimum 12-inch freeboard ratio on haul trucks.
- Cover payloads on trucks hauling soil using tarps or other suitable means.

5.2-3 Prior to approval of each grading plan (for Import/Export Plan) and prior to issuance of demolition permits (for Demolition Plans), the property owner/developer shall submit Demolition and Import/Export Plans. These plans shall include identification of off-site locations for materials export from the project and options for disposal of excess material. These options may include recycling of materials on-site or to an adjacent site, sale to a soil broker or contractor, sale to a project in the vicinity or transport to an environmentally cleared landfill, with attempts made to move it within Orange County. The property owner/developer shall offer recyclable building materials, such as asphalt or concrete for sale or removal by private firms or public agencies for use in construction of other projects, if not all can be reused at the project site.

5.2-4 Prior to approval of each building permit, the property owner/developer shall submit evidence that high-solids or water-based low emissions paints and coatings are utilized in the design and construction of buildings, in compliance with SCAQMD regulations. This information shall be denoted on the project plans and specifications. Additionally, the property owner/developer shall specify the use of high volume/low pressure spray equipment or hand application. Air atomized spray techniques shall not be permitted.

5.2-5 In accordance with the timing required by the Traffic and Transportation Manager, **but no later than prior to the first final Building and Zoning inspection, the property owner/developer shall implement** the following measures ~~shall be implemented~~ to reduce long-term operational CO, NOx, ROG, and PM_{10} emissions:

- Traffic lane improvements and signalization as outlined in the traffic study and MPAH shall be implemented as required by the Traffic and Transportation Manger.

- The property owner/contractor shall place bus benches and/or shelters as required by the Traffic and Transportation Manager at locations along any site frontage routes as needed.

~~5.2-6 While mobile source emission do present the greatest source of impact, all emissions add to the cumulative total and further mitigation is warranted to reduce stationary source emissions as well. These emissions will be reduced though the following:~~

- ~~The property owner/contractor shall specify the installation of energy efficient lighting, air conditioning, water heaters, and appliances.~~

- ~~The property owner/contractor as feasible shall specify the installation of insulation in excess of Title 24 requirements.~~ [Note: This mitigation measure is an existing regulatory requirement as identified above and has therefore been deleted.]

5.2-6 Prior to issuance of a building permit, implementation of energy conservation techniques (i.e., installation of energy saving devices, construction of electrical vehicle charging stations, use of sunlight filtering window coatings or double-paned windows, utilization of light-colored roofing materials as opposed to dark-colored roofing materials, and placement of shady trees next to habitable structures) shall be indicated on plans.

Additional Mitigation

5.2-7 Prior to issuance of a building permit, the property owner/developer shall be responsible for the placement of a note on the plans stating that to reduce the health impacts of air quality hazards within The Platinum Triangle, placement of wood burning fireplaces in residential units shall be prohibited. As an alternative to wood burning fireplaces, gas fireplaces may be used.

5.2.8 Level of Significance After Mitigation

Total construction emissions during peak construction days would exceed SCAQMD daily thresholds for the criteria pollutants of ROG and NOx. However, compliance with the SCAQMD Rules and Regulations during construction will reduce construction related air quality impacts from fugitive dust emissions and construction equipment emissions. The mitigation measures identified above would further reduce impacts related to construction emissions, although construction emissions would still remain a significant unavoidable adverse impact.

Long-term stationary source emissions would occur due to energy consumption, such as electricity usage by the proposed land uses, and from mobile source emissions. Pollutant emissions from project operations would exceed the SCAQMD criteria pollutant thresholds for CO, ROG, NOx, and PM_{10}. The majority of these releases which contribute to these exceedances are from mobile sources. As a result, long-term operational emissions associated with the Proposed Project are considered Significant and Unavoidable.

However, the project will not result in significant regional air quality impacts as the Proposed Project is consistent with AQMP and other regional plan strategies to reduce the number of trips and the length of trips in the region, and to improve the balance between jobs and housing at the subregional level. The AQMP recognizes that emissions due to trips and mode choices are not only a function of the transportation system, but also relate to the proximity of housing and job generating land uses, and proximity of jobs to transportation infrastructure and transit.