IV. ENVIRONMENTAL IMPACT ANALYSIS
B. AIR QUALITY

The following analysis of air quality impacts is based on the Air Quality and Noise Technical Report prepared by Terry A. Hayes Associates LLC (TAHA), dated August 21, 2008. This report is included in its entirety as Appendix B of this Draft EIR.

This section examines the degree to which the Proposed Project, including the proposed Equivalency Program, may result in significant adverse changes to air quality. Both short-term construction emissions occurring from activities, such as site grading and haul truck trips, and long-term effects related to the ongoing operation of the proposed project are discussed in this section. The analysis contained herein focuses on air pollution from two perspectives: daily emissions and pollutant concentrations. "Emissions" refer to the quantity of pollutant released into the air, measured in ppd. "Concentrations" refer to the amount of pollutant material per volumetric unit of air, measured in parts per million (ppm) or micrograms per cubic meter (μg/m3).

EXISTING CONDITIONS

Pollutants and Effects

Criteria air pollutants are defined as pollutants for which the federal and State governments have established ambient air quality standards, or criteria, for outdoor concentrations to protect public health. The federal and State standards have been set at levels above which concentrations could be harmful to human health and welfare. These standards are designed to protect the most sensitive persons from illness or discomfort. Pollutants of concern include: CO, ozone (O_3), NO_2, sulfur dioxide (SO_2), $PM_{2.5}$, PM_{10}, and lead (Pb). These pollutants are discussed below.

Carbon Monoxide

CO is a colorless and odorless gas formed by the incomplete combustion of fossil fuels. CO is emitted almost exclusively from motor vehicles, power plants, refineries, industrial boilers, ships, aircraft, and trains. In urban areas such as the project location, automobile exhaust accounts for the majority of CO emissions. CO is a non-reactive air pollutant that dissipates relatively quickly, so ambient CO concentrations generally follow the spatial and temporal distributions of vehicular traffic. CO concentrations are influenced by local meteorological conditions, primarily wind speed, topography, and atmospheric stability. CO from motor vehicle exhaust can become locally concentrated when surface-based temperature inversions are combined with calm atmospheric conditions, a typical situation at dusk in urban areas between November and February.[1] The highest levels of CO typically occur during the

[1] *Inversion is an atmospheric condition in which a layer of warm air traps cooler air near the surface of the earth, preventing the normal rising of surface air.*

colder months of the year when inversion conditions are more frequent. In terms of health, CO competes with oxygen, often replacing it in the blood, thus reducing the blood's ability to transport oxygen to vital organs. The results of excess CO exposure can be dizziness, fatigue, and impairment of central nervous system functions.

Ozone

O_3 is a colorless gas that is formed in the atmosphere when reactive organic gases (ROG), which includes VOC, and NO_X react in the presence of ultraviolet sunlight. O_3 is not a primary pollutant; it is a secondary pollutant formed by complex interactions of two pollutants directly emitted into the atmosphere. The primary sources of ROG and NO_X, the components of O_3, are automobile exhaust and industrial sources. Meteorology and terrain play major roles in O_3 formation. Ideal conditions occur during summer and early autumn, on days with low wind speeds or stagnant air, warm temperatures, and cloudless skies. The greatest source of smog-producing gases is the automobile. Short-term exposures (lasting for a few hours) to O_3 at levels typically observed in Southern California can result in breathing pattern changes, reduction of breathing capacity, increased susceptibility to infections, inflammation of the lung tissue, and some immunological changes.

Nitrogen Dioxide

NO_2, like O_3, is not directly emitted into the atmosphere but is formed by an atmospheric chemical reaction between nitric oxide (NO) and atmospheric oxygen. NO and NO_2 are collectively referred to as NO_X and are major contributors to O_3 formation. NO_2 also contributes to the formation of PM_{10}. High concentrations of NO_2 can cause breathing difficulties and result in a brownish-red cast to the atmosphere with reduced visibility. There is some indication of a relationship between NO_2 and chronic pulmonary fibrosis. Some increase in bronchitis in children (two and three years old) has also been observed at concentrations below 0.3 ppm.

Sulfur Dioxide

SO_2 is a colorless, pungent gas formed primarily by the combustion of sulfur-containing fossil fuels. Main sources of SO_2 are coal and oil used in power plants and industries. Generally, the highest levels of SO_2 are found near large industrial complexes. In recent years, SO_2 concentrations have been reduced by the increasingly stringent controls placed on stationary source emissions of SO_2 and limits on the sulfur content of fuels. SO_2 is an irritant gas that attacks the throat and lungs. It can cause acute respiratory symptoms and diminished ventilator function in children. SO_2 can also yellow plant leaves and erode iron and steel.

Particulate Matter

Particulate matter pollution consists of very small liquid and solid particles floating in the air, which can include smoke, soot, dust, salts, acids, and metals. Particulate matter also forms when gases emitted from industries and motor vehicles undergo chemical reactions in the atmosphere. $PM_{2.5}$ and PM_{10} represent fractions of particulate matter. Fine particulate matter, or $PM_{2.5}$, is roughly 1/28 the diameter of a human

hair. $PM_{2.5}$ result from fuel combustion (e.g. motor vehicles, power generation, and industrial facilities), residential fireplaces, and wood stoves. In addition, $PM_{2.5}$ can be formed in the atmosphere from gases such as SO_2, NO_X, and VOC. Inhalable particulate matter, or PM_{10}, is about 1/7 the thickness of a human hair. Major sources of PM_{10} include crushing or grinding operations; dust stirred up by vehicles traveling on roads; wood burning stoves and fireplaces; dust from construction, landfills, and agriculture; wildfires and brush/waste burning, industrial sources, windblown dust from open lands; and atmospheric chemical and photochemical reactions.

$PM_{2.5}$ and PM_{10} pose a greater health risk than larger-size particles. When inhaled, these tiny particles can penetrate the human respiratory system's natural defenses and damage the respiratory tract. $PM_{2.5}$ and PM_{10} can increase the number and severity of asthma attacks, cause or aggravate bronchitis and other lung diseases, and reduce the body's ability to fight infections. Very small particles of substances, such as lead, sulfates, and nitrates can cause lung damage directly. These substances can be absorbed into the blood stream and cause damage elsewhere in the body. These substances can transport absorbed gases, such as chlorides or ammonium, into the lungs and cause injury. Whereas PM_{10} tends to collect in the upper portion of the respiratory system, $PM_{2.5}$ is so tiny that it can penetrate deeper into the lungs and damage lung tissues. Suspended particulates also damage and discolor surfaces on which they settle, as well as produce haze and reduce regional visibility.

Lead

Pb in the atmosphere occurs as particulate matter. Sources of lead include leaded gasoline, the manufacturers of batteries, paint, ink, ceramics, and ammunition and secondary lead smelters. Prior to 1978, mobile emissions were the primary source of atmospheric lead. Between 1978 and 1987, the phase-out of leaded gasoline reduced the overall inventory of airborne lead by nearly 95 percent. With the phase-out of leaded gasoline, secondary lead smelters, battery recycling, and manufacturing facilities are becoming lead-emission sources of greater concern.

Prolonged exposure to atmospheric lead poses a serious threat to human health. Health effects associated with exposure to lead include gastrointestinal disturbances, anemia, kidney disease, and in severe cases, neuromuscular and neurological dysfunction. Of particular concern are low-level lead exposures during infancy and childhood. Such exposures are associated with decrements in neurobehavioral performance including intelligence quotient performance, psychomotor performance, reaction time, and growth.

Regulatory Setting

The Federal Clean Air Act (CAA) governs air quality in the United States. In addition to being subject to the requirements of CAA, air quality in California is also governed by more stringent regulations under the California Clean Air Act (CCAA). At the federal level, CAA is administered by the United States Environmental Protection Agency (USEPA). In California, the CCAA is administered by the California Air Resources Board (CARB) at the State level and by the air quality management districts and air pollution control districts at the regional and local levels.

United States Environmental Protection Agency

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

California Air Resources Board

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

South Coast Air Quality Management District

The South Coast Air Quality Management District (SCAQMD) monitors air quality within the project area. SCAQMD has jurisdiction over an area of approximately 10,743 square miles, consisting of Orange County; the non-desert portions of Los Angeles, Riverside, and Bernardino counties; and the Riverside County portion of the Salton Sea Air Basin and Mojave Desert Air Basin. The 1977 Lewis Air Quality Management Act created SCAQMD to coordinate air quality planning efforts throughout southern California. This Act merged four county air pollution control agencies into one regional district to better address the issue of improving air quality in Southern California. Under the Act, renamed the Lewis-Presley Air Quality Management Act in 1988, SCAQMD is the agency principally responsible for comprehensive air pollution control in the South Coast Air Basin (Basin). Specifically, SCAQMD is responsible for monitoring air quality, as well as planning, implementing, and enforcing programs designed to attain and maintain State and federal ambient air quality standards in the district. Programs that were developed include air quality rules and regulations that regulate stationary sources, area sources, point sources, and certain mobile source emissions. SCAQMD is also responsible for establishing stationary source permitting requirements and for ensuring that new, modified, or relocated stationary sources do not create net emission increases.

The Basin is a subregion of the SCAQMD and covers an area of 6,745 square miles. The Basin includes all of Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino counties. The Basin is bounded by Pacific Ocean to the west; the San Gabriel, San Bernardino and San Jacinto mountains to the north and east; and the San Diego County line to the south (Figure IV.B-1).

National and California Ambient Air Quality Standards

As required by the federal CAA, NAAQS have been established for seven major air pollutants: CO, NO_2, O_3, $PM_{2.5}$, PM_{10}, SO_2, and Pb. The CAA requires USEPA to designate areas as either attainment or non-attainment for each criteria pollutant based on whether the NAAQS have been achieved. The federal standards are summarized in Table IV.B-1 on page IV.B-7. The USEPA has classified the Basin as nonattainment for O_3, CO, $PM_{2.5}$, and PM_{10}.

As discussed above, the CAAQS are generally more stringent than the corresponding federal standards (NAAQS) and, as such, are used as the comparative standard in the air quality analysis contained in this report. The State standards are summarized in Table IV.B-1.

Attainment Status

The CCAA requires CARB to designate areas within California as either attainment or non-attainment for each criteria pollutant based on whether the CAAQS have been achieved. Under the CCAA, areas are designated as non-attainment for a pollutant if air quality data shows that a State standard for the pollutant was violated at least once during the previous three calendar years. Exceedances that are affected by highly irregular or infrequent events are not considered violations of a State standard and are not used as a basis for designating areas as non-attainment. Under the CCAA, the Los Angeles County portion of the Basin is designated as a non-attainment area for O_3, $PM_{2.5}$, and PM_{10}.[2]

Air Quality Management Plan

All areas designated as non-attainment under the CCAA are required to prepare plans showing how the area would meet the State air quality standards by its attainment dates. The Air Quality Management Plan (AQMP) is the region's plan for improving air quality in the region. It addresses CAA and CCAA requirements and demonstrates attainment with State and federal ambient air quality standards. The AQMP is prepared by SCAQMD and the Southern California Association of Governments (SCAG). The AQMP provides policies and control measures that reduce emissions to attain both State and federal ambient air quality standards by their applicable deadlines. Environmental review of individual projects within the Basin must demonstrate that daily construction and operational emissions thresholds, as established by the SCAQMD, would not be exceeded. The environmental review must also demonstrate that individual projects would not increase the number or severity of existing air quality violations.

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[2] *CARB, http://www.arb.ca.gov/desig/adm/adm.htm, accessed May 29, 2007.*

Legend

South Coast Air Basin

State of California

NORTH

0 75 150

Feet

Source: TAHA, 2007 and California Air Resources Board, State and Local Air Monitoring Network Plan, October 1998.

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Figure IV.B-1
South Coast Air Basin

Table IV.B-1
State and National Ambient Air Quality Standards

Pollutant	Averaging Period	California Standards (concentration)	Federal Standard (concentration)	
			Primary	Secondary
Ozone (O_3)	1 hour	0.09 ppm	--	Same as Primary Standards
	8 hour	0.070 ppm	0.075 ppm	
Respirable Particulate Matter (PM_{10})	24 hour	50 µg/m^3	150 µg/m^3	Same as Primary Standards
	Annual Arithmetic Mean	20 µg/m^3	--	
Fine Particulate Matter ($PM_{2.5}$)	24 hour	--	35 µg/m^3	Same as Primary Standards
	Annual Arithmetic Mean	12 µg/m^3	15 µg/m^3	
Carbon Monoxide (CO)	8 hour	9.0 ppm	9 ppm	None
	1 hour	20 ppm	35 ppm	
Nitrogen Dioxide (NO_2)	Annual Arithmetic Mean	--	0.053 ppm	Same as Primary Standards
	1 hour	0.18 ppm	--	
Sulfur Dioxide (SO_2)	Annual Arithmetic Mean	--	0.03 ppm	--
	24 hour	0.04 ppm	0.14 ppm	--
	3 hour	--	--	0.5 ppm
	1 hour	0.25 ppm	--	--
Lead	30 day average	1.5 µg/m^3	--	--
	Calendar Quarter	--	1.5 µg/m^3	Same as Primary Standards

Source: CARB, Ambient Air Quality Standards, April 1, 2008.

The 2007 AQMP was adopted by the SCAQMD on June 1, 2007. The 2007 AQMP proposes attainment demonstration of the federal $PM_{2.5}$ standards through a more focused control of SO_X, directly-emitted $PM_{2.5}$, and NO_X supplemented with VOC by 2015. The eight-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. 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 is consistent with and builds upon the approaches taken in the 2003 AQMP. 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 time frames allowed under the CAA.

Global Warming

Global climate change refers to changes in average climatic conditions on Earth as a whole, including temperature, wind patterns, precipitation and storms. Global temperatures are moderated by naturally occurring atmospheric gases, including water vapor, carbon dioxide (CO_2), methane (CH_4) and nitrous oxide (N_2O). These gases allow solar radiation (sunlight) into the Earth's atmosphere, but prevent radiative heat from escaping, thus warming the Earth's atmosphere.

Global climate change attributable to human emissions of greenhouse gases ("GHG") (mainly CO_2, CH_4 and N_2O) is currently one of the most important and widely debated scientific, economic and political issues in the United States. Historical records indicate that global climate changes have occurred in the past due to natural phenomena (such as during previous ice ages). Some data indicate that the current global conditions differ from past climate changes in rate and magnitude. There continues to be significant scientific uncertainty concerning the extent to which increased concentrations of GHGs have caused or will cause climate change, and over the appropriate actions to limit and/or respond to climate change.

Carbon dioxide is the most abundant GHG. GHGs are the result of both natural and anthropogenic activities. Forest fires, decomposition, industrial processes, landfills, and consumption of fossil fuels for power generation, transportation, heating, and cooking are the primary sources of GHG emissions. According to the California Energy Commission (CEC), emissions from fossil fuel consumption represent approximately 81 percent of GHG emissions and transportation creates 41 percent of GHG emissions in California.[3]

Our understanding of the fundamental processes responsible for global climate change has improved over the past decade, and our predictive capabilities are advancing. However, there remain significant scientific uncertainties, for example, in predictions of local effects of climate change, occurrence of extreme weather events, effects of aerosols, changes in clouds, shifts in the intensity and distribution of precipitation, and changes in oceanic circulation. Due to the complexity of the Earth's climate system, the uncertainty surrounding climate change may never be completely eliminated. Because of these uncertainties, there continues to be significant debate as to the extent to which increased concentrations of GHGs have caused or will cause climate change, and with respect to the appropriate actions to limit and/or respond to climate change. In addition, it is impossible to link a single development project with future specific climate change impacts.

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[3] *http://www.energy.ca.gov/2006publications/CEC-600-2006-013/CEC-600-2006-013-SF.PDF*

Regulatory Setting

In response to growing scientific and political concern regarding global climate change, California has recently adopted a series of laws to reduce both the level of GHGs in the atmosphere and to reduce emissions of GHGs from commercial and private activities within the State. In September 2002, Governor Gray Davis signed Assembly Bill (AB) 1493, requiring the development and adoption of regulations to achieve "the maximum feasible reduction of greenhouse gases" emitted by noncommercial passenger vehicles, light-duty trucks, and other vehicles used primarily for personal transportation in the State. However, setting emission standards on automobiles is solely the responsibility of the USEPA. The CAA allows States to set state-specific emission standards on automobiles if they first obtain a waiver from the USEPA. The USEPA has denied California's request for a waiver, and California is in the process of legally challenging USEPA's decision, thereby possibly delaying CARB's proposed implementation schedule.

There has also been activity at the federal level with respect to the regulation of GHGs. In Massachusetts v. Environmental Protection Agency (Docket No. 05–1120), argued November 29, 2006 and decided April 2, 2007, the U.S. Supreme Court held that that not only did the USEPA have authority to regulate greenhouse gases, but that the USEPA's reasons for not regulating this area did not fit the statutory requirements. As such, the U.S. Supreme Court ruled that the USEPA should be required to regulate CO_2 and other greenhouse gases as pollutants under the Clean Air Act. To date, the USEPA has not developed a regulatory program for greenhouse gas emissions.

In September, 2006, Governor Schwarzenegger signed into law the California Global Warming Solutions Act of 2006 (Assembly Bill 32, codified at Section 38500 et seq. of the California Health & Safety Code). This law requires the CARB to determine what the statewide greenhouse gas emissions level was in 1990 and design and implement emission limits, regulations, and other measures, such that by 2020 statewide greenhouse gas emissions are reduced in a technologically feasible and cost-effective manner to the 1990 level.

As a result of the Global Warming Solutions Act, the CARB adopted three discrete early action measures to reduce GHG emissions. These measures involve complying with a low carbon fuel standard, reducing refrigerant loss from motor vehicle air conditioning maintenance and increasing methane capture from landfills. On October 25, 2007, the CARB tripled the set of previously approved early action measures. The newly approved measures include Smartway truck efficiency (i.e., reducing aerodynamic drag), port electrification, reducing perfluorocarbons from the semiconductor industry, reducing propellants in consumer products, promoting proper tire inflation in vehicles, and reducing sulfur hexaflouride emission from the non-electricity sector. The Global Warming Solutions Act also required CARB to define the 1990 baseline emissions for California and adopt that baseline as the 2020 statewide emissions cap. CARB has determined that the total statewide aggregated greenhouse gas 1990 emissions level and 2020 emissions limit is 427 million metric tons of CO_2 equivalent (CO_2e).

The Global Warming Solutions Act also established a timetable for CARB to complete each of the following responsibilities:

- By January 1, 2009, prepare and approve scoping plan for achieving the maximum technologically feasible and cost-effective reductions of GHGs from sources or categories of sources of GHGs.

- By January 1, 2010, adopt regulations to implement measures identified on the list published as the discrete early action GHG emissions reduction measures.

- By January 1, 2011, adopt greenhouse gas emission limits and emission reduction measures by regulation to achieve the maximum technologically feasible and cost-effective reductions in greenhouse gas emissions in furtherance of achieving the statewide greenhouse gas emissions limit, to become operative beginning on January 1, 2012.

Although no specific language in the Global Warming Solutions Act refers to CEQA compliance, comment letters from the California Attorney General encourages CEQA lead agencies and other agencies to consider global warming impacts and GHG emissions as a part of the environmental review process.

However, on June 19, 2008, the Governor's Office of Planning and Research published a technical advisory entitled "CEQA and Climate Change: Addressing Climate Change Through California Environmental Quality Act (CEQA) Review"[4] (the "OPR Technical Advisory"), which offers informal guidance regarding the steps lead agencies should take to address climate change in their CEQA documents until such time as further state guidance is available on the thresholds of significance. The OPR's guidance was developed in cooperation with the California Resources Agency, CalEPA and CARB. The OPR Technical Advisory suggests that lead agencies: (i) make a good faith effort, based on available information, to calculate, model or estimate the amount of CO_2 and other GHG emissions from a project, (ii) undertake a project-by-project analysis of the significance of the impact, while being mindful that although climate change is ultimately a cumulative impact, not every individual project that emits GHG must necessarily be found to contribute to a significant cumulative impact on the environment, and (iii) impose mitigation measures to reduce GHG emissions to a less than significant level, or adopt a Statement of Overriding Considerations stating why further mitigation is not feasible. The OPR encourages agencies to develop standard GHG emission reduction or mitigation measures that can be applied on a project-by-project basis, and provides a preliminary menu of measures that lead agencies may wish to consider. The OPR also notes that CEQA can be a more effective tool for GHG emissions analysis and mitigation if it is supported and supplemented by sound land use development polices and practices that will reduce GHG emissions on a broad planning scale and that can provide for a programmatic approach to project-specific CEQA analysis and mitigation.

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[4] *State of California, Governor's Office of Planning and Research, CEQA and Climate Change: Addressing Climate Change Through California Environmental Quality Act (CEQA) Review, June 19, 2008.*

Existing Air Quality

Air Pollution Climatology

The project site is located within the Los Angeles County portion of the Basin. Ambient pollution concentrations recorded in Los Angeles County are among the highest in the four counties comprising the Basin.

The Basin is an area of high air pollution potential due to its climate and topography. The general region lies in the semi-permanent high pressure zone of the eastern Pacific, resulting in a mild climate tempered by cool sea breezes with light average wind speeds. This Basin experiences warm summers, mild winters, infrequent rainfalls, light winds, and moderate humidity. This usually mild climatological pattern is interrupted infrequently by periods of extremely hot weather, winter storms, or Santa Ana winds. The Basin is a coastal plain with connecting broad valleys and low hills, bounded by the Pacific Ocean to the west and high mountains around the rest of its perimeter. The mountains and hills within the area contribute to the variation of rainfall, temperature, and winds throughout the region.

The Basin experiences frequent temperature inversions. Temperature typically decreases with height. However, under inversion conditions, temperature increases as altitude increases, thereby preventing air close to the ground from mixing with the air above it. As a result, air pollutants are trapped near the ground. During the summer, air quality problems are created due to the interaction between the ocean surface and the lower layer of the atmosphere. This interaction creates a moist marine layer. An upper layer of warm air mass forms over the cool marine layer, preventing air pollutants from dispersing upward. Additionally, hydrocarbons and NO_2 react under strong sunlight, creating smog. Light, daytime winds, predominantly from the west, further aggravate the condition by driving air pollutants inland, toward the mountains. During the fall and winter, air quality problems are created due to CO and NO_2 emissions. CO concentrations are generally worse in the morning and late evening (around 10:00 p.m.). In the morning, CO levels are relatively high due to cold temperatures and the large number of cars traveling. High CO levels during the late evenings are a result of stagnant atmospheric conditions trapping CO in the area. Since CO is produced almost entirely from automobiles, the highest CO concentrations in the Basin are associated with heavy traffic. NO_2 levels are also generally higher during fall and winter days.

Local Climate

The mountains and hills within the Basin contribute to the variation of rainfall, temperature, and winds throughout the region. Within the project site and its vicinity, the average wind speed, as recorded at the Lennox Wind Monitoring Station, is approximately 4.7 miles per hour, with calm winds occurring approximately 13 percent of the time. Wind in the vicinity of the project site predominately blows from the west.[5]

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[5] *SCAQMD, http://www.aqmd.gov/smog/metdata/MeteorologicalData.html.*

The annual average temperature in the project area is 62.8 degrees Fahrenheit (°F). The project area experiences an average winter temperature of approximately 53.3°F and an average summer temperature of approximately 72.4°F. Total precipitation in the project area averages approximately 13 inches annually. Precipitation occurs mostly during the winter and relatively infrequently during the summer. Precipitation averages approximately eight inches during the winter, approximately three inches during the spring, approximately two inches during the fall, and less than one inch during the summer.[6]

Air Monitoring Data

The SCAQMD monitors air quality conditions at 38 locations throughout the Basin. The proposed project is located in SCAQMD's Southwest Coastal Los Angeles County Air Monitoring Subregion (Monitoring Subregion No. 3) Historical data from Monitoring Subregion No. 3 were used to characterize existing conditions within the vicinity of the project area and to establish a baseline for estimating future conditions with and without the proposed project. Criteria pollutants monitored at Monitoring Subregion No. 3 include O_3, CO, NO_2, PM_{10}, and SO_2. However, Monitoring Subregion No. 3 does not monitor $PM_{2.5}$. The nearest, most representative monitoring station that gathers $PM_{2.5}$ data is the South Coastal Los Angeles County Air Monitoring Subregion (Monitoring Subregion No. 4). The locations of the relevant air monitoring stations are shown in Figure IV.B-2. Table IV.B-2 shows pollutant levels, the State standards, and the number of exceedances recorded at the Hawthorne Monitoring Station from 2005 to 2007. The CAAQS for the criteria pollutants are also shown in the table.

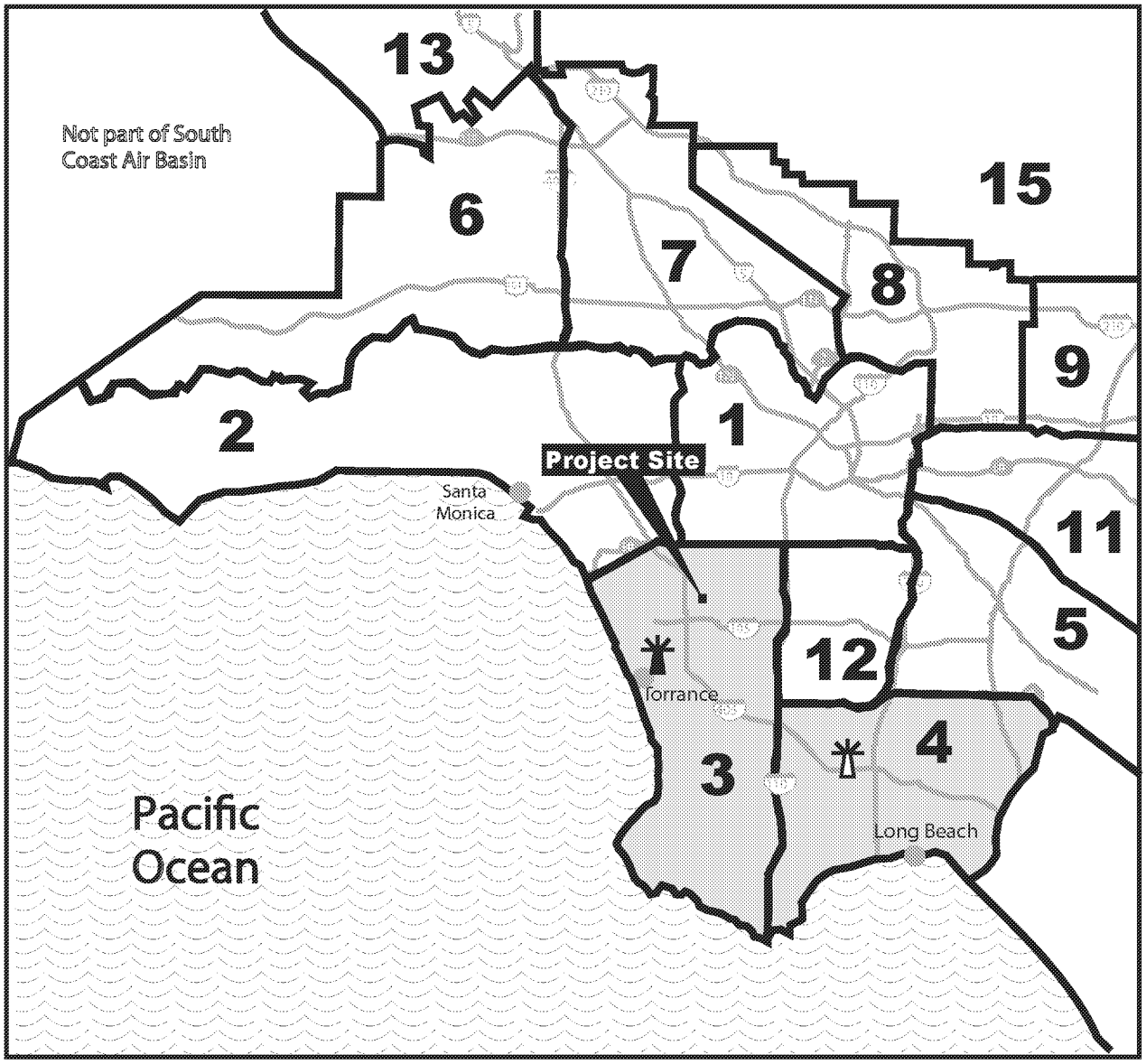
Table IV.B-2
Ambient Air Quality Data in Project Vicinity

Pollutant	Pollutant Concentration & Standards	Number of Days Above State Standard		
		2005	2006	2007
Ozone (1-hour)	Maximum 1-hr Concentration (ppm) Days > 0.09 ppm (State 1-hr standard)	0.09 0	0.08 0	0.09 0
Ozone (8-hour)	Maximum 8-hr concentration (ppm) Days > 0.07 ppm (State 8-hr standard)	0.08 1	0.07 0	0.07 1
Carbon Monoxide	Maximum 1-hr concentration (ppm) Days > 20 ppm (State 1-hr standard)	3 0	3 0	3 0
Carbon Monoxide	Maximum 8-hr concentration (ppm) Days > 9.0 ppm (State 8-hr standard)	2.1 0	2.3 0	2.4 0
Nitrogen Dioxide	Maximum 1-hr Concentration (ppm) Days > 0.18 ppm (State 1-hr standard)	0.09 0	0.10 0	0.08 0
PM_{10}	Maximum 24-hr concentration ($\mu g/m^3$) Estimated Days > 50 $\mu g/m^3$ (State 24-hr standard)	44 0	45 0	96 2
$PM_{2.5}$	Maximum Annual Arithmetic Mean ($\mu g/m^3$) Exceed State Standard (12 $\mu g/m^3$)?	16 Yes	14 Yes	15 Yes
Sulfur Dioxide	Maximum 24-hr Concentration (ppm) Days > 0.04 ppm (State 24-hr standard)	0.012 0	0.010 0	0.009 0

[a] *Less than 12 months of data. May not be representative.*

Source: SCAQMD, http://aqmd.gov/smog/historical data.htm.

[6] *Western Regional Climate Center, http:// www.wrrc.dri.edu, accessed May 29, 2007.*



Legend

Hawthorne Monitoring Station

North Long Beach Monitoring Station

Air Monitoring Areas in Los Angeles County:

1. Central Los Angeles
2. Northwest Coastal
3. Southwest Coastal
4. South Coastal
5. Southeast Los Angeles County
6. West San Fernando Valley
7. East San Fernando Valley
8. West San Gabriel Valley
9. East San Gabriel Valley
11. South San Gabriel Valley
12. South Central Los Angeles
13. Santa Clarita Valley
15. San Gabriel Mountains

NORTH

0 3 6 9 12

Miles

Source: TAHA, 2007 and South Coast Air Quality Management District Air Monitoring Areas Map, 1999.

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Figure IV.B-2
Air Monitoring Areas

As Table IV.B-2 indicates, criteria pollutants CO, NO_2, and SO_2 did not exceed the CAAQS during the 2005 through 2007 period. In addition, the one-hour State standard for O_3 was not exceeded during this period but the eight-hour State standard for O_3 was exceeded one time each in 2005 and 2007. Additionally, the PM_{10} 24-hour standard was exceeded twice in 2007 and the annual State standard for $PM_{2.5}$ was exceeded in 2005, 2006, and 2007.

Background Carbon Monoxide Conditions

CO concentrations are typically used as an indicator of conformity with CAAQS because CO is the primary component of automobile exhaust (tailpipe emissions), and it does not readily react with other pollutants. In other words, operational air quality impacts associated with a project are generally best reflected through estimated changes in CO concentrations.

For purposes of this assessment, the ambient, or background, CO concentration is first established. SCAQMD defines the background level as the highest reading over the past three years. A review of data from Monitoring Subregion No. 3 for the 2005 to 2007 period indicates that the one- and eight-hour background concentrations are approximately 3 and 2.4 ppm, respectively. Accordingly, the existing one- and eight-hour background concentrations do not exceed the State CO standard of 20 ppm and 9.0 ppm, respectively.

Existing Carbon Monoxide Concentrations at Project Area Intersections

There is a direct relationship between traffic/circulation congestion and CO impacts since exhaust fumes from vehicular traffic is the primary source of CO. CO is a localized gas that dissipates very quickly under normal meteorological conditions. Therefore, CO concentrations decrease substantially as distance from the source (intersection) increases. The highest CO concentrations are typically found in areas directly adjacent to congested roadway intersections.

Existing CO concentrations adjacent to six study intersections were modeled for a combination of weekday and weekend conditions. The study intersections were selected to be representative of the project area and were based on traffic volume to capacity (V/C) ratio and the traffic level of service (LOS) as indicated in the traffic analysis.[7,8]

The selected intersections are as follows:

- La Brea Avenue/Centinela Avenue - AM Peak Hour
- La Brea Avenue/Florence Avenue - AM Peak Hour

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[7] *Level of service is used to indicate the quality of traffic flow on roadway segments and at intersections. Level of service ranges from LOS A (free flow, little congestion) to LOS F (forced flow, extreme congestion).*

[8] *Linscott, Law & Greenspan, Engineers, Revised Traffic Impact Study for the Hollywood Park Redevelopment Project, August 1, 2008.*

- La Brea Avenue/Century Boulevard - PM Peak Hour
- Prairie Avenue/Florence Avenue - AM Peak Hour
- Crenshaw Boulevard/Manchester Boulevard - Saturday Midday
- Crenshaw Boulevard/Century Boulevard - Saturday Midday

At each intersection, traffic-related CO contributions were added to background CO conditions. Traffic CO contributions were estimated using the USEPA CAL3QHC dispersion model, which utilizes traffic volume inputs and CARB EMFAC2007 emissions factors. Receptors for the CO analysis were located three meters (approximately ten feet) from each intersection corner.[9] Existing conditions at the six study intersections are shown in Table IV.B-3. One-hour CO concentrations range from approximately 4 ppm to 5 ppm and eight-hour CO concentrations range from approximately 3.4 ppm to 3.6 ppm. Presently, none of the study intersections exceed the State one- and eight-hour CO standards of 20 ppm and 9.0 ppm, respectively.

Table IV.B-3
Existing Carbon Monoxide Concentrations [a]

Intersection	Parts Per Million (ppm)	
	1-hour	8-hour
La Brea Avenue/Centinela Avenue	4	3.4
La Brea Avenue/Florence Avenue	5	3.5
La Brea Avenue/Century Boulevard	5	3.5
Prairie Avenue/Florence Avenue	5	3.6
Crenshaw Boulevard/ Manchester Boulevard	5	3.5
Crenshaw Boulevard/Century Boulevard	5	3.5
State Standard	**20**	**9.0**

[a] *All concentrations include one- and eight-hour ambient concentrations of 3 ppm and 2.4 ppm, respectively.*
Source: TAHA, 2008.

Air Quality Sensitive Receptors

Some land uses are considered more sensitive to changes in air quality than others, depending on the population groups and the activities involved. CARB has identified the following groups who are most likely to be affected by air pollution: children under 14, the elderly over 65 years of age, athletes, and people with cardiovascular and chronic respiratory diseases. According to the SCAQMD, sensitive

[9] *Caltrans, Transportation Project-Level Carbon Monoxide Protocol, 1997.*

receptors include residences, schools, playgrounds, child care centers, athletic facilities, long-term health care facilities, rehabilitation centers, convalescent centers, and retirement homes.

Figure IV.B-3 shows sensitive receptors within one-quarter mile (1,320 feet) of the project site. Residential sensitive receptors include the following:

- Single-family residences located adjacent and to the east of the project site
- Single-family residences located adjacent and to the northeast of the project site
- Single- and multi-family residences located approximately 75 feet west of the project site
- Multi-family residences located approximately 75 feet south of the project site
- Single-family residences located approximately 500 feet north of the project site

Institutional sensitive receptors include the following:

- Inglewood Junior Academy located approximately 75 feet west of the project site
- William H. Kelso Elementary School located approximately 125 feet west of the project site
- Greater New Bethel Baptist Church located approximately 675 feet west of the project site
- Holy Trinity Evangelical Lutheran Church located approximately 850 feet east of the project site
- First Church of God located approximately 900 feet east of the project site
- Inglewood Southside Christian Church located approximately 1,100 feet south of the project site
- Centinela Hospital located approximately 1,100 feet west of the project site
- Warren Lane Elementary School located approximately 1,175 feet east of the project site

The above sensitive receptors represent the nearest residential and institutional land uses with the potential to be impacted by the proposed project. Additional single- and multi-family residences are located in the surrounding community within one-quarter mile of the project site.

ENVIRONMENTAL IMPACT

Analytical Methodology

The air quality analysis in the technical report is consistent with the methods described in the SCAQMD CEQA Air Quality Handbook (1993 edition), as well as the updates to the CEQA Air Quality Handbook, as provided on the SCAQMD website.[10]

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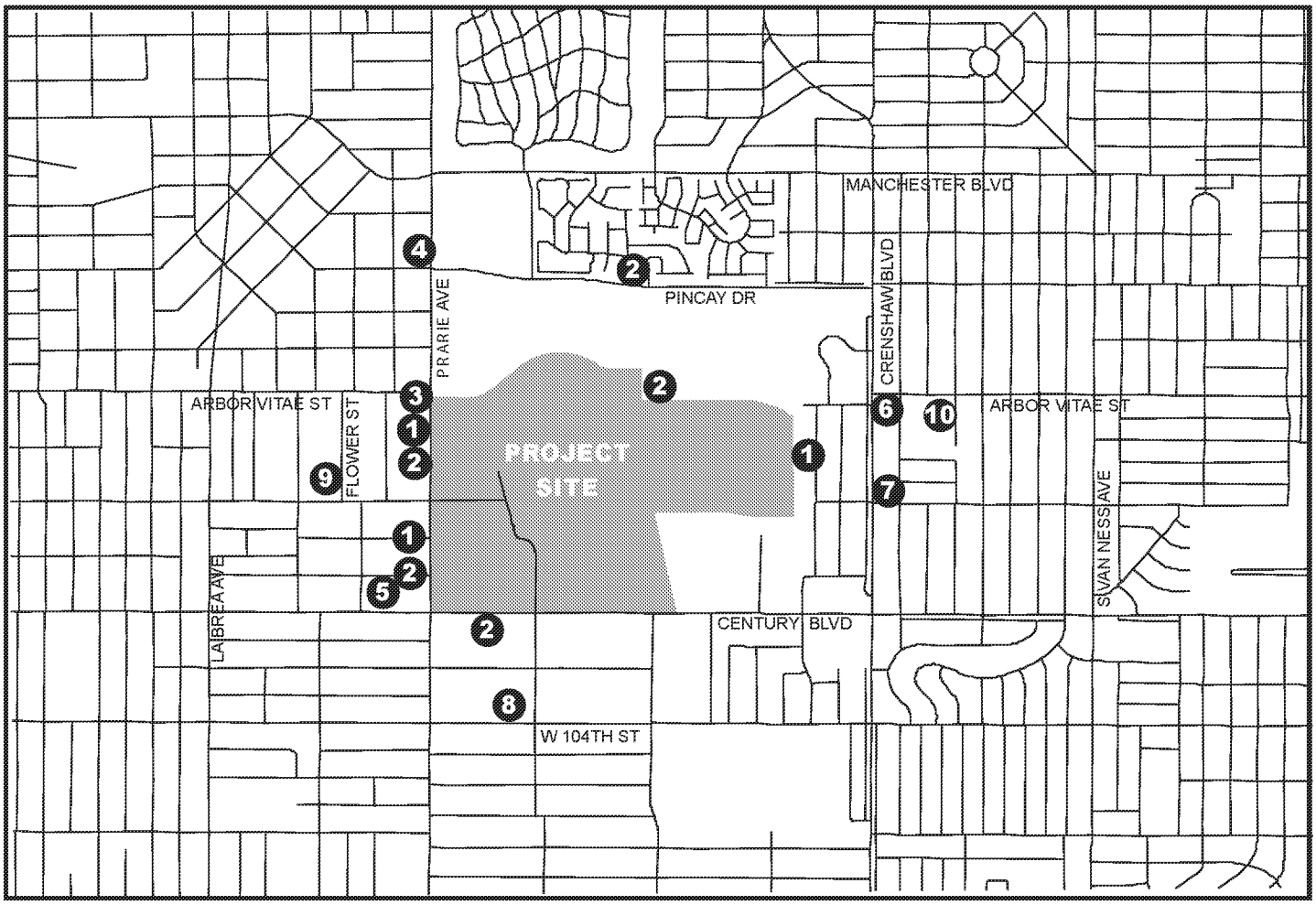
[10] *SCAQMD, http://www.aqmd.gov/ceqa/hdbk.html, accessed May 29, 2007.*



Legend

Sensitive Receptors

1. Single-Family Residence
2. Multi-Family Residence
3. Inglewood Junior Academy
4. William H. Kelso Elementary School
5. Greater New Bethel Baptist Church
6. Holy Trinity Evangelical Lutheran Church
7. First Church of God
8. Inglewood Southside Christian Church
9. Centinela Hospital
10. Warren Lane Elementary

NORTH

Source: TAHA, 2007.

CHRISTOPHER A. JOSEPH & ASSOCIATES
Environmental Planning and Research

Figure IV.B-3
Sensitive Receptor Locations

Regional and Local Emissions

Regional and localized construction emissions were analyzed for the proposed project. Construction emissions were calculated using CARB's URBEMIS2007 model. Regional emissions were compared to SCAQMD regional thresholds to determine project significance. The localized construction analysis followed guidelines published by the SCAQMD in the Localized Significance Methodology for CEQA Evaluations (SCAQMD Localized Significance Threshold (LST) Guidance Document).[11] In January 2005, the SCAQMD supplemented the SCAQMD LST Guidance Document with Sample Construction Scenarios for Projects Less than Five Acres in Size.[12]

URBEMIS2007 was also used to calculate operations emissions (i.e., mobile and area). Localized CO emissions were calculated utilizing USEPA's CAL3QHC dispersion model and CARB's EMFAC2007 model. EMFAC2007 is the latest emission inventory model that calculates emission inventories and emission rates for motor vehicles operating on roads in California. This model reflects the CARB's current understanding of how vehicles travel and how much they pollute. The EMFAC2007 model can be used to show how California motor vehicle emissions have changed over time and are projected to change in the future. CAL3QHC is a model developed by USEPA to predict CO and other pollutant concentrations from motor vehicles at roadway intersections. The model uses a traffic algorithm for estimating vehicular queue lengths at signalized intersections.

The proposed project does not contain lead emissions sources. Therefore, emissions and concentrations related to this pollutant were not analyzed in the Air Quality Technical Report.[13]

Greenhouse Gas Emissions

Greenhouse Gas Emissions Estimate

Greenhouse gas emissions associated with the Proposed Project were estimated based on guidance provided by the California Air Pollution Control Officers Association (CAPCOA).[14] For specific plans, the CAPCOA guidance recommends using URBEMIS2007 to calculate construction and mobile source emissions. The CAPCOA guidance also recommends that the California Climate Action Registry General Reporting Protocol to calculate energy consumption emissions (i.e., natural gas and electricity).

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[11] *SCAQMD, Localized Significance Methodology, June 2003.*

[12] *SCAQMD, Sample Construction Scenarios for Projects Less than Five Acres in Size, January 2005.*

[13] *Prior to 1978, mobile emissions were the primary source of lead resulting in air concentrations. Between 1978 and 1987, the phase-out of leaded gasoline reduced the overall inventory of airborne lead by nearly 95 percent. Currently, industrial sources are the primary source of lead resulting in air concentrations. Since the proposed project does not contain an industrial component, lead emissions are not analyzed in this report.*

[14] *CAPCOA, CEQA & Climate Change: Evaluating and Addressing Greenhouse Gas Emissions from Projects Subject to the California Environmental Quality Act, January 2008.*

Each GHG has a different global warming potential, called a CO_2 equivalent value, which describes its global warming potency. CO_2 is the most common GHG and has an equivalent value of one. The CO_2 equivalent values for CH_4 and N_2O are 21 and 310, respectively.

Greenhouse Gas Construction Emissions

GHG emissions from construction activity were calculated using URBEMIS2007. The URBEMIS2007 model utilizes emissions factors obtained from the CARB OFFROAD2007 Model. The OFFROAD2007 model incorporates the CARBs most recent emission factors for heavy-duty construction equipment.

Mobile Source Emissions

GHG emissions from mobile sources are a function of vehicle miles traveled (VMT). CARB's URBEMIS2007 emissions inventory model calculates daily VMT based on the average daily trips (ADT). The Existing and Future With Project weekend and weekday ADTs were obtained from the project traffic study. The weekday and weekend ADTs were input into URBEMIS2007 to determine weekday and weekend VMTs, which were converted into a yearly VMT. On an annual basis, the Existing and Future With Project VMTs were determined to be 59,749,191 and 127,929,238, respectively. Trip lengths were obtained from the URBEMIS2007 default values. URBEMIS2007 provides GHG emissions in tons per year. The weekday and weekend conditions were modeled in URBEMIS2007 and the results were divided by 365 days to obtain tons per day. The tons per day were then adjusted to account for 261 weekdays and 104 weekend days per year.

Natural Gas Combustion

GHG emissions would result from the combustion of natural gas on the project site. Natural gas usage rates, presented in cubic feet per month, were obtained from Table IV.J-7 in Section IV.J, Public Utilities. As presented in the DEIR, existing land uses on the project site consume 46,738,800 cubic feet per year of natural gas, and the proposed land uses would consume 285,658,500 cubic feet per year of natural gas. The net increase in natural gas consumption as a result of the Proposed Project would be 238,919,700 cubic feet per year.

The natural gas GHG emission rates were obtained from the California Climate Action Protocol (the "Protocol"). The Protocol states that the CO_2, CH_4, and N_2O natural gas consumption emission rates are 52.78, 0.01, and 0.0001 million British thermal units (MBTU) per year, respectively. The natural gas usage rates presented in the DEIR were converted into MBTU and multiplied by the Protocol emission rates to obtain GHG emissions.

Electricity Consumption

GHG emissions would result from the combustion of fossil fuels to provide energy for the Proposed Project. Electricity usage rates were obtained from Table IV.J-6 of the DEIR. As presented in the DEIR, existing land uses on the project site use 26,010,004 kilowatt-hours (kWh) per year of electricity and the

proposed land uses would use 33,814,918 kWh per year of electricity. The net increase in electricity use as a result of the proposed project would be 7,804,914 kWh per year.

The electricity GHG emission rates were obtained from the Protocol. The Protocol states that the CO_2, CH_4, and N_2O electricity emission rates are 8.1E-01, 6.7E-06, and 3.7E-06 kWh per year, respectively.

The electricity usage rates presented in the DEIR were multiplied by the Protocol emission rates to obtain GHG emissions.

Greenhouse Gas Emissions

The presented GHG emissions represent worst-case emissions and do not include energy conservation measures. During the construction process, the proposed project would emit approximately 35,687 tons of CO_2e. Yearly operational GHG emissions are shown in Table IV.B-4. As shown, the proposed project would result in a net increase of 53,227 tons per year of CO_2 equivalent emissions.

Table IV.B-4
Estimated Annual Greenhouse Gas Emissions

Scenario	Carbon Dioxide Equivalent (tons per year)
Existing	
Mobile	30,716
Natural Gas	25
Electricity	9,507
Total Existing	40,248
Project	
Mobile	65,994
Natural Gas	15,121
Electricity	12,360
Total Project	93,475
Net	53,227
Source: TAHA, 2008.	

Threshold of Significance

To determine whether a proposed project would have a significant impact to air quality, Appendix G to the State CEQA Guidelines questions whether a project would:

a) Conflict with or obstruct implementation of the applicable air quality plan;

b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation;

c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors);

d) Expose sensitive receptors to substantial pollutant concentrations; or

e) Create objectionable odors affecting a substantial number of people.

Specific threshold related to the above general thresholds are presented below for construction and operational activity.

Construction Phase Significance Criteria

The proposed project would have a significant impact if:

- Daily construction emissions were to exceed SCAQMD construction emissions thresholds for VOC, NO_X, CO, SO_X, $PM_{2.5}$, or PM_{10}, as presented in Table IV.B-5.
- Project-related fugitive dust and construction equipment combustion emissions cause an incremental increase in localized $PM_{2.5}$ or PM10 concentrations of 10.4 μg/m3, or cause a violation of NO_2 or CO ambient air quality standards.
- The proposed project would generate significant emissions of toxic air contaminants (TACs).
- The proposed project would create an odor nuisance.

Table IV.B-5
SCAQMD Daily Construction Emissions Thresholds

Criteria Pollutant	Pounds Per Day
Volatile Organic Compounds (VOC)	75
Nitrogen Oxides (NO_X)	100
Carbon Monoxide (CO)	550
Sulfur Oxides (SO_X)	150
Fine Particulates ($PM_{2.5}$)	55
Particulates (PM_{10})	150
Source: SCAMQD, 2008.	

Operations Phase Significance Criteria

The proposed project would have a significant impact if:

- Daily operational emissions were to exceed SCAQMD operational emissions thresholds for VOC, NO_X, CO, SO_X, $PM_{2.5}$, or PM_{10}, as presented in Table IV.B-6;

- Project-related traffic causes CO concentrations at study intersections to violate the CAAQS for either the one- or eight-hour period. The CAAQS for the one- and eight-hour periods are 20 ppm and 9.0 ppm, respectively. If CO concentrations currently exceed the CAAQS, then an incremental increase of 1.0 ppm over "no project" conditions for the one-hour period would be considered a significant impact. An incremental increase of 0.45 ppm over the "no project" conditions for the eight-hour period would be considered significant; [15]

- The proposed project would generate significant emissions of TACs;

- The proposed project would create an odor nuisance; and

- The proposed project would not be consistent with the AQMP.

Global Warming

At this time there are no quantitative emission thresholds and there are no established significance criteria to determine project impacts with respect to climate change or GHGs. Emitting GHGs into the atmosphere is not itself an adverse environmental effect. Rather, it is the increased accumulation of GHGs in the atmosphere that may result in global climate change. The consequences of that climate change can cause adverse environmental effects. Due to the complex physical, chemical, and

Table IV.B-6
SCAQMD Daily Operational Emissions Thresholds

Criteria Pollutant	Pounds Per Day
Volatile Organic Compounds (VOC)	55
Nitrogen Oxides (NO_X)	55
Carbon Monoxide (CO)	550
Sulfur Oxides (SO_X)	150
Fine Particulates ($PM_{2.5}$)	55
Particulates (PM_{10})	150
Source: SCAQMD, 2008.	

atmospheric mechanisms involved in global climate change, it is not possible to predict the specific impact, if any, to global climate change from one project's relatively small incremental increase in

[15] *Consistent with the SCAQMD Regulation XIII definition of a significant impact.*

emissions. Nonetheless the project's GHG emissions were estimated for comparison purposes, and analyzed in the cumulative impacts analysis.

Impacts Determined to be Less Than Significant

Threshold questions (a) though (e) are analyzed in the discussion below.

Construction Phase Impacts

The first construction phase would last approximately 30 months with additional phased construction lasting until 2014. Although construction-related emissions are temporary, adverse air quality impacts may still result.

Construction of the proposed project would generally occur in three phases. The first phase would include: (1) demolition of existing structures, (2) grading and excavation, (3) construction workers traveling to and from project sites, (4) delivery and hauling of construction supplies and debris to and from project sites, (5) fuel combustion by on-site construction equipment, (6) the application of architectural coatings and other building materials that release VOC, and (7) asphalt paving. The second and third phases would include: (1) construction workers traveling to and from project sites, (2) delivery and hauling of construction supplies to and from project site, (3) fuel combustion by on-site construction equipment, (4) the application of architectural coatings and other building materials that release VOC, and (5) asphalt paving. The retail component along Century Boulevard and Prairie Avenue, the casino renovation and reconfiguration, and some of the residential units would be the first phase, while the remaining residential units would generally be completed in the second and third phases. These construction activities would temporarily create emissions of dusts, fumes, equipment exhaust, and other air contaminants. It is anticipated that some construction activities and construction phases would overlap.

Regional Emissions

Construction of the proposed project has the potential to create air quality impacts through the use of heavy-duty construction equipment and through vehicle trips generated by construction workers traveling to and from the project site. Fugitive dust emissions would primarily result from demolition and site preparation (e.g., excavation) activities. NO_X emissions would primarily result from the use of construction equipment. During the finishing phase, paving operations and the application of architectural coatings (e.g., paints) and other building materials would release VOCs. The assessment of construction air quality impacts considers each of these potential sources. Construction emissions can vary substantially from day to day, depending on the level of activity, the specific type of operation and, for dust, the prevailing weather conditions.

It is mandatory for all construction projects in the Basin to comply with SCAQMD Rule 403 for Fugitive Dust. Specific Rule 403 control requirements include, but are not limited to, applying water in sufficient quantities to prevent the generation of visible dust plumes, applying soil binders to uncovered areas, reestablishing ground cover as quickly as possible, utilizing a wheel washing system to remove bulk

material from tires and vehicle undercarriages before vehicles exit the project site, and maintaining effective cover over exposed areas. Compliance with Rule 403 would reduce regional PM_{10} emissions associated with construction activities by approximately 61 percent.

URBEMIS2007 was used to estimate daily construction emissions. Table IV.B-7 shows the estimated daily emissions associated with each year of construction. As shown, daily construction regional emissions would exceed the SCAQMD regional thresholds for VOC, NO_X, $PM_{2.5}$, and PM_{10}. As such, regional construction emissions would result in a significant air quality impact without incorporation of mitigation measures.

Localized Impacts

Based on Table IV.B-7, maximum on-site emissions for $PM_{2.5}$, PM_{10}, and NO_x, would occur in Year 2009 when grading activity overlaps with Casino renovation and reconfiguration. The maximum on-site emissions for CO and VOC would occur in Year 2011 when Phase II infrastructure construction, building erection, and architectural coating activity overlap. Wind in the project area predominantly blows from the west to the east. As such, sensitive receptors located east of the project site would experience the highest localized pollutant concentrations. Therefore, localized emissions were modeled at sensitive receptors on the eastern boundary of the project site.

Construction emissions were input into the ISC dispersion model to determine localized impacts. Results of the dispersion modeling are shown in Table IV.B-8. The dispersion modeling results indicate that localized CO emissions would be less than the SCAQMD daily significance thresholds. However, localized emissions of $PM_{2.5}$, PM_{10}, and NO_2 would exceed the localized thresholds. The maximum localized emissions would be temporary and would generally occur during the heaviest periods of construction activity. Nonetheless, localized construction emissions would result in a significant air quality impact without implementation of mitigation measures.

Toxic Air Contaminant Impacts

The Phase I Environmental Assessment has identified asbestos-containing materials (ACM) on the project site.[16] As such, the proposed project would be required to comply with SCAQMD Rule 1403 (Asbestos Emissions From Demolition/Renovation Activities). SCAQMD Rule 1403 specifies work practice requirements to limit asbestos emissions from building demolition and renovation activities, including the removal and associated disturbance of ACM. The requirements for demolition and renovation activities include asbestos surveying, notification, ACM removal procedures and time schedules, ACM handling and clean-up procedures, and storage, disposal, and landfill requirements for asbestos-containing waste materials. The proposed project would also be required to maintain records, including waste shipment

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[16] *Environ International Corporation, Phase I Environmental Site Assessment and Limited Compliance Assessment, Hollywood Park, Inglewood, California, April 11, 2005.*

records, and use appropriate warning labels, signs, and markings. As such, construction activity would result in a less than significant toxic air contaminant impact.

Table IV.B-7
Regional Construction Emissions - Unmitigated

Construction Year	Pounds Per Day					
	VOC	NO_X	CO	SO_X	$PM_{2.5}$ [a]	PM_{10} [a]
2009 [b]	71	697	346	<1	296	1,322
2010 [c]	51	481	246	<1	278	1,267
2011 [d]	123	478	355	<1	32	36
2012 [e]	115	407	328	<1	28	30
2013 [f]	60	424	340	<1	27	30
2014 [g]	92	242	232	<1	17	19
Maximum Regional Total	**123**	**697**	**355**	<1	**296**	**1,322**
SCAQMD Threshold	**75**	**100**	**550**	**150**	**55**	**150**
Exceed Threshold?	Yes	Yes	No	No	Yes	Yes

[a] *Assumes proper implementation of SCAQMD Rule 403 – Fugitive Dust.*
[b] *Maximum Year 2009 emissions would occur when demolition, grading and Phase I infrastructure construction activity overlap.*
[c] *Maximum Year 2010 emissions would occur when grading and Phase I infrastructure construction activity overlaps.*
[d] *Maximum Year 2011 emissions would occur when Phase II infrastructure construction, building erection, and architectural coating activity overlap.*
[e] *Maximum Year 2012 emissions would occur when Phase III infrastructure construction, building erection, and architectural coating activity overlap.*
[f] *Maximum Year 2013 emissions would occur when Phase III infrastructure construction activity overlaps with building erection activity.*
[g] *Maximum Year 2014 emissions would occur when building erection and architectural coating activity overlap.*
Source: TAHA, 2008.

Table IV.B-8
Localized Construction Emissions - Unmitigated

Pollutant	Estimated Emissions (lbs/day)	Concentration at Nearest Sensitive Receptor	Significance Threshold	Significant Impact?
$PM_{2.5}$	294	116 µg/m^3	10.4 µg/m^3	Yes
PM_{10}	1,318	535 µg/m^3	10.4 µg/m^3	Yes
NO_2 [a]	631	0.64 µg/m^3	0.18 ppm	Yes
CO (One-Hour) [b]	269	3.5 ppm	20 ppm	No
CO (Eight-Hour) [b]	269	2.6 ppm	9.0 ppm	No

[a] *The NO_2 concentration includes a background concentration of 0.11 ppm.*
[b] *The CO concentration includes one- and eight-hour background concentrations of 3.0 and 2.4 ppm, respectively.*
Source: TAHA, 2008.

A diesel health risk assessment (HRA) was completed to determine the risk posed to sensitive receptors from construction activity. The SCAQMD has not published guidance for completing construction HRAs. The SCAQMD has published guidance for calculating the health risk associated with mobile

source idle emissions.[17] This document was used as the basis for calculating the health risk associated with construction activity. The HRA calculated the lifetime carcinogenic risk associated with heavy-duty construction equipment, on-site haul truck movement, on-site haul truck idling, and off-site haul truck travel on the local roadway system. The analysis included a credit for diesel emissions from existing on-site equipment. Emissions were modeled using the ISC dispersion model. The ISC dispersion model does not indicate how far the risk is spread; instead, it indicates the maximum risk. The HRA resulted in an unmitigated carcinogenic risk of 30 persons in one million, which is greater than the ten persons in one million significance threshold. As such, construction-related diesel emissions would result in a significant impact. It should be noted that the SCAQMD has identified the area surrounding the project site as having an existing carcinogenic risk of 804 people in one million.[18]

Odor Impacts

Potential sources that may emit odors during construction activities include equipment exhaust and architectural coatings. Odors from these sources would be localized and generally confined to the project site. The proposed project would utilize typical construction techniques, and the odors would be typical of most construction sites and temporary. As such, proposed project construction would not cause an odor nuisance, and construction odors would result in a less than significant impact.

Operational Phase Impacts

Regional Impacts

Long-term project emissions would be generated by area sources, such as natural gas combustion and consumer products (e.g., aerosol sprays) and mobile sources. Motor vehicles generated by the proposed project would be the predominate source of long-term project emissions. According to the traffic report, existing weekday activity generates 19,936 daily vehicle trips. The proposed project would generate 37,158 daily vehicle trips, resulting in a net weekday increase of 17,222 daily vehicle trips. Existing weekend activity generates 13,986 daily vehicle trips. The proposed project would generate 39,494 daily vehicle trips, resulting in a net weekend increase of 25,508 daily vehicle trips.[19]

As part of the proposed circulation plan, the Hollywood Park Specific Plan will incorporate a Transportation Demand Management (TDM) Strategy. See Section IV.L.Traffic/Transportation for a discussion of the TDM Strategy.

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[17] *SCAQMD, Health Risk Assessment Guidance for Analyzing Cancer Risks from Mobile Source Diesel Idling Emissions for CEQA Air Quality Analysis, August 2003.*

[18] *SCAQMD, Multiple Air Toxics Exposure Study in the South Coast Air Basin, January 2008.*

[19] *Linscott, Law & Greenspan, Engineers, Revised Traffic Impact Study for the Hollywood Park Redevelopment Project, August 1, 2008.*

Mobile and area source emissions were estimated using URBEMIS2007. Weekday and weekend operational emissions are shown in Tables IV.B-9 and IV.B-10, respectively. As shown, weekday and weekend regional operational emissions would exceed SCAQMD significance thresholds for VOC, NO_X, CO, $PM_{2.5}$, and PM_{10}. As such, regional operational emissions would result in a significant air quality impact without incorporation of mitigation measures.

Table IV.B-9
Daily Operations Emissions – Future Weekday Conditions

Emission Source	Pounds Per Day					
	VOC	NO_X	CO	SO_X	$PM_{2.5}$	PM_{10}
Existing Land Uses						
Mobile Sources	118	182	1,451	2	60	309
Area Sources	<1	6	7	<1	<1	<1
Total Emissions	118	188	1,458	2	60	309
Proposed Project Land Uses						
Mobile Sources	244	353	2,856	4	117	598
Area Sources [a]	157	40	30	<1	<1	<1
Total Emissions	401	393	2,886	4	117	598
Net Emissions	283	205	1,428	2	57	289
SCAQMD Threshold	**55**	**55**	**550**	**150**	**55**	**150**
Exceed Threshold?	Yes	Yes	Yes	No	Yes	Yes

[a] *Area sources include emissions from natural gas combustion and consumer products (e.g., aerosol sprays).*
Source: TAHA, 2008.

Table IV.B-10
Daily Operations Emissions – Future Weekend Conditions

Emission Source	Pounds Per Day					
	VOC	NO_X	CO	SO_X	$PM_{2.5}$	PM_{10}
Existing Land Uses						
Mobile Sources	84	128	1,018	1	42	217
Area Sources	<1	6	7	<1	<1	<1
Total Emissions	84	134	1,025	1	42	217
Proposed Project Land Uses						
Mobile Sources	247	368	2,970	4	122	624
Area Sources [a]	157	39	28	<1	<1	<1
Total Emissions	404	407	2,998	4	122	624
Net Emissions	320	273	1,973	3	80	407
SCAQMD Threshold	**55**	**55**	**550**	**150**	**55**	**150**
Exceed Threshold?	Yes	Yes	Yes	No	Yes	Yes

[a] *Area sources include emissions from natural gas combustion and consumer products (e.g., aerosol sprays).*
Source: TAHA, 2008.

The potential exists that the later stages of project construction could occur concurrently with the occupancy of the earlier stages of development. Construction emissions (Table IV.B-7) combined with operational emissions (Tables IV.B-9 and IV.B-10) would result in concurrent emissions that exceed the SCAQMD significance thresholds for VOC, NO_X, CO, $PM_{2.5}$, and PM_{10}. As such, the proposed project would result in a significant emissions impact associated with concurrent emissions.

Localized Impacts

CO concentrations in 2014 are expected to be lower than existing conditions due to stringent State and federal mandates for lowering vehicle emissions. Although traffic volumes would be higher in the future both without and with the implementation of the proposed project, CO emissions from mobile sources are expected to be much lower due to technological advances in vehicle emissions systems, as well as from normal turnover in the vehicle fleet. Accordingly, increases in traffic volumes are expected to be offset by increases in cleaner-running cars as a percentage of the entire vehicle fleet on the road.[20]

The State one- and eight-hour CO standards may potentially be exceeded at congested intersections with high traffic volumes. An exceedance of the State CO standards at an intersection is referred to as a CO hotspot. The SCAQMD recommends a CO hotspot evaluation of potential localized CO impacts when V/C ratios are increased by two percent at intersections with a LOS of D or worse. SCAQMD also recommends a CO hotspot evaluation when an intersection decreases in LOS by one level beginning when LOS changes from C to D.

Based on the traffic study, a localized CO hotspot analysis was completed for the selected intersections:

- La Brea Avenue/Centinela Avenue - AM Peak Hour
- La Brea Avenue/Florence Avenue - AM Peak Hour
- La Brea Avenue/Century Boulevard - PM Peak Hour
- Prairie Avenue/Florence Avenue - AM Peak Hour
- Crenshaw Boulevard/Manchester Boulevard - Saturday Midday
- Crenshaw Boulevard/Century Boulevard - Saturday Midday

The USEPA CAL3QHC micro-scale dispersion model was used to calculate CO concentrations for 2014 "no project" and "project" conditions. CO concentrations at the six study intersections are shown in Table IV.B-11. As indicated, one-hour CO concentrations under "project" conditions would be approximately 3 at worst-case sidewalk receptors. Eight-hour CO concentrations under "project" conditions would range from approximately 1.8 ppm to 2.1 ppm. The State one- and eight-hour standards

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[20] *Consistent with CARB's vehicle emissions inventory.*

of 20 ppm and 9.0 ppm, respectively, would not be exceeded at the six study intersections. Thus, a less than significant impact is anticipated.

Table IV.B-11
2006 and 2014 Carbon Monoxide Concentrations [a]

Intersection	1-Hour (parts per million)			8-Hour (parts per million)		
	Existing (2006)	No Project (2014)	Project (2014)	Existing (2006)	No Project (2014)	Project (2014)
La Brea Avenue/Centinela Avenue	4	2	3	3.4	1.7	1.8
La Brea Avenue/Florence Avenue	5	3	3	3.5	1.8	1.8
La Brea Avenue/Century Boulevard	5	3	3	3.5	1.8	1.9
Prairie Avenue/Florence Avenue	5	3	3	3.6	1.8	1.8
Crenshaw Boulevard/ Manchester Boulevard	5	3	3	3.5	1.8	1.8
Crenshaw Boulevard/Century Boulevard	5	3	3	3.5	2.0	2.1
State Standard	**20**			**9.0**		

[a] *Existing concentrations include year 2006 one- and eight-hour ambient concentrations of 3 ppm and 2.4 ppm, respectively. No Project and Project concentrations include year 2014 one- and eight-hour ambient concentrations of 1.5 ppm and 1.1 ppm, respectively.*

[b] *Source: TAHA, 2008.*

CO is a gas that disperses quickly. Thus, CO concentrations at sensitive receptor locations are expected to be much lower than CO concentrations adjacent to the roadway intersections. Additionally, the intersections were selected based on poor LOS and high traffic volumes. Sensitive receptors that are located away from congested intersections or are located near roadway intersections with better LOS are expected to be exposed to lower CO concentrations. As shown in Table IV.B-11, CO concentrations would not exceed the State one- and eight-hour standards. Thus, no significant increase in CO concentrations at sensitive receptor locations is expected, resulting in a less than significant impact.

A localized CO hotspot analysis was also completed for the proposed parking structures in the mixed-use area of the Project Site. For purposes of this analysis, it was assumed that the proposed project would include five parking structures ranging from five to seven parking levels and containing 570 to 2,199 parking spaces. It should be noted that each structure was assumed to be maximized (i.e. as large and as tall as possible) for purposes of this analysis but it is anticipated that parking structures would be smaller, as fewer parking spaces would be required to support the proposed mix of land uses. As shown in Table IV.B-12, one-hour concentrations would range from 2.0 to 2.5 ppm, and eight-hour concentrations would range from 1.4 to 1.8 ppm. The State one- and eight-hour standards of 20 and 9.0 ppm, respectively, would not be exceeded at the five parking structures. Thus, a less than significant impact is anticipated.

Table IV.B-12
Carbon Monoxide Concentrations Near Proposed Parking Structures[a]

Station	Structure 1	Structure 2	Structure 3	Structure 4	Structure 4b	Structure 5
Spaces	2,199	1,121	2,005	1,228	655	570
Acres	2.6	1.9	2.2	0.9	0.9	1.0
Parking Levels	5	5	5	7	5	2
1-Hour CO Concentrations (parts per million)						
25 Feet	2.4	2.2	2.2	2.1	2.0	2.0
50 Feet	2.5	2.2	2.2	2.1	2.0	2.0
100 Feet	2.5	2.2	2.2	2.1	2.0	2.0
8-Hour CO Concentrations (parts per million)						
25 Feet	1.7	1.5	1.5	1.5	1.4	1.4
50 Feet	1.8	1.6	1.5	1.5	1.4	1.4
100 Feet	1.8	1.5	1.5	1.5	1.4	1.4

[a] *CO concentrations assume peak evening operations at parking structures. EMFAC2007 emissions factors for running exhaust emissions and starting emissions were used. The USEPA SCREEN 3 dispersion model was used to estimate concentrations at ground level from mobile sources on each level of a multi-level parking structure. Parking garages are assumed to have sufficient egress capacity to clear the peak parking demand during a one-hour period. All concentrations include year 2014 1- and 8-hour ambient concentrations of 1.5 ppm and 1.1 ppm, respectively.*
Source: TAHA, 2008.

Toxic Air Contaminant Impacts

The SCAQMD recommends that health risk assessments be conducted for substantial sources of diesel particulate emissions (e.g., truck stops and warehouse distribution facilities) and has provided guidance for analyzing mobile source diesel emissions.[21] The proposed project would develop residential, hotel, casino/gaming, civic, open spaces, retail and office/commercial uses on the project site. These uses are not anticipated to generate a substantial number of daily truck trips. The primary source of potential TACs associated with proposed project operations is diesel particulates from delivery trucks (e.g., truck traffic on local streets and on-site truck idling). The number of heavy-duty trucks (e.g., delivery trucks) accessing the project site on a daily basis would be minimal, and the trucks that do visit the site would not idle on-site for extended periods of time. Based on the limited activity of the TAC sources, the proposed project would not warrant the need for a health risk assessment associated with on-site activities, and potential TAC impacts would be less than significant.

Typical sources of acutely and chronically hazardous TACs include industrial manufacturing processes and automotive repair facilities. The proposed project would not include any of these potential sources,

[21] *SCAQMD, Health Risk Assessment Guidance for Analyzing Cancer Risks from Mobile Source Diesel Emissions, December 2002.*

although minimal emissions may result from the use of consumer products (e.g., aerosol sprays). As such, the proposed project would not release substantial amounts of TACs, and no significant impact on human health would occur.

Odor Impacts

According to the SCAQMD CEQA Air Quality Handbook, land uses and industrial operations that are associated with odor complaints include agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting, refineries, landfills, dairies and fiberglass molding. The project site would be developed with residential, hotel, casino/gaming, civic, open spaces, retail and office/commercial and not land uses that are typically associated with odor complaints. On-site trash receptacles would have the potential to create adverse odors. As trash receptacles would be located and maintained in a manner that promotes odor control, no adverse odor impacts are anticipated from these types of land uses. Therefore, the proposed project would not result in activities that create objectionable odors. No significant impacts would occur.

Consistency with the Air Quality Management Plan

Criteria for determining consistency with the AQMP are defined in Chapter 12, Section 12.2 and Section 12.3 of the SCAQMD's CEQA Air Quality Handbook. There are two key indicators of consistency. These indicators are discussed below.

- ***Consistency Criterion No. 1***: The proposed project will not result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations, or delay the timely attainment of air quality standards or the interim emissions reductions specified in the AQMP.

  Consistency Criterion No. 1 refers to violations of the CAAQS. CO is the preferred pollutant for assessing local area air quality impacts because it is primarily emitted by motor vehicles, and it does not readily react with other pollutants. Based on methodologies set forth by SCAQMD, one measure to determine whether the proposed project would cause or contribute to a violation of an air quality standard would be based on the estimated CO concentrations at intersections that would be affected by the proposed project. The CO hotspot analysis indicates that the proposed project would not result in an exceedance of the State one- and eight-hour CO concentration standards. Therefore, the proposed project complies with Consistency Criterion No. 1.

- ***Consistency Criterion No. 2***: The Proposed Project will not exceed the assumptions in the AQMP in 2010 or increments based on the year of the project build-out phase.

  The SCAQMD AQMP was developed to provide methods for controlling pollutant emissions within the Basin. Many of the design aspects of the project are consistent with the goals of the AQMP. For example, the proposed mixed-use development would potentially reduce regional vehicle miles traveled by decreasing residential to retail trip lengths, the Proposed Project would be located near heavily traveled roadways that are serviced by the Los Angeles County

Metropolitan Transportation Authority, and the Proposed Project would provide housing in a region in need of and that can support more housing. The 2007 AQMP was adopted by the SCAQMD on June 1, 2007 and is based upon growth forecasts in the 2004 Regional Transportation Plan. Per the growth forecasts in the 2004 RTP, the housing growth generated by the Proposed Project would represent approximately 85 percent of the remaining anticipated housing growth for the City by 2015. However, since the Regional Transportation Plan has been recently updated and the growth forecasts revised for the City, the Proposed Project would not be consistent with the most recent SCAG growth projections and therefore will not be consistent with the AQMP when it is updated to reflect the new growth projections. The Proposed Project's growth and proposed zoning was not anticipated by SCAG when the growth projections were finalized given the existing principal use of the Project Site as a racetrack and the request by the City to adjust the growth forecasts and the housing allocated to Inglewood. Since the Proposed Project would not be consistent with existing zoning and would require a zone change and General Plan amendment, the use of the site as a master-planned mixed-use development was not reasonably foreseen and therefore not accounted for in the growth forecasts. (For a more detailed discussion of the Project and its relationship to regional growth projections, see Section IV.H, Population, Housing & Employment.) As such, the Proposed Project would result in a significant unavoidable impact with respect to AQMP consistency.

Greenhouse Gas Emissions

Because it is impossible to trace the impacts of a single project to a change in overall climate, potential impacts from GHG emissions should not be considered on a project-level basis, but rather on a cumulative basis. No guidance exists to indicate what level of GHG emissions would be considered substantial enough to result in a significant averse impact on global climate. Even though the GHG emissions associated with an individual development project could be estimated, there is no emissions threshold that can be used to evaluate the significance of these emissions. Also, global climate change models are not sensitive enough to be able to predict the effect of a single project on global temperatures and the resultant effect on climate; therefore, they cannot be used to evaluate the significance of a project's impact. Thus, insufficient information and predictive tools exist to assess whether a single project would result in a significant impact on global climate. For these reasons, determining the significance of the impact of the Proposed Project on global climate is speculative. The appropriate context for consideration of the Proposed Project's contributions to greenhouse gases is within the cumulative impacts analysis, and this approach is consistent with the June 19, 2007 OPR Technical Advisory on this topic.

Land Use Equivalency Program

The Proposed Equivalency Program allows for specific limited exchanges in the types of land uses occurring within the Hollywood Park Specific Plan Area.

The exchange of office/commercial, retail, hotel and/or residential uses would occur at relatively limited locations within the Project Site. Furthermore, under the Equivalency Program, there would be no

substantial variation in the Project's Conceptual Circulation Plan, building pad elevations, or the depth of excavation. The equivalency formula was designed to be traffic neutral. Potential changes in land use under the Equivalency Program would therefore have no substantial effect on the air quality analysis because the total amount of traffic would be the same. As a result, the amount and types of construction equipment operating at the Project site under peak construction activity levels would be the same for the Equivalency Program as compared to the Proposed Project, although there may be minor differences in the overall duration of construction activities due to the limited changes in the amount of development that could occur. Furthermore, the site characterization and associated remediation required for Project development would be the same under the Equivalency Program. As such, the impacts of the Equivalency Program relative to peak regional and local emissions as well as emissions of toxic air contaminants or odors during construction would be the same as those forecasted for the Proposed Project. Therefore, the Equivalency Program, as is the case with the Proposed Project, would result in significant and unavoidable impacts with regard to air quality in the construction phase.

Regional and local air quality impacts during operations under the Equivalency Program would be comparable to those of the Proposed Project as the trip generation and trip distribution characteristics of the Equivalency Program and the Proposed Project would also be comparable. Potential sources of toxic air contaminants and odors under the Equivalency Program would be the same as those associated with the Proposed Project, and, thus, impacts would be the same. Concurrent construction and operations emissions under the Equivalency Program would also be comparable to the Proposed Project as levels of construction activity and traffic would also be comparable. In addition, as is the case with the Proposed Project, the Equivalency Program would result in significant and unavoidable impacts with regard to consistency findings with adopted plans and policies.

Specifically, while there would potentially be some exchange of land uses, the Equivalency Program does not fundamentally alter the land use mix and the same Project Design Features and Mitigation Measures as those established for the Proposed Project are applicable to the Equivalency Program. Therefore, the Equivalency program, as is the case with the Proposed Project, would result in significant and unavoidable impacts with regard to the operations phase.

All Project Design Features and recommended mitigation measures to minimize air quality impacts under the Proposed Project would be implemented, as appropriate, under the Equivalency Program.

PROJECT DESIGN FEATURES

The following PDFs are proposed to be incorporated into the project description and were used in the basis to formulate portions of the environmental analysis with respect to air quality impacts for the Proposed Project, including the Equivalency Program. As such, it is recommended that the lead agency incorporate the following project design features as conditions of project approval.

PDF B-1. As part of the Proposed Project Plot Plan Review process, each builder would incorporate energy efficiency measures and other conservation measures from the Hollywood Park Sustainability Strategy Checklist contained in the Hollywood Park Specific Plan.

PDF B-2. The Proposed Project incorporates various sustainable design elements and guidelines to promote energy efficiency and other conservation measures. Some examples of the Proposed Project's sustainable design elements include:

- a new mixed-use development that integrates housing, civic, entertainment and retail amenities (jobs, parks, shopping opportunities, etc.) to help reduce vehicle miles traveled resulting from discretionary automobile trips;
- a mix of land uses that will also contribute to the overall reduction in vehicle miles traveled by promoting alternative methods of transportation and creating provisions for non-vehicular travel (e.g. pedestrian pathways and paseos, bike paths, etc.) within the project site;
- urban infill development, in central Los Angeles County, providing access to several modes of public transportation (buses, rapid transit, and light rail) for travel between neighboring cities;
- a land use plan and land use strategies that encourage higher density development along established transit corridors;
- quality housing opportunities located in a job-rich area of Los Angeles County;
- implement street improvements that are designed to relieve pressure on congested roadways and intersections (see Section IV. L. Traffic/Transportation);
- contribution to air quality improvements through the creation of shade to reduce ambient heat produced by paved surfaces by integrating an urban forest concept into the overall landscape design of the Proposed Project;
- planting trees and vegetation near structures to shade buildings and reduce energy requirements for heating/cooling;
- use of a plant palette that requires low maintenance and climate appropriate plant species;
- conservation by utilization of reclaimed water sources for landscape irrigation purposes;
- natural treatment of stormwater run-off through an arroyo and lake system and in smaller pocket parks;
- using energy efficient bulbs for street lights and other electrical uses;

- creating incentives to increase recycling and reduce generation of solid waste by residential users on the Project Site;
- implementing a recycling program for waste generated by demolition and construction activities, including recycling of existing asphalt and other building materials; and
- using Energy Star appliances,

MITIGATION MEASURES

Construction Phase

The following mitigation measures, which are required/recommended by the SCAQMD, shall be implemented for all areas (both on-site and off-site) where construction for the Proposed Project, including the Equivalency Program would occur:

MM B-1. Water or a stabilizing agent shall be applied to exposed surfaces in sufficient quantity to prevent generation of dust plumes.

MM B-2. Track-out shall not extend 25 feet or more from an active operation, and track-out shall be removed at the conclusion of each workday.[22]

MM B-3. A wheel washing system shall be installed and used to remove bulk material from tires and vehicle undercarriages before vehicles exit the project site.

MM B-4. All haul trucks hauling soil, sand, and other loose materials off-site shall maintain at least six inches of freeboard in accordance with California Vehicle Code Section 23114.

MM B-5. All haul trucks hauling soil, sand, and other loose materials off-site shall be covered (e.g., with tarps or other enclosures that would reduce fugitive dust emissions).

MM B-6. Traffic speeds on unpaved roads shall be limited to 15 miles per hour.

MM B-7. Operations on unpaved surfaces shall be suspended when winds exceed 25 miles per hour.

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[22] *Track-out is defined by the SCAQMD as any material that adheres to and agglomerates on the exterior surface of motor vehicles, haul trucks, and equipment (including tires) that has been released onto a paved road and can be removed by a vacuum sweeper or a broom sweeper under normal operating conditions (Rule 1156(c)(28)).*

MM B-8. Heavy-equipment operations shall be suspended during first and second stage smog alerts.

MM B-9. On-site stock piles of debris, dirt, or rusty materials shall be covered or watered at least twice per day.

MM B-10. Contractors shall maintain equipment and vehicle engines in good condition and in proper tune per manufacturers' specifications.

MM B-11. Contractors shall utilize electricity from power poles rather than temporary diesel or gasoline generators, as feasible.

MM B-12. Heavy-duty trucks shall be prohibited from idling in excess of five minutes, both on- and off-site.

MM B-13. Construction parking shall be configured to minimize traffic interference.

MM B-14. Construction activity that affects traffic flow on the arterial system shall be limited to off-peak hours, as feasible.

MM B-15. Architectural coatings shall be purchased from a super-compliant architectural coating manufacturer as identified by the SCAQMD (http://www.aqmd.gov/prdas/brochures /Super-Compliant_AIM.pdf).

MM B-16. Spray equipment with high transfer efficiency, such as the electrostatic spray gun or manual coatings application (e.g., paint brush and hand roller), shall be used to reduce VOC emissions.

Operational Phase

The following mitigation measures shall be implemented for all areas (both on-site and off-site) during operation of the Proposed Project, including the Equivalency Program would occur:

MM B-17. The Applicant shall install automatic lighting on/off controls and energy-efficient lighting for office spaces.

MM B-18. The Applicant shall provide informational packets to new residents within the development locating nearby public transportation options.

LEVEL OF SIGNIFICANCE AFTER MITIGATION

Construction Phase

With respect to threshold questions (b) and (d), implementation of Mitigation Measures B-1 through B-9 would ensure that fugitive dust emissions would be reduced by approximately 61 percent. Mitigation Measure B-10 would reduce heavy-duty construction equipment exhaust emissions by approximately five percent. Mitigation Measure B-15 would reduce VOC emissions during the architectural coating activity by approximately 40 percent. The other mitigation measures (Mitigation Measures B-11 through B-14 and B-16), while difficult to quantify, would also reduce construction emissions. As demonstrated in Table IV.B-13, mitigated construction regional emissions would continue to exceed the SCAQMD regional thresholds for VOC, NO_X, $PM_{2.5}$, and PM_{10}. As such, regional construction emissions would result in a significant and unavoidable air quality impact.

Table IV.B-13
Regional Construction Emissions - Mitigated

Construction Year	Pounds Per Day					
	VOC	**NO_X**	**CO**	**SO_X**	**$PM_{2.5}$ [a]**	**PM_{10} [a]**
2009 [b]	68	662	328	<1	277	1,317
2010 [c]	48	457	234	<1	277	1,266
2011 [d]	98	454	338	<1	31	34
2012 [e]	90	421	312	<1	26	29
2013 [f]	58	406	341	<1	26	28
2014 [g]	85	233	238	<1	17	18
Maximum Regional Total	**98**	**662**	**341**	<1	**277**	**1,317**
SCAQMD Threshold	**75**	**100**	**550**	**150**	**55**	**150**
Exceed Threshold?	Yes	Yes	No	No	Yes	Yes

[a] *Assumes proper implementation of SCAQMD Rule 403 – Fugitive Dust.*
[b] *Maximum Year 2009 emissions would occur when demolition, grading, and Phase I infrastructure construction activity overlap.*
[c] *Maximum Year 2010 emissions would occur when grading and Phase I infrastructure construction activity overlap.*
[d] *Maximum Year 2011 emissions would occur when Phase II infrastructure construction, building erection, and architectural coating activity overlap.*
[e] *Maximum Year 2012 emissions would occur when Phase III infrastructure construction, building erection, and architectural coating activity overlap.*
[f] *Maximum Year 2013 emissions for VOC would occur when building erection and architectural coating overlap. Maximum Year 2013 emissions for NO_X, CO, SO_X, $PM_{2.5}$, and PM_{10} would occur when Phase III infrastructure construction and building erection activity overlap.*
[g] *Maximum Year 2014 emissions would occur when building erection and architectural coating activity overlap.*
Source: TAHA, 2008.

Results of the mitigated localized construction analysis are shown in Table IV.B-14. The dispersion modeling results indicate that localized CO emissions would be less than the SCAQMD daily significance thresholds. However, localized emissions of $PM_{2.5}$, PM_{10}, and NO_2 would still exceed the localized thresholds. The maximum localized emissions would be temporary and would generally occur during the

heaviest periods of construction activity. Nonetheless, localized construction emissions would result in a significant and unavoidable impact.

The diesel health risk assessment resulted in a mitigated carcinogenic risk of 28 persons in one million, which is greater than the ten persons in one million significance threshold. As such, construction-related diesel emissions would result in a significant and unavoidable temporary impact.

With respect to threshold question (e), the Proposed Project would result in a less than significant construction odor impact.

Table IV.B-14
Localized Construction Emissions - Mitigated

Pollutant	Estimated Emissions (lbs/day)	Concentration at Nearest Sensitive Receptor	Significance Threshold	Significant Impact?
$PM_{2.5}$	292	116 µg/m^3	10.4 µg/m^3	Yes
PM_{10}	1,317	534 µg/m^3	10.4 µg/m^3	Yes
NO_2	600	0.61 µg/m^3	0.18 ppm	Yes
CO (One-Hour) /b/	269	3.5 ppm	20 ppm	No
CO (Eight-Hour)	269	2.6 ppm	9.0 ppm	No

[a] *The NO_2 concentration includes a background concentration of 0.11 ppm.*
[b] *The CO concentration includes one- and eight-hour background concentrations of 3.0 and 2.4 ppm, respectively.*
Source: TAHA, 2008.

Operational Phase

With respect to threshold questions (b) and (d), Mitigation Measures B-17 and B-18 would reduce regional operational emissions for the Proposed Project and the Equivalency Program. The reduction associated with these mitigation measures is difficult to quantify. The majority of operational emissions would result from project-related mobile sources. Mobile source emissions cannot be substantially reduced though mitigation as the Applicant cannot reasonably impose mitigation measures on private vehicles. As such, regional operational emissions would result in a significant and unavoidable air quality impact.

With respect to threshold question (a), the Proposed Project and the Equivalency Program would not be consistent with the 2007 AQMP.

With respect to threshold question (e), the Proposed Project and the Equivalency Program would result in a less than significant operational odor impact.

CUMULATIVE IMPACTS

SCAQMD Methodology

Construction

With respect to threshold question (c), the related projects include the development of hundreds of thousands of square feet of commercial and residential uses, a number that is many times greater than the project and the Equivalency Program. As the project and the Equivalency Program results in a significant impact during construction relative to VOC, NO_X, CO, $PM_{2.5}$, and PM_{10}, (even after mitigation) it is anticipated that related project development would also result in significant regional impacts. While SCAQMD required mitigation measures would reduce air quality impacts, it is forecasted that the construction of the related projects, in addition to the proposed project or the Equivalency Program, would result in a significant impact with regard to VOC, NO_X, CO, $PM_{2.5}$, and PM_{10} emissions.

Operations

With respect to threshold question (c), the SCAQMD's approach for assessing cumulative operational impacts is based on the SCAQMD's AQMP forecasts of attainment of ambient air quality standards in accordance with the requirements of the federal and state CAAs. This forecast also takes into account SCAG's forecasted future regional growth. As such, the analysis of cumulative impacts focuses on determining whether the project is consistent with forecasted future regional growth. If a project is consistent with the regional population, housing and employment growth assumptions upon which the SCAQMD's AQMP is based, then future development would not impede the attainment of ambient air quality standards and a significant cumulative air quality impact would not occur. Here, the Project together with cumulative development would exceed the current growth projections for the City of Inglewood, though when the broader southern California region is considered, the projected cumulative growth is within growth expectations for the region. Nonetheless, given the technical inconsistency and the fact that the Proposed Project and the Equivalency Program would result in a significant VOC, NO_X, CO, $PM_{2.5}$, and PM_{10} impact during operations after mitigation, the Proposed Project and the Equivalency Program would result in a significant regional cumulative operations impact.

Greenhouse Gas Emissions

For the purpose of this analysis, greenhouse gas emissions under the operational control of the Project Applicant associated with the Proposed Project have been identified, quantified and analyzed under the cumulative impacts discussion. These emissions are associated with increased electricity consumption, natural gas combustion and mobile source emissions due to project-generated traffic. The Proposed Project would emit an estimated additional 53,227 tons per year of CO_2 equivalent emissions above the existing development levels. It should be noted that although public transportation exists near the project site, no reduction was taken in the determination of the Proposed Project's vehicular trip generation forecasts and the corresponding traffic impacts. As such, it can be assumed that there would be some reduction in vehicle trips due to public transit ridership, as well as locating retail centers, civic, entertainment and recreational uses near housing; therefore, the additional estimated CO_2 equivalent

emissions associated with the Proposed Project would be less than estimated additional 53,227 tons per year.

Nonetheless, the Proposed Project would be a mixed-use, infill development project that is intended to minimize vehicle trips between residential and commercial uses as well as constructing additional residential units in close proximity to the jobs-rich area of Los Angeles County. The project site is located near major freeways and is well-served by public transit. The Proposed Project also incorporates "smart growth" features including creating walkable neighborhoods, providing housing near mass transit and jobs-rich area, and incorporating energy efficient appliances into the building design. Moreover, infill development reduces pressure to develop green fields such as open spaces and parkland by reclaiming under utilized sites. Infill development allows funds to be used for maintaining or upgrading existing services rather than diverting funds for expansion to new areas.

Improving energy efficiency and using renewable energy sources are effective ways to improve air quality and reduce energy consumption costs. In addition to the "smart growth" features discussed above, the Proposed Project proposes to incorporate other sustainable elements listed below as Project Design Features. Many of the sustainable Project Design Features are also provided as examples of measures to reduce GHG emissions in the OPR Technical Advisory. As discussed in Table IV.B-15, the design of the Proposed Project is generally consistent with the OPR Guidance on measures to reduce GHGs.

It is not possible at this time to quantify the exact reductions in greenhouse gas emissions anticipated from the smart growth and sustainability design features of the Proposed Project. By incorporating energy and VMT reducing project features such as designing, constructing, and operating the project to comply with Title 24, installing appliances, fixtures, and infrastructure that use less energy and water, creating approximately 25 acres of recreation/open space, and by locating housing near to mass transit and employment centers, the Proposed Project will result in lower GHG emission rates compared to current standards and practices. Given the lack of standards and the Proposed Project's consistency with the State and City's goals and GHG reduction measures, the contribution to the cumulative impact of global climate change is considered less than significant.

Table IV. B-15
Comparison of Project Characteristics to Examples of GHG Reduction Measures in OPR Technical Guidance

GHG Reduction Measure	Consistency of the Proposed Project
Land Use and Transportation:	
Implement land use strategies to encourage jobs/housing proximity, promote transit-oriented development, and encourage high density development along transit corridors. Encourage compact, mixed-use projects, forming urban villages designed to maximize affordable housing and encourage walking, bicycling and the use of public transit systems.	The Proposed Project would redevelop the existing 238-acre Hollywood Park Turf Club and Casino property in Inglewood. As such, it is an infill redevelopment project and would thus be consistent with this measure. The Project Site is located near well served public transit routs, including bus lines along Century Boulevard, Prairie Avenue and Crenshaw Boulevard, in addition to Metro Green Line stations at the Hawthorn Station and Crenshaw Station. The Proposed Project, as a mixed-use community, will reduce the number of auto trips and vehicle miles traveled by placing housing

Table IV. B-15
Comparison of Project Characteristics to Examples of GHG Reduction Measures in OPR Technical Guidance

	opportunities in close proximity to transit and jobs. The Proposed Project will also create open space, retail, entertainment, casino/gaming and civic opportunities for residents to walk and bike.
Encourage infill, redevelopment, and higher density development, whether in incorporated or unincorporated settings.	The Proposed Project is an in-fill redevelopment project, which includes higher density development, and thus is consistent with this measure.
Encourage new developments to integrate housing, civic and retail amenities (jobs, schools, parks, shopping opportunities) to help reduce VMT resulting from discretionary automobile trips.	The Proposed Project, as a mixed-use community, will reduce the number of auto trips and vehicle miles traveled by placing housing opportunities in close proximity to transit and jobs. The Proposed Project will also create open space, retail, entertainment, casino/gaming and civic opportunities for residents to walk and bike.
Apply advanced technology systems and management strategies to improve operational efficiency of transportation systems and movement of people, goods and services.	The Proposed Project proposes, as its primary mitigation strategy for impacts to traffic and transportation, a funding contribution to continue development and enhancement of the City's Intelligent Transportation System (ITS). The ITS system will enhance the ability of the traffic signal controller to adjust traffic signal timing and intersections on a real-time basis and synchronize traffic signals along key roadways in response to changing traffic volume patterns. The ITS system has been shown to increase the effective intersection capacity by at least 10% and will improve the operational efficiency of the movement of people, goods and services.
Incorporate features into project design that would accommodate the supply of frequent, reliable and convenient public transit.	The Proposed Project intends to make bus shelter improvements along its Century Boulevard frontage to better accommodate the existing public transit available near the Project Site.
Implement street improvements that are designed to relieve pressure on a region's most congested roadways and intersections.	As noted above, the Proposed Project proposes a funding contribution to the City's ITS system to help relieve pressure on some of the City's most congested roadways and intersections.
Limit idling time for commercial vehicles, including delivery and construction vehicles.	With adherence to Mitigation Measure B-12, the Proposed Project would be consistent with this GHG reduction measure.
Urban Forestry:	
Plant trees and vegetation near structures to shade buildings and reduce energy requirements for heating/cooling.	As provided in the Hollywood Park Specific Plan, the Proposed Project includes an urban forest concept by allowing for the extensive planting of street trees, parkway and landscape setbacks. A majority of the tree species have been carefully selected from the City's approved tree list, and the other selected trees were based on recommendations from local arborists to create a palette of horticultural successful, low maintenance and climate-appropriate tree species.
Green Buildings:	

Table IV. B-15
Comparison of Project Characteristics to Examples of GHG Reduction Measures in OPR Technical Guidance

Encourage public and private construction of LEED (Leadership in Energy and Environmental Design) certified (or equivalent) buildings.	The buildings that are part of the Proposed Project are not currently proposed to be LEED certified. However, as part of the Proposed Project Plot Plan Review process, each builder would incorporate energy efficiency and other conservation measures from the Hollywood Park Sustainability Checklist contained in the Specific Plan. See PDF B-1.
Energy Conservation Policies and Actions:	
Recognize and promote energy saving measures beyond Title 24 requirements for residential and commercial projects.	As discussed above, as part of the Proposed Project Plot Plan Review process, each builder would incorporate energy efficiency and other conservation measures from the Hollywood Park Sustainability Checklist contained in the Specific Plan. See PDF B-1.
Where feasible, include in new buildings facilities to support the use of low/zero carbon fueled vehicles, such as the charging of electric vehicles from green electricity sources.	The Proposed Project does not propose this GHG reduction measure.
Educate the public, schools, other jurisdictions, professional associations, business and industry about reducing GHG emissions.	This GHG reduction measure is not applicable to the Proposed Project.
Replace traffic lights, street lights, and other electrical uses to energy efficient bulbs and appliances.	The Proposed Project would use energy efficient bulbs and appliances where applicable as feasible.
Purchase Energy Star equipment and appliances for public agency use.	This GHG reduction measure is not applicable to the Proposed Project. However, the Proposed Project would include Energy Star appliances for the residential dwelling units.
Incorporate on-site renewable energy production, including installation of photovoltaic cells or other solar options.	This GHG reduction measure is not applicable to the Proposed Project.
Execute an Energy Savings Performance Contract with a private entity to retrofit public buildings. This type of contract allows the private entity to fund all energy improvements in exchange for a share of the energy savings over a period of time.	This GHG reduction measure is not applicable to the Proposed Project.
Design, build, and operate schools that meet the Collaborative for High Performance Schools (CHPS) best practices.	This GHG reduction measure is not applicable to the Proposed Project.
Retrofit municipal water and wastewater systems with energy efficient motors, pumps and other equipment, and recover wastewater treatment methane for energy production.	This GHG reduction measure is not applicable to the Proposed Project.
Convert landfill gas into energy sources for use in fueling vehicles, operating equipment, and heating buildings.	This GHG reduction measure is not applicable to the Proposed Project.

Table IV. B-15
Comparison of Project Characteristics to Examples of GHG Reduction Measures in OPR Technical Guidance

Purchase government vehicles and buses that use alternatives fuels or technology, such as electric hybrids, biodiesel, and ethanol. Where feasible, require fleet vehicles to be low emission vehicles. Promote the use of these vehicles in the general community.	This GHG reduction measure is not applicable to the Proposed Project.
Offer government incentives to private businesses for developing buildings with energy and water efficient features and recycled materials. The incentives can include expedited plan checks and reduced permit fees.	This GHG reduction measure is not applicable to the Proposed Project.
Offer rebates and low-interest loans to residents that make energy-saving improvements on their homes.	This GHG reduction measure is not applicable to the Proposed Project.
Create bicycle lanes and walking paths directed to the location of schools, parks and other destination points.	The Hollywood Park Specific Plan provides a safe and efficient network of roadways, providing for pedestrian trail systems and bicycle circulation in conjunction with the street network. A hierarchy of bicycle connections is incorporated throughout the development to encourage the use of walking, jogging and bicycling as a means of accessing the various land uses on the Project Site, including the civic site, parks, retail, office/commercial, entertainment and casino/gaming.
Programs to Reduce Vehicle Miles Traveled:	
Offer government employees financial incentives to carpool, use public transportation, or use other modes of travel for daily commutes.	This GHG reduction measure is not applicable to the Proposed Project. However, as part of the proposed circulation plan, the Proposed Project will incorporate a Transportation Demand (TDM) Strategy to be implemented as part of the Mitigation and Monitoring Reporting Program. The TDM would provide incentives for those visiting the site to use alternative modes of transportation or use of carpools to reduce VMT. (See Section IV. L. Traffic and Transportation).
Encourage large businesses to develop commute trip reduction plans that encourage employees who commute alone to consider alternative transportation modes.	As discussed above, the Proposed Project will incorporate a TDM Strategy to help reduce VMT to the Project Site. The TDM will be finalized in conjunction with the project approval process.
Develop shuttle systems around business district parking garages to reduce congestion and create shorter commutes.	As discussed above, the Proposed Project will incorporate a TDM Strategy to help reduce VMT to the Project Site. The TDM will be finalized in conjunction with the project approval process.
Create an online ridesharing program that matches potential carpoolers immediately through email.	As discussed above, the Proposed Project will incorporate a TDM Strategy to help reduce VMT to the Project Site. The TDM will be finalized in conjunction with the project approval process.
Develop a Safe Routes to School program that allows and promotes bicycling and walking to school.	As discussed above, the Proposed Project will incorporate a TDM Strategy to help reduce VMT to the Project Site. The TDM will be finalized in conjunction with the project approval process.

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Programs to Reduce Solid Waste:	
Create incentives to increase recycling and reduce generation of solid waste by residential users.	The Proposed Project shall follow all applicable City of Inglewood policies related to curbside collection and recycling programs.
Implement a Construction and Demolition Waste Recycling Ordinance to reduce the solid waste created by new development.	This GHG reduction measure is not applicable to the Proposed Project. However, as part of the Proposed Project's sustainable goals, the Project Applicant will develop and implement a construction waste management plan that identifies the materials to be diverted from disposal and whether the materials will be sorted on site or commingled on-site during the construction process. (See PDF J.4-1)
Add residential/commercial food waste collection to existing greenwaste collection programs.	The Proposed Project shall follow all applicable City of Inglewood policies related to curbside collection and recycling programs.
Source: Christopher A. Joseph & Associates.	