IV. ENVIRONMENTAL IMPACT ANALYSIS

B. AIR QUALITY

The following analysis of air quality impacts is based primarily upon the *Westfield Fashion Square Expansion Project Air Quality and Noise Impact Report*, prepared by Terry A. Hayes Associates LLC and dated February 26, 2008. Air quality calculation sheets are provided in Appendix D-1: Air Quality of this DEIR. Additionally, analysis of global climate change is based on the Technical Memorandum: Greenhouse Gas Emissions for the Westfield Fashion Square Expansion Project, prepared by Terry A. Hayes Associates, LLC and dated November 12, 2007 (see Appendix D2-Global Warming Technical Memorandum).

1. ENVIRONMENTAL CONDITIONS

a. Physical Setting

(1) Air Quality Terms and Characteristics

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 may 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 carbon monoxide (CO), ozone (O_3), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), particulate matter 2.5 microns or less in diameter ($PM_{2.5}$), particulate matter ten microns or less in diameter (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 spacial 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 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 volatile organic compounds (VOC), and nitrogen oxides (NO_X) react in

[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.

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 , 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 exposure (lasting for a few hours) to O_3 at levels typically observed in Southern California can result in breathing pattern changes, reduction of breathing capacity, increased susceptibility to infections, inflammation of the lung tissue, and some immunological changes.

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 of bronchitis in children (two and three years old) has also been observed at concentrations below 0.3 parts per million (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.

Toxic Air Contaminants. An air pollutant which may cause or contribute to an increase in mortality or in serious illness, or which may pose a present or potential hazard to human health is identified as a toxic air contaminant (TAC). TACs are identified by State and federal agencies based on a review of available scientific evidence. In the State of California, TACs are identified through a two-step process that was established in 1983 under the Toxic Air Contaminant Identification and Control Act, Assembly Bill 1807, Tanner. This two-step process of risk identification and risk management was designed to protect residents from the health effects of toxic substances in the air.

The South Coast Air Quality Management District (SCAQMD) has a long and successful history of reducing air toxics and criteria emissions in the South Coast Air Basin. SCAQMD has an extensive control program, including traditional and innovative rules and policies. These policies can be viewed in the SCAQMD's Air Toxics Control Plan for the Next Ten Years (March 2000).

(2) Regional Air Quality

(a) Climate

The project site is located within the Los Angeles County portion of the South Coast Air Basin (Basin). 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 the 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 31: South Coast Air Basin*). Ambient pollution concentrations recorded in Los Angeles County are among the highest in the four counties comprising the Basin.

The Basin is in 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.

(b) Attainment Status

As required by the federal Clean Air Act (CAA), National Ambient Air Quality Standards (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 United States Environmental Protection Agency (USEPA) to designate areas as either attainment or nonattainment for each criteria pollutant based on whether the NAAQS have been achieved. The federal standards are summarized in *Table 4: State and National Ambient Air Quality Standards*. The USEPA has classified the Basin as maintenance for CO and nonattainment for O_3, $PM_{2.5}$, and PM_{10}.

The California Clean Air Act (CCAA) requires California Air Resources Board (CARB) to designate areas within California as either attainment or nonattainment 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

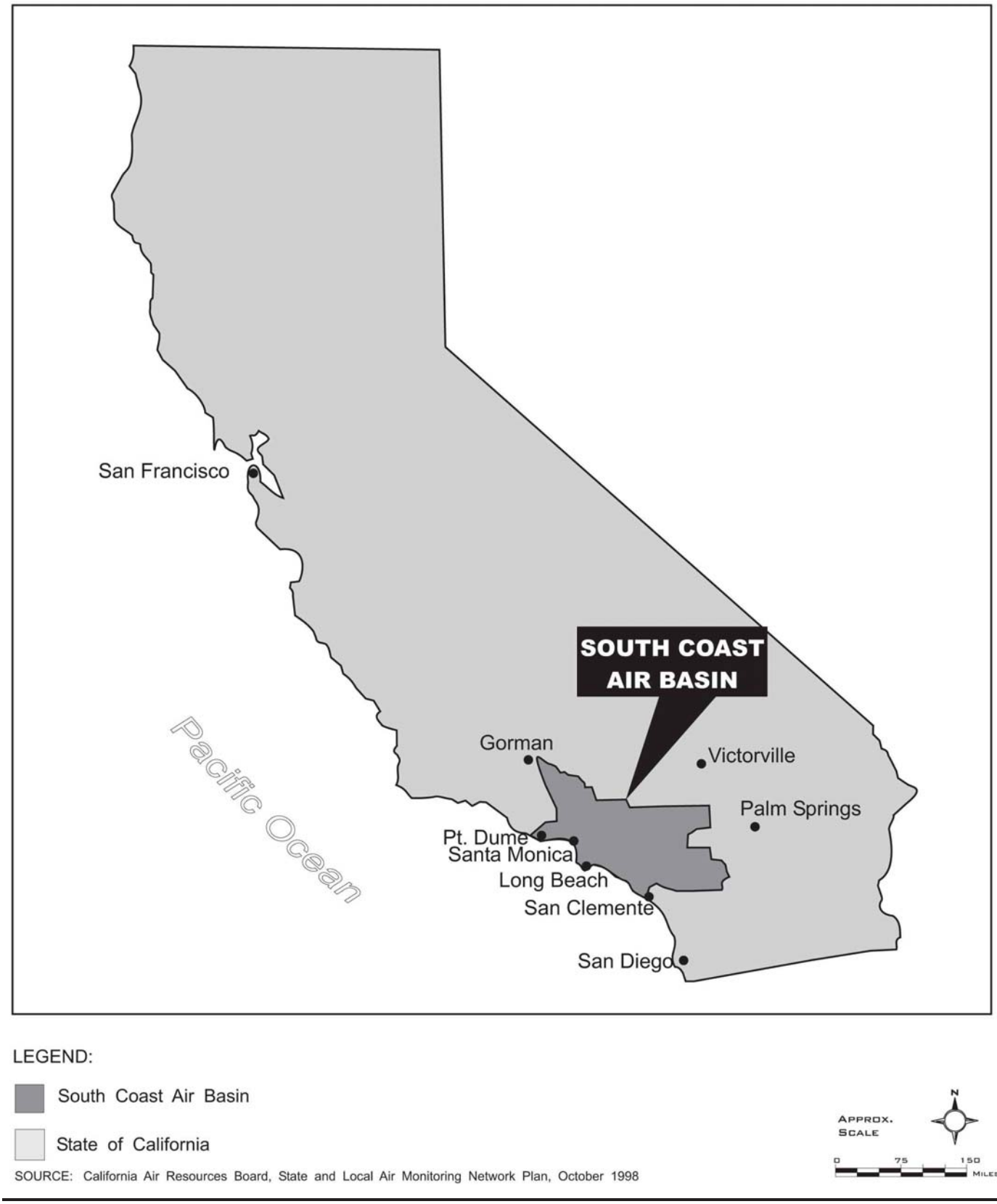


FIGURE 31
SOUTH COAST AIR BASIN

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 nonattainment. The State standards are also summarized in *Table 4: State and National Ambient Air Quality Standards*. Under the CCAA, the Los Angeles County portion of the Basin is designated as a nonattainment area for O_3, $PM_{2.5}$, and PM_{10}.[2]

TABLE 4
STATE AND NATIONAL AMBIENT AIR QUALITY STANDARDS [1]

POLLUTANT	AVERAGING PERIOD	CALIFORNIA		FEDERAL	
		STANDARDS	ATTAINMENT STATUS	STANDARDS	ATTAINMENT STATUS
Ozone (O_3)	1-hour	0.09 ppm (180 μg/m^3)	Nonattainment	--	--
	8-hour	0.070 ppm (137 μg/m^3)	n/a	0.08 ppm (157 μg/m^3)	Nonattainment
Respirable Particulate Matter (PM_{10})	24-hour	50 μg/m^3	Nonattainment	150 μg/m^3	*Nonattainment*
	Annual Arithmetic Mean	20 μg/m^3	Nonattainment	--	--
Fine Particulate Matter ($PM_{2.5}$)	24-hour	--	--	35 μg/m^3	Nonattainment
	Annual Arithmetic Mean	12 μg/m^3	Nonattainment	15 μg/m^3	Nonattainment
Carbon Monoxide (CO)	8-hour	9.0 ppm (10 mg/m^3)	Attainment	9 ppm (10 mg/m^3)	Maintenance
	1-hour	20 ppm (23 mg/m^3)	Attainment	35 ppm (40 mg/m^3)	Maintenance
Nitrogen Dioxide (NO_2)	Annual Arithmetic Mean	0.030 ppm (56μg/m^3)	Attainment	0.053 ppm (100 μg/m^3)	Attainment
	1-hour	0.18 ppm (338 μg/m^3)	Attainment	--	--
Sulfur Dioxide (SO_2)	Annual Arithmetic Mean	--	--	0.030 ppm (80 μg/m^3)	Attainment
	24-hour	0.04 ppm (105 μg/m^3)	Attainment	0.14 ppm (365 μg/m^3)	Attainment
	3-hour	--	--	--	--
	1-hour	0.25 ppm (655 μg/m^3)	Attainment	--	--
Lead (Pb)	30-day average	1.5 μg/m^3	Attainment	--	--
	Calendar Quarter	--	--	1.5 μg/m^3	Attainment

[1] Source: CARB, Ambient Air Quality Standards, February 21, 2008.

[2] California Air Resources Board (CARB). 2007. *2006 State Area Designations*. 1 October 2007 <http://www.arb.ca.gov/desig/adm/adm.htm>.

(3) Local Meteorology

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 Burbank Wind Monitoring Station, is approximately 4.1 miles per hour, with calm winds occurring approximately 13.8 percent of the time. Wind in the vicinity of the project site predominately blows from the West.[3]

The annual average temperature in the project area is 64.1 degrees Fahrenheit (°F). The project area experiences an average winter temperature of approximately 55.2°F and an average summer temperature of approximately 73.1°F. Total precipitation in the project area averages approximately 16.5 inches annually. Precipitation occurs mostly during the winter and relatively infrequently during the summer. Precipitation averages approximately 9.6 inches during the winter, approximately 4.4 inches during the spring, approximately 2.3 inches during the fall, and less than 1 inch during the summer.[4]

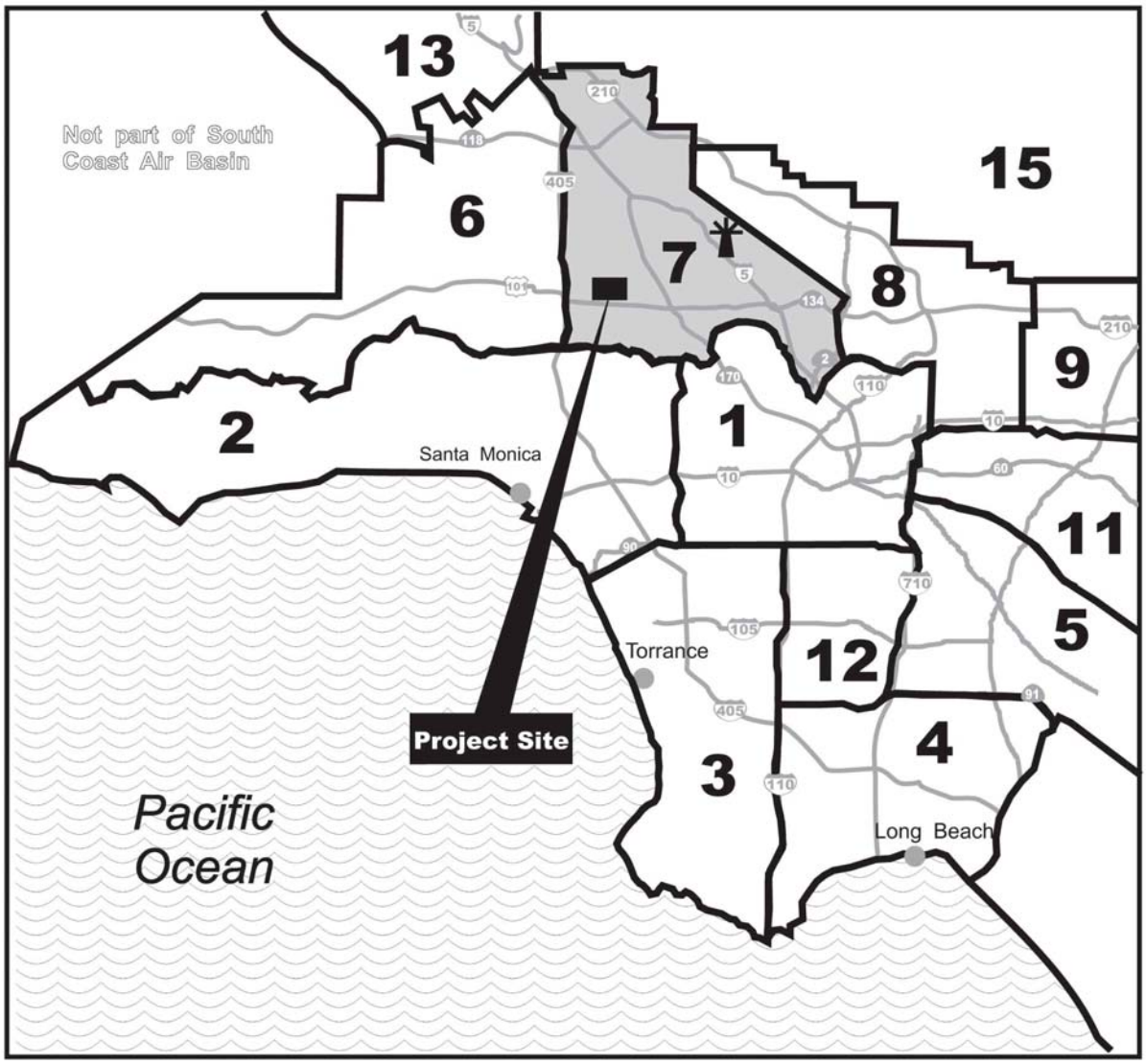
(4) Local Air Quality

The SCAQMD monitors air quality conditions at 38 locations throughout the Basin. The project site is located in SCAQMD's East San Fernando Valley Air Monitoring Subregion, which is served by the Burbank Monitoring Station, located approximately 7.8 miles east of the project site on 228 West Palm Avenue between Victory Boulevard and Lake Street in the City of Burbank (*Figure 32: Air Monitoring Areas*).

Historical data from the Burbank Monitoring Station were used to characterize existing conditions in the vicinity of the project area. Criteria pollutants monitored at the Burbank Monitoring Station include O_3, CO, NO_2, PM_{10}, $PM_{2.5}$, and SO_2.

Table 5: Ambient Air Quality Data in Project Vicinity shows pollutant levels, the State standards, and the number of exceedances recorded at the Burbank Monitoring Station from 2004 to 2006. The CAAQS for the criteria pollutants are also shown in the table. As *Table 5: Ambient Air Quality Data in Project Vicinity* indicates, criteria pollutants CO, NO_2, and SO_2 did not exceed the CAAQS during the 2004 through 2006 period. However, the one-hour State standard for O_3 was exceeded 65 times during this period, and the eight-hour State standard for O_3 was exceeded 72 times. Additionally, the 24-hour State standard for PM_{10} was exceeded seven times in 2004, five times in 2005, and ten times in 2006. The annual State standard for $PM_{2.5}$ was exceeded every year from 2004-2006.

[3] South Coast Air Quality Management District (SCAQMD). 2007. *AQMD Meteorological Data Dispersal Model Application*. September 2007 <http://www.aqmd.gov/smog/metdata/ MeteorologicalData.html>.
[4] Western Regional Climate Center. 2007. *Western Regional Climate Center*. 1 October 2007 <http://www.wrcc.dri.edu/>.



LEGEND: Burbank 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
10. Pomona/Walnut Valley (not shown)
11. South San Gabriel Valley
12. South Central Los Angeles
13. Santa Clarita Valley
15. San Gabriel Mountains

APPROX. SCALE
0 3.0 6.0 9.0 MILES

SOURCE: South Coast Air Quality Management District Air Monitoring Areas Map, 1999

FIGURE 32
AIR MONITORING AREAS

TABLE 5
AMBIENT AIR QUALITY DATA IN PROJECT VICINITY [1]

POLLUTANT	POLLUTANT CONCENTRATION AND STANDARDS	NUMBER OF DAYS ABOVE STATE STANDARD		
		2004	2005	2006
Ozone	Maximum 1-hr Concentration (ppm)	0.14	0.14	0.17
	Days > 0.09 ppm (State 1-hr standard)	27	13	25
	Maximum 8-hr Concentration (ppm)	0.11	0.11	0.13
	Days > 0.07 ppm (State 8-hr standard)	37	12	23
Carbon Monoxide	Maximum 1-hr concentration (ppm)	5	4	4
	Days > 20 ppm (State1-hr standard)	0	0	0
	Maximum 8-hr concentration (ppm)	3.7	3.4	3.5
	Days > 9.0 ppm (State 8-hr standard)	0	0	0
Nitrogen Dioxide	Maximum 1-hr Concentration (ppm)	0.12	0.09	0.10
	Days > 0.18 ppm (State 1-hr standard)	0	0	0
PM_{10}	Maximum 24-hr concentration ($\mu g/m^3$)	74	92	71
	Estimated Days > 50 $\mu g/m^3$ (State 24-hr standard)	7	5	10
$PM_{2.5}$	Maximum 24-hr concentration ($\mu g/m^3$)	60	63	51
	Exceed Standard (12 $\mu g/m^3$ Annual Arithmetic Mean)?	*Yes*	*Yes*	*Yes*
Sulfur Dioxide	Maximum 24-hr Concentration (ppm)	0.010	0.006	0.004
	Days > 0.04 ppm (State 24-hr standard)	0	0	0

[1] Source : SCAQMD, http://www.aqmd.gov/smog/historicaldata.htm, 2008.

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 the Burbank Monitoring Station for the 2004 to 2006 period indicates that the one- and eight-hour background concentrations are approximately 5 and 3.7 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.

A direct relationship between traffic/circulation congestion and CO impacts exist since exhaust fumes from vehicular traffic are 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 nine study intersections were modeled for the 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.[5, 6]

[5] 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).

The selected weekday intersections are as follows:

- Hazeltine Avenue/Riverside Drive - PM Peak Hour
- Hazeltine Avenue/Ventura Boulevard - AM Peak Hour
- Hazeltine Avenue/Magnolia Boulevard – PM Peak Hour
- Woodman Avenue/US 101 Westbound Ramps - PM Peak Hour
- Woodman Avenue/Riverside Drive – PM Peak Hour
- Van Nuys Boulevard/Riverside Drive – PM Peak Hour

The selected weekend intersections are as follows:

- Hazeltine Avenue/Riverside Drive
- Woodman Avenue/Riverside Drive
- Woodman Avenue/US 101 Westbound Ramps

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. Consistent with the California Department of Transportation CO protocol, receptors were located 3 meters (approximately 10 feet) from each intersection corner. Existing weekday and weekend conditions at the study intersections are shown in *Table 6: Existing Carbon Monoxide Concentrations – Weekday Conditions* and *Table 7: Existing Carbon Monoxide Concentrations – Weekend Conditions*, respectively. During the weekday, one-hour CO concentrations range from approximately 6 ppm to 7 ppm and eight-hour CO concentrations range from approximately 4.3 ppm to 4.9 ppm. During the weekend, one-hour CO concentrations range from approximately 6 ppm to 7 ppm and eight-hour CO concentrations range from approximately 4.3 ppm to 4.5 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 6
EXISTING CARBON MONOXIDE CONCENTRATIONS – WEEKDAY CONDITIONS [1][2]

INTERSECTION	1-HOUR	8-HOUR
Hazeltine Avenue/Riverside Drive	6	4.4
Hazeltine Avenue/Ventura Boulevard	7	4.7
Hazeltine Avenue/Magnolia Boulevard	7	4.5
Woodman Avenue/US 101 Westbound Ramps	6	4.3
Woodman Avenue/Riverside Drive	7	4.6
Van Nuys Boulevard/Riverside Drive	7	4.9
State Standard	**20**	**9.0**

[1] Source: Terry A Hayes Associates LLC, *Sherman Oaks Fashion Square Expansion Project Air Quality and Noise Impact Report*, February 26, 2008.
[2] All concentrations include one- and eight-hour ambient concentrations of 5 ppm and 3.7 ppm, respectively.

[6] Linscott, Law & Greenspan, Engineers. 2008 (August 5). *Traffic Impact, Parking, and Site Access Study for the Westfield Fashion Square Expansion Project*. Pasadena, CA: Author. [See Appendix I of this Draft EIR]

TABLE 7
EXISTING CARBON MONOXIDE CONCENTRATIONS – WEEKEND CONDITIONS [1][2]

INTERSECTION	1-HOUR	8-HOUR
Hazeltine Avenue/Riverside Drive	6	4.3
Hazeltine Avenue/Ventura Boulevard	7	4.5
Woodman Avenue/US 101 Westbound Ramps	6	4.3
State Standard	**20**	**9.0**

[1] Source: Terry A Hayes Associates LLC, *Sherman Oaks Fashion Square Expansion Project Air Quality and Noise Impact Report*, February 26, 2008.
[2] All concentrations include one- and eight-hour ambient concentrations of 5 ppm and 3.7 ppm, respectively.

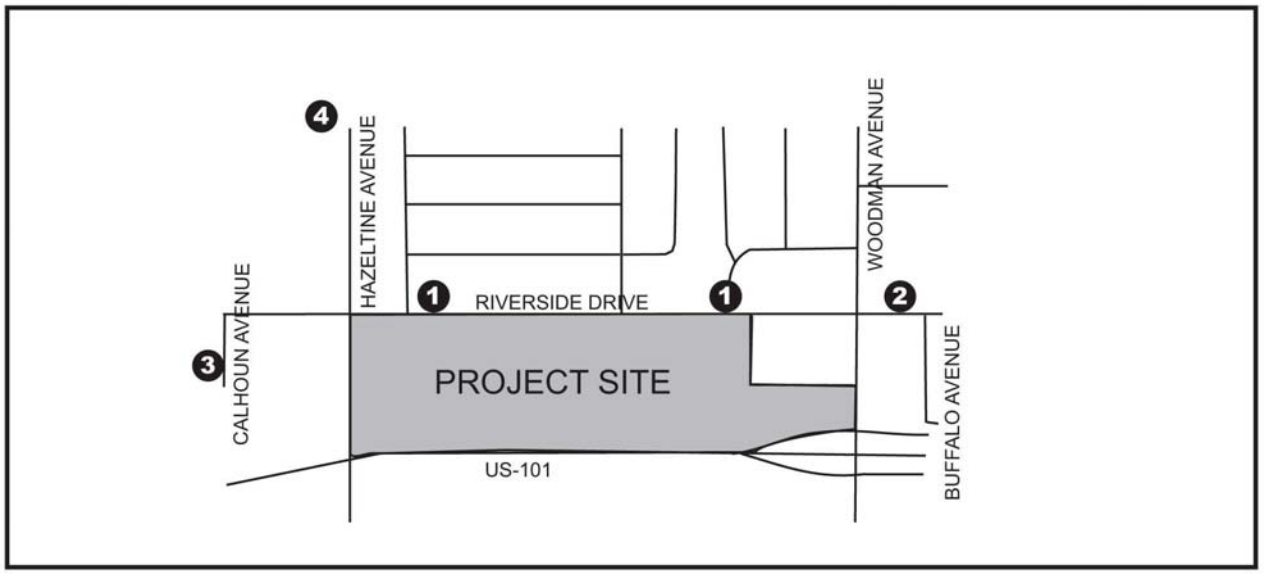
(5) Sensitive Receptors

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

As shown in *Figure 33: Air Quality Receptors*, sensitive receptors within one-quarter mile (1,320 feet) of the project site include the following:

- Multi-family residences located approximately 120 feet north of the project site;
- Single-family residences located approximately 250 feet east of the project site, across Woodman Avenue;
- Notre Dame High School located approximately 575 feet northeast of the project site;
- Single-family residences located approximately 700 feet west of the project site; and
- Van Nuys Sherman Oaks Park located approximately 800 feet northwest of the project site.

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



LEGEND:

Air Quality Monitoring Locations

1. Multi-Family Residence on Riverside Drive
2. Notre Dame High School
3. Single-Family Residence on Calhoun Avenue
4. Van Nuys Sherman Oaks Park

FIGURE 33
AIR QUALITY RECEPTORS

SOURCE: TAHA, 2007

NORTH

b. Regulatory and Policy Setting

(1) Authority for Current Air Quality Planning

The 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 CCAA. At the federal level, CAA is administered by the USEPA. In California, the CCAA is administered by the 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 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. 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 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. 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 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.

All areas designated as nonattainment under the CCAA are required to prepare plans showing how the area would meet the State air quality standards by its attainment dates. The 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 analyze whether the Proposed Project's daily construction and operational emissions would exceed thresholds established by the SCAQMD. The environmental review must also analyze whether individual projects would not increase the number or severity of existing air quality violations.

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.

(2) Global Climate Change

Global climate change refers to variances in Earth's meteorological conditions, which are measured by wind patterns, storms, precipitation, and temperature. There is general scientific agreement that the Earth's average surface temperature has increased by 0.3 to 0.6 degrees Celsius over the past century.[7] The reasons behind the increase in temperature are not well understood and are the subject of intense research activity. Many scientific studies have been completed to determine the extent that greenhouse gas (GHG) emissions from human sources (e.g., fossil fuel combustion) affect the Earth's climate. The interrelationships between atmospheric composition, chemistry, and climate change are very complex. For example, historical records indicate a natural variability in surface temperature.[8] Historical records also indicate that atmospheric concentrations of a number of GHG have increased significantly since the beginning of the industrial revolution.[9] As such, significant attention is being given to anthropogenic (human) GHG emissions.

Many chemical compounds found in the Earth's atmosphere act as GHGs. These gases allow sunlight to enter the atmosphere freely. When sunlight strikes the Earth's surface, some of it is reflected back towards space as infrared radiation (heat). GHGs absorb this infrared radiation

[7] Finlayson-Pitts, Barbara J., and James N. Pitts, Jr. (1999). *Chemistry of the Upper and Lower Atmosphere*. Burlington, MA: Academic Press. 16 June 2008 <http://www.cplbookshop.com/contents/C394.htm>.
[8] *Ibid*.
[9] *Ibid*.

and trap the heat in the atmosphere. Over time, the amount of energy sent from the sun to the Earth's surface should be approximately equal to the amount of energy radiated from Earth back into space, leaving the temperature of the Earth's surface roughly constant. Some GHG are emitted naturally (water vapor, carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O)), while others are exclusively human-made (e.g., gases used for aerosols). 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.[10]

The State of California has traditionally been a pioneer in efforts to reduce air pollution, dating back to 1963 when the California New Motor Vehicle Pollution Control Board adopted the nation's first motor vehicle emission standards. Likewise, California has a long history of actions undertaken in response to the threat posed by climate change. Assembly Bill (AB) 1493, signed by California's governor in July 2002, requires passenger vehicles and light duty trucks to achieve maximum feasible reduction of GHG emissions by model year 2009.[11] AB 1493 was enacted based on recognition that passenger cars are significant contributors to the State's GHG emissions.

Following the passage of the bill, the CARB was tasked to determine the reduction targets based on CARB's analysis of available and near-term technology and cost. After evaluating the options, the CARB established limits that will result in approximately a 22-percent reduction in GHG emissions from new vehicles by 2012, and approximately a 30-percent reduction by 2016.[12] The Federal Clean Air Act reserves the control of emissions from motor vehicles to the federal government, with the exception of California due to its early activity and special conditions (i.e., high density of motor vehicles, topography conducive to pollution formation in heavily populated basins—e.g., Los Angeles and the San Joaquin Valley), and any states that opt for the California regulations. For California to implement a modification such as that represented in AB 1493, it must request a waiver pursuant to Section 209 of the Federal Clean Air Act. The USEPA has not ruled on California's request for a waiver, thereby possibly delaying CARB's proposed implementation schedule.

On September 27, 2006, AB 32, the California Global Warming Solutions Act of 2006, was enacted by the State of California.[13] In that statute, the Legislature stated that "Global warming poses a serious threat to the economic well-being, public health, natural resources, and the environment of California." AB 32 seeks to, among other things, cap California's GHG emissions at 1990 levels by 2020. Relevant gases defined by AB 32 as GHG pollutants include CO_2, CH_4, and N_2O.[14] While acknowledging that national and international actions will be necessary to fully address the issue of global warming, AB 32 lays out a program to inventory and reduce GHG emissions in California. This bill represents the first enforceable Statewide

[10] California Energy Commission. 2006 (December). *Inventory of Greenhouse Gas Emissions and Sinks: 1990 to 2004*. 6 June 2008 <http://www.energy.ca.gov/2006publications/CEC-600-2006-013/CEC-600-2006-013-SF.PDF>.
[11] California State Legislature. 2002. Assembly Bill 1493 (AB 1493), Pavley. 6 June 2008 <http://www.leginfo.ca.gov/cgi-bin/postquery?bill_number=ab_1493&sess=0102&house=B&author=pavley>.
[12] Green Car Congress. 2007. *EPA Concludes Public Hearings on California Waiver for New Vehicle CO2 Regulations*. 19 May 2008 <http://www.greencarcongress.com/ 2007/05/epa_concludes_p.html>.
[13] California State Legislature. 2006. Assembly Bill 32 (AB 32), Global Warming Solutions Act of 2006. Nunez. 6 June 2008 <http://www.leginfo.ca.gov/cgi-bin/postquery?bill_number=ab_32&sess=PREV&house=B&author=nunez>.
[14] AB 32 also defines hydrofluorocarbons, perfluorocarbons and sulfur hexaflouride as GHG pollutants but these gases would not be emitted by the proposed Fashion Square expansion project.

program in the United States to cap all GHG emissions from major industries and include penalties for non-compliance.

AB 32 charges CARB with the responsibility to monitor and regulate sources of GHG emissions in order to reduce those emissions. On June 1 2007, 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.[15] 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 emissions from the non-electricity sector. AB 32 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 carbon dioxide equivalent.

CARB is mandated by AB 32 to meet additional deadlines. CARB has been tasked to establish a "scoping" plan by January 1, 2009 for achieving reductions in GHG emissions, and regulations by January 1, 2011 for reducing GHG emissions to achieve the emissions cap by 2020,[16] which rules would take effect no later than 2012.[17] In designing emission reduction measures, CARB must aim to minimize costs, maximize benefits, improve and modernize California's energy infrastructure, maintain electric system reliability, maximize additional environmental and economic benefits for California, and complement the State's ongoing efforts to improve air quality. AB 32 also directs CARB to "recommend a *de minimis* threshold of greenhouse gas emissions below which emissions reduction requirements will not apply" by January 1, 2009. HSC §38561(e). CARB has suggested a 25,000 metric ton emissions level as a possible *de minimis* threshold.

California Senate Bill (SB) 97, passed in August 2007, is designed to work in conjunction with the California Environmental Quality Act (CEQA) and AB 32.[18] CEQA requires the State Office of Planning and Research (OPR) to prepare and develop guidelines for the implementation of CEQA by public agencies. SB 97 requires OPR by July 1, 2009 to prepare, develop, and transmit to the State Resources Agency its proposed guidelines for the feasible mitigation of GHG emissions, as required by CEQA, including, but not limited to, effects associated with transportation or energy consumption. The Resources Agency is required to certify and adopt the guidelines by January 1, 2010, and OPR is required to periodically update the guidelines to incorporate new information or criteria established by the CARB pursuant to AB 32. SB 97 would apply to any proposed or draft environmental impact report, negative declaration, mitigated negative declaration, or other document prepared under CEQA that has not been certified or adopted by the CEQA lead agency as of the effective date of the new

[15] California Air Resources Board (CARB). 2007. *Proposed Early Actions to Mitigate Climate Change in California*. 6 June 2008 <http://www.climatechange.ca.gov/climate_action_team/reports/2007-04-20_CAT_REPORT.PDF>.
[16] California State Legislature. 2006. Assembly Bill 32 (AB 32), Global Warming Solutions Act of 2006. Nunez. 6 June 2008 <http://www.leginfo.ca.gov/cgi-bin/postquery?bill_number=ab_32&sess=PREV&house=B&author=nunez>.
[17] *Ibid.*
[18] California State Legislature. 2007. Senate Bill 97 (SB 97). Dutton. 6 June 2008 <http://www.leginfo.ca.gov/cgi-bin/postquery?bill_number=sb_97&sess=CUR&house=B&author=dutton>.

guidelines. In addition, SB 97 exempts transportation projects funded under the Highway Safety, Traffic Reduction, Air Quality and Port Security Bond Act of 2006, or projects funded under the Disaster Preparedness and Flood Prevention Bond Act of 2006.

At this time, the USEPA does not regulate GHG emissions. However, in the case of *Massachusetts v. USEPA*, the United States Supreme Court issued a ruling (April 2007) that reviewed a USEPA decision not to regulate GHG emissions from cars and trucks under the Clean Air Act. The lawsuit focused on Section 202 of the Clean Air Act. The case resolved the following legal issues: (1) the Clean Air Act grants the USEPA authority to regulate GHG emissions, and (2) USEPA did not properly exercise its lawful discretion in deciding not to promulgate regulations concerning GHG emissions.

Adopted by the CEC on November 5, 2003, Title 24 is the 2005 Building Energy Efficiency Standards for Residential and Nonresidential Buildings. Title 24 is considered one of the most stringent set of regulations for energy conservation in new buildings in the country. Mandatory measures in Title 24 requirements include, but are not limited to, minimum ceiling, wall, and raised floor insulation, minimum Heating, Ventilating and Air Conditioning (HVAC), and minimum water heating equipment efficiencies. The 2005 Standards (for residential and nonresidential buildings) are expected to reduce electricity use by 478 gigawatt-hours per year (GWh/y) and reduce the growth in natural gas use by 8.8 million therms per year.[19] The savings attributable to new nonresidential buildings are 163.2 GWh/y of electricity savings and 0.5 million therms of natural gas.[20] Additional savings result from the application of the Standards on building alterations. In particular, requirements for cool roofs, lighting and air distribution ducts are expected to save about 175 GWh/y of electricity.[21] The State's energy efficiency standards represent an important strategy that can make an important contribution to the reduction of GHG emissions.

In addition to the State regulations, the City of Los Angeles has issued guidance promoting green building to reduce GHG emissions. The goal of the Green LA Action Plan (Green Plan) is to reduce greenhouse gas emissions 35 percent below 1990 levels by 2030.[22] The Green Plan identifies objectives and actions designed to make the City a leader in confronting global climate change. The measures would reduce emissions directly from municipal facilities and operations, and create a framework to address City-wide GHG emissions. The Green Plan lists various focus areas in which to implement GHG reduction strategies. Focus areas listed in the Green Plan include energy, water, transportation, land use, waste, port, airport, and ensuring that changes to the local climate are incorporated into planning and building decisions. The Green Plan discusses City goals for each focus area as follows:

[19] California Energy Commission. 2005. *2005 Building Energy Efficiency Standards Nonresidential Compliance Manual*. 19 May 2008 <http://www.energy.ca.gov/ title24/2005standards/nonresidential_manual.html>.
[20] *Ibid.*
[21] *Ibid.*
[22] Los Angeles, City of. 2007. *Green LA: An Action Plan to Lead the Nation in Fighting Global Warming*. 19 May 2008 <http://www.lacity.org/ead/EADWeb-AQD/GreenLA_CAP_2007.pdf>.

Energy

- Increase the generation of renewable energy;
- Develop sustainable construction guidelines;
- Increase City-wide energy efficiency; and
- Promote energy conservation.

Water

- Decrease per capita water use to reduce electricity demand associated with water pumping and treatment.

Transportation

- Power the City vehicle fleet with alternative fuels; and
- Promote alternative transportation (e.g., mass transit and rideshare).

Other Goals

- Create a more livable City through land use regulations;
- Increase recycling, reducing emissions generated by activity associated with the Port of Los Angeles and regional airports;
- Create more city parks, promoting the environmental economic sector; and
- Adapt planning and building policies to incorporate climate change policy.

2. THRESHOLDS OF SIGNIFICANCE

This air quality analysis 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.[23]

Regional and localized construction emissions were analyzed for the Proposed Project. Construction emissions (i.e., demolition, site preparation, and building construction) were calculated using CARB's URBEMIS2007 model.[24] Regional emissions were compared to SCAQMD regional thresholds to determine project impact 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).[25] In January 2005, the SCAQMD supplemented the SCAQMD LST Guidance Document with *Sample Construction Scenarios for Projects Less than Five Acres in Size*.[26]

URBEMIS2007 was also used to calculate operational 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

[23] South Coast Air Quality Management District (SCAQMD). 1993. *CEQA Air Quality Handbook*. Diamond Bar: Author. 6 June 2008 <http://www.aqmd.gov/ceqa/oldhdbk.html>.
[24] California Air Resources Board (CARB). 2007. URBEMIS 2007 Emissions Inventory Model, Version 9.2. 6 June 2008 <http://www.urbemis.com/>.
[25] South Coast Air Quality Management District (SCAQMD). 2003 (June). *Final Localized Significance Threshold Methodology*. 19 May 2008 <http://www.aqmd.gov/CEQA/handbook/LST/ LST.html>.
[26] South Coast Air Quality Management District (SCAQMD). 2005 (January). *Sample Construction Scenarios for Projects Less than Five Acres in Size*. 19 May 2008 <http://www.aqmd.gov/ceqa/ handbook/LST/FinalReport.pdf>.

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 are not analyzed in this report.[27]

The following are the significance criteria SCAQMD has established to determine project impacts.

Construction Phase Significance Criteria

The Proposed Project would have a significant impact if:

- Regional and localized construction emissions were to exceed SCAQMD construction emissions thresholds for VOC, NO_X, CO, SOX, $PM_{2.5}$, or PM_{10}, as presented in *Table 8: SCAQMD Daily Construction Emissions Thresholds*;
- The Proposed Project would generate significant TAC emissions; and
- The Proposed Project would create an odor nuisance.

TABLE 8
SCAQMD DAILY CONSTRUCTION EMISSIONS THRESHOLDS [1]

CRITERIA POLLUTANT	REGIONAL EMISSIONS (POUNDS PER DAY)	LOCALIZED EMISSIONS (POUNDS PER DAY) [2]
Volatile Organic Compounds (VOC)	75	--
Nitrogen Oxides (NO_X)	100	176
Carbon Monoxide (CO)	550	553
Sulfur Oxides (SO_X)	150	--
Fine Particulates ($PM_{2.5}$)	55	4
Particulates (PM_{10})	150	6

[1] Source: SCAQMD, 2008
[2] The localized significance thresholds are for a five-acre project site and a 25-meter (82-foot) receptor distance.

[27] 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.

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, SOX, $PM_{2.5}$, or PM_{10}, as presented in *Table 9: SCAQMD Daily Operational Emissions Thresholds*;

- 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;[28]

- 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.

TABLE 9
SCAQMD DAILY OPERATIONAL EMISSIONS THRESHOLDS [1]

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
[1] Source: SCAQMD, 2008	

Climate Change Significance Criteria

While Global warming and climate change have received substantial public attention for a number of years, the analytical tools necessary to determine the effect on worldwide global warming from a particular increase in GHG emissions or the resulting effects on climate change in a particular locale are still being developed. Further, the information and data needed to evaluate the impacts that a specific project may have on climate change is still being gathered. Consequently, federal agencies, State agencies and local agencies (such as the SCAQMD), have not developed methodology to determine the significance of project-level impacts on global warming and climate change. Thus, no government agency has established any significance thresholds to assess specific project effects on climate change. For purpose of this EIR, the

[28] Consistent with SCAQMD Regulation XIII definition of a significant impact.

Proposed Project would result in a significant climate change impact if it would impair or prevent attainment of AB 32 or Green LA Action Plan GHG emission reduction goals and strategies.

3. ENVIRONMENTAL IMPACTS

a. Relevant Project Characteristics

Operational Characteristics

The Proposed Project would involve the construction and operation of approximately 280,000 GLSF of retail and restaurant uses, as well as associated parking facilities (including both surface lots and multi-level structures). The proposed retail expansion (two-levels of shopping plus one subterranean parking level) and the main six-level parking structure (one-level at grade plus five-levels above grade) will be constructed primarily in the space between the existing shopping center (located immediately adjacent to the Riverside Drive frontage) and the Ventura (US 101) Freeway that is currently occupied by a portion of the existing mall parking structure and surface parking. A second four-level parking structure (one-level at grade plus three-levels above grade) will be constructed on the eastern portion of the project site (adjacent to Woodman Avenue) on an area currently developed with surface parking.

The Proposed Project includes a request to extend the length of its allowable hours of operation from 7:00 a.m. - 11:00 p.m. and to permit hours between 5:30 a.m. - 12 midnight in order to facilitate mall operations. The new parking structures would be designed with openings between the parking levels. Also, two new loading docks will be constructed along the south side of the new mall buildings. One existing loading dock, currently along Riverside Drive at the proposed tunnel entrance, would be relocated south the mall structure.

Under the Proposed Project, a number of local access and roadway improvements are proposed to improve traffic flow and improve the level of service at adjacent intersections. These measures, anticipated traffic generation from the Proposed Project, and the resultant levels of service on local roadways are detailed in Section IV: Environmental Impact Analysis: J-Traffic, Circulation and Access, of this EIR.

Construction Activity

Construction is planned for completion in the year 2012, while full occupation of the development may not stabilize until the year 2013. The Proposed Project would be completed as a single-event project staged through four phases over an approximate 36 to 48-month period. Construction activities will generally occur between the hours of 7:00 a.m. and 9:00 p.m. during weekdays. Construction phasing is described in detail in Section II: Project Description: F-Project Characteristics.

Construction activities would be coordinated and staged to balance space limitations on site, phasing of construction to retain operation of the existing shopping center and appropriate parking during construction, and general construction phasing techniques. Construction debris

from demolition of existing parking areas, and earth from excavation will require that dirt and materials be removed from the site. A haul route from the project site will be required.

As currently designed, several project features were considered in the air quality impact analysis. The analysis assumes that the following Project Design Features are supported by the Proposed Project:

- The Proposed Project would be located near public transportation routes and along a heavily traveled vehicle corridor. The Proposed Project would be located within approximately 2 miles from the Metro Orange Line (Express Busway) Valley College and Woodman Stations and adjacent to stops for the MTA Routes 96 (Downtown LA to Sherman Oaks) and 158 (Chatsworth to Sherman Oaks), and LADOT Dash Route for Van Nuys/Studio City, thereby supporting a range of alternative transportation options for public transportation access.

- The Proposed Project would be located within close proximity (less than ½ mile) from other key community services, thereby adding to efficient development densities and community connectivity within the North Sherman Oaks community. Further, the Proposed Project development and other proximate services would be conveniently accessible by local residents through an improved pedestrian access plan (i.e., cross walk at Matilija Avenue/Riverside Drive, and aesthetic treatment along Riverside Drive frontage), and accessible by more distant residents and employees through enhanced public transit options/amenities (i.e., upgraded bus stops, and coordinated bus schedules through MTA). Efficient development densities, accomplished through the consolidation and intensity of community services in the project area, contributes toward improved energy efficiency, vehicle trip reduction, vehicle miles traveled reduction, air pollutants reduction, and consistency with local and regional planning programs.

- Proposed Project would not create a regional mall but a better serving community/neighborhood mall.

- The Proposed Project will be designed to reduce exposure of sensitive receptors to excessive levels of air quality. The Proposed Project is designed and will be built and operated in a manner consistent with the requirements to achieve Leadership in Energy and Environmental Design (LEED) certification from the United States Green Building Council.[29] LEED is a green building rating system that was designed to guide and distinguish high-performance commercial projects. LEED promotes a whole-building approach to sustainability by recognizing performance in five key areas of human and environmental health: sustainable site development, water savings, energy efficiency, materials selection, and indoor environmental quality. The Proposed Project will implement a variety of design and operational features to achieve LEED certification. As a result, the Proposed Project would be proactive in reducing GHG emissions. Examples of design features to be implemented for the Proposed Project in order to

[29] U.S. Green Building Council (USGBC). 2007. *Leadership in Energy and Environmental Design.* 19 May 2008 <http://www.usgbc.org/LEED>.

achieve LEED certification include, but are not limited to, the following or their equivalent:

- A construction activity pollution prevention program.
- Encouraging the use of mass transit.
- Providing transportation amenities, such as alternative fueling stations, carpool/vanpool programs, bicycle racks, and showering/changing facilities.
- Implementing a stormwater management plan that reduces impervious cover, promotes infiltration, and captures and treats the stormwater runoff from 90 percent of the average annual rainfall using acceptable best management practices.
- Adopting site lighting criteria to maintain safe light levels while avoiding off-site lighting and night sky pollution, minimizing site lighting where possible, and reducing light pollution.
- Providing tenants with a description of the sustainable design and construction features incorporated in the core and shell project.
- Using high-efficiency irrigation technology or reducing potable water consumption for irrigation by 50 percent by using a combination of plant species factor, irrigation efficiency, use of captured rainwater, use of recycled wastewater, and use of water treated and conveyed by public agency specifically for non-potable uses.
- Employing strategies that, in aggregate, use 20 percent less water than the water use baseline calculated for the building (not including irrigation) after meeting the Energy Policy Act of 1992 fixture performance requirements.
- Designing the building envelope and building system to maximize energy performance.
- Selecting refrigerants that reduce ozone depletion while minimizing direct contributions to global warming.
- Implementing a construction waste management plan that identifies the materials to be diverted from disposal and whether the materials will be sorted on-site or comingled. The waste management plan would include recycling and/or salvaging at least 50 percent of non-hazardous construction and demolition debris.
- Using materials with recycled content such that the sum of post-consumer recycled content plus one-half of the pre-consumer content constitutes at least ten percent of the total value of the materials in the project.
- Using a minimum of ten percent of the total materials value on building materials or products extracted, harvested, or recovered and manufactured within 500 miles of the project site.
- Adopting an indoor air quality management plan to protect the HVAC system during construction, control pollutant sources, and interrupt contamination pathways.

- Specifying low-volatile organic compounds paints and coatings in construction documents.
- Designing the building with the capability for occupant controls for airflow, temperature and ventilation. Strategies will include underfloor HVAC systems with individual diffusers, displacement ventilation systems with control devices, ventilation walls and mullions.

- The Proposed Project would install carbon monoxide and airflow measurement equipment that would transfer the information to the HVAC system and/or Building Automation System to trigger corrective action, if applicable, and/or use the measurement equipment to trigger alarms that inform building operators or occupants of a possible deficiency in outdoor air delivery. Installation of such a system in areas where carbon monoxide concentrations may escalate (such as in the vicinity of loading docks or valet parking drop-offs) would improve both indoor and localized "hotspot" air quality.

- The Proposed Project would provide bicycle racks at a ratio of 2% of the total number of parking spaces on-site, as well as lockers, changing rooms and showers inside the shopping center. A minimum of 20 additional bicycle spaces (in racks) would be provided at multiple locations through out the site. Four showers (two per each gender) would be provided in a dedicated shower facility area. Lockers would be provided in conjunction with the shower facilities.

- The Proposed Project would provide a shuttle service connecting the site to a nearby Orange Line station (e.g., Van Nuys Boulevard). This service could be provided by either the provision of a private shuttle or the funding of extended hours for the existing Los Angeles Department of Transportation (LADOT) DASH line. The Orange Line shuttle would complement existing transit services (i.e., the LADOT DASH service) such that the shuttle would operate during hours when other public transit services connecting the site to the Orange Line are not available (e.g., during weekdays evenings and general weekend hours). The shuttle would operate during regular shopping center hours corresponding with periods of peak parking demand at the site and peak holiday season demand (i.e., everyday during the holiday shopping period between November 15 and January 1, and every Saturday/Sunday throughout the year).

The analysis assumes that the Proposed Project will be constructed and operated in accordance with all applicable codes, regulations and standard practices, including the following:

- The Proposed Project will comply with applicable CARB regulations and standards. 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 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.

- The Proposed Project will comply with applicable SCAQMD regulations and standards. The 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.

b. Project Impacts

An Initial Study (IS) was prepared for the Proposed Project. Based on the IS, potential impacts for a number of environmental issues were determined to be less than significant. The scope of the following analysis focuses only on those impacts that were determined through the Notice of Preparation (NOP) and IS process to have a potential significant environmental effect. Issues related to Air Quality that were determined to be less than significant, and are not addressed below, include: toxic air contaminants (during construction activity) and odors (during both operational and construction phases). An explanation supporting this conclusion is provided in Section VI: Other Environmental Considerations: A-Effects Not Found To Be Significant of this EIR.

(1) Construction Activity

(a) Regional Impacts

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[30].

The project would be completed in one phase with four stages. The first stage would include the construction of a new four-level parking structure (one-level at grade plus three-levels above grade) at the eastern edge of the project site. The second stage would include the construction of a new six-level parking structure (one-level at grade plus five-levels above grade) south of the existing Macy's parking structure. The third stage would include construction of the shopping retail building and associated one-level of subterranean parking. The fourth stage would consist of the infilling of a portion of the grade and first above grade level of the main parking structure that was used for construction staging.

Each project construction stage is anticipated to include three primary construction phases during the construction process: demolition of any necessary existing pavement or structures, grading and preparation of the site, and erection of structures. Construction activities would be coordinated and staged to balance space limitations on site, phasing of construction to retain operation of the existing shopping center and appropriate parking during construction, and general construction phasing techniques..

The assumed equipment mix for each phase of construction is included in the technical report prepared by Terry A. Hayes Associates LLC.[31] General URBEMIS2007 assumptions utilized to calculate Stage 1 construction emissions include a maximum of 22 haul trips per day during demolition and 2.7 acres of disturbed land per day during grading activity. Stage 2 construction emissions include a maximum of 24 haul trips per day during demolition, 2.3 acres of disturbed land per day during grading activity, and a maximum of 97 haul trips per day during grading activity. Stage 3 construction emissions include a maximum of 25 haul trips per day during demolition, five acres of disturbed land per day during grading activity, and a maximum of 150 haul trips per day during grading activity.

URBEMIS2007 was used to calculate daily construction emissions. *Table 10: Estimated Daily Construction Emissions – Unmitigated*, shows the estimated daily emissions associated with each construction phase. As shown, regional emissions generated by construction activity occurring within the assumptions described above would not exceed the SCAQMD regional significance thresholds for VOC, CO, SO_X, $PM_{2.5}$, or PM_{10}. Because daily construction emissions would exceed the SCAQMD regional thresholds for NO_X, regional NO_X construction emissions would result in a significant impact without incorporation of mitigation

[30] South Coast Air Quality Management District (SCAQMD). 2007 (April). *Overview–Fugitive Dust Mitigation Measures Tables.* 25 August 2008. <http://www.aqmd.gov/ceqa/handbook/mitigation/fugitive/Dust_MM_Overview.pdf>

[31] Terry A. Hayes Associates, LLC. 2008 (February 26). *Westfield Fashion Square Expansion Project Air Quality and Noise Impact Report*. Culver City, CA: Author. [See Appendix D of this Draft EIR]

TABLE 10
ESTIMATED DAILY CONSTRUCTION EMISSIONS – UNMITIGATED [1]

CONSTRUCTION PHASE	POUNDS PER DAY					
	VOC	NO_X	CO	SO_X	$PM_{2.5}$ [2]	PM_{10} [2]
PHASE 1 – FOUR-LEVEL PARKING STRUCTURE						
Demolition						
On-Site	2	13	6	0	5	21
Off-Site	2	24	11	<1	1	1
Total	**4**	**37**	**17**	**<1**	**6**	**22**
Grading/Excavation						
On-Site	2	13	6	0	7	29
Off-Site	<1	<1	1	0	<1	<1
Total	**2**	**13**	**7**	**0**	**7**	**29**
Construction						
On-Site	4	22	11	0	2	2
Off-Site	1	9	44	<1	<1	<1
Total	**5**	**31**	**55**	**<1**	**2**	**2**
PHASE 2 – MAIN PARKING STRUCTURE						
Demolition						
On-Site	2	13	6	0	5	23
Off-Site	2	26	11	<1	1	1
Total	**4**	**39**	**17**	**<1**	**6**	**24**
Grading/Excavation						
On-Site	3	29	12	0	6	26
Off-Site	6	68	29	<1	3	3
Total	**9**	**97**	**41**	**<1**	**9**	**29**
Construction						
On-Site	3	21	11	0	2	2
Off-Site	2	8	41	<1	<1	<1
Total	**5**	**29**	**52**	**<1**	**2**	**2**
PHASE 3 – RETAIL AND SUBTERRANEAN PARKING						
Demolition						
On-Site	2	12	6	0	6	24
Off-Site	2	26	11	<1	1	1
Total	**4**	**38**	**17**	**<1**	**7**	**25**
Grading/Excavation						
On-Site	3	29	12	0	12	53
Off-Site	9	104	44	<1	4	5
Total	**12**	**133**	**56**	**<1**	**16**	**58**
Building Construction						
On-Site	3	20	11	0	2	2
Off-Site	1	7	38	<1	<1	<1
Total	**4**	**27**	**49**	**<1**	**2**	**2**

TABLE 10 (CONTINUED)
ESTIMATED DAILY CONSTRUCTION EMISSIONS – UNMITIGATED [1]

CONSTRUCTION PHASE	POUNDS PER DAY					
	VOC	NO_X	CO	SO_X	$PM_{2.5}$ [2]	PM_{10} [2]
Architectural Coating						
On-Site	68	<1	<1	<1	<1	<1
Off-Site	<1	<1	1	<1	<1	<1
Total	**68**	**<1**	**1**	**<1**	**<1**	**<1**
Maximum Regional Total	68	133	56	<1	16	58
Regional Significance Threshold	75	100	550	150	55	150
Exceed Threshold?	No	Yes	No	No	No	No
Maximum On-Site Total	68	29	12	0	12	53
Localized Significance Threshold [3]	--	176	553	--	4	6
Exceed Threshold?	--	No	No	--	Yes	Yes

[1] Source: Terry A Hayes Associates LLC, *Westfield Fashion Square Expansion Project Air Quality and Noise Impact Report*, February 26, 2008.
[2] URBEMIS2007 emissions for fugitive dust were adjusted to account for a 61 percent control efficiency associated with SCAQMD Rule 403.
[3] Assumed a two-acre project site and a 25-meter (82-foot) receptor distance. This is the smallest distance between source and receptor to be analyzed under the SCAQMD LST methodology.

(b) Localized Impacts

Emissions for the localized construction air quality analysis of $PM_{2.5}$, PM_{10}, CO, and NO_2 were compiled using LST methodology promulgated by the SCAQMD.[32] Localized on-site emissions were calculated using similar methodology to the regional emission calculations. LSTs were developed based upon the size or total area of the emissions source, the ambient air quality in each source receptor area, and the distance to the sensitive receptor. LSTs for CO and NO_2 were derived by using an air quality dispersion model to back-calculate the emissions per day that would cause or contribute to a violation of any ambient air quality standard for a particular source receptor area. Construction PM_{10} LSTs were derived using a dispersion model to back-calculate the emissions necessary to exceed a concentration equivalent to 50 µg/m3 over five hours, which is the SCAQMD Rule 403 control requirement.

Table 10: Estimated Daily Construction Emissions – Unmitigated, shows the estimated localized daily emissions associated with each construction phase. Because daily construction emissions would exceed the SCAQMD localized thresholds for $PM_{2.5}$ and PM_{10}, localized construction emissions would result in a significant impact without incorporation of mitigation measures.

[32] The concentrations of SO_2 are not estimated because construction activities would generate a small amount of SOX emissions. No State standard exists for VOC. As such, concentrations for VOC were not estimated.

(2) Long-Term Operation

(a) 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 vehicle trips generated by the Proposed Project would be the predominate source of long-term project emissions. According to the traffic report, the Proposed Project would generate 4,964 net daily[33] vehicle trips during the weekday and 6,252 net daily vehicle trips during the weekend.[34]

Mobile and area source emissions were estimated using URBEMIS2007. A project-specific trip length analysis concluded that the average vehicle miles traveled by a Fashion Square patron is 4.85 per trip.[35] The average trip length was based on a study of existing shopper travel patterns for the shopping center. The objective of the Proposed Project is to capture more shoppers from the existing service area. As such, the Proposed Project would not expand the existing market range, and it was assumed that existing average trip length would not change with implementation of the Proposed Project. The trip length was utilized to determine that the daily weekday vehicle miles traveled would be approximately 24,075 and the daily weekend vehicle miles traveled would be approximately 30,320. The VMT includes a ten percent increase to account for pass-by trips. The default URBEMIS2007 trip length was adjusted to account for the predicted vehicle miles traveled. Weekday and weekend operational emissions are shown in *Table 11: Estimated Daily Operational Emissions - Weekday* and *Table 12: Estimated Daily Operational Emissions - Weekend*, respectively. As shown, regional operational emissions due to the Proposed Project would not exceed SCAQMD significance thresholds and, as such, would result in a less than significant impact.

TABLE 11
ESTIMATED DAILY OPERATIONAL EMISSIONS – WEEKDAY [1]

EMISSION SOURCE	POUNDS PER DAY					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
EXISTING LAND USE						
Area Sources [2]	<1	8	9	<1	<1	<1
EXISTING LAND USE						
Mobile Sources	106	155	1,148	1	211	41
Total Emissions	**106**	**163**	**1,156**	**1**	**211**	**41**
PROPOSED EXPANSION						
Area Sources [2]	<1	11	11	<1	<1	<1
Mobile Sources	128	186	1,377	2	253	49
Total Emissions	**128**	**197**	**1,388**	**2**	**253**	**49**

[33] Bravio, F. 2007 (August 23). E-mail. E-mail communication between F. Bravio (Linscott, Law & Greenspan Engineers) and D. Steinert (Planning Associates, Inc.)
[34] Linscott, Law & Greenspan, Engineers. 2008 (August 5). *Traffic Impact, Parking, and Site Access Study for the Westfield Fashion Square Expansion Project*. Pasadena, CA: Author. [See Appendix I of this Draft EIR]
[35] Linscott, Law & Greenspan, Engineers. 2007. *Westfield Fashion Square Vehicle Miles Traveled Study*. Pasadena, CA: Author. [See Appendix K of this Draft EIR]

TABLE 12
ESTIMATED DAILY OPERATIONAL EMISSIONS – WEEKEND [1]

EMISSION SOURCE	POUNDS PER DAY					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
NET EMISSIONS	**22**	**34**	**232**	**1**	**42**	**8**
SCAQMD Threshold	**55**	**55**	**550**	**150**	**150**	**55**
Exceed Threshold?	No	No	No	No	No	No
[1] Source: Terry A Hayes Associates LLC, *Westfield Fashion Square Expansion Project Air Quality and Noise Impact Report*, February 26, 2008. [2] Area sources include emissions from natural gas combustion and consumer product (e.g., aerosol sprays).						
EXISTING LAND USE						
Area Sources [2]	<1	8	8	<1	<1	<1
Mobile Sources	137	202	1,496	1	275	54
Total Emissions	**137**	**210**	**1,504**	**1**	**275**	**54**
PROPOSED EXPANSION						
Area Sources [2]	<1	11	11	<1	<1	<1
Mobile Sources	164	241	1,784	2	328	64
Total Emissions	**164**	**252**	**1,795**	**2**	**328**	**64**
NET EMISSIONS	**27**	**42**	**291**	**1**	**53**	**10**
SCAQMD Threshold	**55**	**55**	**550**	**150**	**150**	**55**
Exceed Threshold?	No	No	No	No	No	No
[1] Source: Terry A Hayes Associates LLC, *Westfield Fashion Square Expansion Project Air Quality and Noise Impact Report*, February 26, 2008. [2] Area sources include emissions from natural gas combustion and consumer product (e.g., aerosol sprays).						

(b) Localized Impacts

CO concentrations in 2012 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.[36] This reduction is accounted for in the EMFAC2007 model and included in the CO analysis.

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.

[36] Consistent with CARB's vehicle emissions inventory.

Based on the traffic study, the selected weekday intersections are as follows:

- Hazeltine Avenue/Riverside Drive - PM Peak Hour
- Hazeltine Avenue/Ventura Boulevard - AM Peak Hour
- Hazeltine Avenue/Magnolia Boulevard – PM Peak Hour
- Woodman Avenue/US 101 Westbound Ramps - PM Peak Hour
- Woodman Avenue/Riverside Drive – PM Peak Hour
- Van Nuys Boulevard/Riverside Drive – PM Peak Hour

Based on the traffic study, the selected weekend intersections are as follows:

- Hazeltine Avenue/Riverside Drive
- Woodman Avenue/Riverside Drive
- Woodman Avenue/US 101 Westbound Ramps

The USEPA CAL3QHC micro-scale dispersion model was used to calculate CO concentrations for 2012 "no project" and "project" conditions. CO concentrations at the six study intersections are shown for the AM and PM peak hours in *Table 13: Carbon Monoxide Concentrations – Weekday* and *Table 14: Carbon Monoxide Concentrations – Weekend*, respectively. As indicated, weekday one-hour CO concentrations under "project" conditions would be approximately 5 ppm at worst-case sidewalk receptors. Weekday eight-hour CO concentrations under "project" conditions would range from approximately 3.2 ppm to 3.5 ppm. Weekend one- and eight-hour CO concentrations under "project" conditions would be approximately 5 and 3.2 ppm, respectively, at worst-case sidewalk receptors. The State one- and eight-hour standards of 20 ppm and 9.0 ppm, respectively, would not be exceeded at the analyzed intersections. Thus, a less than significant impact is anticipated.

TABLE 13
CARBON MONOXIDE CONCENTRATIONS – WEEKDAY [1][2]

INTERSECTION	1-HOUR (PARTS PER MILLION)			8-HOUR (PARTS PER MILLION)		
	EXISTING (2007)	NO PROJECT (2012)	PROJECT (2012)	EXISTING (2007)	NO PROJECT (2012)	PROJECT (2012)
Hazeltine Avenue/Riverside Drive	6	5	5	4.4	3.2	3.2
Hazeltine Avenue/Ventura Boulevard	7	5	5	4.7	3.4	3.4
Hazeltine Avenue/Magnolia Boulevard	7	5	5	4.5	3.3	3.3
Woodman Avenue/ US 101 Westbound Ramps	6	5	5	4.3	3.2	3.2
Woodman Avenue/Riverside Drive	7	5	5	4.6	3.2	3.3
Van Nuys Boulevard/Riverside Drive	7	5	5	4.9	3.5	3.5
State Standard	**20**			**9.0**		

[1] Source: Terry A Hayes Associates LLC, *Westfield Fashion Square Expansion Project Air Quality and Noise Impact Report*, February 26, 2008.
[2] Existing concentrations include year 2007 one- and eight-hour ambient concentrations of 5 ppm and 3.7 ppm, respectively. No Project and Project concentrations include year 2012 one- and eight-hour ambient concentrations of 4 ppm and 2.6 ppm, respectively.

TABLE 14
CARBON MONOXIDE CONCENTRATIONS – WEEKEND [1][2]

INTERSECTION	1-HOUR (PARTS PER MILLION)			8-HOUR (PARTS PER MILLION)		
	EXISTING (2007)	NO PROJECT (2012)	PROJECT (2012)	EXISTING (2007)	NO PROJECT (2012)	PROJECT (2012)
Hazeltine Avenue/Riverside Drive	6	5	5	4.3	3.2	3.2
Woodman Avenue/Riverside Drive	7	5	5	4.5	3.3	3.2
Woodman Avenue/ US 101 Westbound Ramps	6	5	5	4.3	3.2	3.2
State Standard	**20**			**9.0**		

[1] Source: Terry A Hayes Associates LLC, *Westfield Fashion Square Expansion Project Air Quality and Noise Impact Report*, February 26, 2008.
[2] Existing concentrations include year 2007 one- and eight-hour ambient concentrations of 5 ppm and 3.7 ppm, respectively. No Project and Project concentrations include year 2012 one- and eight-hour ambient concentrations of 4 ppm and 2.6 ppm, respectively.

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 would be exposed to lower CO concentrations. As shown in *Table 13: Carbon Monoxide Concentrations – Weekday* and *Table 14: Carbon Monoxide Concentrations – Weekend*, 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.

Notre Dame High School is located near Riverside Avenue and Woodman Avenue. As shown in *Table 13: Carbon Monoxide Concentrations – Weekday*, one- and eight-hour weekday CO concentrations at Notre Dame High School would be approximately 7 and 4.6 ppm, respectively. Weekday CO concentrations would not exceed the one- and eight-hour CO standards of 20 and 9.0 ppm, respectively.

(c) 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.[37] The primary source of potential TACs associated with Proposed Project operations is diesel particulate from delivery trucks (e.g., truck traffic on local streets and on-site truck idling). Diesel truck activity associated with the existing loading docks would not change as a result of the Proposed Project. The Proposed Project would locate two new loading docks on the southern portion of the project site, facing the US 101. The number of heavy-duty trucks (e.g., delivery trucks) accessing the new loading docks on a daily basis would be minimal, and, consistent with CARB regulations, the trucks that do visit the site would not idle on-site for over five minutes. 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

[37] South Coast Air Quality Management District (SCAQMD). 2002 (December). *Health Risk Assessment Guidance for Analyzing Cancer Risks from Mobile Source Diesel Emissions.* 6 June 2008 <http://www.aqmd.gov/ceqa/handbook/mobile_toxic/diesel_analysis.doc>.

significant. However, mitigation is recommended to limit the potential idling of heavy-duty trucks due to the close proximity of sensitive receptors.

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, 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.

(3) Climate Change Gas Emissions

Project-related carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N2O) emissions were calculated for energy use and mobile sources. 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.[38]

(a) Construction Activity Climate Change Gas Emissions

Construction activity for the Proposed Project would generate GHG emissions from construction equipment, delivery/haul truck trips, and construction worker commute trips. CO_2 emissions were obtained from the URBEMIS2007 emissions inventory model[39]. URBEMIS2007 uses emission factors obtained from the CARB's OFFROAD2007 model to calculate construction equipment emissions[40]. URBEMIS2007 does not estimate CH_4 emissions. CH_4 combustion emissions were obtained using a reactive organic compound to CH_4 ratio of 0.0902, which was obtained directly from the CARB's OFFROAD2007 model.[41] Neither the SCAQMD nor OFFROAD2007 provides construction equipment N_2O emission factors. Other models that have been developed to inventory GHG emissions, such as Clean Air and Climate Protection Software[42], Sustainable Communities Model[43], I-PLAC^{3}S[44], EMFAC2007[45], and Climate Action Registry Reporting On-Line Tool[46], focus on regional energy use and transportation and also do not provide construction equipment N_2O emission factors. As such, N_2O emissions from construction equipment were not estimated by use of those models. However, the N_2O emissions from construction worker commute trips were calculated as a ratio of daily countywide VMT to

[38] Intergovernmental Panel on Climate Change. 1995. *IPCC Second Assessment Report: Climate Change 1995*. 19 May 2008 <http://www.ipcc.ch/ipccreports/assessments-reports.htm>.
[39] California Air Resources Board (CARB). 2007. URBEMIS 2007 Emissions Inventory Model, Version 9.2. 6 June 2008 <http://www.urbemis.com/>.
[40] California Air Resources Board (CARB). 2006 (December 15). OFFROAD2007 Emissions Inventory Model, Version 2.0.1.2. 6 June 2008 <http://www.arb.ca.gov/msei/offroad/offroad.htm>.
[41] *Ibid.*
[42] National Association of Clean Area Agencies (NACAA) [formerly the State and Territorial Air Pollution Program Administrators (STAPPA) and Association of Local Air Pollution Control Officials (ALAPCO)]. 2005. 12 June 2008 <http://www.4cleanair.org/InnovationDetails.asp?innoid=1>.
[43] Constructive Technologies Group. 2007. Sustainable Communities Model. 6 June 2008 <http://www.ctg-net.com/energetics/resources/newsDetails.aspx?id=17>.
[44] U.S. Department of Energy. 2005. Internet Accessed Planning for Community Energy, Economic and Environmental Sustainability (I-PLACE3S). 6 June 2008 <http://www.energy.ca.gov/places/index.html>.
[45] California Air Resources Board (CARB). 2006 (November 1). EMFAC2007 Mobile Source Emissions Inventory Model, Version 2.3. 6 June 2008 <http://www.arb.ca.gov/msei/onroad/latest_version.htm>.
[46] California Climate Action Registry. 2007. *Climate Action Registry Reporting On-Line Tool (CARROT)*. 19 May 2008 <http://www.climateregistry.org/tools/carrot.html>.

daily countywide emissions obtained from EMFAC2007. The ratio was utilized to obtain an NO_X emission rate, which was then adjusted to account for an N_2O to NO_X conversion ratio of 0.048.[47] The N_2O emission rate was then multiplied by the VMT to obtain GHG emissions. It was assumed that an average of 60 worker commuter trips would be made every day for the entire construction period. Based on UREBMIS2007, it was also assumed that one-way trips would be 13.3 miles, resulting in a VMT of 1,053,360 .

Based on this methodology, construction activity would result in CO_2 equivalent levels of approximately 2,415 tons of CO_2 emissions, less than 1 ton of CH_4 carbon dioxide-equivalent emissions, and 24 tons of N_2O carbon dioxide-equivalent emissions.

(b) Long-Term Operations Climate Change Gas Emissions

Long-term operational GHG emissions are generated due to local site-specific activity, such as on-site natural gas combustion and project-related vehicle trips, as well as regionally due to consumption of resources to provide energy, water, and waste management services for the Proposed Project. GHG emissions for the key areas (i.e., electricity generation, provision of water services, natural gas consumption and mobile sources) are discussed below.

Energy Use Associated with Standard Electricity Generation

GHG emissions would result from the combustion of fossil fuels that would provide energy for the Proposed Project. Based on information obtained from the Project Applicant, the shopping center currently consumes approximately 3,396,325 kilowatt-hours (kWh) of electricity per year.[48] This represents approximately 3.92 kWh per square foot per year based on the existing development size of 867,000 GLSF. The Proposed Project would include 280,000 GLSF of new retail development, which when applying similar factors would use approximately additional 1,096,852 kWh per year. As such, the shopping center with the Proposed Project would potentially consume approximately 4,493,177 kWh per year.

Implementation of the LEED program would directly reduce project-related energy use. Development that accomplishes LEED certifiable results in a minimum energy efficiency savings of approximately 10.5 to 14 percent over California Title 24 Energy Design Standards.[49] For a worst-case GHG emissions scenario, this LEED-level reduction was conservatively applied only to the new Proposed Project portion of the shopping center. As a result, the combined existing shopping center (with no LEED assumed) and Proposed Project (assumed LEED compliant) energy use would be reduced to approximately 4,378,008 kWh per year.

Table 15: Annual Greenhouse Gas Emissions shows electricity consumption-related GHG emissions associated with the Proposed Project. Pounds per kWh emission rates for CO_2 of 8.1E-01, CH_4 of 6.7E-06, and N_2O of 3.7E-06 were obtained from the California Climate Action

[47] California Air Resources Board (CARB). 2005 (June). *N2O Emission Factors - Estimates of Nitrous Oxide Emissions from Motor Vehicles and the Effects of Catalyst Composition and Aging* (Table 8.2). 6 June 2008 <http://www.arb.ca.gov/research/apr/past/02-313.pdf>.
[48] Based on average energy use in 2005 and 2006.
[49] U.S. Green Building Council (USGBC). 2007 (November 19). *LEED-NC v2.2, LEED-CS and California Title 24-2005*. 6 June 2008 <http://www.usgbc.org/ShowFile.aspx?DocumentID=2255 >.

Registry.[50] As shown, the shopping center currently generates 1,239 tons per year of CO_2 emissions from energy use and the Proposed Project would generate an additional 440 tons per year. When construction is complete, the Proposed Project would generate 1,639 tons per year of CO_2 emissions. LEED certifiable construction would reduce CO_2 emissions to 1,598 tons per year. The Proposed Project would increase electricity consumption-related emissions of CH_4 by 0.1 tons per year and NO_2 by 0.6 tons per year. LEED certifiable construction would reduce CH_4 and N_2O emissions by 0.01 and 0.06 tons per year, respectively.

TABLE 15
ANNUAL GREENHOUSE GAS EMISSIONS [1]

SCENARIO	CARBON EQUIVALENT (TONS PER YEAR)		
	CO_2	CH_4	N_2O
EXISTING CONDITIONS (SHOPPING CENTER)			
Mobile Emissions	22,410	38	688
Electricity Consumption Emissions	1,239	0.22	1.77
Water Consumption Emissions	72	0.013	0.103
Natural Gas Consumption Emissions	1,548	3.63	0.91
CO_2 Equivalent Emissions	25,629	42	691
Total CO_2 Equivalent Emissions	**26,362**		
280,000-SQUARE-FOOT PROPOSED PROJECT			
Mobile Emissions	4,469	8	136
Electricity Consumption Emissions	400	0.10	0.57
Water Consumption Emissions	23	0.004	0.033
Natural Gas Consumption Emissions	431	1.01	0.25
CO_2 Equivalent Emissions	5,323	9	137
Total CO_2 Equivalent Emissions	**5,469**		
PROJECT BASELINE CONDITIONS (EXISTING + PROPOSED PROJECT)			
Mobile Emissions	26,879	46	824
Electricity Consumption Emissions	1,640	0.29	2.34
Water Consumption Emissions	95	0.017	0.136
Natural Gas Consumption Emissions	1,979	4.64	1.16
CO_2 Equivalent Emissions	30,593	51	828
Total CO_2 Equivalent Emissions	**31,472**		
LEED BASIC CONDITIONS			
Mobile Emissions	26,879	46	824
Electricity Emissions	1,598	0.28	2.28
Water Consumption Emissions	89	0.015	0.126

[50] California Climate Action Registry. 2008 (April). *California Climate Action Registry General Reporting Protocol Version 3.0*. 6 June 2008 <http://www.climateregistry.org/resources/docs/protocols/grp/GRP_V3_April2008_FINAL.pdf>.

TABLE 15 (CONTINUED)
ANNUAL GREENHOUSE GAS EMISSIONS [1]

SCENARIO	CARBON EQUIVALENT (TONS PER YEAR)		
	CO_2	CH_4	N_2O
LEED BASIC CONDITIONS			
Natural Gas Consumption Emissions	1,979	0.221	0.004
CO_2 Equivalent Emissions	30,545	47	826
Total CO_2 Equivalent Emissions	**31,418**		
NET CO_2 EQUIVALENT EMISSIONS WITH LEED	**5,056**		

[1] Source: Terry A Hayes Associates LLC, *Westfield Fashion Square Expansion Project Air Quality and Noise Impact Report*, February 26, 2008.

Energy Use Associated with Water Consumption

The provision of potable water to commercial consumers requires large amounts of energy associated with source and conveyance, treatment, distribution, end use, and wastewater treatment.[51] Based on information obtained from the Applicant, the shopping center currently utilizes approximately 5,700 cubic feet of water per day, which is equivalent to 15,563,235 gallons per year (gpy) or approximately 17.95 gpy per square foot (based on the existing development area of 867,000 square feet). The Proposed Project would use an additional approximate 5,026,189 gpy of water. As such, the Proposed Project would potentially consume approximately 20,589,424 gpy of water. The California Energy Commission estimates that water usage has an embodied energy of 12,700 kWh per million gallons. The Proposed Project would require approximately 261,486 kWh per year of electricity to support water consumption needs.

Implementation of the LEED program would directly reduce project-related water consumption. The Project Applicant is committed to reducing interior water usage by 20 percent and exterior water usage by 50 percent.[52] This reduction was conservatively applied only to the Proposed Project portion. The resulting total shopping center water consumption would be 9,800 gpd, or 3,577,000 gallons per year. Energy use associated with water consumption at the project site would be reduced to approximately 242,783 kWh per year.

Table 15: Annual Greenhouse Gas Emissions shows water consumption-related GHG emissions associated with the Proposed Project. As shown, the shopping center currently generates 72 tons per year of CO_2 emissions from water consumption and the Proposed Project would generate an additional 23 tons per year. When construction is complete, the entire shopping center (including the Proposed Project) would generate 95 tons per year of CO_2 emissions. LEED certifiable construction would reduce CO_2 emissions to 89 tons per year. The Proposed Project would increase water consumption-related emissions of CH_4 and NO_2 by less than 0.037 tons per year. LEED certifiable construction would reduce CH_4 and N_2O emissions by 0.002 and 0.01 tons per year, respectively.

[51] Construction-related water usage would be de minimis when compared to overall water usage and was not factored into the analysis.
[52] U.S. Green Building Council (USGBC). 2008. *LEED for New Construction v2.2 Registered Project Checklist*. 19 May 2008 <http://www.usgbc.org/DisplayPage.aspx?CMSPageID= 220#v2.2>.

Natural Gas Emissions

Daily operational activity associated with the Proposed Project would require natural gas consumption. The shopping center currently generates a demand for natural gas of approximately 2,443,998 cubic feet per month (CF/month).[53] The proposed retail and restaurant expansion is anticipated to generate an additional demand for approximately 3,124,094 CF/month, an increase of approximately 680,096 CF/month.[54] These usage rates were converted into million British thermal units per year (kg/mmBTU). Kg/mmBTU emission rates for CO_2 of 52.78, CH_4 of 0.0059, and N_2O of 0.0001 were obtained from the California Climate Action Registry.[55]

Table 15: Annual Greenhouse Gas Emissions shows natural gas consumption-related GHG emissions associated with the Proposed Project. As shown, the shopping center currently generates 1,548 tons per year of CO_2 emissions from natural gas consumption and the Proposed Project portion would generate an additional 431 tons per year. When construction is complete, the shopping center (including the Proposed Project) would generate 1,979 tons per year of CO_2 emissions. The Proposed Project would increase natural gas consumption-related emissions of CH_4 by 1.01 tons per year and NO_2 by 0.25 tons per year. LEED certifiable construction would not substantially reduce natural gas consumption CH_4 and N_2O emissions.

Mobile Source Emissions

GHG emissions from mobile sources are a function of vehicle miles traveled (VMT). Based on a zip code analysis, it was determined that the average trip length for shopping center patrons is 4.85 miles.[56,57] On an annual basis, the existing VMT is 47,730,363 and the 280,000 GLSF Proposed Project would increase VMT by 9,413,113. At project buildout, the shopping (including the Proposed Project) would result in a total VMT of 57,143,476. URBEMIS2007 typically calculates CO_2 emissions based on default VMT values. However, the zip code analysis provided a project-specific VMT and URBEMIS2007 was modified to account for the correct VMT.

URBEMIS2007 does not calculate CH_4 and N_2O emissions. The CH_4 emission rate was calculated as a ratio of daily countywide VMT to daily countywide emissions obtained from CARB's EMFAC2007 Mobile Source Emissions Inventory Model.[58] The same ratio methodology was utilized to obtain an NO_X emission rate, which was then adjusted to account

[53] Table A-9-11-A. South Coast Air Quality Management District (SCAQMD). 1993. *CEQA Air Quality Handbook*. Diamond Bar: Author. 6 June 2008 <http://www.aqmd.gov/ceqa/oldhdbk.html>. Assumes a natural gas generation rate of 2.9 CF/SF/month for retail and restaurant uses.
[54] *Ibid.*
[55] California Climate Action Registry. 2008 (April). *California Climate Action Registry General Reporting Protocol Version 3.0*. 6 June 2008 <http://www.climateregistry.org/resources/docs/protocols/grp/GRP_V3_April2008_FINAL.pdf>.
[56] Linscott, Law & Greenspan, Engineers. 2007. *Westfield Fashion Square Vehicle Miles Traveled Study*. Pasadena, CA: Author. [See Appendix K of this Draft EIR]
[57] The VMT was based on a study of existing shopper travel patterns for the Westfield Fashion Square. The objective of the Proposed Project is to capture more shoppers from the existing service area. As such, the Proposed Project would not expand the existing market range and it was assumed that existing average trip length would not change with implementation of the Proposed Project.
[58] California Air Resources Board (CARB). 2006 (November 1). EMFAC2007 Mobile Source Emissions Inventory Model, Version 2.3. 6 June 2008 <http://www.arb.ca.gov/msei/onroad/latest_version.htm>.

for an N_2O to NO_X conversion ratio of 0.048.[59] The CH_4 and N_2O emission rates were multiplied by the existing and future VMT to obtain GHG emissions.

Table 15: Annual Greenhouse Gas Emissions shows mobile GHG emissions associated with the Proposed Project. As shown, the shopping center currently generates 22,410 tons per year of CO_2 emissions from mobile sources and the Proposed Project would generate an additional 4,469 tons per year. When construction is complete, the shopping center (including the Proposed Project) would generate 26,879 tons per year of CO_2 emissions. The shopping center currently generates 38 tons per year of CH_4 emissions from mobile sources and the Proposed Project would generate an additional 8 tons per year. At buildout, the Proposed Project would generate 46 tons per year of CH_4 emissions. The shopping center currently generates 688 tons per year of N_2O emissions from mobile sources and the Proposed Project would generate an additional 136 tons per year. When construction is complete, the shopping center (including the Proposed Project) would generate 824 tons per year of N_2O emissions.

Emissions Summary

As previously discussed, *Table 15: Annual Greenhouse Gas Emissions* shows GHG emissions for the shopping center, the 280,000 GLSF Proposed Project, existing conditions plus the Proposed Project, and existing conditions plus the Proposed Project with LEED certification. As shown, LEED certification would reduce CO_2 equivalent emissions by 54 tons per year. Total CO_2 equivalent emissions would be 31,418 tons per year. It should be noted that approximately 88 percent of GHG emissions would result from mobile sources. Net CO_2 equivalent emissions would be 5,056 tons per year. CARB has calculated total CO_2 equivalent emissions for the State of California for a number of years up through 2004.[60] The State emitted 26.56 million metric tons of CO_2 equivalent emissions in 2004. The Proposed Project would represent less than 0.02 percent of Statewide CO_2 equivalent emissions.

(c) Consistency with Climate Change and Gas Emissions Policy

The Proposed Project is an expansion of an existing retail shopping center, which is intended to capture retail sales and demand in the current trade area of the shopping center. Thus, the Proposed Project has the potential to decrease the amount of GHG emissions resulting from automobile trips associated with retail customers who currently travel longer distances to more distant retail businesses. Further, the other sources of regional GHG emissions associated with the Proposed Project (energy, natural gas, and water consumption) would probably occur even if the project is not developed since the demand for the goods and services to be provided at the project site would be provided at another location to satisfy the demands of a growing population. Moreover, the Proposed Project is not the type of project that would generate a disproportionate amount of vehicle miles traveled or consumption of fuel. In fact, the Proposed Project includes programs that support greater use of mass transit. For example, the Proposed Project would provide a shuttle service connecting the site to a nearby Orange Line station (e.g.,

[59] California Air Resources Board (CARB). 2005 (June). *N2O Emission Factors - Estimates of Nitrous Oxide Emissions from Motor Vehicles and the Effects of Catalyst Composition and Aging* (Table 8.2). 6 June 2008 <http://www.arb.ca.gov/research/apr/past/02-313.pdf>.
[60] California Air Resources Board (CARB). 2007 (November 19). Draft California Greenhouse Gas Inventory (millions of metric tonnes of CO2 equivalent) - By IPCC Category. 25 August 2008. < http://www.arb.ca.gov/cc/inventory/data/tables/rpt_Inventory_IPCC_Sum_2007-11-19.pdf>.

Van Nuys Boulevard). This service would complement existing transit services (i.e., the LADOT DASH service) such that the shuttle would operate during hours when other public transit services connecting the site to the Orange Line are not available (e.g., evenings during the work week and certain weekend hours). The shuttle would operate during regular shopping center hours corresponding with periods of peak parking demand at the site (i.e., everyday during the holiday shopping period between November 15 and January 1, and every Saturday/Sunday throughout the year). Consequently, the Proposed Project would result in a negligible increase in regional and national GHG emissions.

However, in light of the increased accumulation of GHGs in the atmosphere that may result in global climate change, a Proposed Project's contribution to that potential cumulative effect on climate change should be discussed. As previously discussed, OPR has been tasked with developing CEQA global warming significance thresholds. OPR has indicated that many significant questions must be answered before a consistent, effective, and workable process for completing global warming analyses can be created for use in CEQA documents.[61] OPR has also indicated that there may not be sufficient amount of information or research available to develop significance thresholds.[62] On a local level, the City of Los Angeles has not adopted a global warming significance threshold or addressed the issue in its CEQA Thresholds Guide. Also, no other agency (e.g., United States Environmental Protection Agency, CARB, or SCAQMD) responsible for managing air quality emissions has promulgated a global warming significance threshold that may be used in reviewing new development projects.

In the absence of project-specific significance thresholds established by any State or local air quality management agency, the analysis of potential impacts should focus on compliance with State and local plans aimed at reducing GHG emissions. The California Climate Action Team was formed in response to AB 32. The goal of the California Climate Action Team is to evaluate the impacts of climate change on California and examine adaptation measures that would best prepare the State to respond to adverse consequences of climate change. As shown in *Table 16: Project Consistency with the California Climate Action Team Report and the Green LA Action Plan*, the Proposed Project would be consistent with the applicable GHG reduction measures recommended by the California Climate Action Team to comply with AB 32.[63] As previously discussed, the City has published a Green LA Action Plan (Green Plan). The Proposed Project would be consistent with the applicable policies and measures discussed in the Green Plan. Green Plan policies relevant to the Proposed Project are also presented in *Table 16: Project Consistency with the California Climate Action Team Report and the Green LA Action Plan*. In addition to complying with the applicable elements of these two plans for reducing GHG emissions, the Proposed Project will also achieve LEED Basic certification. As a result, the Proposed Project's energy efficiency would be at least 10.5 to 14 percent improved from the standard Title 24 requirements. Thus, the Proposed Project would actively reduce on-going operational emissions through compliance with a number of GHG emission reduction strategies and would result in a less than significant impact on climate change.

[61] California Climate Action Team. California Climate Change Portal website. 12 June 2008 <http://climatechange.ca.gov/climate_action_team/index.html>.
[62] *Ibid.*
[63] California Environmental Protection Agency. 2006. *Climate Action Team Report to Governor Schwarzenegger and the Legislature.* 19 May 2008 <http://www.climatechange. ca.gov/climate_action_team/reports/index.html>.

TABLE 16
PROJECT CONSISTENCY WITH THE
CALIFORNIA CLIMATE ACTION TEAM REPORT AND THE GREEN LA ACTION PLAN [1]

CALIFORNIA CLIMATE ACTION TEAM REPORT	
GHG REDUCTION STRATEGY [2][3]	**PROJECT CONSISTENCY**
Diesel Anti-Idling – Limit diesel-fueled commercial motor vehicle idling.	Consistent with State law, the Proposed Project would prohibit diesel-fueled vehicles from idling in excess of five minutes.
Alternative Fuels – Require the use of one to four percent biodiesel displacement in California diesel fuel and increase the ethanol content of diesel fuel.	The Proposed Project would include transportation amenities, such as providing preferred parking to alternative-fueled vehicles, to encourage the use of alternative fuels.
Achieve 50 Percent Statewide Recycling Goal – Reduce GHG emissions associated with material extraction and production as well as methane emissions from landfills.	The Proposed Project would include a construction waste management plan that identifies construction materials to be diverted from disposal. The waste management plan would include recycling and/or salvaging at least 50 percent of non-hazardous construction and demolition debris.
Urban Forestry – Plant trees in urban areas.	Landscaping for the Proposed Project would include the planting of native, drought-resistant trees throughout the project site, including the replacement of mature trees removed during project construction.
Water Use Efficiency – Conserve water so that GHG emissions are reduced from energy consumption required to convey, treat, distribute, and use water and wastewater.	The Proposed Project would use high-efficiency irrigation technology or reduce potable water consumption for irrigation by 50 percent. In addition, the Proposed Project would employ strategies that use 20 percent less water than the water use baseline calculated for the building (not including irrigation) after meeting the Energy Policy Act of 1992 fixture performance requirements.
Building Energy Efficiency Standards in Place – Place priority on and establish specific goals for updating building energy efficiency standards.	The Proposed Project will achieve LEED Basic certification. This would result in minimum energy efficiency savings of approximately 10.5 to 14 percent over California Title 24 Energy Design Standards.
Appliance Energy Efficiency Standards in Place – Place priority on updating State appliance energy efficiency standards.	The Proposed Project will achieve LEED Basic certification. This would result in minimum energy efficiency savings of approximately 10.5 to 14 percent over California Title 24 Energy Design Standards.
Measures to Improve Transportation Energy Efficiency – Provide incentives, tools, and information that advance cleaner transportation and reduce GHG emissions.	The Proposed Project would include transportation amenities, such as providing preferred parking to alternative-fueled vehicles. The Proposed Project will be located near public transportation routes and along a heavily traveled vehicle corridor. This would encourage mass transportation thereby potentially reducing regional VMT.
Green Building Initiative – Encourage private building owners and operators to reduce energy use by 20 percent.	LEED Basic certification would reduce energy use by at least 10.5 to 14 percent. In addition, the Proposed Project would encourage alternative-fueled vehicles, which would also reduce project-related energy use.
Promote Green Building – Create a comprehensive set of green building policies.	The Proposed Project will achieve LEED Basic certification, which would reduce energy use by at least 10.5 to 14 percent. In addition, the Proposed Project would encourage alternative-fueled vehicles, which would also reduce project-related energy use.

TABLE 16 (CONTINUED)
PROJECT CONSISTENCY WITH THE
CALIFORNIA CLIMATE ACTION TEAM REPORT AND THE GREEN LA ACTION PLAN [1]

GREEN LA ACTION PLAN	
GHG REDUCTION STRATEGY [2][3]	**PROJECT CONSISTENCY**
Decrease Per Capita Water Use – Encourage water conservation and recycling.	The Proposed Project would use high-efficiency irrigation technology or reduce potable water consumption for irrigation by 50 percent. In addition, the Proposed Project would employ strategies that use 20 percent less water than the water use baseline calculated for the building (not including irrigation) after meeting the Energy Policy Act of 1992 fixture performance requirements.
Transportation – Promote mass transit.	The Proposed Project will be located near public transportation routes and along a heavily traveled vehicle corridor. This would encourage mass transportation (e.g., providing bus shuttles and encouraging carpooling through an on-site Ride-Share Coordinator), thereby potentially reducing regional VMT.
Shift Waste Disposal to Resource Recovery– Increase City-wide recycling.	The Proposed Project would include a construction waste management plan that identifies construction materials to be diverted from disposal. The waste management plan would include recycling and/or salvaging at least 50 percent of non-hazardous construction and demolition debris. Other waste management strategies are discussed in Section IV: Environmental Impact Analysis: I.1-Solid Waste, of this EIR.

[1] Source: Terry A Hayes Associates LLC, *Westfield Fashion Square Expansion Project Air Quality and Noise Impact Report*, February 26, 2008.
[2] California Air Resources Board, *Expanded List of Early Action Measure to Reduce Greenhouse Gas Emissions in California Recommended for Board Consideration*, September 2007.
[3] Only GHG reduction strategies applicable to the Proposed Project are presented.

(4) Consistency with Applicable Plans and Policies

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*. The AQMP is establishes goals and policies to reduce long-term emissions in the Basin. Thus, this analysis focuses on long-term operational emissions. 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 designated 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. In addition, as shown in *Table 11: Estimated Daily Operational Emissions - Weekday* and *Table 12: Estimated Daily Operational Emissions - Weekend*, mobile CO emissions would account for the majority of operational emissions. As such, CO was utilized as an indicator for AQMP consistency. 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 would comply 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 project build-out phase.*

  The second consistency criterion requires that the Proposed Project not exceed the assumptions in the AQMP. A project is consistent with the AQMP if it is consistent with the population, housing, and employment assumptions that were used in the development of the AQMP. The 2007 AQMP, the most recent AQMP adopted by the SCAQMD, incorporates, in part, SCAG's 2004 Regional Transportation Plan (RTP) socioeconomic forecast projections of regional population and employment growth. The 2004 RTP is based on growth assumptions through 2030 developed by each of the cities and counties in the SCAG region.

  SCAG locates the project site within the Los Angeles City subregion. The Proposed Project would not include new housing and, as such, would be consistent with the RTP housing and population growth assumptions. The Proposed Project, which would add 788 employees, represents less than one percent of the 121,694 new employees projected in SCAG's RTP between 2007 and 2010 for the Los Angeles City subregion[64]. Such levels of housing, population, and employment growth are consistent with housing forecasts for the subregion as adopted by SCAG. The Proposed Project is consistent with growth assumptions included in the AQMP and, as such, the Proposed Project would comply with Consistency Criterion No. 2.

The Proposed Project complies with Consistency Criteria No. 1 and No. 2. and is consistent with the AQMP.

(5) Cumulative Impacts

The SCAQMD has set forth both a methodological framework and significance thresholds for the assessment of a project's cumulative air quality impacts[65]. SCAQMD's approach is based on the AQMP forecasts of attainment of ambient air quality standards in accordance with the requirements of the federal and State Clean Air Acts. This forecast also takes into account SCAG's forecasted future regional growth. As such, the analysis of cumulative impacts focuses on determining whether the Proposed Project is consistent with forecasted future regional growth.

[64] Provided by the Project Applicant.
[65] Table A9-14. South Coast Air Quality Management District (SCAQMD). 1993. *CEQA Air Quality Handbook*. Diamond Bar: Author. 6 J une 2008 <http://www.aqmd.gov/ceqa/oldhdbk.html>.

Based on SCAQMD's methodology, a project would have a significant cumulative air quality impact if the ratio of daily project-related employment vehicle miles traveled to daily countywide vehicle miles traveled exceeds the ratio of project-related employment to countywide employment[66]. None of the related projects in the Proposed Project area require a General Plan Amendment and as a result, these projections are viewed by SCAG and SCAQMD, as representing new anticipated growth. As shown in *Table 17: Cumulative Air Quality Analysis*, the Proposed Project to countywide VMT ratio is not greater than the Proposed Project to countywide employment ratio.

TABLE 17
CUMULATIVE AIR QUALITY ANALYSIS [1]

DAILY VEHICLE MILES	
Daily Vehicle Miles Traveled For Project Employment [2]	20,961
Daily Vehicle Miles Traveled Countywide [3]	223,514,000
Daily Vehicle Miles Traveled Ratio	**0.00009**
EMPLOYMENT	
Project Employment [4]	788
Countywide Employment [5]	5,022,215
Employment Ratio	**0.00016**
Significance Test **Daily Vehicle Miles Traveled Ratio Greater Than Employment Ratio**	**No**

[1] Source: Terry A Hayes Associates LLC, *Sherman Oaks Fashion Square Expansion Project Air Quality and Noise Impact Report*, February 26, 2008..
[2] Data obtained from URBEMIS 2007.
[3] Data obtained from EMFAC2007.
[4] Provided by the project Applicant.
[5] Data obtained from SCAG's Regional Transportation Plan, Socioeconomic Projections, 2004.

A localized CO impact analysis was also completed for cumulative traffic (i.e., related projects and ambient growth through 2012). When calculating future traffic impacts, the traffic consultant took 17 additional projects into consideration. The future traffic results without and with the Proposed Project already account for the cumulative impacts from these other related projects. As shown in *Table 13: Carbon Monoxide Concentrations – Weekday* and *Table 14: Carbon Monoxide Concentrations – Weekend*, the Proposed Project with cumulative traffic would not violate CO standards at local intersections. As such, the Proposed Project would not contribute to cumulative air quality impacts.

4. MITIGATION PROGRAM

MM AQ-1: The Proposed Project will comply with applicable CARB regulations and standards. 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 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.

[66] Table A9-14. South Coast Air Quality Management District (SCAQMD). 1993. *CEQA Air Quality Handbook*. Diamond Bar: Author. 6 June 2008 <http://www.aqmd.gov/ceqa/oldhdbk.html>.

MM AQ-2: The Proposed Project will comply with applicable SCAQMD regulations and standards. The 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.

MM AQ-3: The Proposed Project will be designed to reduce exposure of sensitive receptors to excessive levels of air quality. The Proposed Project is designed and will be built and operated in a manner consistent with the requirements to achieve Leadership in Energy and Environmental Design (LEED) certification from the United States Green Building Council.[67] LEED is a green building rating system that was designed to guide and distinguish high-performance commercial projects. LEED promotes a whole-building approach to sustainability by recognizing performance in five key areas of human and environmental health: sustainable site development, water savings, energy efficiency, materials selection, and indoor environmental quality. The Proposed Project will implement a variety of design and operational features to achieve LEED certification. As a result, the Proposed Project would be proactive in reducing GHG emissions. Examples of design features to be implemented for the Proposed Project in order to achieve LEED certification include, but are not limited to, the following or their equivalent:

- A construction activity pollution prevention program.
- Encouraging the use of mass transit.
- Providing transportation amenities, such as alternative fueling stations, carpool/vanpool programs, bicycle racks, and showering/changing facilities.
- Implementing a stormwater management plan that reduces impervious cover, promotes infiltration, and captures and treats the stormwater runoff from 90 percent of the average annual rainfall using acceptable best management practices.
- Adopting site lighting criteria to maintain safe light levels while avoiding off-site lighting and night sky pollution, minimizing site lighting where possible, and reducing light pollution.
- Providing tenants with a description of the sustainable design and construction features incorporated in the core and shell project.

[67] U.S. Green Building Council (USGBC). 2007. *Leadership in Energy and Environmental Design.* 19 May 2008 <http://www.usgbc.org/LEED>.

- Using high-efficiency irrigation technology or reducing potable water consumption for irrigation by 50 percent by using a combination of plant species factor, irrigation efficiency, use of captured rainwater, use of recycled wastewater, and use of water treated and conveyed by public agency specifically for non-potable uses.

- Employing strategies that, in aggregate, use 20 percent less water than the water use baseline calculated for the building (not including irrigation) after meeting the Energy Policy Act of 1992 fixture performance requirements.

- Designing the building envelope and building system to maximize energy performance.

- Selecting refrigerants that reduce ozone depletion while minimizing direct contributions to global warming.

- Implementing 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. The waste management plan would include recycling and/or salvaging at least 50 percent of non-hazardous construction and demolition debris.

- Using materials with recycled content such that the sum of post-consumer recycled content plus one-half of the pre-consumer content constitutes at least ten percent of the total value of the materials in the project.

- Using a minimum of ten percent of the total materials value on building materials or products extracted, harvested, or recovered and manufactured within 500 miles of the project site.

- Adopting an indoor air quality management plan to protect the HVAC system during construction, control pollutant sources, and interrupt contamination pathways.

- Specifying low-volatile organic compounds paints and coatings in construction documents.

- Designing the building with the capability for occupant controls for airflow, temperature and ventilation. Strategies will include underfloor HVAC systems with individual diffusers, displacement ventilation systems with control devices, and ventilation walls and mullions.

MM AQ-4: The Proposed Project would install carbon monoxide and airflow measurement equipment that would transfer the information to the HVAC system and/or Building Automation System to trigger corrective action, if applicable, and/or use the measurement equipment to trigger alarms that inform building operators or

occupants of a possible deficiency in outdoor air delivery. Installation of such a system in areas where carbon monoxide concentrations may escalate (such as in the vicinity of loading docks or valet parking drop-offs) would improve both indoor and localized "hotspot" air quality.

MM AQ-5: The Proposed Project would provide bicycle racks at a ratio of 2% of the total number of parking spaces on-site, as well as lockers, changing rooms and showers inside the shopping center. A minimum of 20 additional bicycle spaces (in racks) would be provided at multiple locations through out the site. Four showers (two per each gender) would be provided in a dedicated shower facility area. Lockers would be provided in conjunction with the shower facilities.

MM AQ-6: The Proposed Project would provide a shuttle service connecting the site to a nearby Orange Line station (e.g., Van Nuys Boulevard). This service could be provided by either the provision of a private shuttle or the funding of extended hours for the existing Los Angeles Department of Transportation (LADOT) DASH line. The Orange Line shuttle would complement existing transit services (i.e., the LADOT DASH service) such that the shuttle would operate during hours when other public transit services connecting the site to the Orange Line are not available (e.g., during weekdays evenings and general weekend hours). The shuttle would operate during regular shopping center hours corresponding with periods of peak parking demand at the site and peak holiday season demand (i.e., everyday during the holiday shopping period between November 15 and January 1, and every Saturday/Sunday throughout the year).

MM AQ-7: During construction activity, water or a stabilizing agent shall be applied to exposed surfaces in sufficient quantity to prevent generation of dust plumes.

MM AQ-8: During construction activity, track-out shall not extend 25 feet or more from any active construction operations, and track-out shall be removed at the conclusion of each workday.

MM AQ-9: During construction activity, 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 AQ-10: All haul trucks hauling soil, sand, and other loose materials shall maintain at least six inches of freeboard in accordance with California Vehicle Code Section 23114, and such trucks shall be covered (e.g., with tarps or other enclosures that would reduce fugitive dust emissions).

MM AQ-11: During construction activity, traffic speeds on unpaved roads shall be limited to 15 miles per hour.

MM AQ-12: During construction activity, operations on unpaved surfaces shall be suspended when winds exceed 25 miles per hour.

MM AQ-13: Heavy equipment operations shall be suspended during first and second stage smog alerts.

MM AQ-14: On-site stock piles of debris, dirt, or rusty materials shall be covered or watered at least twice per day.

MM AQ-15 Heavy-duty equipment shall be equipped with a diesel oxidation catalyst capable of reducing NO_X emissions by 40 percent.

MM AQ-16 Contractors shall maintain equipment and vehicle engines in good condition and in proper tune per manufacturers' specifications.

MM AQ-17 Contractors shall utilize electricity from power poles rather than temporary diesel or gasoline generators, as feasible.

MM AQ-18 Heavy-duty construction shall be prohibited from idling in excess of five minutes, both on- and off-site, to be consistent with State law.

MM AQ-19 Construction parking shall be configured to minimize traffic interference.

MM AQ-20 Construction activity that affects traffic flow on the arterial system shall be limited to off-peak hours, as feasible.

5. SIGNIFICANT PROJECT IMPACTS AFTER MITIGATION

a. Construction

Implementation of Mitigation Measures above would ensure that fugitive dust emissions (i.e. $PM_{2.5}$ and PM_{10}) would be reduced by approximately 61 percent. However, localized $PM_{2.5}$ and PM_{10} emissions would still exceed the SCAQMD significance thresholds. Mitigation Measures would reduce regional NO_X emissions by at least 40 percent. The mitigation measures although difficult to quantify would also reduce NO_X emissions. As demonstrated in *Table 18: Estimated Daily Construction Emissions –Mitigated*, regional construction emissions of VOC, NO_X, CO, SO_X, $PM_{2.5}$, and PM_{10} would be less than the SCAQMD significance thresholds. However, regional NO_X emissions, localized $PM_{2.5}$ and PM_{10} concentrations would exceed the SCAQMD significance thresholds. As such, regional NO_X construction emissions would result in a significant impact, even with the implementation of mitigation measures. Localized construction emissions from the Proposed Project would also result in significant impacts even with implementation of all feasible mitigation measures. The Proposed Project would be considered to have a significant unavoidable regional and localized construction air quality impact.

TABLE 18
ESTIMATED DAILY CONSTRUCTION EMISSIONS –MITIGATED [1]

CONSTRUCTION PHASE	POUNDS PER DAY					
	VOC	NO_X	CO	SO_X	$PM_{2.5}$ [2]	PM_{10} [2]
PHASE 1 –FOUR LEVEL PARKING STRUCTURE						
Demolition						
On-Site	2	10	6	0	5	21
Off-Site	2	25	11	<1	1	1
Total	**4**	**35**	**17**	**<1**	**6**	**22**
Grading/Excavation						
On-Site	2	10	6	0	7	29
Off-Site	<1	<1	1	0	<1	<1
Total	**2**	**10**	**7**	**0**	**7**	**29**
Construction						
On-Site	4	17	11	0	2	2
Off-Site	1	9	44	<1	<1	<1
Total	**5**	**26**	**55**	**<1**	**2**	**2**
PHASE 2 – MAIN PARKING STRUCTURE						
Demolition						
On-Site	2	11	6	0	5	23
Off-Site	2	26	11	<1	1	2
Total	**4**	**37**	**17**	**<1**	**6**	**24**
Grading/Excavation						
On-Site	3	22	12	0	6	26
Off-Site	6	68	29	<1	3	3
Total	**9**	**90**	**41**	**<1**	**9**	**29**
Construction						
On-Site	3	16	11	0	2	2
Off-Site	2	8	41	<1	<1	<1
Total	**5**	**24**	**52**	**<1**	**2**	**2**
PHASE 3 – RETAIL AND SUBTERRANEAN PARKING						
Demolition						
On-Site	2	10	6	0	6	24
Off-Site	2	26	11	<1	1	1
Total	**4**	**36**	**17**	**<1**	**7**	**25**
Grading/Excavation						
On-Site	3	24	12	0	12	53
Off-Site	9	104	44	<1	4	5
Total	**12**	**129**	**56**	**<1**	**16**	**58**
Building Construction						
On-Site	3	15	11	0	2	2
Off-Site	1	8	38	<1	<1	<1
Total	**4**	**23**	**49**	**<1**	**2**	**2**

TABLE 18 (CONTINUED)
ESTIMATED DAILY CONSTRUCTION EMISSIONS –MITIGATED [1]

CONSTRUCTION PHASE	POUNDS PER DAY					
	VOC	NO_X	CO	SO_X	$PM_{2.5}$ [2]	PM_{10} [2]
Architectural Coating						
On-Site	68	<1	<1	<1	<1	<1
Off-Site	<1	<1	1	<1	<1	<1
Total	**68**	**<1**	**1**	**<1**	**<1**	**<1**
Maximum Regional Total	68	129	56	<1	16	58
Regional Significance Threshold	75	100	550	150	55	150
Exceed Threshold?	No	Yes	No	No	No	No
Maximum On-Site Total	68	24	12	0	12	53
Localized Significance Threshold [3]	--	176	553	--	4	6
Exceed Threshold?	--	No	No	--	Yes	Yes

[1] Source: Terry A Hayes Associates LLC, *Westfield Fashion Square Expansion Project Air Quality and Noise Impact Report*, February 26, 2008.
[2] URBEMIS2007 emissions for fugitive dust were adjusted to account for a 61 percent control efficiency associated with SCAQMD Rule 403.
[3] Assumed a two-acre project site and a 25-meter (82-foot) receptor distance. This is the smallest distance between source and receptor to be analyzed under the SCAQMD LST methodology.

b. Operational

The project-related operational emissions would result in a less than significant impact without mitigation.