4.3 Air Quality

SUMMARY

Development of the project would generate air pollutant emissions from a wide variety of stationary and mobile sources. The emissions generated during the site preparation phase of construction would not exceed the thresholds of significance recommended by the SMAQMD; during the construction phases of development, emissions of ROG and PM_{10} would exceed the SMAQMD's recommended daily threshold, as the result of the emissions associated with the application of architectural coatings. There is no feasible mitigation (beyond compliance with SMAQMD regulations, which was already assumed) for this impact. During project operation, the proposed project would generate a net increase in emissions of ROG and NO_X that would exceed the thresholds of significance recommended by the SMAQMD. Therefore, project emissions would be considered significant. The estimated emissions reflect all of the measures proposed for the project in the AQ-15 and TSM Plan, which reflects feasible mitigation measures that are applicable to the land uses proposed for this project. Therefore, the impact would be unavoidably significant. Project-specific and cumulative concentrations of carbon monoxide would not exceed State or Federal standards, and thus the impact would not be significant.

INTRODUCTION

This section evaluates the potential impacts of the proposed project on the regional and local air quality of Sacramento County. Both vehicular and non-vehicular sources of air pollutants, including site preparation (such as site grading), construction, and project operation are addressed. In addition to specific pollutant emissions, this section evaluates the project's compliance with local air quality plans.

EXISTING AIR QUALITY ENVIRONMENT

To study and manage regional air pollution problems, the state of California area has been divided into a number of air basins and airsheds. The proposed project site is located within the Sacramento Valley Air Basin. Air quality within the Basin and County is degraded by high pollutant concentrations generated by dense population centers, heavy vehicular traffic, stationary source emissions and industry, combined with meteorological influences including frequent summer inversion layers.

Causes of Smog

Smog is a general term based on the words smoke and fog that is used to describe dense, visible air pollution. Although some air pollutants are colorless, smog is commonly used to describe the general concentrations of pollutants in the air. Smog is formed when combustion emissions and gaseous emissions, such as reactive organic gases (ROG) and oxides of nitrogen (NO_X), undergo photochemical reactions in sunlight to form ozone (O_3). Ozone is a gas that, in the upper atmosphere, helps to shield the earth from harmful solar radiation. However, in the lower atmosphere where people live, ozone poses health risks and damages crops, rubber, and other materials. Particulates, such as soil and dust materials, and vehicle exhaust particulates often mix with ozone, carbon monoxide (CO), and other compounds and create a brownish haze in the air. "Smog episode" warnings occur when an occurrence of high concentrations of ozone is predicted that could endanger or cause harm to the public.

The topography and climate of the Basin combine to make it an area of smog potential. During the summer months, a warm air mass frequently descends over the lower, cool, moist marine air layer from the Sacramento Delta and San Francisco Bay. The warm upper layer forms a cap over the marine layer and inhibits the air pollutants generated near the ground from dispersing upward. Light summer winds and the surrounding mountains further limit the horizontal disbursement of the pollutants. Concentrating volumes of pollutants in this manner allows the summer sunlight to generate high levels of smog. In the winter, cool ground temperatures and very light winds cause extremely low inversions and air stagnation which trap CO and NO_X during the late night and early morning hours. On days when no inversions occur, or when winds average 25 miles per hour or more, there will be no important smog effects.

The air pollutants within the Basin are generated by both stationary and mobile sources. Stationary sources are known as "point sources," which have one or more emission sources at a single facility. "Area sources," which are widely distributed, produce many small emissions. Point sources are usually associated with manufacturing and industrial uses and include sources that produce electricity or process heat, such as refinery boilers or combustion equipment. Examples of area sources include residential water heaters, painting operations, lawn mowers, agricultural fields, landfills, and consumer products, such as barbecue lighter fluid or hair spray. "Mobile sources" refer to operational and evaporative emissions from motor vehicles. They account for the majority of the emissions generated within the Basin.

Regulatory Agencies and Responsibilities

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

U.S. Environmental Protection Agency

The U.S. Environmental Protection Agency (U.S. EPA) is responsible for enforcing the 1990 amendments to the Federal Clean Air Act (CAA) and the national ambient air quality standards (Federal standards) that it establishes. These standards identify levels of air quality for six "criteria" pollutants, which are considered the maximum levels of ambient (background) air pollutants considered safe, with an adequate margin of safety, to protect public health and welfare. The six criteria pollutants include ozone, CO, nitrogen dioxide (NO_2- a form of NO_X), sulfur dioxide (SO_2- a form of SO_X), particulate matter 10 microns in size and smaller (PM_{10}), and lead. The U.S. EPA also has regulatory and enforcement jurisdiction over emission sources beyond State waters (outer continental shelf), and those that are under the exclusive authority of the Federal government, such as aircraft, locomotives, and interstate trucking.

In response to its enforcement responsibilities, the U.S. EPA requires each state to prepare and submit a State Implementation Plan (SIP) that describes how the state will achieve the federal standards by specified dates, depending on the severity of the air quality within the state or air basin. The Sacramento metropolitan area, which includes all of Sacramento and Yolo Counties, and parts of El Dorado, Placer, Solano, and Sutter Counties, is classified by the U.S. EPA as a "severe" non-attainment area for ozone. All of Sacramento County has been classified as a "moderate" non-attainment area for PM_{10}. Under the compliance timetables, which pertain to ozone, the Sacramento metropolitan area must achieve attainment status for ozone by November 15, 2005. The County must officially demonstrate attainment of the federal PM_{10} standard by December 31, 2000. Because there have been no recorded violations of this standard since 1990, a formal request has been submitted to the U.S. EPA to reclassify the County as being in attainment for PM_{10}.

In July 1997, the U.S. EPA announced new health-based standards for ozone and $PM_{2.5}$. $PM_{2.5}$ is a subset of PM_{10} and a microscopic form of particle pollution primarily composed of diesel soot and other combustion by-products. However, these proposed standards are currently the subject of litigation and, as such, have not been approved and are not currently being implemented.

California Air Resources Board

The California Air Resources Board (ARB), a department of the California Environmental Protection Agency (Cal EPA), oversees air quality planning and control throughout California. It is primarily responsible for ensuring implementation of the 1989 amendments to the California Clean Air Act (CCAA), responding to the Federal CAA requirements, and for regulating emissions from motor vehicles and consumer products within the State. The ARB has established emission standards for vehicles sold in California and for various types of equipment available commercially. It also sets fuel specifications to further reduce vehicular emissions.

The amendments to the CCAA establish ambient air quality standards for the State (state standards) and a legal mandate to achieve these standards by the earliest practicable date. These standards apply to the same six criteria pollutants as the Federal CAA, and also include sulfate, visibility, hydrogen sulfide, and vinyl chloride. They are also more stringent than the federal standards and, in the case of PM_{10} and SO_2, far more stringent.

Based on monitored pollutant levels, the CCAA divides nonattainment areas into three categories -- moderate, serious, and severe -- to which progressively more stringent requirements apply. The Sacramento Valley Air Basin is classified as a "severe" non-attainment area for ozone and a non-attainment area for PM_{10}.

Sacramento Metropolitan Air Quality Management District

The management of air quality in Sacramento County is the responsibility of the Sacramento Metropolitan Air Quality Management District (SMAQMD). This agency is responsible for bringing air quality in the County into compliance with federal and state air quality standards. Specifically, the SMAQMD has the responsibility to monitor ambient air pollutant levels throughout the County and to develop and implement attainment strategies to ensure that future emissions will be within federal and state standards.

Clean Air Plans

As discussed previously, the Federal and State Clean Air Acts require the preparation of plans to reduce air pollution to healthful levels. The SMAQMD has responded to this requirement by cooperating in the preparation of a series of clean air plans. One of these plans is the SMAQMD's *Air Quality Attainment Plan*, which was adopted in July 1991. This plan addresses CCAA requirements and focuses on ozone

and CO emissions. The SMAQMD also cooperated in the preparation of the Sacramento Regional Ozone Attainment Plan (ROAP) which addresses the requirements of the CAA. This document, which was submitted in November 1994, focuses on reducing emissions from ozone precursors through stationary and mobile source reduction measures.

SMAQMD Rules and Regulations

The SMAQMD is responsible for limiting the amount of emissions that can be generated throughout the County by various stationary and mobile sources. Specific rules and regulations have been adopted by the SMAQMD Board of Directors that limit the emissions that can be generated by various uses and/or activities, and identify specific pollution reduction measures which must be implemented in association with various uses and activities. These rules not only regulate the emissions of the six criteria pollutants, but also toxic emissions and acutely hazardous materials. They are also subject to ongoing refinement by the SMAQMD.

Emissions sources subject to these rules are regulated through the SMAQMD's permitting process. Through this permitting process, the SMAQMD also monitors the amount of stationary emissions being generated and uses this information in developing new clean air plans. The proposed project would be subject to SMAQMD rules and regulations to reduce specific emissions and to mitigate potential air quality impacts.

Air Quality Thresholds of Significance

In 1994, the SMAQMD prepared its *Air Quality Thresholds of Significance* as a guidance document to assist local government agencies and consultants in preparing environmental documents for projects subject to the California Environmental Quality Act (CEQA). The document is an advisory document and local jurisdictions are not required to utilize the methodology outlined therein. This document describes the criteria that the SMAQMD uses when reviewing and commenting on the adequacy of environmental documents, such as this EIR. It recommends thresholds for use in determining whether projects would have significant adverse environmental impacts, identifies methodologies for predicting project emissions and impacts, and identifies measures that can be used to avoid or reduce air quality impacts. The air quality analysis in this EIR was prepared following the recommendations of the SMAQMD found in the SMAQMD's *Air Quality Thresholds of Significance*.

City of Elk Grove

Local governments, such as the City of Elk Grove, have the authority and responsibility to reduce air pollution through the land use decision-making authority allowed by their police power. Specifically, local governments are responsible for the mitigation of emissions resulting from land use decisions and for the implementation of transportation control measures as outlined in the Air Quality Attainment Plan and the ROAP. In general, a first step toward implementation of a local government's responsibility is accomplished by identifying air quality goals, policies, and implementation measures in its general plan. Through capital improvement programs, local governments can fund infrastructure that contributes to improved air quality, by requiring such improvements as bus turnouts, energy-efficient street lights, and synchronized traffic signals. In accordance with CEQA requirements and the CEQA review process, local governments assess air quality impacts, require mitigation of potential air quality impacts by conditioning discretionary permits, and monitor and enforce implementation of such mitigation.

The General Plan Policy AQ-15 requires all new major development projects to reduce their emissions by 15 percent from the base-case level that would otherwise be produced, assuming full trip generation potential per the current Institute of Traffic Engineers (ITE) *Trip Generation* manual. In addition, Sections 330-140 to 330-150 of the Zoning Code require the preparation and implementation of a Transportation Systems Management (TSM) plan for major development plans with over 200 employees.

Existing Ambient Air Quality

Regional Air Quality

To monitor the concentrations of the six criteria pollutants, the SMAQMD operates eight air quality monitoring stations throughout the County. Five of these stations are located within the City of Sacramento area. The remaining three are located in Elk Grove, Folsom, and North Highlands. In addition, the ARB operates a station within the Sacramento city area. The monitoring station located closest to the proposed project site is the Elk Grove station located at 12490 Bruceville Road. This station currently monitors emission levels of ozone and NO_2. The nearest station that monitors levels of PM_{10} is located just west of the City of Sacramento at 3711 Branch Center Road.

Table 4.3-1 lists the ambient pollutant concentrations registered and the violations of state and federal standards that have occurred at the two representative monitoring stations from 1997 through 1999. As shown, these stations consistently registered values above State and Federal standards for ozone and the

State standard for PM_{10}. Concentrations of all other pollutants have not been exceeded within Sacramento County for several years.

Table 4.3-1
Ambient Pollutant Concentrations Registered in the Project Vicinity

Pollutant	Standards[1,]	Year 1997	1998	1999
OZONE (O_3)				
Maximum 1-hour concentration monitored (ppm)		0.121	0.147	0.160
Number of days exceeding Federal 1-hour standard	>0.12 ppm	0	1	1
Number of days exceeding State 1-hour standard	>0.09 ppm	5	7	16
Maximum 8-hour concentration monitored (ppm)		0.091	0.110	0.104
Number of days exceeding Federal 8-hour standard	>0.08 ppm	3	4	7
NITROGEN DIOXIDE (NO_2)				
Maximum 1-hour concentration monitored (ppm)		0.061	0.048	0.081
Annual average monitored (ppm)		0.009	0.009	0.011
Percentage of average exceeding federal standard	0.0534 ppm	0	0	0
Number of days exceeding 1-hour state standard	>0.25 ppm	0	0	0
SUSPENDED PARTICULATE MATTER (PM_{10})				
Maximum 24-hour concentration ($\mu g/m^3$)		85.0	81.0	86.0
Number of measured samples exceeding Federal standard	>150 $\mu g/m^3$	0	0	0
Number of measured samples exceeding State standard	>50 $\mu g/m^3$	3	8	11
Number of estimated samples exceeding federal standard	>150 $\mu g/m^3$	0	0	0
Number of estimated samples exceeding state standard	>50 $\mu g/m^3$	18	48	66

Source: California Air Resources Board web site, October 17, 2000.
[1] Parts by volume per million of air (ppm), microns per cubic meter of air (ug/m^3), or annual arithmetic mean (aam).
NA: Data not available from California Air Resources Board at the time that this EIR was prepared.

Site-Specific Emissions

The proposed project site is currently used for agricultural operations. Emissions associated with these existing operations are generated by both stationary and mobile sources as a result of normal day-to-day activity at the site. Stationary source emissions are generated by the consumption of natural gas for space and water heating, and by agricultural equipment. Emissions are also generated by motor vehicles (mobile sources) traveling to and from the site and farm vehicles operating at the site.

IMPACT ANALYSIS

Development of the project would generate air pollutant emissions from a wide variety of stationary and mobile sources. Stationary source emissions, such as PM_{10}, would be generated by on-site construction activities. Once the proposed uses are completed and occupied, emissions would be generated by

stationary area sources such as water and space heaters. Mobile source emissions would be generated by motor vehicle travel associated with construction activities and occupancy of the proposed development. A discussion of significance criteria and an assessment of construction and operational emissions are presented below, based on the methodologies recommended in the SMAQMD's *Air Quality Thresholds of Significance* guidance document.

Thresholds of Significance

New and redevelopment projects will often affect regional air quality both directly and indirectly. When determining the extent of a project's environmental impact and the significance of such impacts, the project should be compared to established thresholds of significance. The City of Elk Grove has not officially adopted thresholds of significance for determining air quality impacts. Therefore, in the absence of such thresholds, this EIR has used the thresholds recommended by the SMAQMD in its *Air Quality Thresholds of Significance* guidance document. The following discusses the thresholds for both construction and operational emissions generated by the proposed project.

Construction Emission Thresholds

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

- 85 pounds per day of ROG
- 85 pounds per day of NO_X
- 275 pounds per day of PM_{10}

Operational Emission Thresholds

The SMAQMD has recommended two types of air pollution thresholds to assist lead agencies in determining whether the operational phase of a project's development would be significant. These are identified in the following discussion under Quantitative Emission Thresholds and Qualitative Emission Thresholds. The SMAQMD recommends that a project's impacts be considered significant if either type of these thresholds is exceeded.

Quantitative Emission Thresholds

The SMAQMD recommends that projects with quantitative operational emissions that exceed any of the following emissions thresholds be considered significant:

- 85 pounds per day of ROG
- 85 pounds per day of NO_X
- 275 pounds per day of PM_{10}

Qualitative Emission Thresholds

The SMAQMD recommends that projects meeting any of the following criteria also be considered to have significant air quality impacts:

- Project has the potential to create or be near an objectionable odor (e.g., agriculture, wastewater treatment, food processing, chemical plants, composting, landfills, dairies, renderings, etc.).

- Project has the potential for an accidental release of toxic air emissions or acutely hazardous materials.

- Project has the potential to emit a toxic air contaminant regulated by the District or on a federal or state air toxics list.

- Project would involve the burning of hazardous, medical, or municipal waste as a waste-to-energy facility.

- Project has the potential to generate a substantial amount of wastewater or potential for toxic discharge (e.g., aluminum forming, battery manufacture, chemical manufacture, dye casting, electroplating, food manufacture, reclamation plants, metal finishing, metal molding and casting, pharmaceutical, petroleum/fuel refining, photography, pulp and paper manufacture).

- Project could place sensitive receptors (e.g., schools, households, etc.) located within a quarter mile of toxic air emissions or near CO hotspots.

- Project could generate carcinogenic or toxic air contaminant emissions that exceed or contribute to an exceedance of the District's action level for cancer (one in one million), chronic (one) and acute (one) risks.

The following discussion reviews the proposed project's potential impacts relative to each of the recommended significance criteria identified above.

Construction Impacts

On-Site Development and Off-Site Infrastructure

Impact 4.3-1 Construction equipment and operations would generate emissions that exceed SMAQMD thresholds. This would result in a significant impact.

Development of the project would require site preparation (i.e., grading) and construction of the proposed residential and commercial uses, and on- and off-site infrastructure. These construction activities would occur over a period of several years as individual building projects, and onsite and offsite infrastructure and improvement are developed. During this time, emissions would be generated by stationary sources, heavy-duty construction vehicles, construction worker vehicles, and energy use. In addition, fugitive dust would be generated by grading and construction activities.

Because of the construction time-frame, overlapping of building development, and the normal day-to-day variability in construction activities, it is difficult, if not impossible, to precisely quantify the daily emissions associated with each phase of the proposed construction activities. **Table 4.3-2**, therefore, identifies daily emissions associated with each emission source predicted for the project under a maximum development/worst-case scenario. These calculations consider any off-site infrastructure construction along with the on-site construction activities and assume that appropriate dust control measures would be implemented during each phase of the project as required by SMAQMD Rule 403 - Fugitive Dust. The calculations also assume that all asphalt paving materials would comply with SMAQMD Rule 453 and that architectural coatings would comply with SMAQMD Rule 442.

As shown, the emissions generated during the site preparation phase would exceed the thresholds of significance for PM_{10} recommended by the SMAQMD. Therefore, these emissions would be considered significant. During the construction phases of development, emissions of ROG, NO_X, and PM_{10} would all exceed the SMAQMD's recommended daily threshold. This is largely a result of emissions associated with construction worker vehicle trips and the application of architectural coatings. These calculations assume that emissions would not only be generated at the time that the coatings are being applied, but also for several days following application as the coatings dry. Because these emissions exceed the SMAQMD's recommended threshold, they are considered significant.

Table 4.3-2
Estimated Construction Emissions

Emissions Source		Emissions in Pounds per Day ROG	NO_X	PM_{10}
SITE PREPARATION (GRADING) [1]				
Grading Equipment		5.16	51.90	2.58
On- and Off-Road Vehicles		1.58	10.25	0.77
Fugitive Dust				
Excavation/Trenching		-	-	-
Grading and Earthmoving		-	-	1572.42
Vehicles		-	-	662.79
Exposed Storage Piles		-	-	2.10
	Rule 403 Reduction:	0.00	0.00	985.69
	Net Emission Totals:	6.73	62.16	1254.87
	SMAQMD Threshold:	85.00	85.00	275.00
	Exceeds Threshold?:	NO	NO	YES
GENERAL CONSTRUCTION [2]				
Construction Equipment		2.36	21.75	1.26
On- and Off-Road Vehicles		28.29	189.13	14.42
Asphalt Paving		3.28	-	-
Fugitive Dust				
Excavation/Trenching		-	-	0.74
Vehicles		-	-	1,508.80
Exposed Storage Piles		-	-	7.23
Architectural Coatings		163.00	-	-
	Rule 403 Reduction:	0.00	0.00	1,061.22
	Net Emission Totals:	196.92	210.88	471.22
	SMAQMD Threshold:	85.00	85.00	275.00
	Exceeds Threshold?:	YES	YES	YES

Source: Impact Sciences, Inc. Emissions calculations are provided in Appendix 4.3.
Totals in table may not appear to add exactly due to rounding in the computer model calculations.

[1] Grading equipment emissions based 14 pieces of equipment; on-and off-site emissions based on 2 water tucks, and 28 haul trucks; fugitive dust emissions based on 9 pieces of equipment, 2 water trucks, and 14 construction worker vehicles.

[2] Construction equipment emissions based on 16 pieces of equipment; on-and off-site emissions based on 8 haul trucks and 530 construction worker vehicles; asphalt emissions based on 1.25 acres per day of paving; fugitive dust emissions based on 8 haul trucks and 530 construction worker vehicles; architectural emissions based on 10,000 square feet of painting per day.

Operational Impacts

Quantitative Emissions

Impact 4.3-2 Daily operational emissions would exceed SMAQMD thresholds. This would result in a significant impact.

Operational emissions would be generated by both stationary and mobile sources as a result of normal day-to-day activities on the project site after occupation. Stationary area emissions would be generated by the consumption of natural gas for space and water heating devices. Mobile emissions would be generated by the motor vehicles traveling to and from the project site.

The daily operational emissions of the proposed project have been calculated using the URBEMIS7G computer model developed for the San Joaquin Valley Unified Air Pollution Control District. The results of this analysis are shown in **Table 4.3-3**. The estimated emissions reflect several of the measures proposed for the project in the AQ-15 and TSM Plan (see the data in **Appendix 4.3** for the measures that were included in the calculations). As shown, the proposed project would generate a net increase in emissions of ROG and NO_X that would exceed the thresholds of significance recommended by the SMAQMD. Therefore, project emissions would be considered significant. The net increase in PM_{10} emissions would not exceed the recommended thresholds and would not be considered significant.

Table 4.3-3
Estimated Operational Emissions

Emissions Source		Emissions in Pounds per Day		
		ROG	NO_x	PM_{10}
Commercial Uses				
Stationary Source Emissions		0.22	3.00	0.01
Mobile Source Emissions		240.71	336.17	195.36
	Subtotals:	240.93	339.17	195.37
Medium Density Residential				
Stationary Source Emissions		0.31	4.07	0.01
Mobile Source Emissions		16.80	19.84	14.44
	Subtotals:	17.11	23.91	14.45
Project Totals				
Stationary Source Emissions		0.53	7.07	0.02
Mobile Source Emissions		257.51	356.01	209.80
	Totals:	258.04	363.08	209.82
	Recommended Threshold:	85.00	85.00	275.00
	Exceeds Threshold?:	YES	YES	NO

Source: Impact Sciences, Inc. Emissions calculations are provided in Appendix 4.3.

A portion of the project site could be operational, such as the onsite residential uses, a portion of the mall, the entire mall, or any combination of onsite land uses, while another portion of the project site is under construction or offsite infrastructure and improvement are being developed. Therefore, **Table 4.3-4** identifies the potential emissions that would be generated when up to 1.8 million square feet of

commercial uses are operational and the remaining uses or infrastructure/improvements are being constructed. Although the SMAQMD's recommended construction and operational thresholds apply to separate activities, they are the same numbers. As shown in **Table 4.3-4**, the combined emissions of construction and operational emissions would exceed the SMAQMD's recommended thresholds and would be considered significant.

Table 4.3-4
Estimated Combined Construction and Operational Emissions

Emissions Source	Emissions in Pounds per Day		
	ROG	NO_x	PM_{10}
Operational Commercial Uses			
Stationary Source Emissions	0.13	1.75	0.01
Mobile Source Emissions	169.70	237.00	137.73
Subtotals:	169.83	238.75	137.74
Remaining Construction Activities			
Construction Equipment	2.06	21.57	1.20
On- and Off-Road Vehicles [1]	2.45	16.37	1.25
Asphalt Paving	3.28	-	-
Fugitive Dust			
Excavation/Trenching	-	-	3.36
Vehicles	-	-	482.10
Exposed Storage Piles	-	-	0.10
Architectural Coatings	163.00	-	-
Rule 403 Reduction:	0.00	0.00	385.76
Subtotals:	170.78	37.94	102.76
Emissions Totals			
Operational Emissions	169.83	238.75	137.74
Construction Emissions	170.78	37.94	102.76
Totals:	340.81	276.69	240.50
Construction and Operational Threshold:	85.00	85.00	275.00
Exceeds Threshold?:	YES	YES	NO

Source: Impact Sciences, Inc. Emissions calculations are provided in Appendix 4.3.

The project applicant has prepared a Draft AQ-15 and TSM Plan for the proposed project in compliance with the General Plan requirements discussed previously. This plan has been submitted to the City of Elk Grove and SMAQMD for review and approval. **Table 4.3-5** identifies the 19 measures proposed by the applicant to reduce peak hour vehicle trips by project employees and to reduce the emissions from both mobile and stationary sources.

Table 4.3-5
Summary of Proposed AQ-15 and TSM Plan Measures

CATEGORY Measure	Description
BICYCLE/PEDESTRIAN/TRANSIT	
Bicycle Lockers and Racks	Non-residential projects provide bicycle lockers and/or racks
Bicycle Parking Facilities	Provide an additional 20 percent of required Class I and Class II bicycle parking facilities
Class I Bicycle Storage - Residential	Bicycle storage (Class I) at apartment complexes or condos without garages
Class I and Class II Bicycle Facilities	Entire project is located within 1/2 mile of an existing Class I or Class II bike lane and provides a comparable bikeway connection to that existing facility
Pedestrian Facilities	The project provides for pedestrian facilities and improvements.
Bus Service/Bus Stop Improvements	Bus service provides headways of 15 minutes or less for stops within 1/4 mile; project provides essential bus stop improvements (i.e., shelters, route information, benches, and lighting).
Transportation Information Kiosk	Provide a display case or kiosk displaying transportation information in a prominent area accessible to employees or residents
Uses Proximate to Planned Transit	High density residential, mixed, or retail/commercial uses within 1/4 mile of planned transit, linking with activity centers and other planned infrastructure
PARKING	
Electric Charging Facilities	Provide electric vehicle charging facilities.
Carpool Vanpool Parking	Provide preferential parking for carpool/vanpools
Passenger Loading Facilities	Loading and unloading facilities for transit and carpool/vanpool users
RESIDENTIAL DEVELOPMENT	
Residential Density	Average residential density 7 d.u. per acre or greater
MIXED USE	
Mixed Use within 1/4 Mile	Mixed use - have at least 3 of the following on site and/ or within 1/4 mile: Residential Development, Retail Development, Personal Services, Open Space, Office
Pedestrian Connections	Separate, safe, and convenient bicycle and pedestrian paths connecting residential, commercial, and office uses
BUILDING COMPONENTS	
Low Emission Fireplace	Install lowest emitting commercially available fireplace
Ozone Destruction Catalyst	Install ozone destruction catalyst on air conditioning systems, in consultation with SMAQMD
TDM & MISC.	
TMA Membership	Include permanent TMA membership and funding requirement. Funding to be provided by Community Facilities District or County Service Area or other non-revocable funding mechanism.
Employee Flextime	Provide flextime for non-single occupancy vehicle commuters.
Transportation Coordinator	Provide on-site Transportation Coordinator

Source: Fehr & Peers Associates, Inc., *AQ-15 & TSM Plan for Lent Ranch Marketplace*, January 2000.

Qualitative Emissions

- **Project has the potential to create or be near an objectionable odor (e.g., agriculture, wastewater treatment, food processing, chemical plants, composting, landfills, dairies, renderings, etc.).**

Potential airborne odors associated with food services and eating establishments could result should such services locate on the site. Food-related odors would be typical of food service businesses. In such cases, odors would be controlled in accordance with County Department of Health Services and SMAQMD permit requirements for proper air filtration and food storage and disposal, and SMAQMD Rule 402 which prohibits persons from discharging quantities of air contaminants which cause nuisance to any considerable number of persons.

Agricultural odors that have been of concern in the Elk Grove area in the past have primarily included dairy farm operations. Odors associated with dairy farm operations are generated due to the breakdown of food within the four-chamber stomach of cattle, and the breakdown of manure. These processes typically result in the generation of hydrogen sulfide, methane, and ammonia. Through conditions imposed on another project, a 500-foot buffer between dairy farm operations and adjacent sensitive land uses have been required to reduce potential land use odor conflicts. A review of aerial photographs and survey of the vicinity indicate that there are no dairy operations within 500 feet of the proposed project site. In fact, the closest dairies in proximity to the project site are located about 3/4 mile to the northwest in the Laguna Ridge Conceptual Study Area and about one mile to the west on the west side of the South Pointe area. Given that these dairy operations are in excess of 500 feet from the project site and that the wind direction in the area is predominately from the south, potential odor impacts due to dairy farm operations are considered to be less than significant.

Agricultural practices on-site and on parcels adjacent to the project site are anticipated to involve the use of restricted and non-restricted pesticides, herbicides, and fungicides. These materials could be applied either through manual application and/or aerial spraying and could produce odors experienced within the project site. Currently, the Sacramento County Department of Agriculture and Measurements regulates and imposes limitations on the use of all restricted materials as part of the conditions for obtaining a permit for use. Based on State law and County policy, permit limitations would include, but are not limited to, not allowing chemicals to drift on to adjacent properties (Food and Agricultural Code, Section 12972); limiting the use of application of chemicals to periods when the pesticides are least likely to affect an adjacent land use; and requiring of buffers for some restricted chemicals. The County of Sacramento issues the permit application conditions for restricted chemicals on a case-by-case basis

taking into consideration surrounding land uses.[1] Non-restricted materials do not require a permit for application, and include such materials as "Round-Up" and other chemicals commonly found in the household.

The commercial land uses proposed as part of the project along Kammerer Road and most of the western boundary of the project site are not considered to be sensitive land uses, and would not be occupied by any one person on a 24-hour basis. In addition, a minimum distance of approximately 50 feet which includes the existing roadway and right-of-way would separate these commercial land uses along Kammerer Road from the existing agricultural uses to the south. Considering the existence of the Right to Farm Ordinance, the permit requirements imposed by the County for restricted chemical application, the non-sensitive commercial land use type proposed along the interface, and the existing separation between the uses north and south of Kammerer Road, the potential impacts related to potential odors experienced within the commercial portion of the site are considered to be less than significant.

Along the western and northern project boundaries, multi-family residences would be directly adjacent to agricultural uses. If the proposed South Pointe project is approved, the proposed residential uses along the western border of the project site would be adjacent to future residential uses within South Pointe, and there would not be any interface with agricultural uses. Furthermore, if the Laguna Ridge Conceptual Study Area to the northwest were eventually developed, the onsite residential uses would be adjacent to residential and/or commercial uses. Nonetheless, considering the existence of the Right to Farm Ordinance, the permit requirements imposed by the City to limit the hazards associated with restricted chemical applications, such as the prevention of drift, the restriction of application to periods when materials are least likely to affect adjacent land uses, and the use of buffers in some instances,[2] the potential impacts related to potential odors experienced within the residential portion of the site are considered to be less than significant.

Other odors that may be discernable to onsite uses could potentially include propane from the Suburban Propane facility and formalin from the Georgia-Pacific facility. These facilities are located about three-quarters of a mile southeast of the residential component of the project. All odors from these facilities are controlled in accordance with County Department of Health Services and SMAQMD permit requirements for proper air filtration, and SMAQMD Rule 402 which prohibits discharging quantities of air contaminants which cause nuisance to any considerable number of persons. Given the distance to

1 Julie Jensen, Deputy Agricultural Commissioner, County of Sacramento, personal communication, June 22, 2000.
2 Julie Jensen, Deputy Agricultural Commissioner, County of Sacramento, personal communication, June 22, 2000.

these facilities from on onsite uses, AQMD permit conditions for these types of facilities, and prevailing wind conditions, potential odor impacts from these facilities are considered to be less than significant.

In addition, the future uses planned for the vicinity of the project site are urban in nature, similar to the proposed project, and do not include uses that would generate objectionable odors. Consequently, no significant impacts from such odors are anticipated.

- **Project has the potential for an accidental release of toxic air emissions or acutely hazardous materials.**
- **Project has the potential to emit a toxic air contaminant regulated by the District or on a federal or state air toxics list.**
- **Project would involve the burning of hazardous, medical, or municipal waste as a waste-to-energy facility; project has the potential to generate a substantial amount of wastewater or potential for toxic discharge (e.g., aluminum forming, battery manufacture, chemical manufacture, dye casting, electroplating, food manufacture, reclamation plants, metal finishing, metal molding and casting, pharmaceutical, petroleum/fuel refining, photography, pulp and paper manufacture.**
- **Project could generate carcinogenic or toxic air contaminant emissions that exceed or contribute to an exceedance of the District's action level for cancer (one in one million), chronic (one) and acute (one) risks.**

Toxic or carcinogenic air pollutants are not expected to occur in any meaningful amounts in conjunction with operation of the proposed land uses. Only common forms of hazardous or toxic substances typically used, stored, or sold in conjunction with office, retail, and household activities would be present in small quantities. Most uses of such substances would occur indoors. None of the uses identified above in the third threshold would occur on the project site. Only a few uses that could be developed on the site would require emitting toxic pollutants as a by-product. These common uses, their source types, and the potential emissions are identified in **Table 4.3-6**. Data in this table are compiled by the South Coast Air Quality Management District (SCAQMD) and are not all-inclusive; therefore, the table may not include uses that would be permitted on the site under the City's Zoning Code. Any uses of toxic substances that could involve an air release, however, would be subject to regulatory control under the permitting authority of SMAQMD. The potential for toxic air pollutants would be evaluated during the permit process by SMAQMD, which may require emission control equipment at the site. Adjacent land uses would not subject project site residents, employees, or visitors to toxic or carcinogenic air emissions. Based on the requirement to obtain permits, and the common uses expected on the site, no significant impacts are expected to occur.

Table 4.3-6
Examples of Toxic and/or Carcinogenic Air Emissions Which Could be Generated on the Project Site

Land Use	Source Type	Air Toxic Emissions
Gas Station	Fuel Dispensers	Benzene
Dry Cleaners	Cleaning Equipment	Perchloroethylene
Medical Clinic and Laboratory	Ethylene Oxide Sterilization Chamber	Ethylene Oxide

Source: South Coast Air Quality Management District, CEQA Air Quality Handbook *(Diamond Bar, California: South Coast Air Quality Management District, April 1993), pp. 5-12-14.*

- **Project could place sensitive receptors (e.g., schools, households, etc.) located within a quarter mile of toxic air emissions or near CO hotspots.**

As discussed above, the onsite land uses would not subject project site residents, employees, or visitors to toxic air emissions. In addition, off-site land use would not be affected by toxic air emissions associated with on-site land uses.

Traffic-congested roadways and intersections have the potential to generate localized high levels of CO. Localized areas where ambient concentrations exceed state and/or federal standards are termed CO "hotspots." The SMAQMD recommends the use of CALINE4, a dispersion model for predicting CO concentrations, as the preferred method of estimating pollutant concentrations near affected intersections. For each intersection analyzed, CALINE4 adds roadway-specific CO emissions calculated from peak hour turning volumes to ambient CO air concentrations. For this analysis, CO concentrations were calculated based on a simplified CALINE4 screening model developed by the Bay Area Air Quality Management District (BAAQMD). The simplified model is intended as a screening analysis which identifies a potential CO hotspot. If a hotspot is identified, the complete CALINE4 model is utilized to determine precisely the CO concentrations predicted at the intersections in question. This methodology assumes worst-case conditions (i.e., wind direction is parallel to the primary roadway, 90° to the secondary road; wind speed of less than one meter per second; and extreme atmospheric stability) and provides a screening of maximum, worst-case, CO concentrations.

Maximum future CO concentrations were calculated for peak hour traffic volumes at several of the intersections in the project vicinity with addition of traffic generated by the proposed project as well as related projects. The results of these calculations are presented in **Table 4.3-7** for representative receptors located 50, 100 and 300 feet from each roadway. As shown, the CALINE4 screening model predicts that, under worst case conditions, future CO concentrations would not exceed the state and federal 1- and 8-

hour CO standards near these intersections. Therefore, the project would not generate vehicle trips that cause a CO hotspot.

Table 4.3-7
Predicted Future Carbon Monoxide Concentrations

Intersections	50 Feet		100 Feet		300 Feet	
	1-Hour[1]	8-Hour[2]	1-Hour[1]	8-Hour[2]	1-Hour[1]	8-Hour[2]
Elk Grove Blvd./Bruceville Rd.	3.7	2.9	3.1	2.5	2.1	1.8
Bruceville Rd./Poppy Ridge Rd.	2.2	1.8	1.9	1.6	1.5	1.4
Bruceville Rd./Bilby Rd.	1.4	1.3	1.3	1.2	1.2	1.1
Bruceville Rd./Kammerer Rd.	1.6	1.4	1.5	1.3	1.2	1.2
Kammerer Rd./W. Stockton Blvd.	4.5	3.4	3.5	2.8	2.3	1.9
Poppy Ridge Rd./W. Stockton Blvd.	4.3	3.3	3.4	2.7	2.1	1.8

Source: Impact Sciences, Inc. Emissions calculation sheets are provided in Appendix 4.3.
[1] State standard is >20.0 parts per million. Federal standard is >35.0 parts per million.
[2] State standard is >9.0 parts per million. Federal standard is ≥9.5 parts per million.

MITIGATION MEASURES

Measures Already Incorporated into Project

Operational Impacts

MM4.3-2(a) The project developer shall implement all 19 measures proposed by the applicant in the Draft AQ-15 and TSM Plan for the project to reduce peak hour vehicle trips by project employees and to reduce the emissions from both mobile and stationary sources.

Timing/Implementation: During all planning and development phases of the project.
Enforcement/Monitoring: City of Elk Grove Planning Department.

Measures Incorporated into the EIR

Construction Impacts

The following dust control measures are recommended to assist in the implementation of SMAQMD Rule 403 during the grading and construction phases of development to reduce PM_{10} impacts.

MM4.3-1(a) The construction contract shall require that the contractor water all exposed soil surfaces to keep them moist at all times.

Timing/Implementation: During all grading and construction phases of the project.
Enforcement/Monitoring: City of Elk Grove Planning Department and SMAQMD.

MM4.3-1(b) The construction contract shall require that the contractor water all dirt roads three times per day to prevent dust generation and that the contractor will limit travel speeds on any unpaved roads to 15 mph or less.

Timing/Implementation: During all grading and construction phases of the project.
Enforcement/Monitoring: City of Elk Grove Planning Department and SMAQMD.

MM4.3-1(c) The construction contract shall require that all trucks hauling soil, sand, or other loose material are covered and at least two feet of freeboard (i.e., minimum vertical distance between top of load and top of trailer) is maintained.

Timing/Implementation: During all grading and construction phases of the project.
Enforcement/Monitoring: City of Elk Grove Planning Department and SMAQMD.

The following is proposed to reduce NO_X emission during general construction activities.

MM4.3-1(d) The construction contract shall require contractors to implement ridesharing programs for construction employees traveling to and from the site.

Timing/Implementation: During all construction phases of the project.
Enforcement/Monitoring: City of Elk Grove Planning Department and SMAQMD.

SMAQMD recommended measures during the Notice of Preparation (NOP) to reduce oxides of nitrogen construction emissions. These measures included either utilizing 20 percent CARB certified off-road engine in the mix of construction equipment operating onsite or providing a 10 percent reduction in NO_X emission over an uncontrolled fleet. The feasibility of these measures is questionable, since the availability of construction equipment within Sacramento County that would meet the SMAQMD requirements is very limited. In other words, only about one or two construction projects in the County could occur simultaneously due to the limited amount of equipment. It should be noted that the majority of NO_X generated by the project would be due to workers trips, not by construction equipment.

Mitigation for architectural coatings involves the required use of materials that comply with SMAQMD Rule 442. No feasible mitigation beyond Rule 442 is available to reduce the significant impacts of the project.

Operational Impacts

The Draft General Plan Policy AQ-15 and TSM Plan prepared by the applicant for the proposed project identifies all feasible mitigation measures that are applicable to the land uses proposed for this project. The measures would provide a reduction in project-generated emissions of at least 15 percent as required by General Plan Policy AQ-15. No additional mitigation measures are known or recommended that would provide additional emissions reduction beyond those that are already proposed in the Draft General Plan Policy AQ-15 and TSM Plan. No additional measures would be capable of reducing the operational emissions of the project to below the SMAQMD's recommended thresholds.

CONSISTENCY WITH GENERAL PLAN POLICIES

Table 4.3-8 identifies the General Plan Air Quality Element policies that are directly applicable to the proposed project, and presents an evaluation of the consistency of the project with these statements. The final authority for interpretation of these policy statements, and determination of the project's consistency rests with the City Council.

Table 4.3-8
General Plan Air Quality Element Policy Consistency

General Plan Policies	Consistency with General Plan	Analysis
Policy AQ-3: Promote optimal air quality benefits through energy conservation measures in new development.	Yes	The project would be required to comply with Energy Building Regulations adopted by the California Energy Commission (Title 24 of the Cal. Code of Regulations) and adopted City of Elk Grove energy conservation requirements.
Policy AQ-5 Require the use of Best Available Control Technology (BACT) to reduce air pollution emissions.	Yes	The project would implement dust control measures pursuant to SMAQMD Rule 403 during construction to reduce PM_{10} emissions, as well as measures contained the General Plan Policy AQ-15 and Transportation System Management (TSM) Plan ("AQ-15/TSM Plan"). See analysis of Policy AQ-15.
Policy AQ-8 Implement the Sacramento City/County Bikeways Master Plan.	Yes	Bicycle paths proposed within the project would link to areawide bicycle facilities envisioned in the General Plan and the County's Bikeways Master Plan. The Lent Ranch Marketplace Design Guidelines address the location and design of pedestrian and bike paths.

General Plan Policies	Consistency with General Plan	Analysis
Policy AQ-9 Secure adequate funding for Regional Transit so that transit is a viable transportation alternative. Development shall pay its fair share of the cost of transit facilities required to serve the project.	Yes	The project would include a transit component in the Public Facilities Finance Plan adopted by the City Council for the project. A fee would be collected from the project for use by Regional Transit (RT) or some other transportation service entity that provides service to the City. In the event that a transportation entity cannot commit to the commencement of service to the project within a time period acceptable to either the project or the City, fees would be paid to the City to be applied to a comprehensive transit alternative developed to serve Elk Grove.
Policy AQ-11 Require as a building standard the installation of electrical service in all residential development that can be used in the overnight charging of electric vehicles.	Yes	Electric vehicle charging facilities would be provided within parking lots of retail commercial uses, as indicated in the AQ-15/TSM Plan. Residential units with private garages would be equipped with 220v electrical current to facilitate vehicle charging.
Policy AQ-15 All major new indirect sources of emissions shall be reviewed and modified or conditioned to achieve a reduction in emissions.	Yes	Although the project would create a significant air quality impact, it would comply with the requirements of Policy AQ-15. Specifically, AQ-15 requires that projects achieve a fifteen percent reduction (15 point) in emissions from the level that would be produced by a base-case project assuming full trip generation in a cost-effective manner. To achieve this Policy, the project would mitigate its air quality impacts to the extent possible. Specifically, the project applicant has worked with the SMAQMD to develop a strategy that is both effective and cost-efficient. First, it has developed the AQ-15/TSM Plan in accordance with City Zoning Code requirements to reduce single occupant vehicle employee commute trips for new developments during peak hours. The Plan developed by the project would help reduce both vehicular trips and vehicular miles traveled, as well as improve project design to encourage non-automobile travel. TSM measures would include: a mix of land uses (retail, multi-family, office) proximate to one another to encourage linkages; bicycle and pedestrian paths and connectivity throughout the project; bus stop improvements to accommodate future transit service; a central transportation information kiosk; bicycle lockers, racks, and storage; and carpool parking and electric vehicle charging facilities. In addition, the project meets the intent of AQ-15 through its incorporation of a mixed-use element (i.e., a residential component) with land uses located within walking distance of each other. The project would also help reduce automobile travel (both trips and vehicle miles traveled) by providing retail uses in the Elk Grove and South County area, where there is a projected shortage of commercial development to serve the existing and proposed residential development that is predominant in the area. Without the project, residents from surrounding areas would be forced to drive substantial for comparable shopping, services, restaurants and entertainment. Also, much of the adjacent South Pointe Development, with its proposed approximately 1,000 residential units, would be within walking distance of the project site. At build-out, the project is expected to provide approximately 7,700 jobs, and these jobs may be filled by residents of the new residential development nearby, thus reducing vehicle miles traveled.

General Plan Policies	Consistency with General Plan	Analysis
Policy AQ-15, continued		Therefore, the project would contribute to a more balanced mix of land uses that would promote a reduction in automobile usage resulting in a reduction in air emissions from the level that would be produced by a base-case project assuming full trip generation.
Policy AQ-17 Require that development projects be located and designed in a manner that will conserve air quality and minimize direct and indirect emission of air contaminants	Yes	See analysis of Policy AQ-15, above.
Policy AQ-18 Encourage employment-intensive development, having the potential to employ 200 or more employees, where adequate transit service is planned, and discourage such development where adequate transit service is not planned.	Yes	While the project site is not currently served by transit, transit service would likely be planned and implemented as project demand warrants. See analysis of Policies AQ-9 and AQ-15, above.
Policy AQ-19 Identify the air quality impacts of development proposals to avoid significant adverse impacts and require appropriate mitigation measures or offset fees.	Yes	The air quality impacts of the project and feasible mitigation measures are identified in this EIR.
Policy AQ-20 Submit development proposals to AQMD for review and comment in compliance with CEQA prior to consideration by the appropriate decision-making body.	Yes	The AQMD is actively participating in the preparation of the AQ-15 TSM Plan and review of the Draft EIR.
Policy AQ-21 Provide for the location of ancillary employee services (including, if not limited to, child care, restaurants, banking facilities, convenience markets) at major employment centers for the purpose of reducing midday vehicle trips.	Yes	The project would be mixed-use in nature, and would include many ancillary employee services and other community serving uses in addition to the major retail and office employment centers. This would reduce vehicle trips and miles traveled during all times of the day.
Policy AQ-22 Provide for buffers between sensitive land uses and sources of air pollution or odor.	Yes	The project would not create a stationary source of air pollution or odor affecting nearby sensitive land uses. The residential component of the project would be separated from commercial and retail uses by landscaped areas, walls and parking areas. In addition, the project is separated from agricultural land to the south by 96-foot wide Kammerer Road, 36 feet of landscaping on the north side of the roadway, and 30 feet of landscaping on the south side of the roadway, for a total width of approximately 162 feet.

General Plan Policies	Consistency with General Plan	Analysis
Policy AQ-23 Promote mixed-use development to reduce the length and frequency of vehicle trips.	Yes	The project would be a mixed-use development, providing necessary retail and commercial uses in an area where commercial development is in a state of undersupply, and where demand for these services is anticipated to be much greater in the future. Residents of the proposed adjacent South Pointe development, as well as from the project's multi-family units, would be able to walk to various neighborhood-serving amenities within the project. The project would provide approximately 7,700 jobs at build-out. The project would likely promote a better balance of employment, services and housing, improve the mix of uses in the community and thus reduce vehicle trips and miles traveled.
Policy AQ-24 Provide for increased intensity of development along existing and proposed transit corridors.	Yes	The project site is located along an existing transit corridor, SR 99. While the project site is not directly served by transit currently, transit routes would likely be planned to serve the project as ridership demand warrants.
Policy AQ-25 Require that new development be designed to promote pedestrian and bicycle access and circulation.	Yes	See analysis of Policies AQ-8 and AQ-15, above.
Policy AQ-27 Require that all employee parking areas for new development be designed with controllable access.	Yes	Employee parking areas would be identified to employees within retail areas. Employee parking would be separated from patron parking when appropriate to ensure that patron and employee parking is ample and accessible.
Policy AQ-28 Require that large new developments dedicate land for use as park-and-ride lots if suitably located	Yes.	The AQ-15/TSM Plan outlines measures that would be included in the project that area aimed at trip reduction. At this time, a park-and-ride lot is not provided since transit service is not available to the site nor is it planned to be extended to serve the site. Consequently, the project site is not suitably located for use as a park-and-ride facility.
Policy AQ-29 Require traffic counter loops and traffic management hardware at nonresidential garage entrances, driveways, new intersections, and other appropriate locations.	Yes	Traffic counter loops and traffic management hardware would be installed if necessary to control traffic flow and access. However, the project is designed such that traffic counter loops and traffic management hardware are not anticipated to be necessary.
Policy AQ-30 Require that new commercial and industrial projects adjacent to bus stops make provisions in their project design for park-and-ride spaces.	Yes	Currently the project site is not served by an existing bus route, although bus service to the project is anticipated to be provided in the future as demand for such service warrants. As transit service is neither available nor planned to serve the project site, it is not practicable to provide space for park-and-ride activities. Bus stops would be provided adjacent to commercial uses that would serve as destinations for transit riders.
Policy AQ-37 Maximize air quality benefits through selective use of vegetation in landscaping and through revegetation of appropriate areas.	Yes	The project would contain substantial areas of landscaping and greenways. A diverse plant palate for the project is contained in the Lent Ranch Marketplace Design Guidelines, and plant species were selected for adaptability to climate, foliage retention, and aesthetic appeal.

CUMULATIVE IMPACTS

According to page 43 of the SMAQMD's *Air Quality Thresholds of Significance* guidance document, development projects are considered cumulatively significant if:

1. The project requires a change in the existing land use designation of the site (i.e., a general plan amendment or zoning change); AND

2. The projected emissions (ROG, NO_X, or PM_{10}) of the proposed project are greater than the emissions anticipated for the site if developed under the existing land use designation.

Impact 4.3-3 Proposed project would exceed SMAQMD thresholds for cumulative impacts. This would result in a significant cumulative impact.

Implementation of the proposed project would require amendments to the General Plan and Zoning Ordinance. These amendments would allow for substantially greater development on the project site than what is allowed under the existing designations for the site. The amount of energy-related emissions and traffic-related emissions would also be substantially greater than what would be generated under the maximum development potential of the site under the existing designations. Consequently, the proposed project would have a significant adverse incremental effect on the region's ability to attain air quality standards, and would be considered cumulatively significant.

Impact 4.3-4 Development of project in combination with cumulative projects would result in emissions that exceed SMAQMD thresholds. This would result in a significant cumulative impact.

Construction activities associated with the Grant Line Road interchange project, the development of the South Pointe project, East Franklin Specific Plan, the Laguna Ridge Specific Plan, the Laguna Ridge Conceptual Study, Lent Ranch project or other development areas could all or partially occur during the same period. Therefore, these is the potential for combined construction air quality impacts to occur if activities were occurring simultaneous. While all these projects would implement recommended air quality controls to reduce fugitive dust and engine emissions, the combined effect would be cumulatively significant. For example, **Table 4.3-9** shows the combined site preparation (grading) emissions of the proposed project along with site preparation emissions generated by the Grant Line Road interchange project. As shown, the combined emissions would exceed the SMAQMD's recommended thresholds. Therefore, they would be considered cumulatively significant.

Table 4.3-9
Estimated Site Preparation Emissions for Cumulative Projects

Emissions Source	Emissions in Pounds per Day		
	ROG	NO_X	PM_{10}
SITE PREPARATION (GRADING) [1]			
Proposed Project [1]	6.73	62.16	1,254.87
Grant Line Interchange [2]	7.89	63.37	2,722.32
Net Emission Totals:	14.62	125.53	3,977.19
SMAQMD Threshold:	85.00	85.00	275.00
Exceeds Threshold?:	NO	YES	YES

Source: Impact Sciences, Inc.

[1] Source: Table 4.3-2 in this EIR section.
[2] Source: Grant Line Interchange Administrative Draft EIR, July 24, 2000.

CUMULATIVE MITIGATION MEASURES

Project specific mitigation measures 4.3-1(a) through 4.3-1(g) would apply to cumulative air quality constriction impacts, but would not reduce impacts to a less than significant level. Mitigation measure 4.3-2(a) would not be sufficient to reduce cumulative operational air quality impacts to a less than significant level.

UNAVOIDABLE SIGNIFICANT IMPACTS

Short-term fugitive dust (PM_{10}) emissions during site preparation and the ROG, NO_X, and PM_{10} construction emissions (construction worker vehicles and architectural coatings) would remain both individually and cumulatively significant. Operational emissions would also remain above the SMAQMD's recommended thresholds for ROG and NO_X and be both individually and cumulatively significant.