APPENDIX D
AIR QUALITY REPORT

CITY PLACE SKY LOFTS
AIR QUALITY REPORT

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SECTION 1.0
INTRODUCTION AND SUMMARY

This report documents the methodologies, assumptions, findings, and recommendations of the air quality study for the proposed City Place Sky Lofts project in the City of Santa Ana, California. The study analyzes potential air quality impacts associated with short-term construction and long-term operation of the proposed project and identified potential mitigation to lessen and/or avoid significant adverse project related air quality impacts.

1.1 PROJECT LOCATION

The proposed City Place Sky Lofts project is located approximately thirty miles southeast of Los Angeles in the City of Santa Ana. Figure 1.1-1 from the City Place Sky Lofts Traffic Impact Study (May, 2007) is represented here showing the regional location map for the project. The project site is located in the north part of Santa Ana approximately 0.5 mile north of the Interstate 5 (I-5) and 0.25 miles south of State Route (SR) 22. The project site is located on the northwest corner of the intersection of Lawson Way and the proposed Jeanette Lane.

1.2 PROJECT DESCRIPTION AND SCOPE

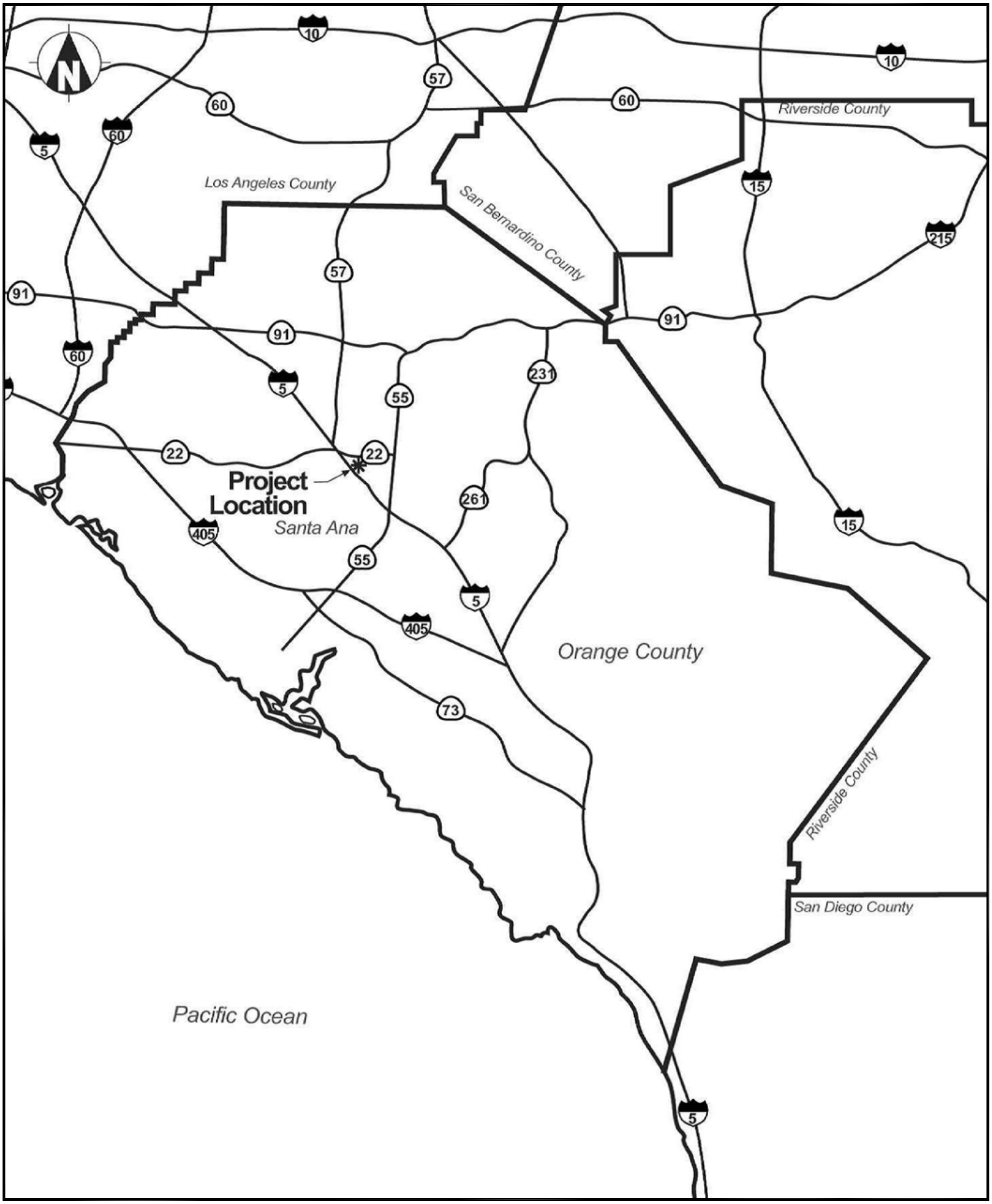
The proposed City Place Sky Lofts consists of a 27-story residential tower of 335 condominium units and 20 townhomes for a total of 355 dwelling units. Specifically, the proposed project includes:

- 52 studio condominium units
- 202 one-bedroom condominium units
- 146 two-bedroom condominium units
- Seven three-bedroom condominium units
- 20 two-bedroom townhome units

Figure 1.1-2 shows the project site plan for City Place Sky Lofts. The proposed project includes a parking garage with 710 residential parking spaces and 79 visitor parking spaces for a total of 789 parking spaces. The proposed project would also contain 38,280 square feet of amenities (i.e., pool, spa, cabana/lounge, fireplace, outdoor barbecue, gymnasium, dining and kitchen area, and media room) dedicated exclusively for City Place Sky Lofts occupants.

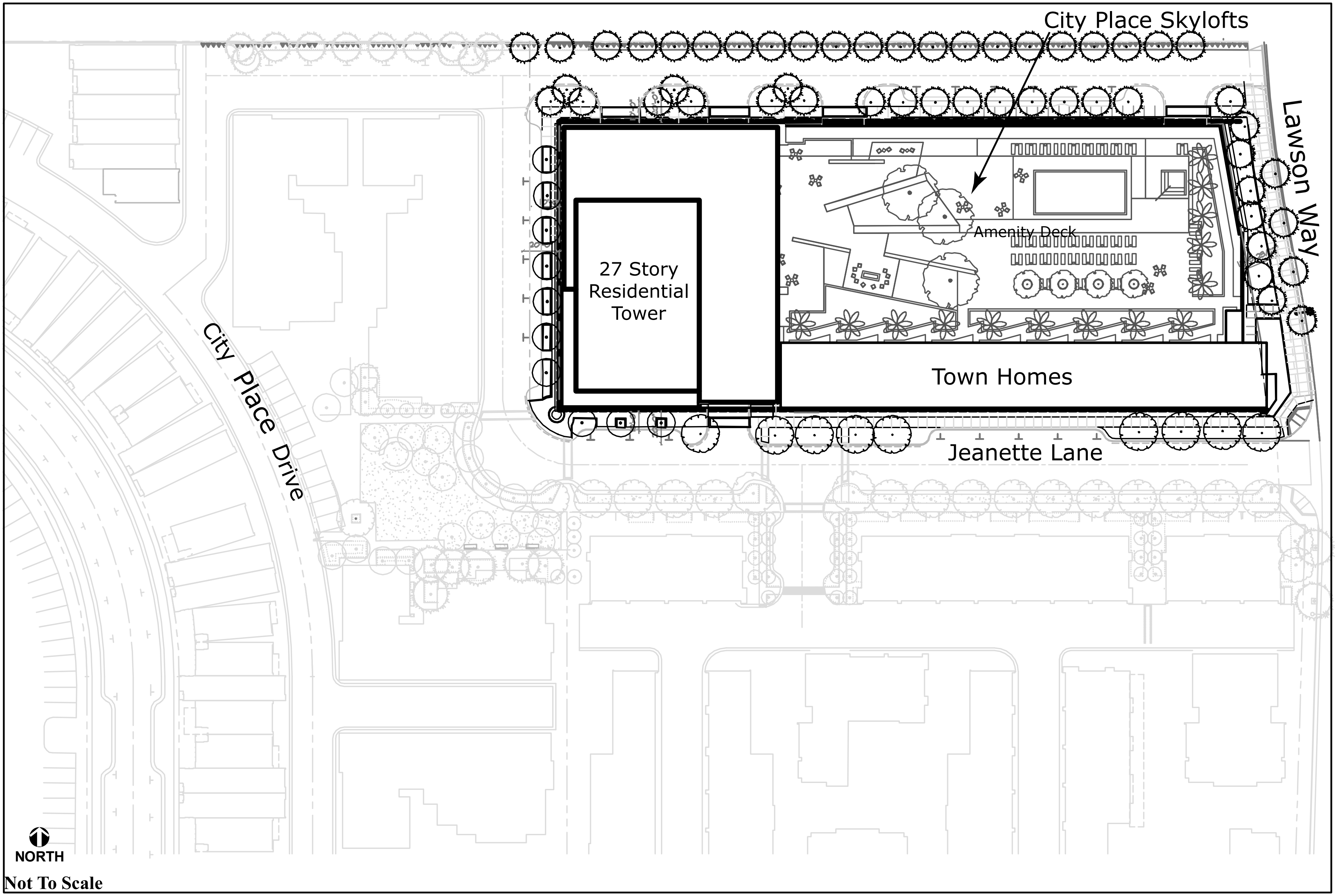
The anticipated completion and occupancy of the proposed project is 2010. The year designated as full buildout for the area is 2030. This report analyzes air quality according to the following scenarios:

- 2010 without the proposed project
- 2010 with the proposed project
- 2030 without the proposed project
- 2030 with the proposed project



Source: P&D Consultants (2007).

Figure 1.1-1
Regional Location Map



Source: Steven Ehrlich Architects (2007).

Figure 1.1-2
Project Site Plan

1.3 SUMMARY

Existing Conditions. The project site is in the South Coast Air Basin of California (Basin), a 6,600 square-mile area encompassing all of Orange County and the non-desert parts of Los Angeles, Riverside and San Bernardino Counties. The Basin is an area of high air pollution potential, particularly from June through September. Light winds and shallow vertical atmospheric mixing frequently reduce pollutant dispersion, thus causing elevated air pollution levels. Pollutant concentrations in the Basin vary with location, season and time of day. Ozone (O_3) concentrations, for example, tend to be lower along the coast, higher in the near inland valleys, and lower in the far inland areas of the Basin and adjacent desert.

Over the past 30 years, the South Coast Air Quality Management District (AQMD) has made substantial progress in reducing air pollution levels in southern California. The area was previously designated non-attainment for all of the National Ambient Air Quality Standards (NAAQS), except for sulfur dioxide (SO_2) and lead. The area is now defined as in attainment for nitrogen dioxide (NO_2), SO_2, and lead, with carbon monoxide (CO) approaching attainment. Levels of particulate matter and ozone, while reduced substantially from their peak levels, are still far from attainment in the Basin.

Environmental Impacts. The proposed project would produce air pollutant emissions from both the construction and operation phases of the proposed land uses. For each of these phases, the analysis included an evaluation of regional emissions. For operations, the analysis also addresses local area concentrations of CO.

Construction of the proposed project would generate pollutant emissions from the following activities:

(1) grading and paving operations.
(2) travel by construction workers to the site.
(3) delivery and hauling of construction materials and supplies to and from the site.
(4) fuel combustion by on-site construction equipment.
(5) the application of architectural coatings and other building materials that release reactive organic gases (ROG).

Construction emissions calculated for this project would exceed the South Coast Air Quality Management District (SCAQMD) daily thresholds established for criteria pollutants for ROG.

An assessment of regional emissions from the operation of the proposed project was conducted. Based on that analysis, the operation of the project would produce air pollutant emissions in exceedance of the SCAQMD significance thresholds for ROG. As such, regional emissions generated by operation of the proposed project are anticipated to result in a significant air quality impact.

During operation of the project, project traffic was analyzed for potential for local area impacts on roads. Analysis at selected intersections was performed to determine the potential for the presence or the creation of CO hot spots attributable to the proposed project. Selected intersections were modeled to assess the potential for CO hotspot formation during the peak-hour traffic period. Based on the results of these analyses, project-related traffic is not anticipated to result in any exceedances of the state one-hour and eight-hour CO standards at any of the study intersections.

The SCAQMD has adopted criteria for assessing consistency with regional plans and the Air Quality Management Plan (AQMP) in its CEQA Air Quality Handbook. This study assessed the consistency of the proposed project with the AQMP. Overall, no significant adverse impact would occur as a result of the project with respect to consistency with AQMP.

Existing Regulations and Project Enhancement Measures. Existing regulations and project enhancement measures established by the SCAQMD and the City of Santa Ana would minimize air pollutants generated during construction of the proposed project. The measures are associated with grading and excavation, construction equipment travel on paved roads as well as the SCAQMD's intent to control fugitive dust emissions associated with construction equipment travel on on-site unpaved roads.

Adverse Impacts. The proposed project would result in air pollutant emissions that would exceed construction and operational thresholds established by the SCAQMD. With the incorporation of the project mitigation measures, the short and long term air quality impacts of the proposed project would be mitigated to the degree feasible but would still result in exceedances of the SCAQMD construction and operational phase thresholds. Consequently, the proposed project would result in an unavoidable significant adverse impact to air quality for ROC emissions during the construction and operational phases of the project.

SECTION 2.0
ENVIRONMENTAL SETTING

2.1 REGULATORY SETTING

Federal, state and local authorities have adopted various rules and regulations requiring evaluation of the impact on air quality of a planned project and appropriate mitigation for air pollutant emissions. The following Sections focus on current air quality planning efforts and the responsibilities of agencies involved in these efforts. A discussion of ambient air quality standards is also provided.

2.1.1 AUTHORITY FOR CURRENT AIR QUALITY PLANNING

A number of plans and policies have been adopted which address air quality. Plans and policies relevant to the proposed project are discussed in the following sections.

2.1.1.1 Federal Clean Air Act

The Federal Clean Air Act (CAA) was first enacted in 1955 and has been amended numerous times, most recently in 1990. The CAA establishes federal air quality standards, known as National Ambient Air Quality Standards (NAAQS), and specifies future dates for achieving compliance with these standards. The NAAQS were amended in July 1997 to include an additional standard for ozone (O_3) and to adopt a NAAQS for fine particulates ($PM_{2.5}$). The CAA also mandates that the state submit and implement a State Implementation Plan (SIP) for local areas not meeting the NAAQS. SIPs must include pollution control measures that demonstrate how the NAAQS will be met. The City of Santa Ana is located in the South Coast Air Basin (Basin), which was designated a non-attainment area for certain pollutants regulated under the CAA. By a separate state statute, the South Coast Air Quality Management District (SCAQMD) was established as the local air pollution control agency for the Basin.

The 1990 Amendments to the CAA identify specific emission reduction goals for areas not meeting the NAAQS. These Amendments require both a demonstration of reasonable further progress toward attainment and incorporation of additional sanctions for failure to attain or to meet interim milestones. The sections of the CAA which would most substantially affect the implementation of the proposed project are Titles I (Nonattainment Provisions) and II (Mobile Source Provisions).

The Title I provisions were established with the goal of attaining the NAAQS for the following criteria pollutants: ozone (O_3), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), fine particulates (PM_{10}), carbon monoxide (CO), fine particulate matter ($PM_{2.5}$, comprised of particles less than 2.5 microns in diameter) and lead (Pb). Table 2-1 shows the federal and state AAQS for these criteria pollutants.

TABLE 2-1
AMBIENT AIR QUALITY STANDARDS

Pollutant	Averaging Time	California Standards [a]	National Standards [a]	Pollutant Health Effects	Major Pollutant Sources
Ozone (O_3)	1 Hour	0.09 ppm (180 µg/m^3)	0.12 ppm (235 µg/m^3)	High concentrations can directly affect lungs, causing irritation. Common effects are damage to vegetation and cracking of untreated rubber.	Motor vehicles.
	8 Hour	0.07 ppm (137 µg/m^3)	0.08 (157 µg/m^3)		
Carbon Monoxide (CO)	1 Hour	20 ppm (23 mg/m^3)	35 ppm (40 mg/m^3)	Interferes with the transfer of fresh oxygen to the blood and deprives sensitive tissues of oxygen.	Internal combustion engines, primarily gasoline-powered motor vehicles.
	8 Hour	9 ppm (10 mg/m^3)	9 ppm (10 mg/m^3)		
Nitrogen Dioxide (NO_2)	Annual Average	- -	0.05 ppm (100 ug/m^3)	Irritating to eyes and respiratory tract. Colors atmosphere reddish-brown.	Motor vehicles, petroleum refining operations, industrial sources, aircraft, ships, railroads.
	1 Hour	0.25 ppm (470 ug/m^3)	- -		
Sulfur Dioxide (SO_2)	Annual Average	0.04 ppm -	0.03 ppm (80 ug/m^3)	Irritates upper respiratory tract; injurious to lung tissue. Can yellow the leaves of plants, destructive to marble, iron and steel. Limits visibility and reduces sunlight.	Fuel combustion, chemical plants, sulfur recovery plants and metal processing.
	24 Hour	0.05 ppm (131 ug/m^3)	0.14 ppm (365 ug/m^3)		
	1 Hour	0.25 ppm (655 ug/m^3)	- -		
Particulate Matter (PM_{10})	24 Hour	50 ug/m^3	150 ug/m^3	May irritate eyes and respiratory tract. Absorbs sunlight, reducing amount of solar energy reaching the earth. Produces haze and limits visibility.	Dust and fume-producing industrial and agricultural operations, combustion, atmospheric photochemical reactions, and natural activities such as wind-raised dust and ocean spray.
	Annual Arithmetic Mean	20 ug/m^3	50 ug/m^3		
Fine Particulate Matter ($PM_{2.5}$)	Annual Arithmetic Average	12 µg/m^3	15 ug/m^3	May increase respiratory symptoms and diseases and decrease lung function.	Vehicle exhaust, industrial combustion.
	24 Hour	-	65 ug/m^3		

[a] ppm = parts per million, µg/m^3 = micrograms per cubic meter, mg/m^3 = milligrams per cubic meter.

Source: California Air Resources Board (2007) and the United States Environmental Protection Agency (2007).

Mobile source emissions are regulated in accordance with Title II provisions. These provisions require use of cleaner burning gasoline and other cleaner burning fuels such as methanol and natural gas. Automobile manufacturers are also required to reduce tailpipe emissions of hydrocarbons, reactive organic gases (ROGs) and nitrogen oxides (NO_x).

2.1.1.2 California Clean Air Act

The California Clean Air Act (CCAA), signed into law in 1988, requires all areas of the state to achieve and maintain the California AAQS by the earliest practical date.

Standards for most of the criteria and other pollutants have been set by the State. The California AAQS tend to be more restrictive than the NAAQS and are based on even greater health and welfare concerns. California has also set AAQS for sulfates, hydrogen sulfide, vinyl chloride and visibility-reducing particles. Table 2-1 shows the California AAQS currently in effect for criteria pollutants.

Air pollution from commercial and industrial facilities is regulated by local air quality management districts. All air pollution control districts have been formally designated as attainment or non-attainment for each state AAQS. Table 2-2 lists the criteria pollutants and their relative attainment status. Serious or worse non-attainment areas are required to prepare air quality management plans to include specified emission reduction strategies in an effort to meet clean air goals. The Basin's criteria pollutant designations are based on the following criteria:

Area Designations

The South Coast Air Basin fails to meet national standards for O_3, $PM_{2.5}$, and PM_{10} and, therefore, is considered a federal non-attainment area for these pollutants. Nonattainment designations are categorized into four levels of severity: (1) moderate, (2) serious, (3) severe and (4) extreme. The following are descriptions of the attainment classifications:

- Unclassified: a pollutant is designated unclassified if the data are incomplete and do not support a designation of attainment or nonattainment.

- Attainment: a pollutant is designated attainment if the state AAQS for that pollutant was not violated at any site in the area during a three year period.

- Nonattainment: a pollutant is designated nonattainment if there was at least one violation of a state AAQS for that pollutant in the area.

- Nonattainment/Transitional: is a subcategory of the nonattainment designation. An area is designated nonattainment/transitional to signify that the area is close to attaining the AAQS for that pollutant.

Table 2-2 lists the criteria pollutants and their relative attainment status in the Basin.

TABLE 2-2
SOUTH COAST AIR BASIN ATTAINMENT STATUS

Pollutant	National Standards	California Standards
Ozone (O_3)	Severe	Nonattainment
Carbon Monoxide (CO)	Serious	Nonattainment (Los Angeles County Only)
Sulfur Dioxide (SO_2)	Attainment	Attainment
Nitrogen Dioxide (NO_2)	Maintenance	Attainment
PM_{10}	Serious	Nonattainment
$PM_{2.5}$	Nonattainment	Nonattainment

Source: California Air Resources Board website (http://www.arb.ca.gov/desig/adm/adm.htm).

2.1.1.3 South Coast Air Quality Management District

The SCAQMD has jurisdiction over approximately 12,000 square miles consisting of the four-county South Coast Air Basin and the Los Angeles County and Riverside County parts of what used to be, under state classification, the Southeast Desert Air Basin. Historically, the Basin has the highest number of exceedances of the federal AAQS in the United States. In 2002 alone, there were 60 days on which one or more federal AAQS were exceeded somewhere in the Basin. However, air quality trends through 2002 reveal continuation of a downward trend in concentrations and the number of exceedances in relation to preceding years. In the past few years, O_3 levels in the Basin have been markedly improving in terms of maximum concentration, the number of days exceeding standards and the severity of episode levels. In a continuing trend of improving air quality, the Basin made it through a summer without experiencing a stage one episode for the fourth year in a row. While 1999 and 2000 were the first years in the history of ambient air monitoring that the Basin was not the location of the highest recorded O_3 concentration in the nation, once again in 2001 the highest one-hour O_3 concentration in the nation was reported in the Basin.

The SCAQMD has adopted a series of Air Quality Management Plans (AQMPs) to meet the California and national AAQS. According to the 2003 AQMP, attainment of the federal PM_{10} standard is to occur no later than December 31, 2006 and O_3 standards are to be achieved by 2010. The eight-hour federal CO standard was to be attained no later than December 31, 2000; however, two exceedances were measured in the Basin during 2000. As of 2002, the Basin had met the CO standards and the SCAQMD will request reclassification as attainment in the next few years. The 2003 AQMP updates the demonstration of attainment with the federal AAQS for O_3 and PM_{10}, replaces the 1997 attainment demonstration for the federal CO standard and provides a basis for a maintenance plan for CO for the future and updates the maintenance plan for the federal NO_2 standard that the Basin has met since 1992.

The 2003 revision to the AQMP proposes policies and measures to achieve federal and state AAQS for healthful air quality in the Basin. The revision to the AQMP also addresses several state and 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. This AQMP is consistent with and builds on the approaches taken in the 1997 AQMP and the 1999 Amendments to the Ozone SIP for the South Coast Air Basin. However, this revision points to an urgent need for additional emissions reductions (beyond those incorporated in the 1997/99 AQMP) to offset increased emissions estimates from mobile sources and to meet all federal criteria pollutant standards within the time frames allowed under the federal CAA.

In addition to the AQMP and its rules and regulations, SCAQMD has published a handbook (California Environmental Quality Act (CEQA) Air Quality Handbook, November, 1993) intended to provide local governments and CEQA practitioners with guidance for analyzing and mitigating project specific air quality impacts. The Handbook provides standards, methodologies and procedures for conducting air quality analyses for projects subject to the requirements of CEQA.

2.1.1.4 Regional Comprehensive Plan and Guide

The Southern California Association of Governments (SCAG) is the regional planning agency for Los Angeles, Orange, Ventura, Riverside, San Bernardino and Imperial Counties and serves as a forum for regional issues relating to transportation, the economy and community development and the environment. SCAG serves as the federally-designated metropolitan planning organization (MPO) for the southern California region and is the largest MPO in the United States. With respect to air quality planning, SCAG has prepared the Regional Comprehensive Plan and Guide (RCPG) for the region, which includes Growth Management and Regional Mobility chapters that form the basis for the land use and transportation control parts of the AQMP and are utilized in the preparation of air quality forecasts included in the AQMP. SCAG also prepares the Regional Transportation Plan every three years which focuses on growth forecasts, long term financing needs and the future regional aviation system.

2.1.2 GREENHOUSE GAS EMISSIONS

The State of California has addressed the issue of global warming in the following legislation: AB 1493, Exec. Order S-3-05, and AB 32. These legislations are meant to recognize global warming as a significant threat to California and therefore certain guidelines must be enacted to limit the production of greenhouse gases (GHG’s). Executive Order S-3-05 states that:

- By 2010 Greenhouse gases must be reduced to 2000 emission levels
- By 2020 Greenhouse gases must be reduced to 1990 emission levels
- By 2050 Greenhouse gases must be reduced to 80% below 1990 levels

The order also states that the California Environmental Protection Agency will have oversight of regulation. Furthermore starting January 2006 and bi-yearly afterwards the CalEPA must prepare science reports of the potential impact global warming may have on California’s economy and environment.

On September 27, 2006, Governor Schwarzenegger signed AB 32, the Global Warming Solutions Act. The Act caps California’s GHG emissions at 1990 levels by 2020. This legislation represents the first enforceable statewide program in the U.S. to cap all GHG emissions from major industries that includes penalties for non-compliance. Primarily concerned with emissions of carbon dioxide (CO_2), it requires the California Air Resources Board (ARB) to establish a program for statewide greenhouse gas emissions reporting and to monitor and enforce compliance with this program. The Act authorizes ARB to adopt market-based compliance mechanisms including cap-and-trade, and allows a one-year extension of the targets. Methane and various chlorofluorocarbons (e.g., Freons used in air conditioning systems and refrigeration units) are also important GHG's that can contribute to global climate change. CO_2 and methane, however, are not ozone-depleting substances, which are pollutants targeted for phase-out because of their potential harm to the Earth's protective stratospheric ozone layer.

- On or before June 30, 2007, the Air Resources Board shall publicly make available a list of discrete early action GHG emission reduction measures prior to the future statewide GHG limit.
- By January 1, 2008 the state will determine the 1990 GHG emission levels and set that as a baseline for the 2020 emission limit.
- On or before January 1, 2011 the state will adopt quantifiable, verifiable, and enforceable emission reductions aimed to decrease GHG emissions to the 1990 baseline by 2020. These will come into effect by January 1, 2012 by the latest. The reductions measures may include direct reduction methods, alternative compliance mechanisms, and various incentives.

AB 32 requires that ARB adopt a quantified cap on GHG emissions representing 1990 emissions levels and disclose how it arrives at the cap; institute a schedule to meet the emissions cap; and develop tracking, reporting, and enforcement mechanisms to ensure that the state achieves the reductions in GHG emissions necessary to meet the cap. AB 32 also includes guidance to institute emissions reductions in an economically efficient manner and conditions to ensure that businesses and consumers are not unfairly affected by the reductions.

Assembly Bill 1493 requires the Air Resources Board to adopt regulations that addresses greenhouse gases emitted by motor vehicles in an effort to reduce emissions. In summary it requires:

- The ARB no later than January 1, 2005 to develop and adopt regulation to achieve the most feasible and cost-effective reduction of GHG's emitted by motor vehicles.
- ARB regulations do not go into effect before January 1, 2006 and furthermore the regulations must only apply to vehicle 2009 models or later.

The California Climate Action Registry must consult with the ARB to develop procedures and protocols for the reduction of greenhouse gases. In regards to the City Place Sky Lofts project vehicles in the construction phase will mostly likely not be affected by this regulation. Additionally, this will most likely not affect the City Place Sky Lofts project on a local level.

At this time, there are no federal or local laws, regulations, or policies pertaining to GHG emissions.

SECTION 3.0
EXISTING AIR QUALITY

3.1 REGIONAL AIR QUALITY

The project site is in the South Coast Air Basin (Basin) of California, a 6,600 square-mile area encompassing all of Orange County and the non-desert parts of Los Angeles, Riverside and San Bernardino Counties. The distinctive climate of this area is determined primarily by its terrain and geographical location. Regional meteorology is largely dominated by a persistent high pressure area which commonly resides over the eastern Pacific Ocean. Seasonal variations in the strength and position of this pressure cell cause changes in the weather patterns of the area. Local climatic conditions are characterized by warm summers, mild winters, infrequent rainfall, moderate daytime on-shore breezes and moderate humidity. This normally mild climatic condition is occasionally interrupted by periods of hot weather, winter storms and Santa Ana (hot easterly flow) winds.

The Basin is an area of high air pollution potential, particularly from June through September. This condition is generally attributed to light winds and shallow vertical atmosphere mixing. This frequently reduces pollutant dispersion, thus causing elevated air pollution levels. Pollutant concentrations in the Basin vary with location, season and time of day. Ozone (O_3) concentrations, for example, tend to be lower along the coast, higher in the near inland valleys and lower in the far inland areas of the Basin and adjacent desert.

Over the past 30 years, substantial progress has been made in reducing air pollution levels in southern California. The area previously was in non-attainment for all the National Ambient Air Quality Standards (NAAQS), except sulfur dioxide (SO_2). The area is now defined as in attainment for nitrogen dioxide (NO_2), lead (Pb) and SO_2, with carbon monoxide (CO) approaching attainment. Particulate matter and ozone levels, while reduced substantially from their peak levels, are still far from attainment in the Basin.

3.2 LOCAL AREA CONDITIONS

3.2.1 EXISTING POLLUTANT LEVELS AT NEARBY MONITORING STATIONS

The SCAQMD maintains a network of air quality monitoring stations throughout the Basin. As defined by the SCAQMD, the monitoring stations most representative of existing air quality conditions in the City of Santa Ana include two monitoring stations located in the City of Anaheim. The most recent data available for criteria pollutants are from the monitoring station located at Harbor Boulevard for PM_{10} and $PM_{2.5}$, and Pampus Lane for all other criteria pollutants. The data from these two monitoring stations, shown in Table 3-1, show the following pollutant trends:

Ozone. The maximum 1-hour O_3 concentration recorded from 2001 to 2005 was 0.136 parts per million (ppm), which was recorded in 2003. During this period, the California AAQS of 0.09 ppm was exceeded between one and 14 times annually, with the lowest number of exceedances recorded in 2005. The 1-hour O_3 NAAQS of 0.12 ppm was exceeded only twice during the five-year period, with the both of exceedances occurring in 2003. The maximum 8-hour O_3 concentration was 0.097 ppm, which was recorded in 2004. The 8-hour O_3 NAAQS of 0.08 ppm was exceeded once in 2003 and six times in 2004, with no exceedances in 2001, 2002, and 2005. The California 8-hour O_3 standard of 0.07 ppm was exceeded 35 times in 2004 and four times in 2005.

Carbon Monoxide. The maximum recorded 8-hour CO concentration from 2001 to 2005 was 5.4 ppm, which was recorded in 2002. During this time period, there were no exceedances of the California or national 8-hour CO standards. The maximum 1-hour CO concentration during the 5-year period was 8 ppm, which was recorded in 2001. During this time period, there were no exceedances of the California or national 1-hour CO standards.

Nitrogen Dioxide. The highest recorded concentration of NO_2 from 2001 to 2005 was 0.13 ppm, which was recorded in 2003. Neither the California AAQS nor the NAAQS were exceeded during the period.

Particulate Matter (PM_{10}). The highest recorded PM_{10} concentration from 2001 to 2005 was 96 micrograms per cubic meter of air ($\mu g/m^3$) of particulates, which was recorded in 2003. The highest annual average concentration during the 5-year period was 36.0 $\mu g/m^3$ recorded in 2001. During this same time period, the California PM_{10} AAQS was exceeded between three and nine days annually, with the lowest number of exceedances recorded in 2005. No violations of the NAAQS occurred during this time period.

Fine Particulates ($PM_{2.5}$). $PM_{2.5}$ is monitored at the monitoring station at Harbor Boulevard. The highest recorded $PM_{2.5}$ concentration from 2001 to 2005 was 115.5 $\mu g/m^3$ of particulates, which was recorded in 2003. The annual average PM2.5 concentration has fallen each year during this time period. The 24-hour and annual average NAAQS for $PM_{2.5}$ were exceeded at this station from 2001 to 2003, but not in 2004 or 2005. The new California AAQS for annual average $PM_{2.5}$ concentration has been exceeded each year from its inception in 2003.

Lead. The Basin is currently in compliance with California and NAAQS for lead.

3.2.2 CLIMATE CHANGE

Greenhouse gases are responsible for affecting the Earth's climate in what is known as the "Greenhouse Effect". These gases are found naturally, however the excessive anthropogenic production of GHGs is causing global temperatures to increase. GHGs concentrate in the Earth's atmosphere and block sun heat that is normally radiated back into space. GHGs also increase moisture in the atmosphere which will affect climate and weather patterns. Human-caused emissions of these GHGs (with the exception of water vapor) in excess of natural ambient concentrations are responsible for intensifying the Greenhouse Effect and have led to a trend of warming of the earth's climate, known as global climate change or global warming (Ahrens 2003). As a result, scientists agree that the Earth's temperature is increasing as shown that 1990 was the warmest decade in a millennium. The greenhouse gases as identified by the Kyoto Protocol are Carbon Dioxide (CO_2), Methane (CH_4), Nitrous Oxide (N_2O), hydrofluorocarbons (HFC's), Perfluorocarbons (PFC's), and Sulphur Hexafluoride (SF_6).

Emissions of GHGs contributing to global climate change are attributable in large part to human activities associated with the industrial/manufacturing, utility, transportation, residential, and agricultural sectors (California Energy Commission [CEC] 2006a). CO_2 is caused by the combustion of fossil fuels for transportation and power generation and CH_4 is mainly caused by landfills and cattle industry. In California, the transportation sector is the largest emitter of GHGs, followed by electricity generation (CEC 2006a). Methane, a highly potent GHG, results from off-gassing (the release of chemicals from nonmetallic substances under ambient or greater pressure conditions) associated with agricultural practices and landfills. CO_2 sinks, or reservoirs, include sequestration by vegetation or dissolution into the ocean, among other processes.

Climate change is a global problem that extends well beyond health-based air quality impacts. GHGs are global pollutants, unlike criteria air pollutants and TACs, which are pollutants of regional and local concern, respectively. Resource areas other than air quality and atmospheric temperature could be indirectly affected by the accumulation of GHG emissions. For example, an increase in the global average temperature is expected to result in a decreased volume of precipitation falling as snow in California and an overall reduction in snowpack in the Sierra Nevada. Snowpack in the Sierra Nevada provides both water supply (runoff) and storage (within the snowpack before melting), which is a major source of supply for the state. According to the CEC (CEC 2006b), the snowpack portion of the water supply could potentially decline by 30–90% by the end of the 21st century. A study cited in a report by the California Department of Water Resources (DWR) projects that approximately 50 percent of the statewide snowpack will be lost by the end of the century (Knowles and Cayan 2005). Although current forecasts are uncertain, it is evident that this phenomenon could lead to significant challenges in securing an adequate water supply for a growing population. An increase in precipitation falling as rain rather than snow could also lead to increased potential for floods because water that would normally be held in the Sierra Nevada snowpack until spring could flow into the Central Valley concurrently with winter storm events. This would place more pressure on California's levee/flood control system.

Another outcome of global climate change is sea level rise. Sea level rose approximately 7 inches during the last century (CEC 2006b), and it is predicted to rise an additional 7–22 inches by 2100, depending on the future levels of GHG emissions (IPCC 2007). If this occurs, resultant effects could include increased coastal flooding, saltwater intrusion, and disruption of wetlands (CEC 2006b). As the existing climate throughout California changes over time, the ranges of various plant and wildlife species could shift or be reduced, depending on the favored temperature and moisture regimes of each species. In the worst cases, some species would become extinct or be extirpated from the state if suitable conditions are no longer available.

3.2.3 SENSITIVE RECEPTORS

Some population groups, such as children, the elderly, and acutely ill and chronically ill persons, especially those with cardio-respiratory diseases, are considered more sensitive to air pollution than others. Sensitive land use receptors in the vicinity of the project site include an elder care facility east of the project site, Santiago Park to the south of the site and a residential condominium complex to the north of the site on Town and Country Road. The proposed project includes residential uses which are also considered a sensitive receptor.

TABLE 3-1
POLLUTANT STANDARDS AND ANAHEIM MONITORING STATIONS AMBIENT AIR QUALITY DATA

	2001	**2002**	**2003**	**2004**	**2005**
Ozone (O_3)[1]					
Maximum Concentration 1-hr period (ppm)	0.107	0.103	0.136	0.120	0.095
Maximum Concentration 8-hr period (ppm)	0.071	0.079	0.087	0.097	0.077
Days California 1-hr standard (*0.09 ppm*) exceeded	2	3	11	14	1
Days California 8-hr standard (*0.07 ppm*) exceeded	-	-	-	35	4
Days National 1-hr standard (*0.12 ppm*) exceeded	0	0	2	0	0
Days National 8-hr standard (*0.08 ppm*) exceeded	0	0	1	6	0
Carbon Monoxide (CO) [1]					
Maximum concentration 1-hr period (ppm)	8	7	6	5	4
Maximum concentration 8-hr period (ppm)	4.7	5.4	3.9	4.1	3.3
Days California 1-hr standard (*20 ppm*) exceeded	0	0	0	0	0
Days California 8-hr standard (*9 ppm*) exceeded	0	0	0	0	0
Days National 1-hr standard (35 *ppm*) exceeded	0	0	0	0	0
Days National 8-hr standard (*9 ppm*) exceeded	0	0	0	0	0
Nitrogen Dioxide (NO_2) [1]					
Maximum 1-hr concentration (ppm)	0.12	0.10	0.13	0.12	0.09
Annual Arithmetic Mean (AAM) (ppm)	0.029	0.024	0.024	0.020	0.021
Days California 1-hr standard (*0.25 ppm*) exceeded	0	0	0	0	0
Federal AAM standard (*0.0534 ppm*) exceeded	No	No	No	No	No
Particulate Matter (PM_{10})[2]					
Maximum 24-hr concentration ($\mu g/m^3$)	93	69	96	74	65
Annual average concentration (AAM, $\mu g/m^3$)	36.0	33.6	32.7	34.1	28.2
Annual average concentration (AGM, $\mu g/m^3$)	33.7	31.5	n/a	n/a	n/a
Days California 24-hr standard (*50* $\mu g/m^3$) exceeded	9	5	6	7	3
Days National 24-hr standard (*150* $\mu g/m^3$) exceeded	0	0	0	0	0
National AAM standard (*50* $\mu g/m^3$) exceeded	No	No	No	No	No
California AGM standard (*30* $\mu g/m^3$) exceeded	Yes	Yes	n/a	n/a	n/a
California AAM standard (*20* $\mu g/m^3$) exceeded	n/a	n/a	Yes	Yes	Yes
Particulate Matter ($PM_{2.5}$) [2]					
Maximum 24-hr concentration ($\mu g/m^3$)	70.8	68.6	115.5	58.9	54.7
Annual average concentration (AAM, $\mu g/m^3$)	22.4	18.6	17.3	16.8	14.7
Days National standard (*65* $\mu g/m^3$) exceeded	1	1	3	0	0
National AAM standard (*15* $\mu g/m^3$) exceeded	Yes	Yes	Yes	Yes	No
State AAM standard (*12* $\mu g/m^3$) exceeded	n/a	n/a	Yes	Yes	Yes

AAM = Annual Arithmetic Mean
AGM=Annual Geometric Mean
ppm = parts per million
$\mu g/m^3$ = micrograms per cubic meter
N/A = not available

Note: Ambient data for airborne lead is not included in this table because the Basin is currently in compliance with state and national AAQSs for lead and sulfur oxides.

[1] Monitoring data were provided by the station at 1630 Pampus Lane in Anaheim.

[2] The Harbor Boulevard monitoring station in Anaheim provided monitoring data for $PM_{2.5}$.

Source: South Coast Air Quality Management District and CARB Air Quality Data 2001-2005.

SECTION 4.0
SIGNIFICANCE THRESHOLDS/METHODOLOGIES

4.1 SIGNIFICANCE THRESHOLDS

Air quality planning strategy in the South Coast Air Basin is based on attainment of the National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (California AAQS). To this end, the South Coast Air Quality Management District (SCAQMD) has established thresholds of significance for the assessment of air quality impacts attributable to proposed projects. The thresholds seek to promote attainment of the CAAQS and NAAQS in the Basin.

The SCAQMD has promulgated daily emission thresholds for project construction and operations. The SCAQMD thresholds are set at a level which either promote or maintain regional attainment of the relevant AAQS. A project is deemed to have a significant adverse impact on regional air quality if emissions (specified in either pounds of pollutant emitted per day or per quarter) of specified pollutants due to either project construction or operation exceed the significance threshold. Regional significance thresholds are summarized in Table 4-1.

TABLE 4-1
SCAQMD SIGNIFICANCE THRESHOLDS
(in pounds per day)

Pollutant	Construction Pounds per Day	Operations Pounds Per Day
CO	550	550
NO_x	100	55
VOC	75	55
PM_{10}	150	150
$PM_{2.5}$	55	55
SO_x	150	150
Lead	3	3

Source: South Coast Air Quality Management District, 2007 AQMP Final Program EIR (June 2007).

A standardized methodology has been developed by the SCAQMD and the California Department of Transportation (Caltrans) to quantify carbon monoxide (CO) pollutant concentrations from vehicle traffic. Project related vehicle traffic was modeled using Caltrans' CALINE4 pollutant dispersion model. A project would have a significant adverse impact on local area air quality if it causes a new exceedance or a measurable increase in an existing exceedance of an NAAQS or California AAQS.

A CO hotspots analysis was not conducted for the parking garage because queuing at the gate will not cause any potential vehicle back-up and internal circulation within the parking structure cannot be accurately characterized (based on regular traffic flow patterns). A CO hot spots analysis is performed when a traffic report indicates that a proposed project has the potential to raise local concentrations to above applicable ambient air quality standards. Level of service (LOS) is typically the parameter used to screen vehicle flow at intersections or on roadways for this potential project impact. Although LOS was not analyzed for the parking structure, the traffic report for the project analyzed the parking structure for queuing because access will be controlled by gates. The traffic report found that the vehicles in queue would not exceed one, even during the A.M. and P.M. peak hours.

California AAQS have been established for sulfates, hydrogen sulfide, vinyl chloride and lead. Based on the types of the fuels consumed during project construction and operations, emissions of sulfates, hydrogen sulfide, vinyl chloride and lead are expected to be negligible. Therefore, these pollutants were not analyzed in this study.

Neither ARB nor any air district in California, including the SCAQMD, has identified a significance threshold for analyzing GHG emissions generated by a proposed project or a methodology for analyzing air quality impacts related to global warming. Though, by adoption of AB 32, the State of California has identified GHG reduction goals, the effect of increased GHG emissions as they relate to global climate change is inherently an adverse environmental impact. While the emissions of one single project will not cause global climate change, GHG emissions from multiple projects throughout the world could result in an impact with respect to global climate change.

To meet AB 32 goals, California would need to generate less GHG than current levels. It is recognized, however, that for most projects there is no simple metric available to determine if a single project would substantially increase or decrease overall GHG emission levels.

While AB 32 focuses on stationary sources of GHG emissions, the primary objective of AB 32 is to reduce California’s contribution to global climate change by reducing California’s total annual production of GHG emissions. The impact that GHG emissions have on global climate change is not dependent on whether they were generated by stationary, mobile, or area sources; or whether they were generated in one region or another. Thus, the net change in total GHG levels generated by a project or activity is the best metric for determining whether the proposed project would contribute to climate change.

There are currently no published thresholds of significance for measuring the impact of global climate change on or from a project.

SECTION 5.0
ANALYSIS OF PROJECT IMPACTS

Analysis of the potential air quality impacts of the proposed City Place Sky Lofts project was conducted for both the construction and operations phases. For each of these phases, the analysis included analysis of regional emissions. Emissions' modeling was performed using the Windows version of the URBEMIS2007 model (URBEMIS). URBEMIS is designed to estimate air emissions from land use development projects. The model was set to reflect the South Coast Air Basin parameters for 2007/2008 and reflected all applicable regional default assumptions. Although project-specific variables by be used, regional defaults tend to be the most conservative and acceptable when evaluating programmatic impacts such as in this sustainability study.

The URBEMIS model was used to estimate emissions associated with the construction and daily operation applicable to specific land use types. Emissions were also estimated for each phase of the construction and operational activities.

For the operational phase, the analysis also addresses local area concentrations of a specific pollutant, carbon monoxide (CO). CO is the only pollutant for which standardized modeling methodologies for estimating localized concentrations have been developed and approved by the South Coast Air Quality Management District (SCAQMD). Therefore, localized concentrations of CO emissions generated from mobile sources during operations of the project were evaluated.

5.1 CONSTRUCTION PHASE

5.1.1 Construction Impacts

Construction of the proposed project would generate pollutant emissions from the following activities:

(1) Grading and paving operations.
(2) Travel by construction workers to the project site.
(3) Delivery and hauling of construction materials and supplies to and from the project site.
(4) Fuel combustion by on-site construction equipment.
(5) Application of architectural coatings and other materials that release reactive organic gases (ROG).
(6) Particulate matter (dust, PM_{10}) generation from vehicles traveling on interior roadways as it is constructed.

Construction emissions are calculated based on the type and magnitude of development which would be constructed for the proposed project, the time line for project construction, the mix of construction equipment required to build the project and emissions factors from the SCAQMD's CEQA Air Quality Handbook and the United States Environmental Protection Agency's (EPA's) Compilation of Emission Factors (AP42). Emissions from construction activities were calculated for a daily basis and were compared to the SCAQMD's daily construction related emissions thresholds.

Daily construction-related regional emissions for the proposed project are presented in Table 5-1. Construction related daily emissions would be above the SCAQMD significance thresholds for reactive organic gases (ROG). The ROG emissions are primarily from the application of architectural coatings. The emissions of these pollutants are considered to produce adverse significant adverse short term regional air quality impact because the levels of these emissions during construction of the proposed project would be in exceedance of the SCAQMD air pollutant significance thresholds. As detailed in Appendix A

TABLE 5-1
PROJECT RELATED DAILY CONSTRUCTION EMISSIONS
(in pounds per day)

	ROG	NO$_x$	CO	SO$_x$	PM$_{10}$	PM$_{2.5}$
Fine Grading	-	28.07	14.69	-	21.42	5.48
Fine Grading Dust	-	0.00	0.00	-	20.00	4.18
Fine Grading Off Road Diesel	-	28.00	13.56	-	1.41	1.30
Fine Grading On Road Diesel	-	0.00	0.00	-	0.00	0.00
Fine Grading Worker Trips	-	0.07	1.13	-	0.01	0.00
Asphalt	-	15.52	9.92	-	1.26	1.15
Paving Off-Gas	-	0.00	0.00	-	0.00	0.00
Paving Off Road Diesel	-	13.27	7.15	-	1.15	1.06
Paving On Road Diesel	-	2.13	0.79	-	0.10	0.09
Paving Worker Trips	-	0.12	1.98	-	0.02	0.01
Building	151.13	35.56	54.61	0.07	2.33	1.99
Building Off Road Diesel	4.07	18.22	11.8	0.00	1.33	1.22
Building Vendor Trips	1.23	15.42	11.06	0.02	0.74	0.63
Building Worker Trips	1.02	1.92	31.75	0.04	0.25	0.14
Architectural Coating	144.62	-	-	0.00	-	-
Coating Worker Trips	0.19	-	-	0.01	-	-
Building Construction Emissions	151.13	79.15	79.22	0.07	25.01	8.62
SCAQMD Daily Threshold	75	100	550	150	150	55
Difference[1]	76	(21)	(471)	(150)	(125)	(46)
Exceeds Thresholds?	**Yes**	**No**	**No**	**No**	**No**	**No**

[1] Numbers in parenthesis indicate the amount of the pollutant that is below SCAQMD emissions thresholds.

Source: URBEMIS2007 emissions inventory model. Emissions shown are unmitigated.

5.1.2 Construction Odor Impacts

The proposed project has the potential to create objectionable odors during construction. Some odors may be associated with the operation of diesel engines during site preparation. However, these odors are typical of urbanized environments and would be subject to construction and air quality regulations, including proper maintenance of machinery to minimize engine emissions. These emissions are also of short duration and they are quickly dispersed into the atmosphere. Therefore, the project would not create objectionable odor impacts during construction.

5.2 OPERATIONS PHASE

5.2.1 Operations Regional Impacts

Air pollutant emissions associated with project operations would be generated by both consumption of electricity and natural gas and by the operation of on-road vehicles. Emissions associated with energy consumption (electricity and natural gas) are classified as regional stationary source emissions. Electricity is considered an area source because it is produced at various locations within, as well as outside of, the South Coast Air Basin. Because it is not possible to isolate geographically where electricity production occurs, these emissions are considered to be regional in nature. Emissions of criteria pollutants associated with the production of energy were calculated using emission factors from the SCAQMD's CEQA Air Quality Handbook.

Vehicle and stationary source emissions for the operational phase of the City Place Sky Lofts project were calculated using the URBEMIS2007 emissions inventory model. This computer model projects emissions rates for motor vehicles based on the year of analysis, a projected vehicle fleet mix, projected vehicle speeds, whether these emissions are projected to occur during the summer or the winter months, and other factors. These emissions were calculated using the projected ambient temperature range. Assumptions used in preparing the model analysis were consistent with those recommended in SCAQMD's CEQA Air Quality Handbook.

The volume of vehicle trips attributable to the proposed project was taken from the project traffic study. Average trip distances are provided within the CARB URBEMIS2007 emissions inventory model. The URBEMIS2007 model calculates emissions resulting from project related on-road mobile source emissions and stationary source emissions from electricity and natural gas consumption. Project-related operational emissions for on-road mobile sources and stationary sources are summarized in Table 5-2.

TABLE 5-2
OPERATIONAL AND AREA PHASE REGIONAL EMISSIONS
(in pounds per day)

	ROG	**NO_x**	**CO**	**SO_2**	**PM_{10}**	**PM_{10}**
Winter						
Area Sources	75	8	156	< 1	24	23
Operational Sources	27	37	255	< 1	34	7
Total Winter	**102**	**45**	**411**	**1**	**58**	**30**
SCAQMD Standard	**55**	**55**	**550**	**150**	**150**	**55**
Difference [1]	47	(10)	(139)	(149)	(92)	(25)
Exceeds Thresholds?	**Yes**	**No**	**No**	**No**	**No**	**No**

1 Parenthesis denotes a negative number.

Source: URBEMIS2007 emissions inventory model.

As illustrated in Table 5-2, regional emissions from the operation of the proposed project would produce air pollutant emissions that are above the SCAQMD significance thresholds for ROG. As such, regional emissions generated by the proposed City Place Sky Lofts project during the operational phase of the project are anticipated to result in a significant adverse air quality impact related to ROG.

5.2.2 Local Impacts - Roads

During the operational phase of the City Place Sky Lofts project, project traffic may have the potential for local area air quality impacts. Analysis at selected intersections was performed to determine the potential for the presence or the creation of CO hot spots attributable to the proposed project. Local area CO concentrations were projected using the CALINE4 traffic pollutant dispersion model. The analysis of CO impacts followed the protocol recommended by the California Department of Transportation's Transportation Project-Level Carbon Monoxide Protocol (December 1997). It is also consistent with procedures identified through the SCAQMD CO modeling protocol, with all four corners of each intersection analyzed to determine whether project operations would result in CO concentrations that exceed the national or state CO standards. Consistent with the Caltrans protocol, sensitive receptors were placed 10 feet from the edge of the road for each corner of the intersection. Placing the sensitive receptor locations 10 feet from the edge of the road at each corner of the study intersection represents a worst-case modeling approach in which these locations are exposed to peak hour traffic volumes traveling at speeds associated with congested road conditions and under meteorological conditions conducive to pollutant formation. Receptor locations further than 10 feet from the edge of the road and further from the study intersection would experience lower concentrations of CO.

The CALINE4 model generates results of CO concentrations averaged over a one-hour time period under worst case atmospheric conditions for the area which include low wind speeds and low atmospheric circulation. Eight-hour concentrations were calculated by converting the one-hour concentrations to eight-hour equivalents, using a typical persistence factor of 0.7, as recommended by the SCAQMD. (The persistence factor is the ratio between the 8-hour and the 1-hour second annual maximum CO concentrations measured at a continuous air monitoring station. A persistence factor of 0.7 is typically used in urban areas.)

Future CO concentrations were determined by adding the predicted increase in CO concentrations attributable to the operation of the proposed project to a projected ambient concentration. The first step in the evaluation of local area impacts was to evaluate baseline CO conditions in the project area in 2010 and 2030 which reflect CO concentrations without the proposed project. The contribution of the project traffic to CO concentrations at the study intersections was then determined by taking the difference between CO concentrations generated during the baseline traffic scenario (i.e., future traffic not including the project) and the baseline-plus-project scenario. The difference is added to monitored ambient concentration to determine the additional CO concentrations that would be expected to result from project operations.

The selected intersections were modeled to determine the CO concentrations that would be generated by vehicle traffic with and without the proposed project. Tables 5-3 and 5-4 list the baseline and project related CO concentrations that would occur at the study area intersections, with and without the proposed project for 2010 and 2030, respectively. Project related CO concentrations were found to be the approximately the same as the concentrations for the No Project concentrations; the all of the changes resulting from the project are less than 0.1 parts per million increase or decrease. Based on the CALINE4 analyses, project-related traffic is not anticipated to result in any exceedance of the state one-hour CO standards at the study area intersections.

TABLE 5-3
ONE-HOUR CARBON MONOXIDE DISPERSION ANALYSIS FOR 2010
WITH AND WITHOUT PROJECT SCENARIOS
(in parts per million)

Intersection and Receptor Location at Intersection	Maximum No Project Concentrations	Maximum With Project Concentrations	Significance Threshold	Exceedance?
Main Street at I-5 northbound on-ramp/I-5 southbound off-ramp/Santa Clara Avenue (afternoon traffic)				
Northeast	8.4	8.4	20.0	No
Southeast	8.6	8.6	20.0	No
Southwest	8.5	8.5	20.0	No
Northwest	8.2	8.2	20.0	No
Broadway at 17th Street (morning traffic)				
Northeast	8.7	8.7	20.0	No
Southeast	8.6	8.6	20.0	No
Southwest	8.6	8.6	20.0	No
Northwest	8.6	8.6	20.0	No

Source: Caltrans' traffic emission dispersion model CALINE4.

TABLE 5-4
ONE-HOUR CARBON MONOXIDE DISPERSION ANALYSIS FOR 2030 WITH AND WITHOUT PROJECT SCENARIOS
(in parts per million)

Intersection and Receptor Location at Intersection	Maximum No Project Concentrations	Maximum With Project Concentrations	Significance Threshold	Exceedance?
Main Street at Chapman Avenue (afternoon traffic)				
Northeast	9.1	9.1	20.0	No
Southeast	8.9	8.9	20.0	No
Southwest	8.6	8.6	20.0	No
Northwest	9.0	9.0	20.0	No
Batavia Street at La Veta Avenue (afternoon traffic)				
Northeast	8.5	8.5	20.0	No
Southeast	7.8	7.8	20.0	No
Southwest	7.8	7.8		
Northwest	8.2	8.2	20.0	No
SR 22 eastbound ramps/Lawson Way at Town & Country Road (morning traffic)				
Northeast	7.8	7.9	20.0	No
Southeast	7.8	7.8	20.0	No
Southwest	7.9	7.9	20.0	No
Northwest	7.8	7.8	20.0	No
SR 22 eastbound ramps/Lawson Way at Town & Country Road (afternoon traffic)				
Northeast	8.0	8.0	20.0	No
Southeast	7.8	7.8	20.0	No
Southwest	7.6	7.7	20.0	No
Northwest	7.8	7.7	20.0	No
Parker Street at Town & Country Road (morning traffic)				
Northeast	8.0	8.0	20.0	No
Southeast	7.8	7.8	20.0	No
Southwest	8.2	8.2	20.0	No
Northwest	7.8	7.8	20.0	No
Parker Street at Town & Country Road (afternoon traffic)				
Northeast	8.0	8.1	20.0	No
Southeast	7.6	7.6	20.0	No
Southwest	7.9	7.9	20.0	No
Northwest	7.6	7.7	20.0	No
Main Street at I-5 HOV ramps/I-5 northbound off-ramp/Edgewood Road (afternoon traffic)				
Northeast	8.1	8.2	20.0	No
Southeast	8.0	8.1	20.0	No
Southwest	8.3	8.3	20.0	No
Northwest	8.5	8.5	20.0	No
Main Street at 17th Street (afternoon traffic)				
Northeast	9.2	8.1	20.0	No
Southeast	9.0	8.9	20.0	No
Southwest	8.8	8.9	20.0	No
Northwest	8.9	8.9	20.0	No
Parker Street at La Veta Avenue (morning traffic)				
Northeast	7.9	7.9	20.0	No
Southeast	8.1	8.1	20.0	No
Southwest	8.2	8.2	20.0	No
Northwest	7.9	8.0	20.0	No
Parker Street at La Veta Avenue (afternoon traffic)				
Northeast	8.3	8.3	20.0	No
Southeast	8.5	8.5	20.0	No
Southwest	8.7	8.7	20.0	No
Northwest	8.2	8.2	20.0	No

Source: Caltrans' traffic emission dispersion model CALINE4.

Tables 5-5 and 5-6 list the baseline and project related eight-hour CO concentrations that would occur at the study area intersections, with and without the proposed project for 2010 and 2030, respectively. Project related CO concentrations were found to be the approximately the same as the concentrations for the No Project concentrations; the all of the changes resulting from the project are less than 0.1 parts per million increase or decrease.

Based on the CALINE4 analyses, project-related traffic is not anticipated to result in any exceedance of the state one-hour CO standards at the study area intersections. Consequently, sensitive receptors in the area would not be significantly adversely affected by CO emissions generated by operation of the proposed project. Localized air quality impacts related to mobile source emissions would therefore be less than significant for the proposed project.

TABLE 5-5
EIGHT-HOUR CARBON MONOXIDE DISPERSION ANALYSIS FOR 2010
WITH AND WITHOUT PROJECT SCENARIOS
(in parts per million)

Intersection and Receptor Location at Intersection	Maximum No Project Concentrations	Maximum With Project Concentrations	Significance Threshold	Exceedance?
Main Street at I-5 northbound on-ramp/I-5 southbound off-ramp/Santa Clara Avenue (afternoon traffic)				
Northeast	5.9	5.9	9.0	No
Southeast	6.0	6.0	9.0	No
Southwest	6.0	6.0	9.0	No
Northwest	5.7	5.7	9.0	No
Broadway at 17th Street (morning traffic)				
Northeast	6.1	6.1	9.0	No
Southeast	6.0	6.0	9.0	No
Southwest	6.0	6.0	9.0	No
Northwest	6.0	6.0	9.0	No

Source: Caltrans' traffic emission dispersion model CALINE4.

TABLE 5-6
EIGHT-HOUR CARBON MONOXIDE DISPERSION ANALYSIS FOR 2030 WITH AND WITHOUT PROJECT SCENARIOS
(in parts per million)

Intersection and Receptor Location at Intersection	Maximum No Project Concentrations	Maximum With Project Concentrations	Significance Threshold	Exceedance?
Main Street at Chapman Avenue (afternoon traffic)				
Northeast	6.4	6.4	9.0	No
Southeast	6.2	6.2	9.0	No
Southwest	6.0	6.0	9.0	No
Northwest	6.3	6.3	9.0	No
Batavia Street at La Veta Avenue (afternoon traffic)				
Northeast	6.0	6.0	9.0	No
Southeast	5.5	5.5	9.0	No
Southwest	5.5	5.5	9.0	No
Northwest	5.7	5.7	9.0	No
SR 22 eastbound ramps/Lawson Way at Town & Country Road (morning traffic)				
Northeast	5.5	5.5	9.0	No
Southeast	5.5	5.5	9.0	No
Southwest	5.5	5.5	9.0	No
Northwest	5.5	5.5	9.0	No
SR 22 eastbound ramps/Lawson Way at Town & Country Road (afternoon traffic)				
Northeast	5.6	5.6	9.0	No
Southeast	5.5	5.5	9.0	No
Southwest	5.3	5.4	9.0	No
Northwest	5.5	5.4	9.0	No
Parker Street at Town & Country Road (morning traffic)				
Northeast	5.6	5.6	9.0	No
Southeast	5.5	5.5	9.0	No
Southwest	5.7	5.7	9.0	No
Northwest	5.5	5.5	9.0	No
Parker Street at Town & Country Road (afternoon traffic)				
Northeast	5.6	5.7	9.0	No
Southeast	5.3	5.3	9.0	No
Southwest	5.5	5.5	9.0	No
Northwest	5.3	5.4	9.0	No
Main Street at I-5 HOV ramps/I-5 northbound off-ramp/Edgewood Road (afternoon traffic)				
Northeast	5.7	5.7	9.0	No
Southeast	5.6	5.7	9.0	No
Southwest	5.8	5.8	9.0	No
Northwest	6.0	6.0	9.0	No
Main Street at 17th Street (afternoon traffic)				
Northeast	6.4	5.7	9.0	No
Southeast	6.3	6.2	9.0	No
Southwest	6.2	6.2	9.0	No
Northwest	6.2	6.2	9.0	No
Parker Street at La Veta Avenue (morning traffic)				
Northeast	5.5	5.5	9.0	No
Southeast	5.7	5.7	9.0	No
Southwest	5.7	5.7	9.0	No
Northwest	5.5	5.6	9.0	No
Parker Street at La Veta Avenue (afternoon traffic)				
Northeast	5.8	5.8	9.0	No
Southeast	6.0	6.0	9.0	No
Southwest	6.1	6.1	9.0	No
Northwest	5.7	5.7	9.0	No

Source: Caltrans' traffic emission dispersion model CALINE4.

5.2.3 Operational Odor Impacts

The proposed City Place Sky Lofts project has the potential to result in odor emissions from tailpipe exhaust from project related vehicle trips and from the proposed restaurant uses. Vehicle exhaust along roads would dissipate relatively quickly due to the transient nature of exhaust emissions during vehicle travel. Vehicle travel would also disperse exhaust emissions due to mechanical turbulence caused by the wake of the vehicle. Odorous fumes related to the Common Kitchen would potentially be generated by trash bins and stove/grill exhausts. Odors related to trash bins would be extremely localized (10 to 20 feet from the source). As an exclusively residential kitchen, odors and fumes would not be regulated as a business enterprise and would not be subject to specific regulatory requirements.

5.2.4 Climate Change

The City Place Sky Lofts project's construction and operational phases will result in a net increase in GHG emissions and not be carbon neutral. Sources of GHG emissions would include off-road equipment, material transport, and worker commute exhaust. In comparison to criteria air pollutants, such as ozone and PM_{10}, CO_2 emissions persist in the atmosphere for a much longer period. In addition, GHG emissions generated by the proposed project would predominantly be in the form of CO_2. While emissions of other GHGs, such as methane, are important with respect to global climate change, emission levels of other GHGs are less dependent on the specific parameters of the proposed project. Thus, emissions of CO_2 from operation-related activities are used as a proxy for total GHG emissions.

Because there are no specific thresholds established it is not possible to determine the degree to which the project will impact climate change. While many scientists believe that CO_2 is causing warming temperatures, there are no factors linking specific CO_2 amounts to a corresponding global temperature increase. Until such a factor or other specific cause and effect are determined thresholds may not be known. It can be stated that the City Place Sky Lofts project is contributing to an increase in GHG emissions but the degree of significance cannot be determined at this time. In the future under AB 32 and using the California Climate Action Registry, a baseline for operation will be established after which a degree of significance may be determined.

Worst-case project-generated, operation-related emissions of CO_2 were modeled using emission factors contained in URBEMIS 2007, Version 9.2.0, which was released June 25, 2007 (Rimpo 2007). An estimation of CO_2 emissions from the City Place Sky Lofts project was developed using the URBEMIS 2007 v9.2 program. URBEMIS factors in number of households, commercial, educational, and recreational facilities in order to calculate CO_2 emissions. The operational phase sources of CO_2 include stationary sources such as electricity and natural gas consumption. Construction CO_2 emissions amounted to 11,422 pounds per day. Operational and source emission totaled 29,452 pounds per day unmitigated and 27,075 pounds per day with mitigation, an 8.07 percent decrease. CO_2 emissions are shown in Appendix A.

A significant impact determination associated with global climate change of the proposed Specific Plan would be speculative because no adopted thresholds of significance currently exist for measuring the impact of global climate change on or from a project. However, mitigation has been provided to generally reduce global climate change impacts.

SECTION 6.0
EXISTING REGULATIONS AND PROJECT ENHANCEMENT MEASURE

The proposed City Place Sky Lofts project would result in significant adverse air quality impacts from both the construction and operational phases of the project. Compliance with the following existing regulations and project enhancement measure will lessen air quality impacts during construction and operations.

6.1 CONSTRUCTION

6.1.1 Existing Regulations

During construction, the contractor will be required to comply with SCAQMD Rule 403 – Fugitive Dust. Rule 403 requires that dust generated during demolition and construction activities be suppressed. Under Rule 403, the project construction activities would be subject to the following requirements:

1) All trucks hauling dirt, sand, soil or other loose materials off site shall be covered or wetted or shall maintain at least two feet of freeboard (i.e., minimum vertical distance between the top of the load and the top of the trailer).

2) Streets shall be swept hourly if visible soil material has been carried onto adjacent public paved roads (reclaimed water shall be used if available.)

3) All active sites shall be watered at least twice daily.

4) All grading activities that result in dust generation shall cease during second stage smog alerts and periods of high winds (i.e., greater than 25 mph) if dust is being transported to off-site locations and cannot be controlled by watering.

5) The developer shall use zero Volatile Organic Compounds (VOC) content architectural coatings during the construction of the project to the maximum extent feasible. This measure will reduce VOC (ROG) emissions by 95 percent over convention architectural coatings. The following websites provide lists of manufacturers of zero VOC content coatings:

   http://www.aqmd.gov/business/brochures/zerovoc.html
   http://www.delta-institute.org/publications/paints.pdf
   http://www.cleanaircounts.org/factsheets/FS%20PDF/Low%20VOC%20Paint.pdf

6.1.2 Project Enhancement Measure

6) The project applicant will be required to name a construction relations officer to act as a community liaison concerning on site construction activity, including resolution of issues related to dust generation from grading/paving activities.

The existing regulations and project enhancement measure identified above implement measures associated with grading/paving activities and construction equipment travel on unpaved roads which are consistent the SCAQMD’s intent to control fugitive dust emissions associated with construction.

6.2 OPERATION

7) All appliances installed as part of the project shall be energy efficient appliances (i.e., washer/dryers, refrigerators, stoves, etc.).

8) The project applicant will install ozone destruction catalysts on all air conditioning units.

9) The proposed project will not include wood burning fireplaces.

10) The project will exceed by 20% requirements of the Energy Efficiency Standards of Title 24 of the California Code of Regulations. Prior to approval of a building permit the project applicant will provide documentation to the City Engineer of compliance with this measure.

SECTION 7.0
SIGNIFICANT ADVERSE IMPACTS

As discussed in the previous Sections, the proposed project would result in air pollutant emissions in exceedance of construction and operational thresholds established by the South Coast Air Quality Management District (SCAQMD) during both construction and operations. During the construction phase of the project, ROG would exceed the construction phase thresholds established by the SCAQMD due almost entirely too architectural coatings. Although these emissions cannot feasibly be mitigated to below a level of significance through extending the coating application and delaying building completion, the project may implement a low-VOC or zero-VOC coating that would substantially reduce total ROG emissions. By the project using low-VOC architectural coatings (less than 25 grams per liter), ROG emissions from coatings will be reduced by 90% from this activity and result in a mitigated ROG emission level of approximately 21 pounds per day. This ROG emission level is below the 25 pound per day SCAQMD significance thresholds for construction activities.

During the operation of the project, compliance with existing regulations would minimize odor emissions. However, project operations would result in emissions of ROG that would exceed the operational phase thresholds established by the SCAQMD. These ROG emissions cannot be mitigated to below a level of significance and which would constitute an unavoidable significant adverse impact of the proposed project related to air quality.

Based on the CALINE4 analyses, project-related traffic is not anticipated to result in any exceedance of the state one-hour CO standards at the study area intersections. Consequently, sensitive receptors in the area would not be significantly adversely affected by CO emissions generated by operation of the proposed project. Localized air quality impacts related to mobile source emissions would therefore be less than significant for the proposed project.

A significant impact determination associated with global climate change of the proposed project would be speculative because no adopted thresholds of significance currently exist for measuring the impact of global climate change on or from a project. However, mitigation has been provided to generally reduce global climate change impacts.

SECTION 8.0
CUMULATIVE IMPACTS

As shown earlier in Tables 5-1 and 5-2, construction-related emissions of the proposed project of reactive organic gases (ROG) and the operations related emissions of the proposed project of ROG would exceed the applicable South Coast Air Quality Management District (SCAQMD) thresholds for these criteria pollutants. The impact from the proposed project plus related cumulative projects would additionally contribute cumulatively significant adverse emissions to the Basin, which is already a nonattainment area. Regional programs to reach air quality goals and standards will be adhered to by the cumulative projects, reducing the impact. However, the incremental increase must be considered significant and adverse when added to the existing nonattainment levels of the South Coast Air Basin.

SECTION 9.0
CONSISTENCY IMPACTS

The City Place Sky Lofts Project anticipates development of the project site with land uses and densities consistent with the land use designations and densities assumed for this site in the City of Santa Ana General Plan Land Use Element. The Air Quality Management Plan (AQMP) assumes future development in the South Coast Air Basin consistent with land use designations and densities in adopted General Plans. Because the proposed project is consistent with the City of Santa Ana General Plan Land Use Element, it is assumed to be consistent with the AQMP and the development's assumptions included in the modeling for the AQMP.

SECTION 10.0
REFERENCES

California Air Resources Board, South Coast Air Basin Attainment Status, http://www.arb.ca.gov/desig/adm/adm.htm, November 16, 2006.

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California Energy Commission, Our Changing Climate, Publication CEC-500-2006-077, July 2006. (CEC 2006b).

California Department of Transportation, EMFAC2007 emission factor model version 2.3, November 2006.

California Department of Transportation, CALINE4 traffic dispersion model version 1.3.2, June 1998.

California Department of Transportation, Transportation Project-Level Carbon Monoxide Protocol, December 1997.

City of Santa Ana General Plan, Land Use Element, Adopted September 1982.

Intergovernmental Panel on Climate Change, Contribution of Working Group I to the Fourth Assessment Report, February 2007

Knowles, N., M.D. Dettinger and D.R. Cayan, 2005: Trends in Snowfall versus Rainfall in the Western United States. *J. Climate*, accepted for publication.

P&D Consultants, City Place Sky Lofts Traffic Impact Study, Santa Ana, California. Prepared for the City of Santa Ana, May 23, 2007.

Rimpo and Associates, URBEMIS 2007, Version 9.2.0, Environmental Management Software, June 2007.

South Coast Air Quality Management District, Air Pollution Monitoring Station Data 2001-2005.

South Coast Air Quality Management District, Air Quality Management Plan, 2003.

South Coast Air Quality Management District, CEQA Air Quality Handbook, November 1993.

United States Environmental Protection Agency, “AP42 Compilation of Air Pollutant Emission Factor.” November 1997.

APPENDIX A
REGIONAL EMISSIONS FOR CONSTRUCTION ACTIVITIES AND PROJECT OPERATION

7/5/2007 01:11:00 PM

Urbemis 2007 Version 9.2.0

Summary Report for Winter Emissions (Pounds/Day)

File Name: C:\Documents and Settings\DWL\Desktop\ENSR\City Skyloft Traffic\Urbemis files\City Place Sky Lofts.urb9

Project Name: City Place Sky Lofts

Project Location: Orange County

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

CONSTRUCTION EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
2008 TOTALS (lbs/day unmitigated)	151.13	79.15	79.22	0.07	20.28	4.73	25.01	4.27	4.35	8.62	11,422.85
2008 TOTALS (lbs/day mitigated)	136.67	71.65	79.22	0.07	10.09	2.80	12.89	2.15	2.57	4.71	11,422.85

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	75.31	8.07	155.83	0.43	23.89	23.00	10,577.36
TOTALS (lbs/day, mitigated)	75.25	7.30	155.47	0.43	23.89	23.00	9,599.92
Percent Reduction	0.08	9.54	0.23	0.00	0.00	0.00	9.24

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	26.75	36.70	255.48	0.18	34.27	6.79	18,875.25
TOTALS (lbs/day, mitigated)	24.54	33.87	235.91	0.16	31.73	6.28	17,475.21
Percent Reduction	8.26	7.71	7.66	11.11	7.41	7.51	7.42

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	102.06	44.77	411.31	0.61	58.16	29.79	29,452.61
TOTALS (lbs/day, mitigated)	99.79	41.17	391.38	0.59	55.62	29.28	27,075.13
Percent Reduction	2.22	8.04	4.85	3.28	4.37	1.71	8.07

Urbemis 2007 Version 9.2.0

Combined Winter Emissions Reports (Pounds/Day)

File Name: C:\Documents and Settings\DWL\Desktop\ENSR\City Skyloft Traffic\Urbemis files\City Place Sky Lofts.urb9

Project Name: City Place Sky Lofts

Project Location: Orange County

On-Road Vehicle Emissions Based on: Version : Emfac2007 V2.3 Nov 1 2006

Off-Road Vehicle Emissions Based on: OFFROAD2007

Summary Report:

CONSTRUCTION EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
2008 TOTALS (lbs/day unmitigated)	151.13	79.15	79.22	0.07	20.28	4.73	25.01	4.27	4.35	8.62	11,422.85
2008 TOTALS (lbs/day mitigated)	136.67	71.65	79.22	0.07	10.09	2.80	12.89	2.15	2.57	4.71	11,422.85

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	75.31	8.07	155.83	0.43	23.89	23.00	10,577.36
TOTALS (lbs/day, mitigated)	75.25	7.30	155.47	0.43	23.89	23.00	9,599.92
Percent Reduction	0.08	9.54	0.23	0.00	0.00	0.00	9.24

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	26.75	36.70	255.48	0.18	34.27	6.79	18,875.25
TOTALS (lbs/day, mitigated)	26.75	36.70	255.48	0.18	34.27	6.79	18,875.25
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00

SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	102.06	44.77	411.31	0.61	58.16	29.79	29,452.61
TOTALS (lbs/day, mitigated)	150.50	14.60	310.94	0.86	47.78	46.00	19,199.84
Percent Reduction	-47.46	67.39	24.40	-40.98	17.85	-54.41	34.81

Construction Unmitigated Detail Report:

CONSTRUCTION EMISSION ESTIMATES Winter Pounds Per Day, Unmitigated

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2

Time Slice 1/30/2008-2/27/2008 Number Active Days: 21	3.35		14.69		20.01	1.41		4.18		5.48	2,371.86
		28.07		0.00			21.42		1.30		
Fine Grading 01/30/2008-03/11/2008	3.35		14.69		20.01	1.41		4.18	1.30		2,371.86
		28.07		0.00			21.42			5.48	
Fine Grading Dust	0.00	0.00	0.00	0.00	20.00	0.00	20.00	4.18	0.00	4.18	0.00
Fine Grading Off Road Diesel	3.31	28.00	13.56	0.00	0.00	1.41	1.41	0.00	1.30	1.30	2,247.32
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.04	0.07	1.13	0.00	0.01	0.00	0.01	0.00	0.00	0.00	124.55
Time Slice 2/28/2008-3/10/2008 Number Active Days: 8	6.08		24.62		20.02	2.66		4.19		6.63	3,821.67
		43.59		0.01			22.68		2.44		
Asphalt 02/28/2008-03/11/2008	2.73		9.92		0.02	1.24		0.01	1.14		1,449.81
		15.52		0.00			1.26			1.15	
Paving Off-Gas	0.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	2.22	13.27	7.15	0.00	0.00	1.15	1.15	0.00	1.06	1.06	979.23
Paving On Road Diesel	0.15	2.13	0.79	0.00	0.01	0.09	0.10	0.00	0.08	0.09	252.62
Paving Worker Trips	0.06	0.12	1.98	0.00	0.01	0.01	0.02	0.00	0.00	0.01	217.96
Fine Grading 01/30/2008-03/11/2008	3.35		14.69		20.01	1.41		4.18	1.30		2,371.86
		28.07		0.00			21.42			5.48	
Fine Grading Dust	0.00	0.00	0.00	0.00	20.00	0.00	20.00	4.18	0.00	4.18	0.00
Fine Grading Off Road Diesel	3.31	28.00	13.56	0.00	0.00	1.41	1.41	0.00	1.30	1.30	2,247.32
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.04	0.07	1.13	0.00	0.01	0.00	0.01	0.00	0.00	0.00	124.55
Time Slice 3/11/2008-3/11/2008 Number Active Days: 1	12.40		79.22		20.28	4.73		4.27		8.62	11,422.85
		79.15		0.07			25.01		4.35		
Asphalt 02/28/2008-03/11/2008	2.73		9.92		0.02	1.24		0.01	1.14		1,449.81
		15.52		0.00			1.26			1.15	
Paving Off-Gas	0.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	2.22	13.27	7.15	0.00	0.00	1.15	1.15	0.00	1.06	1.06	979.23
Paving On Road Diesel	0.15	2.13	0.79	0.00	0.01	0.09	0.10	0.00	0.08	0.09	252.62
Paving Worker Trips	0.06	0.12	1.98	0.00	0.01	0.01	0.02	0.00	0.00	0.01	217.96
Building 03/11/2008-10/22/2008	6.32		54.61		0.25	2.07		0.09	1.90		7,601.18
		35.56		0.06			2.33			1.99	

Building Off Road Diesel	4.07	18.22	11.80	0.00	0.00	1.33	1.33	0.00	1.22	1.22	1,621.20
Building Vendor Trips	1.23	15.42	11.06	0.02	0.09	0.65	0.74	0.03	0.60	0.63	2,491.45
Building Worker Trips	1.02	1.92	31.75	0.04	0.16	0.09	0.25	0.06	0.08	0.14	3,488.53
Fine Grading 01/30/2008-03/11/2008	3.35		14.69		20.01	1.41		4.18	1.30		2,371.86
		28.07		0.00			21.42			5.48	
Fine Grading Dust	0.00	0.00	0.00	0.00	20.00	0.00	20.00	4.18	0.00	4.18	0.00
Fine Grading Off Road Diesel	3.31	28.00	13.56	0.00	0.00	1.41	1.41	0.00	1.30	1.30	2,247.32
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.04	0.07	1.13	0.00	0.01	0.00	0.01	0.00	0.00	0.00	124.55
Time Slice 3/12/2008-10/7/2008 Number Active Days: 150	6.32		54.61		0.25	2.07		0.09		1.99	7,601.18
		35.56		0.06			2.33		1.90		
Building 03/11/2008-10/22/2008	6.32		54.61		0.25	2.07		0.09	1.90		7,601.18
		35.56		0.06			2.33			1.99	
Building Off Road Diesel	4.07	18.22	11.80	0.00	0.00	1.33	1.33	0.00	1.22	1.22	1,621.20
Building Vendor Trips	1.23	15.42	11.06	0.02	0.09	0.65	0.74	0.03	0.60	0.63	2,491.45
Building Worker Trips	1.02	1.92	31.75	0.04	0.16	0.09	0.25	0.06	0.08	0.14	3,488.53
Time Slice 10/8/2008-10/22/2008 Number Active Days: 11	151.13		60.62		0.28	2.09		0.10		2.02	8,261.93
		35.92		0.07			2.38		1.92		
Building 03/11/2008-10/22/2008	6.32		54.61		0.25	2.07		0.09	1.90		7,601.18
		35.56		0.06			2.33			1.99	
Building Off Road Diesel	4.07	18.22	11.80	0.00	0.00	1.33	1.33	0.00	1.22	1.22	1,621.20
Building Vendor Trips	1.23	15.42	11.06	0.02	0.09	0.65	0.74	0.03	0.60	0.63	2,491.45
Building Worker Trips	1.02	1.92	31.75	0.04	0.16	0.09	0.25	0.06	0.08	0.14	3,488.53
Coating 10/08/2008-11/05/2008	144.81		6.01		0.03	0.02		0.01	0.01		660.75
		0.36		0.01			0.05			0.03	
Architectural Coating	144.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.19	0.36	6.01	0.01	0.03	0.02	0.05	0.01	0.01	0.03	660.75
Time Slice 10/23/2008-11/5/2008 Number Active Days: 10	144.81		6.01		0.03	0.02		0.01		0.03	660.75
		0.36		0.01			0.05		0.01		
Coating 10/08/2008-11/05/2008	144.81		6.01		0.03	0.02		0.01	0.01		660.75
		0.36		0.01			0.05			0.03	
Architectural Coating	144.62	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Coating Worker Trips	0.19	0.36	6.01	0.01	0.03	0.02	0.05	0.01	0.01	0.03	660.75

Phase Assumptions

Phase: Fine Grading 1/30/2008 - 3/11/2008 - Default Fine Site Grading Description
Total Acres Disturbed: 4
Maximum Daily Acreage Disturbed: 1
Fugitive Dust Level of Detail: Default
20 lbs per acre-day
On Road Truck Travel (VMT): 0
Off-Road Equipment:
1 Graders (174 hp) operating at a 0.61 load factor for 6 hours per day
1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 6 hours per day
1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day
1 Water Trucks (189 hp) operating at a 0.5 load factor for 8 hours per day

Phase: Paving 2/28/2008 - 3/11/2008 - Default Asphalt Description
Acres to be Paved: 1
Off-Road Equipment:
4 Cement and Mortar Mixers (10 hp) operating at a 0.56 load factor for 6 hours per day
1 Pavers (100 hp) operating at a 0.62 load factor for 7 hours per day
1 Rollers (95 hp) operating at a 0.56 load factor for 7 hours per day
1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 7 hours per day

Phase: Building Construction 3/11/2008 - 10/22/2008 - Default Building Construction Description
Off-Road Equipment:
1 Cranes (399 hp) operating at a 0.43 load factor for 6 hours per day
2 Forklifts (145 hp) operating at a 0.3 load factor for 6 hours per day
1 Generator Sets (49 hp) operating at a 0.74 load factor for 8 hours per day
1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 8 hours per day
3 Welders (45 hp) operating at a 0.45 load factor for 8 hours per day

Phase: Architectural Coating 10/8/2008 - 11/5/2008 - Default Architectural Coating Description
Rule: Residential Interior Coatings begins 1/1/2005 ends 6/30/2008 specifies a VOC of 100
Rule: Residential Interior Coatings begins 7/1/2008 ends 12/31/2040 specifies a VOC of 50
Rule: Residential Exterior Coatings begins 1/1/2005 ends 6/30/2008 specifies a VOC of 250
Rule: Residential Exterior Coatings begins 7/1/2008 ends 12/31/2040 specifies a VOC of 100
Rule: Nonresidential Interior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250
Rule: Nonresidential Exterior Coatings begins 1/1/2005 ends 12/31/2040 specifies a VOC of 250

Construction Mitigated Detail Report:

Page: 1

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CONSTRUCTION EMISSION ESTIMATES Winter Pounds Per Day, Mitigated

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10	PM2.5 Dust	PM2.5 Exhaust	PM2.5	CO2
Time Slice 1/30/2008-2/27/2008 Number Active Days: 21	3.35	28.07	14.69	0.00	9.82	1.41	11.24	2.05	1.30	3.35	2,371.86
Fine Grading 01/30/2008-03/11/2008	3.35	28.07	14.69	0.00	9.82	1.41	11.24	2.05	1.30	3.35	2,371.86
Fine Grading Dust	0.00	0.00	0.00	0.00	9.82	0.00	9.82	2.05	0.00	2.05	0.00
Fine Grading Off Road Diesel	3.31	28.00	13.56	0.00	0.00	1.41	1.41	0.00	1.30	1.30	2,247.32
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.04	0.07	1.13	0.00	0.01	0.00	0.01	0.00	0.00	0.00	124.55
Time Slice 2/28/2008-3/10/2008 Number Active Days: 8	6.08	41.14	24.62	0.01	9.84	1.95	11.79	2.06	1.80	3.85	3,821.67
Asphalt 02/28/2008-03/11/2008	2.73	13.07	9.92	0.00	0.02	0.54	0.56	0.01	0.49	0.50	1,449.81
Paving Off-Gas	0.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	2.22	10.82	7.15	0.00	0.00	0.44	0.44	0.00	0.41	0.41	979.23
Paving On Road Diesel	0.15	2.13	0.79	0.00	0.01	0.09	0.10	0.00	0.08	0.09	252.62
Paving Worker Trips	0.06	0.12	1.98	0.00	0.01	0.01	0.02	0.00	0.00	0.01	217.96
Fine Grading 01/30/2008-03/11/2008	3.35	28.07	14.69	0.00	9.82	1.41	11.24	2.05	1.30	3.35	2,371.86
Fine Grading Dust	0.00	0.00	0.00	0.00	9.82	0.00	9.82	2.05	0.00	2.05	0.00
Fine Grading Off Road Diesel	3.31	28.00	13.56	0.00	0.00	1.41	1.41	0.00	1.30	1.30	2,247.32
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.04	0.07	1.13	0.00	0.01	0.00	0.01	0.00	0.00	0.00	124.55
Time Slice 3/11/2008-3/11/2008 Number Active Days: 1	12.40	71.65	79.22	0.07	10.09	2.80	12.89	2.15	2.57	4.71	11,422.85
Asphalt 02/28/2008-03/11/2008	2.73	13.07	9.92	0.00	0.02	0.54	0.56	0.01	0.49	0.50	1,449.81
Paving Off-Gas	0.29	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	2.22	10.82	7.15	0.00	0.00	0.44	0.44	0.00	0.41	0.41	979.23
Paving On Road Diesel	0.15	2.13	0.79	0.00	0.01	0.09	0.10	0.00	0.08	0.09	252.62
Paving Worker Trips	0.06	0.12	1.98	0.00	0.01	0.01	0.02	0.00	0.00	0.01	217.96

Building 03/11/2008-10/22/2008	6.32		54.61		0.25	0.84		0.09	0.77		7,601.18
		30.50		0.06			1.10			0.86	
Building Off Road Diesel	4.07	13.17	11.80	0.00	0.00	0.10	0.10	0.00	0.09	0.09	1,621.20
Building Vendor Trips	1.23	15.42	11.06	0.02	0.09	0.65	0.74	0.03	0.60	0.63	2,491.45
Building Worker Trips	1.02	1.92	31.75	0.04	0.16	0.09	0.25	0.06	0.08	0.14	3,488.53
Fine Grading 01/30/2008-03/11/2008	3.35		14.69		9.82	1.41		2.05	1.30		2,371.86
		28.07		0.00			11.24			3.35	
Fine Grading Dust	0.00	0.00	0.00	0.00	9.82	0.00	9.82	2.05	0.00	2.05	0.00
Fine Grading Off Road Diesel	3.31	28.00	13.56	0.00	0.00	1.41	1.41	0.00	1.30	1.30	2,247.32
Fine Grading On Road Diesel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading Worker Trips	0.04	0.07	1.13	0.00	0.01	0.00	0.01	0.00	0.00	0.00	124.55
Time Slice 3/12/2008-10/7/2008 Number Active Days: 150	6.32		54.61		0.25	0.84		0.09		0.86	7,601.18
		30.50		0.06			1.10		0.77		
Building 03/11/2008-10/22/2008	6.32		54.61		0.25	0.84		0.09	0.77		7,601.18
		30.50		0.06			1.10			0.86	
Building Off Road Diesel	4.07	13.17	11.80	0.00	0.00	0.10	0.10	0.00	0.09	0.09	1,621.20
Building Vendor Trips	1.23	15.42	11.06	0.02	0.09	0.65	0.74	0.03	0.60	0.63	2,491.45
Building Worker Trips	1.02	1.92	31.75	0.04	0.16	0.09	0.25	0.06	0.08	0.14	3,488.53
Time Slice 10/8/2008-10/22/2008 Number Active Days: 11	136.67		60.62		0.28	0.86		0.10		0.88	8,261.93
		30.87		0.07			1.14		0.78		
Building 03/11/2008-10/22/2008	6.32		54.61		0.25	0.84		0.09	0.77		7,601.18
		30.50		0.06			1.10			0.86	
Building Off Road Diesel	4.07	13.17	11.80	0.00	0.00	0.10	0.10	0.00	0.09	0.09	1,621.20
Building Vendor Trips	1.23	15.42	11.06	0.02	0.09	0.65	0.74	0.03	0.60	0.63	2,491.45
Building Worker Trips	1.02	1.92	31.75	0.04	0.16	0.09	0.25	0.06	0.08	0.14	3,488.53
Coating 10/08/2008-11/05/2008	130.35		6.01		0.03	0.02		0.01	0.01		660.75
		0.36		0.01			0.05			0.03	
Architectural Coating	130.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.19	0.36	6.01	0.01	0.03	0.02	0.05	0.01	0.01	0.03	660.75
Time Slice 10/23/2008-11/5/2008 Number Active Days: 10	130.35		6.01		0.03	0.02		0.01		0.03	660.75
		0.36		0.01			0.05		0.01		
Coating 10/08/2008-11/05/2008	130.35		6.01		0.03	0.02		0.01	0.01		660.75

		0.36		0.01			0.05			0.03	
Architectural Coating	130.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.19	0.36	6.01	0.01	0.03	0.02	0.05	0.01	0.01	0.03	660.75

Construction Related Mitigation Measures

The following mitigation measures apply to Phase: Fine Grading 1/30/2008 - 3/11/2008 - Default Fine Site Grading Description

For Soil Stablizing Measures, the Apply soil stabilizers to inactive areas mitigation reduces emissions by:

PM10: 30% PM25: 30%

For Soil Stablizing Measures, the Replace ground cover in disturbed areas quickly mitigation reduces emissions by:

PM10: 15% PM25: 15%

For Soil Stablizing Measures, the Water exposed surfaces 2x daily watering mitigation reduces emissions by:

PM10: 34% PM25: 34%

For Soil Stablizing Measures, the Cover stockpiles with tarp mitigation reduces emissions by:

PM10: 9.5% PM25: 9.5%

The following mitigation measures apply to Phase: Paving 2/28/2008 - 3/11/2008 - Default Asphalt Description

For Pavers, the Use Aqueous Diesel Fuel mitigation reduces emissions by:

NOX: 15% PM10: 50% PM25: 50%

For Pavers, the Diesel Particulate Filter (DPF) 1st Tier mitigation reduces emissions by:

PM10: 85% PM25: 85%

For Pavers, the Diesel Oxidation Catalyst 15% mitigation reduces emissions by:

NOX: 15%

For Rollers, the Use Aqueous Diesel Fuel mitigation reduces emissions by:

NOX: 15% PM10: 50% PM25: 50%

For Rollers, the Diesel Particulate Filter (DPF) 1st Tier mitigation reduces emissions by:

PM10: 85% PM25: 85%

For Rollers, the Diesel Oxidation Catalyst 15% mitigation reduces emissions by:

NOX: 15%

The following mitigation measures apply to Phase: Building Construction 3/11/2008 - 10/22/2008 - Default Building Construction Description

For Cranes, the Use Aqueous Diesel Fuel mitigation reduces emissions by:

NOX: 15% PM10: 50% PM25: 50%

For Cranes, the Diesel Particulate Filter (DPF) 1st Tier mitigation reduces emissions by:

PM10: 85% PM25: 85%

For Cranes, the Diesel Oxidation Catalyst 15% mitigation reduces emissions by:

NOX: 15%

For Forklifts, the Use Aqueous Diesel Fuel mitigation reduces emissions by:

NOX: 15% PM10: 50% PM25: 50%

For Forklifts, the Diesel Particulate Filter (DPF) 1st Tier mitigation reduces emissions by:

PM10: 85% PM25: 85%

For Forklifts, the Diesel Oxidation Catalyst 15% mitigation reduces emissions by:

NOX: 15%

For Generator Sets, the Use Aqueous Diesel Fuel mitigation reduces emissions by:

NOX: 15% PM10: 50% PM25: 50%

For Generator Sets, the Diesel Particulate Filter (DPF) 1st Tier mitigation reduces emissions by:

PM10: 85% PM25: 85%

For Generator Sets, the Diesel Oxidation Catalyst 15% mitigation reduces emissions by:

NOX: 15%

For Tractors/Loaders/Backhoes, the Use Aqueous Diesel Fuel mitigation reduces emissions by:

NOX: 15% PM10: 50% PM25: 50%

For Tractors/Loaders/Backhoes, the Diesel Particulate Filter (DPF) 1st Tier mitigation reduces emissions by:

PM10: 85% PM25: 85%

For Tractors/Loaders/Backhoes, the Diesel Oxidation Catalyst 15% mitigation reduces emissions by:

NOX: 15%

For Welders, the Use Aqueous Diesel Fuel mitigation reduces emissions by:

NOX: 15% PM10: 50% PM25: 50%

For Welders, the Diesel Particulate Filter (DPF) 1st Tier mitigation reduces emissions by:

PM10: 85% PM25: 85%

For Welders, the Diesel Oxidation Catalyst 15% mitigation reduces emissions by:

NOX: 15%

The following mitigation measures apply to Phase: Architectural Coating 10/8/2008 - 11/5/2008 - Default Architectural Coating Description

For Residential Architectural Coating Measures, the Residential Exterior: Use Low VOC Coatings mitigation reduces emissions by:

ROG: 10%

For Residential Architectural Coating Measures, the Residential Interior: Use Low VOC Coatings mitigation reduces emissions by:

ROG: 10%

For Nonresidential Architectural Coating Measures, the Nonresidential Exterior: Use Low VOC Coatings mitigation reduces emissions by:

ROG: 10%

For Nonresidential Architectural Coating Measures, the Nonresidential Interior: Use Low VOC Coatings mitigation reduces emissions by:

ROG: 10%

Area Source Unmitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Winter Pounds Per Day, Unmitigated

Source	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
Natural Gas	0.30	3.85	1.79	0.00	0.01	0.01	4,887.19
Hearth	55.60	4.22	154.04	0.43	23.88	22.99	5,690.17
Landscaping - No Winter Emissions							
Consumer Products	18.21						
Architectural Coatings	1.20						
TOTALS (lbs/day, unmitigated)	75.31	8.07	155.83	0.43	23.89	23.00	10,577.36

Area Source Mitigated Detail Report:

AREA SOURCE EMISSION ESTIMATES Winter Pounds Per Day, Mitigated

Source	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
Natural Gas	0.24	3.08	1.43	0.00	0.01	0.01	3,909.75
Hearth	55.60	4.22	154.04	0.43	23.88	22.99	5,690.17
Landscaping - No Winter Emissions							
Consumer Products	18.21						
Architectural Coatings	1.20						
TOTALS (lbs/day, mitigated)	75.25	7.30	155.47	0.43	23.89	23.00	9,599.92

Area Source Mitigation Measures Selected

Mitigation Description	Percent Reduction
Residential Increase Energy Efficiency Beyond Title 24	20.00
Commercial Increase Energy Efficiency Beyond Title 24	20.00
Industrial Increase Energy Efficiency Beyond Title 24	20.00

Area Source Changes to Defaults

Operational Unmitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Winter Pounds Per Day, Unmitigated

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
Condo/townhouse general	1.59	2.25	15.71	0.01	2.12	0.42	1,167.50
Condo/townhouse high rise	20.61	28.79	200.64	0.14	27.06	5.36	14,907.67
Racquet club	4.55	5.66	39.13	0.03	5.09	1.01	2,800.08
TOTALS (lbs/day, unmitigated)	26.75	36.70	255.48	0.18	34.27	6.79	18,875.25
Less OnRoad Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTALS (lbs/day, unmitigated)	26.75	36.70	255.48	0.18	34.27	6.79	18,875.25

Operational Mitigated Detail Report:

OPERATIONAL EMISSION ESTIMATES Winter Pounds Per Day, Mitigated

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
Condo/townhouse general	1.59	2.25	15.71	0.01	2.12	0.42	1,167.50
Condo/townhouse high rise	20.61	28.79	200.64	0.14	27.06	5.36	14,907.67
Racquet club	4.55	5.66	39.13	0.03	5.09	1.01	2,800.08

TOTALS (lbs/day, mitigated)	26.75	36.70	255.48	0.18	34.27	6.79	18,875.25
Less OnRoad Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOTALS (lbs/day, mitigated)	26.75	36.70	255.48	0.18	34.27	6.79	18,875.25

Operational Mitigation Options Selected

Residential Mitigation Measures

Residential Mix of Uses Mitigation

Percent Reduction in Trips is 0% (calculated as a % of 9.57 trips/day))

Note that the above percent is applied to the 'double counting adjusted' trip rate

to get Mitigated Trips

Inputs Selected:

The number of housing units within a 1/2 mile radius of the project, plus the

number of residential units included in the project are 0.

The employment for the study area (within a 1/2 mile radius of the project) is 0.

Residential Local-Serving Retail Mitigation

Percent Reduction in Trips is 0% (calculated as a % of 9.57 trips/day)))

Note that the above percent is applied to the 'double counting adjusted' trip rate

to get Mitigated Trips

Inputs Selected:

The Presence of Local-Serving Retail checkbox was NOT selected.

Residential Transit Service Mitigation

Percent Reduction in Trips is 0% (calculated as a % of 9.57 trips/day)

Note that the above percent is applied to the 'double counting adjusted' trip rate

to get Mitigated Trips

Inputs Selected:

The Number of Daily Weekday Buses Stopping Within 1/4 Mile of Site is 0

The Number of Daily Rail or Bus Rapid Transit Stops Within 1/2 Mile of Site is 0

The Number of Dedicated Daily Shuttle Trips is 0

Residential Pedestrian/Bicycle Friendliness Mitigation

Percent Reduction in Trips is 0% (calculated as a % of 9.57 trips/day)

Note that the above percent is applied to the 'double counting adjusted' trip rate

to get Mitigated Trips

Inputs Selected:

The Number of Intersections per Square Mile is 0

The Percent of Streets with Sidewalks on One Side is 0%

The Percent of Streets with Sidewalks on Both Sides is 0%

The Percent of Arterials/Collectors with Bike Lanes or where Suitable,

Direct Parallel Routes Exist is 0%

Residential Affordable Housing Mitigation

Percent Reduction in Trips is 0% (calculated as a % of 9.57 trips/day)

Note that the above percent is applied to the 'double counting adjusted' trip rate

to get Mitigated Trips

Inputs Selected:

The Percent of Housing Units that are Deed-Restricted Below Market Rate Housing is 0%

Nonresidential Mitigation Measures

Non-Residential Mix of Uses Mitigation

Percent Reduction in Trips is 0%

Inputs Selected:

The number of housing units within a 1/2 mile radius of the project, plus the

number of residential units included in the project are 0.

The employment for the study area (within a 1/2 mile radius of the project) is 0.

Non-Residential Local-Serving Retail Mitigation

Percent Reduction in Trips is 0%

Inputs Selected:

The Presence of Local-Serving Retail checkbox was NOT selected.

7/5/2007 12:02:48 PM

Non-Residential Transit Service Mitigation

Percent Reduction in Trips is 0%

Inputs Selected:

The Number of Daily Weekday Buses Stopping Within 1/4 Mile of Site is 0

The Number of Daily Rail or Bus Rapid Transit Stops Within 1/2 Mile of Site is 0

The Number of Dedicated Daily Shuttle Trips is 0

Non-Residential Pedestrian/Bicycle Friendliness Mitigation

Percent Reduction in Trips is 0%

Inputs Selected:

The Number of Intersections per Square Mile is 0

The Percent of Streets with Sidewalks on One Side is 0%

The Percent of Streets with Sidewalks on Both Sides is 0%

The Percent of Arterials/Collectors with Bike Lanes or where Suitable,

Direct Parallel Routes Exist is 0%

Non-Residential Parking Supply Mitigation for Racquet club

Percent Reduction in Trips is 50%

The Parking Supply reduction is larger than the sum of Mix of Uses, Local Serving Retail,

Transit Service and Bike/Ped mitigation measures: 0%

Therefore the Parking Supply percent will be used in place of these other mitigation reductions.

Inputs Selected:

For the 38.28 units of Racquet club the Parking Provision was set to 0

The ITE Parking Rate manual states that: 7605.21 spaces should be provided.

Non-Residential On-Road Truck Mitigation:Pounds/Day & Tons/Year Estimates

----

Inputs Selected:

```
                         ROG      NOx       CO       SO2      PM10
```

7/5/2007 12:02:48 PM

Pounds per Day Reduction 0 0 0 0 0

Tons per Year Reduction 0 0 0 0 0

Operational Settings:

Includes correction for passby trips

Includes the following double counting adjustment for internal trips:

Residential Trip % Reduction: 0.00 Nonresidential Trip % Reduction: 0.00

Analysis Year: 2008 Temperature (F): 60 Season: Winter

Emfac: Version : Emfac2007 V2.3 Nov 1 2006

Summary of Land Uses

Land Use Type	Acreage	Trip Rate	Unit Type	No. Units	Total Trips	Total VMT
Condo/townhouse general	1.25	6.90	dwelling units	20.00	138.00	1,220.61
Condo/townhouse high rise	5.23	5.26	dwelling units	335.00	1,762.10	15,585.78
Racquet club		14.03	1000 sq ft	38.28	537.07	2,931.63
					2,437.17	19,738.02

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	49.0	2.0	97.6	0.4
Light Truck < 3750 lbs	10.9	3.7	90.8	5.5
Light Truck 3751-5750 lbs	21.7	0.9	98.6	0.5
Med Truck 5751-8500 lbs	9.5	1.1	98.9	0.0
Lite-Heavy Truck 8501-10,000 lbs	1.6	0.0	75.0	25.0
Lite-Heavy Truck 10,001-14,000 lbs	0.6	0.0	50.0	50.0
Med-Heavy Truck 14,001-33,000 lbs	1.0	0.0	20.0	80.0
Heavy-Heavy Truck 33,001-60,000 lbs	0.9	0.0	0.0	100.0
Other Bus	0.1	0.0	0.0	100.0
Urban Bus	0.1	0.0	0.0	100.0
Motorcycle	3.5	77.1	22.9	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	1.0	10.0	80.0	10.0

Travel Conditions

	Residential			Commercial		
	Home-Work	Home-Shop	Home-Other	Commute	Non-Work	Customer

Urban Trip Length (miles)	12.7	7.0	9.5	13.3	7.4	8.9
Rural Trip Length (miles)	17.6	12.1	14.9	15.4	9.6	12.6
Trip speeds (mph)	30.0	30.0	30.0	30.0	30.0	30.0
% of Trips - Residential	32.9	18.0	49.1			
% of Trips - Commercial (by land use)						
Racquet club				5.0	2.5	92.5

Operational Changes to Defaults

APPENDIX B
DISPERSION MODELING OUTPUT FOR LOCAL-AREA CO ANALYSIS

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          CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
                   JUNE 1989 VERSION
                   PAGE   1

              JOB: MainSt/SantaClara/Ramp-2010-PM, No Proje
              RUN: Hour 1            (WORST CASE ANGLE)
        POLLUTANT: Carbon Monoxide

    I.  SITE VARIABLES

          U=   1.0 M/S            Z0= 175. CM            ALT=      0. (M)
        BRG= WORST CASE           VD=    .0 CM/S
       CLAS=     7 (G)            VS=    .0 CM/S
       MIXH= 1000. M             AMB=   6.6 PPM
      SIGTH=     5. DEGREES      TEMP= 15.0 DEGREE (C)

   II.  LINK VARIABLES

        LINK        *   LINK COORDINATES (M)    *                   EF      H      W
     DESCRIPTION    *   X1     Y1     X2     Y2 * TYPE  VPH   (G/MI)   (M)    (M)
  ------------------*-------------------------*--------------------------------
  A. NF             *      7   -450      7   -150 *  AG   2031    4.8      .0   15.0
  B. NA             *      9   -150      9      0 *  AG   1986    7.6      .0   13.5
  C. ND             *      9      0      9    150 *  AG   1522    5.1      .0    9.9
  D. NE             *      7    150      7    450 *  AG   1522    4.8      .0   15.0
  E. SF             *     -5    450     -5    150 *  AG   2024    4.8      .0   15.0
  F. SA             *     -7    150     -7      0 *  AG   1629    7.4      .0   13.5
  G. SD             *     -7      0     -7   -150 *  AG   1667    5.1      .0    9.9
  H. SE             *     -5   -150     -5   -450 *  AG   1667    4.8      .0   15.0
  I. RF             *   -225    390    -75    130 *  AG    352    5.8      .0   15.0
  J. RA             *    -75    130      0      0 *  AG    352    9.3      .0   13.5
  K. WD             *      0      7   -150      7 *  AG    101   10.1      .0    9.9
  L. WE             *   -150      5   -450      5 *  AG    101    5.8      .0   15.0
  M. EF             *   -450     -5   -150     -5 *  AG   1198    5.8      .0   15.0
  N. EA             *   -150     -7      0     -7 *  AG    835    9.3      .0   13.5
  O. ED             *      0     -7    150     -7 *  AG   1963    7.4      .0    9.9
  P. EE             *    150     -5    450     -5 *  AG   1963    5.8      .0   15.0
  Q. NL             *      0   -150      0      0 *  AG     45    7.4      .0    9.9
  R. SL             *      0    150      0      0 *  AG    395    7.1      .0    9.9
  S. WL             *    150      0      0      0 *  AG      0    8.9      .0    9.9
  T. EL             *   -150      0      0      0 *  AG    363    8.9      .0    9.9

□□

          CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
                   JUNE 1989 VERSION
                   PAGE   2

              JOB: MainSt/SantaClara/Ramp-2010-PM, No Proje
              RUN: Hour 1            (WORST CASE ANGLE)
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 POLLUTANT: Carbon Monoxide

 III.  RECEPTOR LOCATIONS

                *    COORDINATES (M)
   RECEPTOR     *    X        Y      Z
 ---------------*-----------------------
 1. NE          *     17       16    1.8
 2. SE          *     17      -16    1.8
 3. SW          *    -16      -16    1.8
 4. NW          *    -16       16    1.8

 IV.  MODEL RESULTS (WORST CASE WIND ANGLE )

                *        * PRED   *                  CONC/LINK
                *  BRG   * CONC   *                    (PPM)
   RECEPTOR     * (DEG)  * (PPM)  *   A    B    C    D    E    F    G    H
 ---------------*--------*--------*----------------------------------------
 1. NE          *  186.  *   8.4  *  .1  1.1   .0   .0   .0   .0   .0   .2
 2. SE          *  326.  *   8.6  *  .0   .6   .0   .0   .0   .3   .0   .0
 3. SW          *    6.  *   8.5  *  .0   .0   .0   .2   .1   .9   .0   .0
 4. NW          *  167.  *   8.2  *  .0   .4   .0   .0   .0   .3   .5   .0


                *
                *                           CONC/LINK
                *                             (PPM)
   RECEPTOR     *   I    J    K    L    M    N    O    P    Q    R    S    T
 ---------------*------------------------------------------------------------
 1. NE          *  .0   .0   .0   .0   .0   .0   .3   .0   .0   .0   .0   .0
 2. SE          *  .0   .3   .0   .0   .0   .0   .5   .0   .0   .0   .0   .0
 3. SW          *  .0   .1   .0   .0   .0   .3   .0   .0   .0   .0   .0   .0
 4. NW          *  .0   .0   .0   .0   .0   .2   .0   .0   .0   .0   .0   .0

□□
```

```
          CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
                   JUNE 1989 VERSION
                   PAGE   1

              JOB: MainSt/SantaClara/Ramp-2010-PM,With Proj
              RUN: Hour 1            (WORST CASE ANGLE)
        POLLUTANT: Carbon Monoxide

   I.  SITE VARIABLES

        U=   1.0 M/S            Z0= 175. CM           ALT=     0. (M)
      BRG= WORST CASE           VD=    .0 CM/S
     CLAS=     7 (G)            VS=    .0 CM/S
     MIXH= 1000. M             AMB=   6.6 PPM
    SIGTH=    5. DEGREES      TEMP=  15.0 DEGREE (C)

  II.  LINK VARIABLES

        LINK       *  LINK COORDINATES (M)   *                  EF     H     W
     DESCRIPTION   *   X1    Y1    X2    Y2  * TYPE  VPH     (G/MI)   (M)   (M)
  -----------------*-------------------------*-------------------------------
  A. NF            *     7  -450     7  -150 *  AG   2050     4.8      .0   15.0
  B. NA            *     9  -150     9     0 *  AG   2005     7.6      .0   13.5
  C. ND            *     9     0     9   150 *  AG   1547     5.1      .0    9.9
  D. NE            *     7   150     7   450 *  AG   1547     4.8      .0   15.0
  E. SF            *    -5   450    -5   150 *  AG   2024     4.8      .0   15.0
  F. SA            *    -7   150    -7     0 *  AG   1629     7.4      .0   13.5
  G. SD            *    -7     0    -7  -150 *  AG   1682     5.1      .0    9.9
  H. SE            *    -5  -150    -5  -450 *  AG   1682     4.8      .0   15.0
  I. RF            *  -225   390   -75   130 *  AG    352     5.8      .0   15.0
  J. RA            *   -75   130     0     0 *  AG    352     9.3      .0   13.5
  K. WD            *     0     7  -150     7 *  AG    101    10.1      .0    9.9
  L. WE            *  -150     5  -450     5 *  AG    101     5.8      .0   15.0
  M. EF            *  -450    -5  -150    -5 *  AG   1204     5.8      .0   15.0
  N. EA            *  -150    -7     0    -7 *  AG    835     9.3      .0   13.5
  O. ED            *     0    -7   150    -7 *  AG   1966     7.4      .0    9.9
  P. EE            *   150    -5   450    -5 *  AG   1966     5.8      .0   15.0
  Q. NL            *     0  -150     0     0 *  AG     45     7.4      .0    9.9
  R. SL            *     0   150     0     0 *  AG    398     7.1      .0    9.9
  S. WL            *   150     0     0     0 *  AG      0     8.9      .0    9.9
  T. EL            *  -150     0     0     0 *  AG    369     8.9      .0    9.9

□□



          CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
                   JUNE 1989 VERSION
                   PAGE   2

              JOB: MainSt/SantaClara/Ramp-2010-PM,With Proj
              RUN: Hour 1            (WORST CASE ANGLE)
```

```
          POLLUTANT: Carbon Monoxide

   III.  RECEPTOR LOCATIONS

                  *    COORDINATES (M)
     RECEPTOR     *    X        Y       Z
   ---------------*---------------------
   1. NE          *     17       16    1.8
   2. SE          *     17      -16    1.8
   3. SW          *    -16      -16    1.8
   4. NW          *    -16       16    1.8

   IV.  MODEL RESULTS (WORST CASE WIND ANGLE )

                  *        * PRED    *
                  *  BRG   * CONC    *                  CONC/LINK
     RECEPTOR     * (DEG)  * (PPM)   *                    (PPM)
                  *        *         *   A     B     C     D     E     F     G     H
   ---------------*--------*---------*------------------------------------------------
   1. NE          *  186.  *   8.4   *  .1   1.1    .0    .0    .0    .0    .0    .2
   2. SE          *  326.  *   8.6   *  .0    .6    .0    .0    .0    .3    .0    .0
   3. SW          *    6.  *   8.5   *  .0    .0    .0    .2    .1    .9    .0    .0
   4. NW          *  167.  *   8.2   *  .0    .4    .0    .0    .0    .3    .5    .0


                  *
                  *                              CONC/LINK
                  *                                (PPM)
     RECEPTOR     *   I     J     K     L     M     N     O     P     Q     R     S     T
   ---------------*------------------------------------------------------------------------
   1. NE          *  .0    .0    .0    .0    .0    .0    .3    .0    .0    .0    .0    .0
   2. SE          *  .0    .3    .0    .0    .0    .0    .5    .0    .0    .0    .0    .0
   3. SW          *  .0    .1    .0    .0    .0    .3    .0    .0    .0    .0    .0    .0
   4. NW          *  .0    .0    .0    .0    .0    .2    .0    .0    .0    .0    .0    .0

□□
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          CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
                   JUNE 1989 VERSION
                   PAGE   1

              JOB: Broadway/17th, 2010, AM, no project
              RUN: Hour 1            (WORST CASE ANGLE)
        POLLUTANT: Carbon Monoxide

    I.  SITE VARIABLES

        U=   1.0 M/S            Z0= 175. CM          ALT=     0. (M)
      BRG= WORST CASE           VD=    .0 CM/S
     CLAS=     7 (G)            VS=    .0 CM/S
     MIXH= 1000. M             AMB=   6.6 PPM
    SIGTH=    5. DEGREES      TEMP=  15.0 DEGREE (C)

   II.  LINK VARIABLES

       LINK          *  LINK COORDINATES (M)   *                 EF      H      W
    DESCRIPTION      *   X1    Y1    X2    Y2  * TYPE  VPH  (G/MI)   (M)    (M)
  -------------------*-------------------------*------------------------------------
  A. NF              *     7  -450     7  -150 *  AG    440    4.8     .0   15.0
  B. NA              *     9  -150     9     0 *  AG    396    7.6     .0   13.5
  C. ND              *     9     0     9   150 *  AG    581    5.1     .0    9.9
  D. NE              *     7   150     7   450 *  AG    581    4.8     .0   15.0
  E. SF              *    -5   450    -5   150 *  AG   1515    4.8     .0   15.0
  F. SA              *    -7   150    -7     0 *  AG   1429    7.4     .0   13.5
  G. SD              *    -7     0    -7  -150 *  AG   1708    5.1     .0    9.9
  H. SE              *    -5  -150    -5  -450 *  AG   1708    4.8     .0   15.0
  I. WF              *   450     5   150     5 *  AG   1490    5.8     .0   15.0
  J. WA              *   150     7     0     7 *  AG   1257    9.3     .0   13.5
  K. WD              *     0     7  -150     7 *  AG   1338   10.1     .0    9.9
  L. WE              *  -150     5  -450     5 *  AG   1338    5.8     .0   15.0
  M. EF              *  -450    -5  -150    -5 *  AG   1892    5.8     .0   15.0
  N. EA              *  -150    -7     0    -7 *  AG   1697    9.3     .0   13.5
  O. ED              *     0    -7   150    -7 *  AG   1710    7.4     .0    9.9
  P. EE              *   150    -5   450    -5 *  AG   1710    5.8     .0   15.0
  Q. NL              *     0  -150     0     0 *  AG     44    7.4     .0    9.9
  R. SL              *     0   150     0     0 *  AG     86    7.1     .0    9.9
  S. WL              *   150     0     0     0 *  AG    233    8.9     .0    9.9
  T. EL              *  -150     0     0     0 *  AG    195    8.9     .0    9.9

□□

          CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
                   JUNE 1989 VERSION
                   PAGE   2

              JOB: Broadway/17th, 2010, AM, no project
              RUN: Hour 1            (WORST CASE ANGLE)
```

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        POLLUTANT: Carbon Monoxide

 III.   RECEPTOR LOCATIONS

               *     COORDINATES (M)
   RECEPTOR    *    X        Y       Z
 ------------*---------------------
 1. NE         *    17      16     1.8
 2. SE         *    17     -16     1.8
 3. SW         *   -16     -16     1.8
 4. NW         *   -16      16     1.8

  IV.   MODEL RESULTS (WORST CASE WIND ANGLE )

              *        * PRED   *                        CONC/LINK
              *   BRG  * CONC   *                          (PPM)
  RECEPTOR    * (DEG)  * (PPM)  *    A     B     C     D     E     F     G     H
 ------------*-------*-------*-----------------------------------------------
 1. NE        *  260.  *    8.7 *    .0    .0    .0    .0    .0    .2    .0    .0
 2. SE        *  276.  *    8.6 *    .0    .1    .0    .0    .0    .0    .2    .0
 3. SW        *   79.  *    8.6 *    .0    .0    .0    .0    .0    .0    .3    .0
 4. NW        *   96.  *    8.6 *    .0    .0    .0    .0    .0    .4    .0    .0

              *
              *                          CONC/LINK
              *                            (PPM)
  RECEPTOR    *    I     J     K     L     M     N     O     P     Q     R     S     T
 ------------*-----------------------------------------------------------------
 1. NE        *    .0    .2    .9    .0    .0    .4    .0    .0    .0    .0    .0    .0
 2. SE        *    .0    .0    .1    .2    .1   1.2    .0    .0    .0    .0    .0    .0
 3. SW        *    .0    .4    .0    .0    .0    .3    .8    .0    .0    .0    .0    .0
 4. NW        *    .1    .9    .0    .0    .0    .0    .1    .2    .0    .0    .1    .0

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          CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
                   JUNE 1989 VERSION
                   PAGE   1

              JOB: Broadway/17th, 2010, AM, with project
              RUN: Hour 1             (WORST CASE ANGLE)
        POLLUTANT: Carbon Monoxide

   I.  SITE VARIABLES

         U=   1.0 M/S              Z0= 175. CM             ALT=      0. (M)
       BRG= WORST CASE             VD=    .0 CM/S
      CLAS=     7 (G)              VS=    .0 CM/S
      MIXH= 1000. M               AMB=   6.6 PPM
     SIGTH=    5. DEGREES        TEMP=  15.0 DEGREE (C)

  II.  LINK VARIABLES

       LINK       *  LINK COORDINATES (M)   *                 EF      H      W
    DESCRIPTION   *   X1    Y1    X2    Y2  *  TYPE  VPH   (G/MI)   (M)    (M)
  ----------------*-------------------------*-------------------------------
 A. NF            *     7  -450     7  -150 *  AG    442    4.8      .0   15.0
 B. NA            *     9  -150     9     0 *  AG    398    7.6      .0   13.5
 C. ND            *     9     0     9   150 *  AG    583    5.1      .0    9.9
 D. NE            *     7   150     7   450 *  AG    583    4.8      .0   15.0
 E. SF            *    -5   450    -5   150 *  AG   1521    4.8      .0   15.0
 F. SA            *    -7   150    -7     0 *  AG   1435    7.4      .0   13.5
 G. SD            *    -7     0    -7  -150 *  AG   1714    5.1      .0    9.9
 H. SE            *    -5  -150    -5  -450 *  AG   1714    4.8      .0   15.0
 I. WF            *   450     5   150     5 *  AG   1496    5.8      .0   15.0
 J. WA            *   150     7     0     7 *  AG   1260    9.3      .0   13.5
 K. WD            *     0     7  -150     7 *  AG   1344   10.1      .0    9.9
 L. WE            *  -150     5  -450     5 *  AG   1344    5.8      .0   15.0
 M. EF            *  -450    -5  -150    -5 *  AG   1894    5.8      .0   15.0
 N. EA            *  -150    -7     0    -7 *  AG   1698    9.3      .0   13.5
 O. ED            *     0    -7   150    -7 *  AG   1712    7.4      .0    9.9
 P. EE            *   150    -5   450    -5 *  AG   1712    5.8      .0   15.0
 Q. NL            *     0  -150     0     0 *  AG     44    7.4      .0    9.9
 R. SL            *     0   150     0     0 *  AG     86    7.1      .0    9.9
 S. WL            *   150     0     0     0 *  AG    236    8.9      .0    9.9
 T. EL            *  -150     0     0     0 *  AG    196    8.9      .0    9.9

□□

          CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
                   JUNE 1989 VERSION
                   PAGE   2

              JOB: Broadway/17th, 2010, AM, with project
              RUN: Hour 1             (WORST CASE ANGLE)
```

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     POLLUTANT: Carbon Monoxide

 III.  RECEPTOR LOCATIONS

                *    COORDINATES (M)
   RECEPTOR     *    X       Y      Z
 ---------------*----------------------
 1. NE          *     17      16   1.8
 2. SE          *     17     -16   1.8
 3. SW          *    -16     -16   1.8
 4. NW          *    -16      16   1.8

 IV.  MODEL RESULTS (WORST CASE WIND ANGLE )

                *       * PRED  *                     CONC/LINK
                *  BRG  * CONC  *                       (PPM)
   RECEPTOR     * (DEG) * (PPM) *   A     B     C     D     E     F     G     H
 ---------------*-------*-------*------------------------------------------------
 1. NE          *  260. *   8.7 *   .0    .0    .0    .0    .0    .2    .0    .0
 2. SE          *  276. *   8.6 *   .0    .1    .0    .0    .0    .0    .2    .0
 3. SW          *   79. *   8.6 *   .0    .0    .0    .0    .0    .0    .3    .0
 4. NW          *   96. *   8.6 *   .0    .0    .0    .0    .0    .4    .0    .0

                *                            CONC/LINK
                *                              (PPM)
   RECEPTOR     *   I     J     K     L     M     N     O     P     Q     R     S     T
 ---------------*------------------------------------------------------------------------
 1. NE          *   .0    .2    .9    .0    .0    .4    .0    .0    .0    .0    .0    .0
 2. SE          *   .0    .0    .1    .2    .1   1.2    .0    .0    .0    .0    .0    .0
 3. SW          *   .0    .4    .0    .0    .0    .3    .8    .0    .0    .0    .1    .0
 4. NW          *   .1    .9    .0    .0    .0    .0    .1    .2    .0    .0    .0    .0

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         CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
                  JUNE 1989 VERSION
                  PAGE   1

             JOB: Parker/Twn&Country, 2030, AM, No Project
             RUN: Hour 1            (WORST CASE ANGLE)
       POLLUTANT: Carbon Monoxide

 I.  SITE VARIABLES

     U=   1.0 M/S              Z0= 175. CM             ALT=      0. (M)
   BRG= WORST CASE             VD=    .0 CM/S
  CLAS=     7 (G)              VS=    .0 CM/S
  MIXH= 1000. M               AMB=   6.6 PPM
 SIGTH=     5. DEGREES        TEMP=  15.0 DEGREE (C)

 II.  LINK VARIABLES

      LINK       *  LINK COORDINATES (M)    *                EF      H      W
   DESCRIPTION   *    X1    Y1    X2    Y2   * TYPE  VPH  (G/MI)  (M)    (M)
 ----------------*--------------------------*--------------------------------
 A. NF           *     7  -450     7  -150 *  AG   205    4.8     .0   15.0
 B. NA           *     9  -150     9     0 *  AG   100    7.6     .0   13.5
 C. ND           *     9     0     9   150 *  AG   650    5.1     .0    9.9
 D. NE           *     7   150     7   450 *  AG   650    4.8     .0   15.0
 E. SF           *    -5   450    -5   150 *  AG  1504    4.8     .0   15.0
 F. SA           *    -7   150    -7     0 *  AG  1464    7.4     .0   13.5
 G. SD           *    -7     0    -7  -150 *  AG  1235    5.1     .0    9.9
 H. SE           *    -5  -150    -5  -450 *  AG  1235    4.8     .0   15.0
 I. WF           *   450     5   150     5 *  AG    35    5.8     .0   15.0
 J. WA           *   150     7     0     7 *  AG    30    9.3     .0   13.5
 K. WD           *     0     7  -150     7 *  AG   744   10.1     .0    9.9
 L. WE           *  -150     5  -450     5 *  AG   744    5.8     .0   15.0
 M. EF           *  -450    -5  -150    -5 *  AG  1195    5.8     .0   15.0
 N. EA           *  -150    -7     0    -7 *  AG   655    9.3     .0   13.5
 O. ED           *     0    -7   150    -7 *  AG   310    7.4     .0    9.9
 P. EE           *   150    -5   450    -5 *  AG   310    5.8     .0   15.0
 Q. NL           *     0  -150     0     0 *  AG   105    7.4     .0    9.9
 R. SL           *     0   150     0     0 *  AG    40    7.1     .0    9.9
 S. WL           *   150     0     0     0 *  AG     5    8.9     .0    9.9
 T. EL           *  -150     0     0     0 *  AG   540    8.9     .0    9.9

□□



         CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
                  JUNE 1989 VERSION
                  PAGE   2

             JOB: Parker/Twn&Country, 2030, AM, No Project
             RUN: Hour 1            (WORST CASE ANGLE)
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      POLLUTANT: Carbon Monoxide

 III.  RECEPTOR LOCATIONS

                 *     COORDINATES (M)
   RECEPTOR      *      X        Y      Z
 ----------------*----------------------
 1. NE           *      17       16    1.8
 2. SE           *      17      -16    1.8
 3. SW           *     -16      -16    1.8
 4. NW           *     -16       16    1.8

  IV.  MODEL RESULTS (WORST CASE WIND ANGLE )

                 *        * PRED   *                 CONC/LINK
                 *  BRG   * CONC   *                   (PPM)
  RECEPTOR       * (DEG)  * (PPM)  *   A    B    C    D    E    F    G    H
 ----------------*--------*--------*----------------------------------------
 1. NE           *  262.  *   8.0  *  .0   .0   .1   .0   .0   .2   .0   .0
 2. SE           *  277.  *   7.8  *  .0   .0   .0   .0   .0   .0   .1   .0
 3. SW           *    5.  *   8.2  *  .0   .0   .0   .1   .1   .8   .0   .0
 4. NW           *  169.  *   7.8  *  .0   .0   .0   .0   .0   .2   .4   .0


                 *
                 *                         CONC/LINK
                 *                           (PPM)
  RECEPTOR       *   I    J    K    L    M    N    O    P    Q    R    S    T
 ----------------*------------------------------------------------------------
 1. NE           *  .0   .0   .6   .0   .1   .1   .0   .0   .0   .0   .0   .2
 2. SE           *  .0   .0   .1   .1   .0   .5   .0   .0   .0   .0   .0   .2
 3. SW           *  .0   .0   .2   .0   .0   .2   .0   .0   .0   .0   .0   .1
 4. NW           *  .0   .0   .3   .0   .0   .1   .0   .0   .0   .0   .0   .1

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       CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
                JUNE 1989 VERSION
                PAGE   1

           JOB: Parker/Twn&Cntry, 2030, AM, With Project
           RUN: Hour 1            (WORST CASE ANGLE)
     POLLUTANT: Carbon Monoxide

   I.  SITE VARIABLES

         U=    1.0 M/S              Z0= 175. CM             ALT=      0. (M)
       BRG= WORST CASE              VD=    .0 CM/S
      CLAS=      7 (G)              VS=    .0 CM/S
      MIXH= 1000. M                AMB=   6.6 PPM
     SIGTH=     5. DEGREES        TEMP=  15.0 DEGREE (C)

  II.  LINK VARIABLES

        LINK        *  LINK COORDINATES (M)    *                 EF      H      W
     DESCRIPTION    *   X1     Y1     X2     Y2  *  TYPE  VPH  (G/MI)   (M)    (M)
 -------------------*--------------------------*--------------------------------
  A. NF             *     7   -450      7   -150 *  AG    205    4.8     .0   15.0
  B. NA             *     9   -150      9      0 *  AG    100    7.6     .0   13.5
  C. ND             *     9      0      9    150 *  AG    670    5.1     .0    9.9
  D. NE             *     7    150      7    450 *  AG    670    4.8     .0   15.0
  E. SF             *    -5    450     -5    150 *  AG   1510    4.8     .0   15.0
  F. SA             *    -7    150     -7      0 *  AG   1510    7.4     .0   13.5
  G. SD             *    -7      0     -7   -150 *  AG   1235    5.1     .0    9.9
  H. SE             *    -5   -150     -5   -450 *  AG   1235    4.8     .0   15.0
  I. WF             *   450      5    150      5 *  AG     35    5.8     .0   15.0
  J. WA             *   150      7      0      7 *  AG     30    9.3     .0   15.0
  K. WD             *     0      7   -150      7 *  AG    750   10.1     .0   13.5
  L. WE             *  -150      5   -450      5 *  AG    750    5.8     .0    9.9
  M. EF             *  -450     -5   -150     -5 *  AG   1215    5.8     .0   15.0
  N. EA             *  -150     -7      0     -7 *  AG    655    9.3     .0   15.0
  O. ED             *     0     -7    150     -7 *  AG    310    7.4     .0   13.5
  P. EE             *   150     -5    450     -5 *  AG    310    5.8     .0    9.9
  Q. NL             *     0   -150      0      0 *  AG    105    7.4     .0   15.0
  R. SL             *     0    150      0      0 *  AG     40    7.1     .0    9.9
  S. WL             *   150      0      0      0 *  AG      5    8.9     .0    9.9
  T. EL             *  -150      0      0      0 *  AG    560    8.9     .0    9.9

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       CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
                JUNE 1989 VERSION
                PAGE   2

           JOB: Parker/Twn&Cntry, 2030, AM, With Project
           RUN: Hour 1            (WORST CASE ANGLE)
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        POLLUTANT: Carbon Monoxide

 III.  RECEPTOR LOCATIONS

              *     COORDINATES (M)
   RECEPTOR   *     X        Y      Z
 -------------*----------------------
 1. NE        *      17       16   1.8
 2. SE        *      17      -16   1.8
 3. SW        *     -16      -16   1.8
 4. NW        *     -16       16   1.8

  IV.  MODEL RESULTS (WORST CASE WIND ANGLE )

              *       * PRED   *                    CONC/LINK
              *  BRG  * CONC   *                      (PPM)
  RECEPTOR    * (DEG) * (PPM)  *   A     B     C     D     E     F     G     H
--------------*-------*-------*------------------------------------------------
 1. NE        *  262. *   8.0  *   .0    .0    .1    .0    .0    .2    .0    .0
 2. SE        *  277. *   7.8  *   .0    .0    .0    .0    .0    .0    .1    .0
 3. SW        *    5. *   8.2  *   .0    .0    .0    .1    .1    .8    .0    .0
 4. NW        *  168. *   7.8  *   .0    .0    .0    .0    .0    .2    .4    .0


              *                         CONC/LINK
              *                           (PPM)
  RECEPTOR    *   I     J     K     L     M     N     O     P     Q     R     S     T
 -------------*------------------------------------------------------------------------
 1. NE        *  .0    .0    .6    .0    .1    .1    .0    .0    .0    .0    .0    .2
 2. SE        *  .0    .0    .1    .1    .0    .5    .0    .0    .0    .0    .0    .2
 3. SW        *  .0    .0    .2    .0    .0    .2    .0    .0    .0    .0    .0    .1
 4. NW        *  .0    .0    .3    .0    .0    .1    .0    .0    .0    .0    .0    .1

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          CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
                   JUNE 1989 VERSION
                   PAGE   1

              JOB: Parker/Twn&Cntry, 2030, PM, No Project
              RUN: Hour 1          (WORST CASE ANGLE)
        POLLUTANT: Carbon Monoxide

    I.  SITE VARIABLES

        U=    1.0 M/S             Z0= 175. CM          ALT=      0. (M)
      BRG= WORST CASE             VD=    .0 CM/S
     CLAS=      7 (G)             VS=    .0 CM/S
     MIXH= 1000. M               AMB=   6.6 PPM
    SIGTH=     5. DEGREES        TEMP= 15.0 DEGREE (C)

   II.  LINK VARIABLES

      LINK          *  LINK COORDINATES (M)     *                EF      H      W
    DESCRIPTION     *   X1     Y1     X2     Y2 * TYPE  VPH   (G/MI)   (M)    (M)
  ------------------*---------------------------*---------------------------------
  A. NF             *     7   -450     7   -150 *  AG    970    4.8     .0   15.0
  B. NA             *     9   -150     9      0 *  AG    880    7.6     .0   13.5
  C. ND             *     9      0     9    150 *  AG   1616    5.1     .0    9.9
  D. NE             *     7    150     7    450 *  AG   1616    4.8     .0   15.0
  E. SF             *    -5    450    -5    150 *  AG   1101    4.8     .0   15.0
  F. SA             *    -7    150    -7      0 *  AG   1051    7.4     .0   13.5
  G. SD             *    -7      0    -7   -150 *  AG    430    5.1     .0    9.9
  H. SE             *    -5   -150    -5   -450 *  AG    430    4.8     .0   15.0
  I. WF             *   450      5   150      5 *  AG    170    5.8     .0   15.0
  J. WA             *   150      7     0      7 *  AG    165    9.3     .0   15.0
  K. WD             *     0      7  -150      7 *  AG    811   10.1     .0    9.9
  L. WE             *  -150      5  -450      5 *  AG    811    5.8     .0   15.0
  M. EF             *  -450     -5  -150     -5 *  AG    676    5.8     .0   15.0
  N. EA             *  -150     -7     0     -7 *  AG     15    9.3     .0   13.5
  O. ED             *     0     -7   150     -7 *  AG     60    7.4     .0    9.9
  P. EE             *   150     -5   450     -5 *  AG     60    5.8     .0   15.0
  Q. NL             *     0   -150     0      0 *  AG     90    7.4     .0    9.9
  R. SL             *     0    150     0      0 *  AG     50    7.1     .0    9.9
  S. WL             *   150      0     0      0 *  AG      5    8.9     .0    9.9
  T. EL             *  -150      0     0      0 *  AG    661    8.9     .0    9.9

□□

          CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
                   JUNE 1989 VERSION
                   PAGE   2

              JOB: Parker/Twn&Cntry, 2030, PM, No Project
              RUN: Hour 1          (WORST CASE ANGLE)
```

```
        POLLUTANT: Carbon Monoxide

   III.  RECEPTOR LOCATIONS

                 *     COORDINATES (M)
     RECEPTOR    *     X         Y      Z
   --------------*----------------------------
   1. NE         *     17        16    1.8
   2. SE         *     17       -16    1.8
   3. SW         *    -16       -16    1.8
   4. NW         *    -16        16    1.8

   IV.  MODEL RESULTS (WORST CASE WIND ANGLE )

                 *        * PRED  *
                 *  BRG   * CONC  *                CONC/LINK
     RECEPTOR    * (DEG)  * (PPM) *                  (PPM)
                 *        *       *   A     B     C     D     E     F     G     H
   --------------*--------*-------*------------------------------------------------
   1. NE         *  263.  *   8.0 *   .0    .0    .3    .0    .0    .2    .0    .0
   2. SE         *  351.  *   7.6 *   .0    .0    .5    .0    .0    .2    .0    .0
   3. SW         *    6.  *   7.9 *   .0    .0    .0    .2    .0    .6    .0    .0
   4. NW         *  165.  *   7.6 *   .0    .2    .0    .0    .0    .2    .1    .0


                 *
                 *                           CONC/LINK
     RECEPTOR    *                             (PPM)
                 *   I     J     K     L     M     N     O     P     Q     R     S     T
   --------------*-------------------------------------------------------------------------
   1. NE         *   .0    .0    .6    .0    .0    .0    .0    .0    .0    .0    .0    .2
   2. SE         *   .0    .0    .0    .0    .0    .0    .0    .0    .0    .0    .0    .0
   3. SW         *   .0    .0    .2    .0    .0    .0    .0    .0    .0    .0    .0    .1
   4. NW         *   .0    .0    .3    .0    .0    .0    .0    .0    .0    .0    .0    .1

  □□
```

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          CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
                   JUNE 1989 VERSION
                   PAGE   1

              JOB: Parker/Twn&Cntry, 2030, PM, With Project
              RUN: Hour 1           (WORST CASE ANGLE)
        POLLUTANT: Carbon Monoxide

   I.  SITE VARIABLES

        U=   1.0 M/S            Z0= 175. CM            ALT=      0. (M)
      BRG= WORST CASE           VD=    .0 CM/S
     CLAS=     7 (G)            VS=    .0 CM/S
     MIXH= 1000. M             AMB=   6.6 PPM
    SIGTH=     5. DEGREES     TEMP=  15.0 DEGREE (C)

  II.  LINK VARIABLES

     LINK        *  LINK COORDINATES (M)    *                 EF     H     W
  DESCRIPTION    *   X1    Y1    X2    Y2   * TYPE  VPH   (G/MI)  (M)   (M)
-----------------*--------------------------*--------------------------------
A. NF            *     7  -450     7  -150  *  AG    970    4.8     .0  15.0
B. NA            *     9  -150     9     0  *  AG    880    7.6     .0  13.5
C. ND            *     9     0     9   150  *  AG   1625    5.1     .0   9.9
D. NE            *     7   150     7   450  *  AG   1625    4.8     .0  15.0
E. SF            *    -5   450    -5   150  *  AG   1130    4.8     .0  15.0
F. SA            *    -7   150    -7     0  *  AG   1080    7.4     .0  13.5
G. SD            *    -7     0    -7  -150  *  AG    430    5.1     .0   9.9
H. SE            *    -5  -150    -5  -450  *  AG    430    4.8     .0  15.0
I. WF            *   450     5   150     5  *  AG    170    5.8     .0  15.0
J. WA            *   150     7     0     7  *  AG    165    9.3     .0  13.5
K. WD            *     0     7  -150     7  *  AG    840   10.1     .0   9.9
L. WE            *  -150     5  -450     5  *  AG    840    5.8     .0  15.0
M. EF            *  -450    -5  -150    -5  *  AG    685    5.8     .0  15.0
N. EA            *  -150    -7     0    -7  *  AG     15    9.3     .0  13.5
O. ED            *     0    -7   150    -7  *  AG     60    7.4     .0   9.9
P. EE            *   150    -5   450    -5  *  AG     60    5.8     .0  15.0
Q. NL            *     0  -150     0     0  *  AG     90    7.4     .0   9.9
R. SL            *     0   150     0     0  *  AG     50    7.1     .0   9.9
S. WL            *   150     0     0     0  *  AG      5    8.9     .0   9.9
T. EL            *  -150     0     0     0  *  AG    670    8.9     .0   9.9

□□

          CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
                   JUNE 1989 VERSION
                   PAGE   2

              JOB: Parker/Twn&Cntry, 2030, PM, With Project
              RUN: Hour 1           (WORST CASE ANGLE)
```

```
        POLLUTANT: Carbon Monoxide


III.  RECEPTOR LOCATIONS

              *     COORDINATES (M)
  RECEPTOR    *     X         Y       Z
-------------*--------------------
1. NE         *      17       16    1.8
2. SE         *      17      -16    1.8
3. SW         *     -16      -16    1.8
4. NW         *     -16       16    1.8


 IV.  MODEL RESULTS (WORST CASE WIND ANGLE )

              *         * PRED   *                  CONC/LINK
              *   BRG   * CONC   *                    (PPM)
 RECEPTOR     * (DEG)   * (PPM)  *    A     B     C     D     E     F     G     H
-------------*-------*-------*--------------------------------------------------
1. NE         *  263.  *   8.1  *   .0    .0    .3    .0    .0    .2    .0    .0
2. SE         *  351.  *   7.6  *   .0    .0    .5    .0    .0    .2    .0    .0
3. SW         *    6.  *   7.9  *   .0    .0    .0    .2    .0    .6    .0    .0
4. NW         *  165.  *   7.7  *   .0    .2    .0    .0    .0    .2    .1    .0


              *                          CONC/LINK
              *                            (PPM)
 RECEPTOR     *    I     J     K     L     M     N     O     P     Q     R     S     T
-------------*------------------------------------------------------------------
1. NE         *   .0    .0    .6    .0    .1    .0    .0    .0    .0    .0    .0    .2
2. SE         *   .0    .0    .0    .0    .0    .0    .0    .0    .0    .0    .0    .0
3. SW         *   .0    .0    .2    .0    .0    .0    .0    .0    .0    .0    .0    .1
4. NW         *   .0    .0    .3    .0    .0    .0    .0    .0    .0    .0    .0    .2

▯▯
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          CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
                   JUNE 1989 VERSION
                   PAGE   1

              JOB: MainSt/Edgewood/I5Ramp, 2030, PM, NoProj
              RUN: Hour 1           (WORST CASE ANGLE)
        POLLUTANT: Carbon Monoxide

    I.  SITE VARIABLES

          U=   1.0 M/S              Z0= 175. CM            ALT=      0. (M)
        BRG= WORST CASE             VD=    .0 CM/S
       CLAS=     7 (G)              VS=    .0 CM/S
       MIXH= 1000. M               AMB=   6.6 PPM
      SIGTH=     5. DEGREES        TEMP= 15.0 DEGREE (C)

   II.  LINK VARIABLES

        LINK         *  LINK COORDINATES (M)   *                   EF     H      W
     DESCRIPTION     *   X1    Y1    X2    Y2  * TYPE  VPH    (G/MI)   (M)    (M)
  -------------------*-------------------------*---------------------------------
  A. NF              *     7  -450     7  -150 *  AG   2088    4.8      .0   15.0
  B. NA              *     9  -150     9     0 *  AG   1348    7.6      .0   13.5
  C. ND              *     9     0     9   150 *  AG   1478    5.1      .0    9.9
  D. NE              *     7   150     7   450 *  AG   1478    4.8      .0   15.0
  E. SF              *    -5   450    -5   150 *  AG   1662    4.8      .0   15.0
  F. SA              *    -7   150    -7     0 *  AG   1767    7.4      .0   13.5
  G. SD              *    -7     0    -7  -150 *  AG   1952    5.1      .0    9.9
  H. SE              *    -5  -150    -5  -450 *  AG   1952    4.8      .0   15.0
  I. WF              *   450     5   150     5 *  AG    345    5.8      .0   15.0
  J. WA              *   150     7     0     7 *  AG    180    9.3      .0   13.5
  K. WD              *     0     7  -150     7 *  AG   1075   10.1      .0    9.9
  L. WE              *  -150     5  -450     5 *  AG   1075    5.8      .0   15.0
  M. EF              *  -450    -5  -150    -5 *  AG    380    5.8      .0   15.0
  N. EA              *  -150    -7     0    -7 *  AG    305    9.3      .0   13.5
  O. ED              *     0    -7   150    -7 *  AG    170    7.4      .0    9.9
  P. EE              *   150    -5   450    -5 *  AG    170    5.8      .0   15.0
  Q. NL              *     0  -150     0     0 *  AG    740    7.4      .0    9.9
  R. SL              *     0   150     0     0 *  AG     95    7.1      .0    9.9
  S. WL              *   150     0     0     0 *  AG    165    8.9      .0    9.9
  T. EL              *  -150     0     0     0 *  AG     75    8.9      .0    9.9

□□



          CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
                   JUNE 1989 VERSION
                   PAGE   2

              JOB: MainSt/Edgewood/I5Ramp, 2030, PM, NoProj
              RUN: Hour 1           (WORST CASE ANGLE)
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        POLLUTANT: Carbon Monoxide

 III.  RECEPTOR LOCATIONS

              *     COORDINATES (M)
   RECEPTOR   *     X       Y      Z
 -------------*---------------------
 1. NE        *     17      16    1.8
 2. SE        *     17     -16    1.8
 3. SW        *    -16     -16    1.8
 4. NW        *    -16      16    1.8

  IV.  MODEL RESULTS (WORST CASE WIND ANGLE )

              *        * PRED  *                 CONC/LINK
              *  BRG   * CONC  *                   (PPM)
  RECEPTOR    * (DEG)  * (PPM) *   A     B     C     D     E     F     G     H
 -------------*--------*-------*------------------------------------------------
 1. NE        *  263.  *   8.1 *   .0    .0    .2    .0    .0    .3    .0    .0
 2. SE        *  188.  *   8.0 *   .0    .9    .0    .0    .0    .0    .0    .2
 3. SW        *    6.  *   8.3 *   .0    .0    .0    .2    .1   1.0    .0    .0
 4. NW        *  169.  *   8.5 *   .0    .3    .0    .0    .0    .2    .6    .0


              *
              *                          CONC/LINK
              *                            (PPM)
  RECEPTOR    *   I     J     K     L     M     N     O     P     Q     R     S     T
 -------------*-----------------------------------------------------------------------
 1. NE        *   .0    .0    .8    .0    .0    .0    .0    .0    .0    .0    .0    .0
 2. SE        *   .0    .0    .0    .0    .0    .0    .0    .0    .2    .0    .0    .0
 3. SW        *   .0    .0    .2    .0    .0    .1    .0    .0    .0    .0    .0    .0
 4. NW        *   .0    .0    .4    .0    .0    .0    .0    .0    .3    .0    .0    .0

□□
```

```
            CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
                     JUNE 1989 VERSION
                     PAGE   1

                JOB: MainSt/Edgewood/I5Ramp,2030,PM,With Proj
                RUN: Hour 1           (WORST CASE ANGLE)
          POLLUTANT: Carbon Monoxide

   I.  SITE VARIABLES

        U=   1.0 M/S            Z0= 175. CM          ALT=     0. (M)
      BRG= WORST CASE           VD=    .0 CM/S
     CLAS=     7 (G)            VS=    .0 CM/S
     MIXH= 1000. M             AMB=   6.6 PPM
    SIGTH=    5. DEGREES      TEMP=  15.0 DEGREE (C)

  II.  LINK VARIABLES

       LINK        *  LINK COORDINATES (M)    *               EF     H     W
    DESCRIPTION    *   X1    Y1    X2    Y2   * TYPE  VPH  (G/MI)  (M)   (M)
 ------------------*--------------------------*-------------------------------
 A. NF             *      7  -450     7  -150 *  AG   2125   4.8     .0  15.0
 B. NA             *      9  -150     9     0 *  AG   1385   7.6     .0  13.5
 C. ND             *      9     0     9   150 *  AG   1515   5.1     .0   9.9
 D. NE             *      7   150     7   450 *  AG   1515   4.8     .0  15.0
 E. SF             *     -5   450    -5   150 *  AG   1880   4.8     .0  15.0
 F. SA             *     -7   150    -7     0 *  AG   1785   7.4     .0  13.5
 G. SD             *     -7     0    -7  -150 *  AG   1970   5.1     .0   9.9
 H. SE             *     -5  -150    -5  -450 *  AG   1970   4.8     .0  15.0
 I. WF             *    450     5   150     5 *  AG    345   5.8     .0  15.0
 J. WA             *    150     7     0     7 *  AG    180   9.3     .0  13.5
 K. WD             *      0     7  -150     7 *  AG   1075  10.1     .0   9.9
 L. WE             *   -150     5  -450     5 *  AG   1075   5.8     .0  15.0
 M. EF             *   -450    -5  -150    -5 *  AG    380   5.8     .0  15.0
 N. EA             *   -150    -7     0    -7 *  AG    305   9.3     .0  13.5
 O. ED             *      0    -7   150    -7 *  AG    170   7.4     .0   9.9
 P. EE             *    150    -5   450    -5 *  AG    170   5.8     .0  15.0
 Q. NL             *      0  -150     0     0 *  AG    740   7.4     .0   9.9
 R. SL             *      0   150     0     0 *  AG     95   7.1     .0   9.9
 S. WL             *    150     0     0     0 *  AG    165   8.9     .0   9.9
 T. EL             *   -150     0     0     0 *  AG     75   8.9     .0   9.9

□□

            CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
                     JUNE 1989 VERSION
                     PAGE   2

                JOB: MainSt/Edgewood/I5Ramp,2030,PM,With Proj
                RUN: Hour 1           (WORST CASE ANGLE)
```

```
       POLLUTANT: Carbon Monoxide

 III.  RECEPTOR LOCATIONS

                 *   COORDINATES (M)
   RECEPTOR      *    X       Y      Z
 ----------------*---------------------
 1. NE           *    17      16    1.8
 2. SE           *    17     -16    1.8
 3. SW           *   -16     -16    1.8
 4. NW           *   -16      16    1.8

 IV.  MODEL RESULTS (WORST CASE WIND ANGLE )

                 *        * PRED   *                  CONC/LINK
                 *  BRG   * CONC   *                    (PPM)
   RECEPTOR      * (DEG)  * (PPM)  *   A     B     C     D     E     F     G     H
 ----------------*--------*--------*------------------------------------------------
 1. NE           *  263.  *   8.2  *   .0    .0    .3    .0    .0    .3    .0    .0
 2. SE           *  188.  *   8.1  *   .0    .9    .0    .0    .0    .0    .0    .2
 3. SW           *    6.  *   8.3  *   .0    .0    .0    .2    .1   1.0    .0    .0
 4. NW           *  169.  *   8.5  *   .0    .3    .0    .0    .0    .2    .6    .0

                 *
                 *                          CONC/LINK
                 *                            (PPM)
   RECEPTOR      *   I     J     K     L     M     N     O     P     Q     R     S     T
 ----------------*-------------------------------------------------------------------------
 1. NE           *   .0    .0    .8    .0    .0    .0    .0    .0    .0    .0    .0    .0
 2. SE           *   .0    .0    .0    .0    .0    .0    .0    .0    .2    .0    .0    .0
 3. SW           *   .0    .0    .2    .0    .0    .1    .0    .0    .0    .0    .0    .0
 4. NW           *   .0    .0    .4    .0    .0    .0    .0    .0    .3    .0    .0    .0

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          CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
                   JUNE 1989 VERSION
                   PAGE   1

              JOB: MainSt/17thSt, 2030, PM, No Project
              RUN: Hour 1              (WORST CASE ANGLE)
        POLLUTANT: Carbon Monoxide

   I.  SITE VARIABLES

         U=   1.0 M/S              Z0= 175. CM             ALT=      0. (M)
       BRG= WORST CASE             VD=    .0 CM/S
      CLAS=      7 (G)             VS=    .0 CM/S
      MIXH= 1000. M               AMB=   6.6 PPM
     SIGTH=     5. DEGREES       TEMP=  15.0 DEGREE (C)

  II.  LINK VARIABLES

      LINK        *  LINK COORDINATES (M)    *                  EF      H      W
   DESCRIPTION    *   X1    Y1    X2    Y2   * TYPE  VPH    (G/MI)   (M)    (M)
 -----------------*--------------------------*------------------------------------
 A. NF            *     7  -450     7  -150  *  AG   1719     4.8     .0   15.0
 B. NA            *     9  -150     9     0  *  AG   1469     7.6     .0   13.5
 C. ND            *     9     0     9   150  *  AG   1702     5.1     .0    9.9
 D. NE            *     7   150     7   450  *  AG   1702     4.8     .0   15.0
 E. SF            *    -5   450    -5   150  *  AG   1316     4.8     .0   15.0
 F. SA            *    -7   150    -7     0  *  AG   1316     7.4     .0   13.5
 G. SD            *    -7     0    -7  -150  *  AG   1119     5.1     .0    9.9
 H. SE            *    -5  -150    -5  -450  *  AG   1267     4.8     .0   15.0
 I. WF            *   450     5   150     5  *  AG   1784     5.8     .0   15.0
 J. WA            *   150     7     0     7  *  AG   1569     9.3     .0   13.5
 K. WD            *     0     7  -150     7  *  AG   1842    10.1     .0    9.9
 L. WE            *  -150     5  -450     5  *  AG   1842     5.8     .0   15.0
 M. EF            *  -450    -5  -150    -5  *  AG   1859     5.8     .0   15.0
 N. EA            *  -150    -7     0    -7  *  AG   1635     9.3     .0   13.5
 O. ED            *     0    -7   150    -7  *  AG   1867     7.4     .0    9.9
 P. EE            *   150    -5   450    -5  *  AG   1867     5.8     .0   15.0
 Q. NL            *     0  -150     0     0  *  AG    250     7.4     .0    9.9
 R. SL            *     0   150     0     0  *  AG    197     7.1     .0    9.9
 S. WL            *   150     0     0     0  *  AG    215     8.9     .0    9.9
 T. EL            *  -150     0     0     0  *  AG    224     8.9     .0    9.9

□□



          CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
                   JUNE 1989 VERSION
                   PAGE   2

              JOB: MainSt/17thSt, 2030, PM, No Project
              RUN: Hour 1              (WORST CASE ANGLE)
```

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 POLLUTANT: Carbon Monoxide

III.  RECEPTOR LOCATIONS

                *    COORDINATES (M)
   RECEPTOR     *    X        Y       Z
 ---------------*----------------------
 1. NE          *    17       16     1.8
 2. SE          *    17      -16     1.8
 3. SW          *   -16      -16     1.8
 4. NW          *   -16       16     1.8

 IV.  MODEL RESULTS (WORST CASE WIND ANGLE )

               *        * PRED   *                CONC/LINK
               *  BRG   * CONC   *                  (PPM)
   RECEPTOR    * (DEG)  * (PPM)  *   A     B     C     D     E     F     G     H
 --------------*--------*--------*------------------------------------------------
  1. NE        *  260.  *   9.2  *   .0    .0    .3    .0    .0    .2    .0    .0
  2. SE        *  277.  *   9.0  *   .0    .4    .0    .0    .0    .0    .1    .0
  3. SW        *   79.  *   8.8  *   .0    .2    .0    .0    .0    .0    .2    .0
  4. NW        *   96.  *   8.9  *   .0    .0    .2    .0    .0    .3    .0    .0


               *
               *                        CONC/LINK
               *                          (PPM)
  RECEPTOR     *    I     J     K     L     M     N     O     P     Q     R     S     T
 --------------*------------------------------------------------------------------------
 1. NE         *   .0    .3   1.1    .0    .0    .4    .0    .0    .0    .0    .0    .1
 2. SE         *   .0    .0    .2    .2    .0   1.1    .0    .0    .0    .0    .0    .0
 3. SW         *   .0    .4    .0    .0    .0    .3    .8    .0    .0    .0    .1    .0
 4. NW         *   .1   1.1    .0    .0    .0    .0    .1    .3    .0    .0    .0    .0

□□
```

```
          CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
                   JUNE 1989 VERSION
                   PAGE   1

              JOB: MainSt/17thSt, 2030, PM, With Project
              RUN: Hour 1             (WORST CASE ANGLE)
        POLLUTANT: Carbon Monoxide

   I.  SITE VARIABLES

        U=    1.0 M/S            Z0= 175. CM             ALT=      0. (M)
      BRG= WORST CASE            VD=    .0 CM/S
     CLAS=      7 (G)            VS=    .0 CM/S
     MIXH= 1000. M              AMB=   6.6 PPM
    SIGTH=     5. DEGREES      TEMP=  15.0 DEGREE (C)

  II.  LINK VARIABLES

       LINK          *  LINK COORDINATES (M)     *                   EF      H      W
    DESCRIPTION      *   X1     Y1     X2     Y2 * TYPE  VPH   (G/MI)   (M)    (M)
 --------------------*---------------------------*------------------------------------
 A. NF               *     7  -450      7   -150 *  AG   1725    4.8      .0   15.0
 B. NA               *     9  -150      9      0 *  AG   1475    7.6      .0   13.5
 C. ND               *     9     0      9    150 *  AG   1720    5.1      .0    9.9
 D. NE               *     7   150      7    450 *  AG   1720    4.8      .0   15.0
 E. SF               *    -5   450     -5    150 *  AG   1325    4.8      .0   15.0
 F. SA               *    -7   150     -7      0 *  AG   1125    7.4      .0   13.5
 G. SD               *    -7     0     -7   -150 *  AG   1119    5.1      .0    9.9
 H. SE               *    -5  -150     -5   -450 *  AG   1270    4.8      .0   15.0
 I. WF               *   450     5    150      5 *  AG   1270    5.8      .0   15.0
 J. WA               *   150     7      0      7 *  AG   1790    9.3      .0   13.5
 K. WD               *     0     7   -150      7 *  AG   1575   10.1      .0    9.9
 L. WE               *  -150     5   -450      5 *  AG   1845    5.8      .0   15.0
 M. EF               *  -450    -5   -150     -5 *  AG   1845    5.8      .0   15.0
 N. EA               *  -150    -7      0     -7 *  AG   1635    9.3      .0   13.5
 O. ED               *     0    -7    150     -7 *  AG   1870    7.4      .0    9.9
 P. EE               *   150    -5    450     -5 *  AG   1870    5.8      .0   15.0
 Q. NL               *     0  -150      0      0 *  AG    250    7.4      .0    9.9
 R. SL               *     0   150      0      0 *  AG    200    7.1      .0    9.9
 S. WL               *   150     0      0      0 *  AG    215    8.9      .0    9.9
 T. EL               *  -150     0      0      0 *  AG    230    8.9      .0    9.9

□□

          CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
                   JUNE 1989 VERSION
                   PAGE   2

              JOB: MainSt/17thSt, 2030, PM, With Project
              RUN: Hour 1             (WORST CASE ANGLE)
```

```
       POLLUTANT: Carbon Monoxide

 III.  RECEPTOR LOCATIONS

               *     COORDINATES (M)
   RECEPTOR    *     X         Y      Z
 ------------*--------------------
 1. NE         *      17        16    1.8
 2. SE         *      17       -16    1.8
 3. SW         *     -16       -16    1.8
 4. NW         *     -16        16    1.8

  IV.  MODEL RESULTS (WORST CASE WIND ANGLE )

               *        * PRED  *                      CONC/LINK
               *   BRG  * CONC  *                        (PPM)
  RECEPTOR     * (DEG)  * (PPM) *    A     B     C     D     E     F     G     H
-------------*-------*-------*-----------------------------------------------
 1. NE         *  259.  *   9.1 *   .0    .0    .3    .0    .0    .2    .0    .0
 2. SE         *  276.  *   8.9 *   .0    .4    .0    .0    .0    .0    .1    .0
 3. SW         *   78.  *   8.9 *   .0    .2    .0    .0    .0    .0    .2    .0
 4. NW         *   96.  *   8.9 *   .0    .0    .2    .0    .0    .3    .0    .0


               *                        CONC/LINK
               *                          (PPM)
  RECEPTOR     *   I     J     K     L     M     N     O     P     Q     R     S     T
-------------*-------------------------------------------------------------------
 1. NE         *   .0    .4   1.0    .0    .0    .5    .0    .0    .0    .0    .0    .1
 2. SE         *   .0    .0    .2    .3    .1   1.1    .0    .0    .0    .0    .0    .0
 3. SW         *   .0    .5    .0    .0    .0    .3    .8    .0    .0    .0    .1    .0
 4. NW         *   .1   1.3    .0    .0    .0    .0    .1    .3    .0    .0    .0    .0

□□
```

```
          CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
                   JUNE 1989 VERSION
                   PAGE   1

              JOB: MainSt/ChapmanAv 2030, PM, No Project
              RUN: Hour 1            (WORST CASE ANGLE)
        POLLUTANT: Carbon Monoxide

   I.  SITE VARIABLES

       U=    1.0 M/S             Z0= 175. CM           ALT=      0. (M)
     BRG= WORST CASE             VD=    .0 CM/S
    CLAS=      7 (G)             VS=    .0 CM/S
    MIXH= 1000. M               AMB=   6.6 PPM
   SIGTH=     5. DEGREES       TEMP=  15.0 DEGREE (C)

  II.  LINK VARIABLES

       LINK         *  LINK COORDINATES (M)    *                    EF      H      W
    DESCRIPTION     *   X1     Y1     X2     Y2 * TYPE  VPH  (G/MI)   (M)    (M)
 -------------------*--------------------------*----------------------------------
 A. NF              *     7  -450     7  -150 *  AG   2175    4.8      .0   15.0
 B. NA              *     9  -150     9     0 *  AG   1043    7.6      .0   13.5
 C. ND              *     9     0     9   150 *  AG   1204    5.1      .0    9.9
 D. NE              *     7   150     7   450 *  AG   1204    4.8      .0   15.0
 E. SF              *    -5   450    -5   150 *  AG   1343    4.8      .0   15.0
 F. SA              *    -7   150    -7     0 *  AG   1253    7.4      .0   13.5
 G. SD              *    -7     0    -7  -150 *  AG   1435    5.1      .0    9.9
 H. SE              *    -5  -150    -5  -450 *  AG   1435    4.8      .0   15.0
 I. WF              *   450     5   150     5 *  AG    908    5.8      .0   15.0
 J. WA              *   150     7     0     7 *  AG    850    9.3      .0   13.5
 K. WD              *     0     7  -150     7 *  AG   2227   10.1      .0    9.9
 L. WE              *  -150     5  -450     5 *  AG   2227    5.8      .0   15.0
 M. EF              *  -450    -5  -150    -5 *  AG   1549    5.8      .0   15.0
 N. EA              *  -150    -7     0    -7 *  AG   1284    9.3      .0   13.5
 O. ED              *     0    -7   150    -7 *  AG   1109    7.4      .0    9.9
 P. EE              *   150    -5   450    -5 *  AG   1109    5.8      .0   15.0
 Q. NL              *     0  -150     0     0 *  AG   1132    7.4      .0    9.9
 R. SL              *     0   150     0     0 *  AG     90    7.1      .0    9.9
 S. WL              *   150     0     0     0 *  AG     58    8.9      .0    9.9
 T. EL              *  -150     0     0     0 *  AG    265    8.9      .0    9.9

□□



          CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
                   JUNE 1989 VERSION
                   PAGE   2

              JOB: MainSt/ChapmanAv 2030, PM, No Project
              RUN: Hour 1            (WORST CASE ANGLE)
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         POLLUTANT: Carbon Monoxide

 III.  RECEPTOR LOCATIONS

             *    COORDINATES (M)
   RECEPTOR  *    X      Y      Z
 ------------*----------------------
 1. NE       *     17     16   1.8
 2. SE       *     17    -16   1.8
 3. SW       *    -16    -16   1.8
 4. NW       *    -16     16   1.8

  IV.  MODEL RESULTS (WORST CASE WIND ANGLE )

             *       * PRED  *                CONC/LINK
             *  BRG  * CONC  *                  (PPM)
  RECEPTOR   * (DEG) * (PPM) *   A    B    C    D    E    F    G    H
-------------*-------*-------*-----------------------------------------
 1. NE       *  262. *    9.1 *   .0   .0   .2   .0   .0   .2   .0   .0
 2. SE       *  277. *    8.9 *   .0   .3   .0   .0   .0   .0   .1   .0
 3. SW       *    6. *    8.6 *   .0   .0   .0   .2   .0   .7   .0   .0
 4. NW       *  170. *    9.0 *   .0   .2   .0   .0   .0   .2   .5   .0


             *                          CONC/LINK
             *                            (PPM)
  RECEPTOR   *   I    J    K    L    M    N    O    P    Q    R    S    T
 ------------*-------------------------------------------------------------
 1. NE       *   .0   .1  1.4   .0   .1   .3   .0   .0   .0   .0   .0   .1
 2. SE       *   .0   .0   .3   .2   .0   .9   .0   .0   .2   .0   .0   .1
 3. SW       *   .0   .0   .4   .0   .0   .4   .0   .0   .0   .0   .0   .0
 4. NW       *   .0   .0   .7   .0   .0   .3   .0   .0   .4   .0   .0   .0

□□
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```
        CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
                 JUNE 1989 VERSION
                 PAGE   1

            JOB: MainSt/ChapmanAv2030, PM, With Project
            RUN: Hour 1             (WORST CASE ANGLE)
      POLLUTANT: Carbon Monoxide

  I.  SITE VARIABLES

        U=    1.0 M/S            Z0= 175. CM           ALT=      0. (M)
      BRG= WORST CASE            VD=    .0 CM/S
     CLAS=      7 (G)            VS=    .0 CM/S
     MIXH= 1000. M              AMB=   6.6 PPM
    SIGTH=     5. DEGREES      TEMP=  15.0 DEGREE (C)

 II.  LINK VARIABLES

     LINK        *   LINK COORDINATES (M)   *                  EF      H      W
  DESCRIPTION    *   X1     Y1     X2    Y2 * TYPE   VPH   (G/MI)   (M)    (M)
-----------------*--------------------------*---------------------------------
A. NF            *     7   -450      7  -150 *  AG   2185    4.8     .0   15.0
B. NA            *     9   -150      9     0 *  AG   1050    7.6     .0   13.5
C. ND            *     9      0      9   150 *  AG   1210    5.1     .0    9.9
D. NE            *     7    150      7   450 *  AG   1210    4.8     .0   15.0
E. SF            *    -5    450     -5   150 *  AG   1355    4.8     .0   15.0
F. SA            *    -7    150     -7     0 *  AG   1265    7.4     .0   13.5
G. SD            *    -7      0     -7  -150 *  AG   1455    5.1     .0    9.9
H. SE            *    -5   -150     -5  -450 *  AG   1455    4.8     .0   15.0
I. WF            *   450      5    150     5 *  AG    910    5.8     .0   15.0
J. WA            *   150      7      0     7 *  AG    850    9.3     .0   13.5
K. WD            *     0      7   -150     7 *  AG   2230   10.1     .0    9.9
L. WE            *  -150      5   -450     5 *  AG   2230    5.8     .0   15.0
M. EF            *  -450     -5   -150    -5 *  AG   1555    5.8     .0   15.0
N. EA            *  -150     -7      0    -7 *  AG   1290    9.3     .0   13.5
O. ED            *     0     -7    150    -7 *  AG   1110    7.4     .0    9.9
P. EE            *   150     -5    450    -5 *  AG   1110    5.8     .0   15.0
Q. NL            *     0   -150      0     0 *  AG   1135    7.4     .0    9.9
R. SL            *     0    150      0     0 *  AG     90    7.1     .0    9.9
S. WL            *   150      0      0     0 *  AG     60    8.9     .0    9.9
T. EL            *  -150      0      0     0 *  AG    265    8.9     .0    9.9

□□


        CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
                 JUNE 1989 VERSION
                 PAGE   2

            JOB: MainSt/ChapmanAv2030, PM, With Project
            RUN: Hour 1             (WORST CASE ANGLE)
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        POLLUTANT: Carbon Monoxide

 III.  RECEPTOR LOCATIONS

              *    COORDINATES (M)
   RECEPTOR   *     X       Y      Z
 -------------*---------------------
 1. NE        *      17      16    1.8
 2. SE        *      17     -16    1.8
 3. SW        *     -16     -16    1.8
 4. NW        *     -16      16    1.8

  IV.  MODEL RESULTS (WORST CASE WIND ANGLE )

              *       * PRED  *                 CONC/LINK
              *  BRG  * CONC  *                   (PPM)
  RECEPTOR    * (DEG) * (PPM) *  A    B    C    D    E    F    G    H
--------------*-------*-------*----------------------------------------
 1. NE        * 262.  *   9.1 *  .0   .0   .2   .0   .0   .2   .0   .0
 2. SE        * 277.  *   8.9 *  .0   .3   .0   .0   .0   .0   .1   .0
 3. SW        *   6.  *   8.6 *  .0   .0   .0   .2   .0   .7   .0   .0
 4. NW        * 170.  *   9.0 *  .0   .2   .0   .0   .0   .2   .5   .0


              *                      CONC/LINK
              *                        (PPM)
  RECEPTOR    *  I    J    K    L    M    N    O    P    Q    R    S    T
 -------------*-----------------------------------------------------------
 1. NE        *  .0   .1  1.4   .0   .1   .3   .0   .0   .0   .0   .0   .1
 2. SE        *  .0   .0   .3   .2   .0   .9   .0   .0   .2   .0   .0   .1
 3. SW        *  .0   .0   .4   .0   .0   .4   .0   .0   .0   .0   .0   .0
 4. NW        *  .0   .0   .7   .0   .0   .3   .0   .0   .4   .0   .0   .0

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          CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
                   JUNE 1989 VERSION
                   PAGE   1

              JOB: Batavia/LaVeta, 2030, PM, No Project
              RUN: Hour 1           (WORST CASE ANGLE)
        POLLUTANT: Carbon Monoxide

   I.  SITE VARIABLES

         U=   1.0 M/S            Z0= 175. CM          ALT=      0. (M)
       BRG= WORST CASE           VD=    .0 CM/S
      CLAS=     7 (G)            VS=    .0 CM/S
      MIXH= 1000. M             AMB=   6.6 PPM
     SIGTH=    5. DEGREES      TEMP=  15.0 DEGREE (C)

  II.  LINK VARIABLES

      LINK          *  LINK COORDINATES (M)     *                EF      H      W
   DESCRIPTION      *   X1     Y1     X2     Y2 * TYPE  VPH   (G/MI)   (M)    (M)
 -------------------*---------------------------*------------------------------------
 A. NF              *    7   -450      7   -150 *  AG      0    4.8     .0   15.0
 B. NA              *    9   -150      9      0 *  AG      0    7.6     .0   13.5
 C. ND              *    9      0      9    150 *  AG    885    5.1     .0    9.9
 D. NE              *    7    150      7    450 *  AG    885    4.8     .0   15.0
 E. SF              *   -5    450     -5    150 *  AG    950    4.8     .0   15.0
 F. SA              *   -7    150     -7      0 *  AG    470    7.4     .0   13.5
 G. SD              *   -7      0     -7   -150 *  AG      0    5.1     .0    9.9
 H. SE              *   -5   -150     -5   -450 *  AG      0    4.8     .0   15.0
 I. WF              *  450      5    150      5 *  AG   1213    5.8     .0   15.0
 J. WA              *  150      7      0      7 *  AG   1213    9.3     .0   13.5
 K. WD              *    0      7   -150      7 *  AG   1213   10.1     .0    9.9
 L. WE              * -150      5   -450      5 *  AG   1213    5.8     .0   15.0
 M. EF              * -450     -5   -150     -5 *  AG   1230    5.8     .0   15.0
 N. EA              * -150     -7      0     -7 *  AG    815    9.3     .0   13.5
 O. ED              *    0     -7    150     -7 *  AG   1295    7.4     .0    9.9
 P. EE              *  150     -5    450     -5 *  AG   1295    5.8     .0   15.0
 Q. NL              *    0   -150      0      0 *  AG      0    7.4     .0    9.9
 R. SL              *    0    150      0      0 *  AG    480    7.1     .0    9.9
 S. WL              *  150      0      0      0 *  AG      0    8.9     .0    9.9
 T. EL              * -150      0      0      0 *  AG    415    8.9     .0    9.9

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          CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
                   JUNE 1989 VERSION
                   PAGE   2

              JOB: Batavia/LaVeta, 2030, PM, No Project
              RUN: Hour 1           (WORST CASE ANGLE)
```

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       POLLUTANT: Carbon Monoxide

 III.  RECEPTOR LOCATIONS

                   *     COORDINATES (M)
   RECEPTOR        *      X        Y       Z
-------------------*-------------------------
 1. NE             *     17       16     1.8
 2. SE             *     17      -16     1.8
 3. SW             *    -16      -16     1.8
 4. NW             *    -16       16     1.8

  IV.  MODEL RESULTS (WORST CASE WIND ANGLE )

                   *        * PRED  *                  CONC/LINK
                   *  BRG   * CONC  *                    (PPM)
  RECEPTOR         * (DEG)  * (PPM) *   A     B     C     D     E     F     G     H
-------------------*--------*-------*------------------------------------------------
 1. NE             *  261.  *   8.5 *   .0    .0    .2    .0    .0    .0    .0    .0
 2. SE             *  277.  *   7.8 *   .0    .0    .0    .0    .0    .0    .0    .0
 3. SW             *   81.  *   7.8 *   .0    .0    .0    .0    .0    .0    .0    .0
 4. NW             *   96.  *   8.2 *   .0    .0    .0    .0    .0    .1    .0    .0


                   *                           CONC/LINK
                   *                             (PPM)
  RECEPTOR         *   I     J     K     L     M     N     O     P     Q     R     S     T
-------------------*------------------------------------------------------------------------
 1. NE             *   .0    .2    .8    .0    .0    .2    .0    .0    .0    .0    .0    .2
 2. SE             *   .0    .0    .2    .2    .0    .6    .0    .0    .0    .0    .0    .2
 3. SW             *   .0    .3    .0    .0    .0    .1    .7    .0    .0    .0    .0    .0
 4. NW             *   .1    .9    .0    .0    .0    .0    .1    .2    .0    .0    .0    .0

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          CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
                   JUNE 1989 VERSION
                   PAGE   1

              JOB: Batavia/LaVeta, 2030, PM, With Project
              RUN: Hour 1              (WORST CASE ANGLE)
        POLLUTANT: Carbon Monoxide

  I.  SITE VARIABLES

       U=   1.0 M/S             Z0= 175. CM          ALT=      0. (M)
     BRG= WORST CASE            VD=    .0 CM/S
    CLAS=      7 (G)            VS=    .0 CM/S
    MIXH= 1000. M              AMB=   6.6 PPM
   SIGTH=     5. DEGREES      TEMP=  15.0 DEGREE (C)

 II.  LINK VARIABLES

      LINK        *  LINK COORDINATES (M)    *              EF      H      W
   DESCRIPTION    *   X1    Y1    X2    Y2   * TYPE  VPH  (G/MI)   (M)    (M)
------------------*--------------------------*--------------------------------
 A. NF            *     7  -450     7  -150  *  AG      0   4.8     .0   15.0
 B. NA            *     9  -150     9     0  *  AG      0   7.6     .0   13.5
 C. ND            *     9     0     9   150  *  AG    885   5.1     .0    9.9
 D. NE            *     7   150     7   450  *  AG    885   4.8     .0   15.0
 E. SF            *    -5   450    -5   150  *  AG    950   4.8     .0   15.0
 F. SA            *    -7   150    -7     0  *  AG    470   7.4     .0   13.5
 G. SD            *    -7     0    -7  -150  *  AG      0   5.1     .0    9.9
 H. SE            *    -5  -150    -5  -450  *  AG      0   4.8     .0   15.0
 I. WF            *   450     5   150     5  *  AG   1220   5.8     .0   15.0
 J. WA            *   150     7     0     7  *  AG   1220   9.3     .0   13.5
 K. WD            *     0     7  -150     7  *  AG   1220  10.1     .0    9.9
 L. WE            *  -150     5  -450     5  *  AG   1220   5.8     .0   15.0
 M. EF            *  -450    -5  -150    -5  *  AG   1255   5.8     .0   15.0
 N. EA            *  -150    -7     0    -7  *  AG    840   9.3     .0   13.5
 O. ED            *     0    -7   150    -7  *  AG   1320   7.4     .0    9.9
 P. EE            *   150    -5   450    -5  *  AG   1320   5.8     .0   15.0
 Q. NL            *     0  -150     0     0  *  AG      0   7.4     .0    9.9
 R. SL            *     0   150     0     0  *  AG    480   7.1     .0    9.9
 S. WL            *   150     0     0     0  *  AG      0   8.9     .0    9.9
 T. EL            *  -150     0     0     0  *  AG    415   8.9     .0    9.9

□□



          CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
                   JUNE 1989 VERSION
                   PAGE   2

              JOB: Batavia/LaVeta, 2030, PM, With Project
              RUN: Hour 1              (WORST CASE ANGLE)
```

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      POLLUTANT: Carbon Monoxide

 III.  RECEPTOR LOCATIONS

              *     COORDINATES (M)
   RECEPTOR   *    X        Y       Z
 -------------*---------------------
 1. NE        *     17       16    1.8
 2. SE        *     17      -16    1.8
 3. SW        *    -16      -16    1.8
 4. NW        *    -16       16    1.8

  IV.  MODEL RESULTS (WORST CASE WIND ANGLE )

              *       * PRED  *                   CONC/LINK
              *  BRG  * CONC  *                     (PPM)
  RECEPTOR    * (DEG) * (PPM) *   A     B     C     D     E     F     G     H
 -------------*-------*-------*------------------------------------------------
 1. NE        *  261. *   8.5 *   .0    .0    .2    .0    .0    .0    .0    .0
 2. SE        *  277. *   7.8 *   .0    .0    .0    .0    .0    .0    .0    .0
 3. SW        *   81. *   7.8 *   .0    .0    .0    .0    .0    .0    .0    .0
 4. NW        *   96. *   8.2 *   .0    .0    .0    .0    .0    .1    .0    .0

              *                           CONC/LINK
              *                             (PPM)
  RECEPTOR    *   I     J     K     L     M     N     O     P     Q     R     S     T
 -------------*------------------------------------------------------------------------
 1. NE        *   .0    .2    .9    .0    .0    .2    .0    .0    .0    .0    .0    .2
 2. SE        *   .0    .0    .2    .2    .0    .6    .0    .0    .0    .0    .0    .2
 3. SW        *   .0    .3    .0    .0    .0    .1    .7    .0    .0    .0    .0    .0
 4. NW        *   .1    .9    .0    .0    .0    .0    .1    .2    .0    .0    .0    .0

□□
```

```
          CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
                   JUNE 1989 VERSION
                   PAGE   1

              JOB: Parker/LaVeta, 2030, AM, No Project
              RUN: Hour 1           (WORST CASE ANGLE)
        POLLUTANT: Carbon Monoxide

  I.  SITE VARIABLES

         U=   1.0 M/S            Z0= 175. CM           ALT=     0. (M)
       BRG= WORST CASE           VD=    .0 CM/S
      CLAS=     7 (G)            VS=    .0 CM/S
      MIXH= 1000. M             AMB=   6.6 PPM
     SIGTH=    5. DEGREES      TEMP=  15.0 DEGREE (C)

  II.  LINK VARIABLES

      LINK          *  LINK COORDINATES (M)    *                  EF      H      W
   DESCRIPTION      *   X1     Y1     X2     Y2 *  TYPE  VPH    (G/MI)   (M)    (M)
 -------------------*--------------------------*----------------------------------
 A. NF              *     7   -450      7   -150 *  AG     535    4.8      .0   15.0
 B. NA              *     9   -150      9      0 *  AG     371    7.6      .0   13.5
 C. ND              *     9      0      9    150 *  AG      75    5.1      .0    9.9
 D. NE              *     7    150      7    450 *  AG      75    4.8      .0   15.0
 E. SF              *    -5    450     -5    150 *  AG      75    4.8      .0   15.0
 F. SA              *    -7    150     -7      0 *  AG      40    7.4      .0   13.5
 G. SD              *    -7      0     -7   -150 *  AG    1539    5.1      .0    9.9
 H. SE              *    -5   -150     -5   -450 *  AG    1539    4.8      .0   15.0
 I. WF              *   450      5    150      5 *  AG    1694    5.8      .0   15.0
 J. WA              *   150      7      0      7 *  AG     820    9.3      .0   13.5
 K. WD              *     0      7   -150      7 *  AG     999   10.1      .0    9.9
 L. WE              *  -150      5   -450      5 *  AG     999    5.8      .0   15.0
 M. EF              *  -450     -5   -150     -5 *  AG    1140    5.8      .0   15.0
 N. EA              *  -150     -7      0     -7 *  AG    1090    9.3      .0   13.5
 O. ED              *     0     -7    150     -7 *  AG     831    7.4      .0    9.9
 P. EE              *   150     -5    450     -5 *  AG     831    5.8      .0   15.0
 Q. NL              *     0   -150      0      0 *  AG     164    7.4      .0    9.9
 R. SL              *     0    150      0      0 *  AG      35    7.1      .0    9.9
 S. WL              *   150      0      0      0 *  AG     874    8.9      .0    9.9
 T. EL              *  -150      0      0      0 *  AG      50    8.9      .0    9.9

□□

          CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
                   JUNE 1989 VERSION
                   PAGE   2

              JOB: Parker/LaVeta, 2030, AM, No Project
              RUN: Hour 1           (WORST CASE ANGLE)
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         POLLUTANT: Carbon Monoxide

 III.  RECEPTOR LOCATIONS

                 *     COORDINATES (M)
   RECEPTOR      *     X         Y       Z
 ----------------*---------------------------
 1. NE           *     17        16     1.8
 2. SE           *     17       -16     1.8
 3. SW           *    -16       -16     1.8
 4. NW           *    -16        16     1.8

  IV.  MODEL RESULTS (WORST CASE WIND ANGLE )

                 *       * PRED    *                 CONC/LINK
                 *  BRG  * CONC    *                   (PPM)
  RECEPTOR       * (DEG) * (PPM)   *    A     B     C     D     E     F     G     H
-----------------*-------*---------*------------------------------------------------
 1. NE           *  261. *    7.9  *   .0    .0    .0    .0    .0    .0    .0    .0
 2. SE           *  276. *    8.1  *   .0    .1    .0    .0    .0    .0    .1    .0
 3. SW           *   80. *    8.2  *   .0    .0    .0    .0    .0    .0    .3    .0
 4. NW           *  174. *    7.9  *   .0    .0    .0    .0    .0    .0    .5    .1

                 *                         CONC/LINK
                 *                           (PPM)
  RECEPTOR       *    I     J     K     L     M     N     O     P     Q     R     S     T
-----------------*-------------------------------------------------------------------------
 1. NE           *   .0    .1    .7    .0    .0    .3    .0    .0    .0    .0    .0    .0
 2. SE           *   .0    .0    .1    .2    .0    .8    .0    .0    .0    .0    .0    .0
 3. SW           *   .0    .2    .0    .0    .0    .2    .4    .0    .0    .0    .3    .0
 4. NW           *   .0    .0    .3    .0    .0    .2    .0    .0    .0    .0    .0    .0

□□
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          CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
                   JUNE 1989 VERSION
                   PAGE   1

              JOB: Parker/LaVeta, 2030, AM, With Project
              RUN: Hour 1             (WORST CASE ANGLE)
        POLLUTANT: Carbon Monoxide

  I.  SITE VARIABLES

         U=   1.0 M/S             Z0= 175. CM             ALT=     0. (M)
       BRG= WORST CASE            VD=    .0 CM/S
      CLAS=     7 (G)             VS=    .0 CM/S
      MIXH= 1000. M              AMB=   6.6 PPM
     SIGTH=    5. DEGREES       TEMP=  15.0 DEGREE (C)

 II.  LINK VARIABLES

      LINK       *  LINK COORDINATES (M)     *                 EF      H      W
   DESCRIPTION   *   X1     Y1     X2     Y2 * TYPE  VPH    (G/MI)   (M)    (M)
-----------------*---------------------------*----------------------------------
A. NF            *     7   -450      7   -150 *  AG    555    4.8      .0   15.0
B. NA            *     9   -150      9      0 *  AG    375    7.6      .0   13.5
C. ND            *     9      0      9    150 *  AG     75    5.1      .0    9.9
D. NE            *     7    150      7    450 *  AG     75    4.8      .0   15.0
E. SF            *    -5    450     -5    150 *  AG     75    4.8      .0   15.0
F. SA            *    -7    150     -7      0 *  AG     40    7.4      .0   13.5
G. SD            *    -7      0     -7   -150 *  AG   1545    5.1      .0    9.9
H. SE            *    -5   -150     -5   -450 *  AG   1545    4.8      .0   15.0
I. WF            *   450      5    150      5 *  AG   1695    5.8      .0   15.0
J. WA            *   150      7      0      7 *  AG    820    9.3      .0   13.5
K. WD            *     0      7   -150      7 *  AG   1015   10.1      .0    9.9
L. WE            *  -150      5   -450      5 *  AG   1015    5.8      .0   15.0
M. EF            *  -450     -5   -150     -5 *  AG   1145    5.8      .0   15.0
N. EA            *  -150     -7      0     -7 *  AG   1095    9.3      .0   13.5
O. ED            *     0     -7    150     -7 *  AG    835    7.4      .0    9.9
P. EE            *   150     -5    450     -5 *  AG    835    5.8      .0   15.0
Q. NL            *     0   -150      0      0 *  AG    180    7.4      .0    9.9
R. SL            *     0    150      0      0 *  AG     35    7.1      .0    9.9
S. WL            *   150      0      0      0 *  AG    875    8.9      .0    9.9
T. EL            *  -150      0      0      0 *  AG     50    8.9      .0    9.9

□□

          CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
                   JUNE 1989 VERSION
                   PAGE   2

              JOB: Parker/LaVeta, 2030, AM, With Project
              RUN: Hour 1             (WORST CASE ANGLE)
```

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       POLLUTANT: Carbon Monoxide

  III.  RECEPTOR LOCATIONS

              *    COORDINATES (M)
    RECEPTOR  *    X       Y      Z
  ------------*--------------------
  1. NE       *    17      16    1.8
  2. SE       *    17     -16    1.8
  3. SW       *   -16     -16    1.8
  4. NW       *   -16      16    1.8

  IV.  MODEL RESULTS (WORST CASE WIND ANGLE )

              *        * PRED  *                 CONC/LINK
              *  BRG   * CONC  *                   (PPM)
   RECEPTOR   * (DEG)  * (PPM) *   A    B    C    D    E    F    G    H
  ------------*--------*-------*--------------------------------------
  1. NE       *  261.  *   7.9 *  .0   .0   .0   .0   .0   .0   .0   .0
  2. SE       *  276.  *   8.1 *  .0   .1   .0   .0   .0   .0   .1   .0
  3. SW       *   80.  *   8.2 *  .0   .0   .0   .0   .0   .0   .3   .0
  4. NW       *  174.  *   8.0 *  .0   .0   .0   .0   .0   .0   .5   .1


              *
              *                          CONC/LINK
              *                            (PPM)
   RECEPTOR   *   I    J    K    L    M    N    O    P    Q    R    S    T
  ------------*------------------------------------------------------------
  1. NE       *  .0   .1   .7   .0   .0   .3   .0   .0   .0   .0   .0   .0
  2. SE       *  .0   .0   .1   .2   .0   .8   .0   .0   .0   .0   .0   .0
  3. SW       *  .0   .2   .0   .0   .0   .2   .4   .0   .0   .0   .3   .0
  4. NW       *  .0   .0   .3   .0   .0   .2   .0   .0   .0   .0   .0   .0

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          CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
                   JUNE 1989 VERSION
                   PAGE   1

              JOB: Parker/LaVeta, 2030, PM, No Project
              RUN: Hour 1            (WORST CASE ANGLE)
        POLLUTANT: Carbon Monoxide


   I.  SITE VARIABLES

        U=   1.0 M/S            Z0= 175. CM          ALT=     0. (M)
      BRG= WORST CASE           VD=    .0 CM/S
     CLAS=     7 (G)            VS=    .0 CM/S
     MIXH= 1000. M             AMB=   6.6 PPM
    SIGTH=    5. DEGREES      TEMP=  15.0 DEGREE (C)


  II.  LINK VARIABLES

       LINK         *  LINK COORDINATES (M)   *                  EF      H     W
    DESCRIPTION     *   X1    Y1    X2    Y2  * TYPE  VPH   (G/MI)    (M)   (M)
 -------------------*-------------------------*----------------------------------
 A. NF              *    7  -450     7  -150  *  AG   1821    4.8     .0  15.0
 B. NA              *    9  -150     9     0  *  AG   1188    7.6     .0  13.5
 C. ND              *    9     0     9   150  *  AG     60    5.1     .0   9.9
 D. NE              *    7   150     7   450  *  AG     60    4.8     .0  15.0
 E. SF              *   -5   450    -5   150  *  AG    105    4.8     .0  15.0
 F. SA              *   -7   150    -7     0  *  AG     50    7.4     .0  13.5
 G. SD              *   -7     0    -7  -150  *  AG    896    5.1     .0   9.9
 H. SE              *   -5  -150    -5  -450  *  AG    896    4.8     .0  15.0
 I. WF              *  450     5   150     5  *  AG   1041    5.8     .0  15.0
 J. WA              *  150     7     0     7  *  AG    575    9.3     .0  13.5
 K. WD              *    0     7  -150     7  *  AG   1233   10.1     .0   9.9
 L. WE              * -150     5  -450     5  *  AG   1233    5.8     .0  15.0
 M. EF              * -450    -5  -150    -5  *  AG   1290    5.8     .0  15.0
 N. EA              * -150    -7     0    -7  *  AG   1255    9.3     .0  13.5
 O. ED              *    0    -7   150    -7  *  AG   2068    7.4     .0   9.9
 P. EE              *  150    -5   450    -5  *  AG   2068    5.8     .0  15.0
 Q. NL              *    0  -150     0     0  *  AG    633    7.4     .0   9.9
 R. SL              *    0   150     0     0  *  AG     55    7.1     .0   9.9
 S. WL              *  150     0     0     0  *  AG    466    8.9     .0   9.9
 T. EL              * -150     0     0     0  *  AG     35    8.9     .0   9.9

□□


          CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
                   JUNE 1989 VERSION
                   PAGE   2

              JOB: Parker/LaVeta, 2030, PM, No Project
              RUN: Hour 1            (WORST CASE ANGLE)
```

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         POLLUTANT: Carbon Monoxide

  III.  RECEPTOR LOCATIONS

                *      COORDINATES (M)
    RECEPTOR    *     X        Y       Z
  -------------*----------------------
  1. NE         *      17       16     1.8
  2. SE         *      17      -16     1.8
  3. SW         *     -16      -16     1.8
  4. NW         *     -16       16     1.8

   IV.  MODEL RESULTS (WORST CASE WIND ANGLE )

                *        * PRED   *                  CONC/LINK
                *   BRG  * CONC   *                    (PPM)
   RECEPTOR     * (DEG)  * (PPM)  *   A     B     C     D     E     F     G     H
 ---------------*--------*--------*------------------------------------------------
  1. NE         *  186.  *   8.3  *   .1    .7    .0    .0    .0    .0    .0    .1
  2. SE         *  276.  *   8.5  *   .0    .3    .0    .0    .0    .0    .0    .0
  3. SW         *   81.  *   8.7  *   .0    .2    .0    .0    .0    .0    .2    .0
  4. NW         *  172.  *   8.2  *   .2    .2    .0    .0    .0    .0    .3    .0


                *                              CONC/LINK
                *                                (PPM)
   RECEPTOR     *   I     J     K     L     M     N     O     P     Q     R     S     T
 ---------------*----------------------------------------------------------------------
  1. NE         *   .0    .2    .0    .0    .0    .0    .3    .0    .1    .0    .1    .0
  2. SE         *   .0    .0    .1    .2    .1    .9    .0    .0    .1    .0    .0    .0
  3. SW         *   .0    .2    .0    .0    .0    .2   1.0    .0    .1    .0    .2    .0
  4. NW         *   .0    .0    .4    .0    .0    .3    .0    .0    .2    .0    .0    .0

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          CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
                   JUNE 1989 VERSION
                   PAGE   1

              JOB: Parker/LaVeta, 2030, PM, With Project
              RUN: Hour 1             (WORST CASE ANGLE)
        POLLUTANT: Carbon Monoxide

     I.  SITE VARIABLES

            U=    1.0 M/S             Z0= 175. CM             ALT=      0. (M)
          BRG= WORST CASE             VD=    .0 CM/S
         CLAS=      7 (G)             VS=    .0 CM/S
         MIXH= 1000. M               AMB=   6.6 PPM
        SIGTH=     5. DEGREES       TEMP= 15.0 DEGREE (C)

    II.  LINK VARIABLES

         LINK          *  LINK COORDINATES (M)    *                   EF     H      W
      DESCRIPTION      *    X1     Y1     X2     Y2 *  TYPE  VPH    (G/MI)  (M)    (M)
  ---------------------*--------------------------*-----------------------------------
  A. NF                *     7   -450      7   -150 *   AG   1830     4.8     .0   15.0
  B. NA                *     9   -150      9      0 *   AG   1190     7.6     .0   13.5
  C. ND                *     9      0      9    150 *   AG     60     5.1     .0    9.9
  D. NE                *     7    150      7    450 *   AG     60     4.8     .0   15.0
  E. SF                *    -5    450     -5    150 *   AG    105     4.8     .0   15.0
  F. SA                *    -7    150     -7      0 *   AG     50     7.4     .0   13.5
  G. SD                *    -7      0     -7   -150 *   AG    925     5.1     .0    9.9
  H. SE                *    -5   -150     -5   -450 *   AG    925     4.8     .0   15.0
  I. WF                *   450      5    150      5 *   AG   1045     5.8     .0   15.0
  J. WA                *   150      7      0      7 *   AG    575     9.3     .0   13.5
  K. WD                *     0      7   -150      7 *   AG   1240    10.1     .0    9.9
  L. WE                *  -150      5   -450      5 *   AG   1240     5.8     .0   15.0
  M. EF                *  -450     -5   -150     -5 *   AG   1315     5.8     .0   15.0
  N. EA                *  -150     -7      0     -7 *   AG   1280     9.3     .0   13.5
  O. ED                *     0     -7    150     -7 *   AG   2070     7.4     .0    9.9
  P. EE                *   150     -5    450     -5 *   AG   2070     5.8     .0   15.0
  Q. NL                *     0   -150      0      0 *   AG    640     7.4     .0    9.9
  R. SL                *     0    150      0      0 *   AG     55     7.1     .0    9.9
  S. WL                *   150      0      0      0 *   AG    470     8.9     .0    9.9
  T. EL                *  -150      0      0      0 *   AG     35     8.9     .0    9.9

□□

          CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
                   JUNE 1989 VERSION
                   PAGE   2

              JOB: Parker/LaVeta, 2030, PM, With Project
              RUN: Hour 1             (WORST CASE ANGLE)
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        POLLUTANT: Carbon Monoxide

 III.  RECEPTOR LOCATIONS

              *     COORDINATES (M)
   RECEPTOR   *    X        Y       Z
 -------------*----------------------
 1. NE        *     17       16     1.8
 2. SE        *     17      -16     1.8
 3. SW        *    -16      -16     1.8
 4. NW        *    -16       16     1.8

 IV.  MODEL RESULTS (WORST CASE WIND ANGLE )

              *       * PRED  *                 CONC/LINK
              *  BRG  * CONC  *                   (PPM)
  RECEPTOR    * (DEG) * (PPM) *   A    B    C    D    E    F    G    H
 -------------*-------*-------*----------------------------------------
 1. NE        *  186. *   8.3 *   .1   .7   .0   .0   .0   .0   .0   .1
 2. SE        *  276. *   8.5 *   .0   .3   .0   .0   .0   .0   .0   .0
 3. SW        *   81. *   8.7 *   .0   .2   .0   .0   .0   .0   .2   .0
 4. NW        *  172. *   8.2 *   .2   .2   .0   .0   .0   .0   .3   .0

              *
              *                      CONC/LINK
              *                        (PPM)
  RECEPTOR    *   I    J    K    L    M    N    O    P    Q    R    S    T
 -------------*------------------------------------------------------------
 1. NE        *   .0   .2   .0   .0   .0   .0   .3   .0   .1   .0   .1   .0
 2. SE        *   .0   .0   .1   .2   .1   .9   .0   .0   .1   .0   .0   .0
 3. SW        *   .0   .2   .0   .0   .0   .2  1.0   .0   .1   .0   .2   .0
 4. NW        *   .0   .0   .4   .0   .0   .3   .0   .0   .2   .0   .0   .0

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          CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
                   JUNE 1989 VERSION
                   PAGE   1

              JOB: Lawson/T&C/SR-22Ramp,2030,AM, No Project
              RUN: Hour 1            (WORST CASE ANGLE)
        POLLUTANT: Carbon Monoxide


   I.  SITE VARIABLES

       U=   1.0 M/S             Z0= 175. CM             ALT=      0. (M)
     BRG= WORST CASE            VD=    .0 CM/S
    CLAS=     7 (G)             VS=    .0 CM/S
    MIXH= 1000. M              AMB=   6.6 PPM
   SIGTH=     5. DEGREES      TEMP=  15.0 DEGREE (C)


  II.  LINK VARIABLES

      LINK         *  LINK COORDINATES (M)    *                   EF      H      W
   DESCRIPTION     *   X1     Y1     X2     Y2  *  TYPE   VPH   (G/MI)   (M)    (M)
 ------------------*------------------------*------------------------------------
 A. NF             *     7  -450      7   -150 *  AG     515    4.8       .0   15.0
 B. NA             *     9  -150      9      0 *  AG     494    7.6       .0   13.5
 C. ND             *     9     0      9    150 *  AG     514    5.1       .0    9.9
 D. NE             *     7   150      7    450 *  AG     514    4.8       .0   15.0
 E. SF             *    -5   450     -5    150 *  AG    1730    4.8       .0   15.0
 F. SA             *    -7   150     -7      0 *  AG     875    7.4       .0   13.5
 G. SD             *    -7     0     -7   -150 *  AG     928    5.1       .0    9.9
 H. SE             *    -5  -150     -5   -450 *  AG     928    4.8       .0   15.0
 I. WF             *   450     5    150      5 *  AG     629    5.8       .0   15.0
 J. WA             *   150     7      0      7 *  AG     205    9.3       .0   13.5
 K. WD             *     0     7   -150      7 *  AG     756   10.1       .0    9.9
 L. WE             *  -150     5   -450      5 *  AG     756    5.8       .0   15.0
 M. EF             *  -450    -5   -150     -5 *  AG     534    5.8       .0   15.0
 N. EA             *  -150    -7      0     -7 *  AG     384    9.3       .0   13.5
 O. ED             *     0    -7    150     -7 *  AG    1210    7.4       .0    9.9
 P. EE             *   150    -5    450     -5 *  AG    1210    5.8       .0   15.0
 Q. NL             *     0  -150      0      0 *  AG      21    7.4       .0    9.9
 R. SL             *     0   150      0      0 *  AG     855    7.1       .0    9.9
 S. WL             *   150     0      0      0 *  AG     424    8.9       .0    9.9
 T. EL             *  -150     0      0      0 *  AG     150    8.9       .0    9.9

□□




          CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
                   JUNE 1989 VERSION
                   PAGE   2

              JOB: Lawson/T&C/SR-22Ramp,2030,AM, No Project
              RUN: Hour 1            (WORST CASE ANGLE)
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        POLLUTANT: Carbon Monoxide

III.  RECEPTOR LOCATIONS

            *    COORDINATES (M)
  RECEPTOR  *    X      Y      Z
------------*---------------------
1. NE       *     17      16   1.8
2. SE       *     17     -16   1.8
3. SW       *    -16     -16   1.8
4. NW       *    -16      16   1.8

 IV.  MODEL RESULTS (WORST CASE WIND ANGLE )

            *       * PRED  *                CONC/LINK
            *  BRG  * CONC  *                  (PPM)
 RECEPTOR   * (DEG) * (PPM) *   A    B    C    D    E    F    G    H
------------*-------*-------*----------------------------------------
1. NE       *  263. *   7.8 *   .0   .0   .0   .0   .0   .1   .0   .0
2. SE       *  350. *   7.8 *   .0   .0   .2   .0   .0   .2   .0   .0
3. SW       *   83. *   7.9 *   .0   .0   .0   .0   .0   .0   .2   .0
4. NW       *  126. *   7.8 *   .0   .0   .0   .0   .0   .3   .0   .0


            *                          CONC/LINK
            *                            (PPM)
 RECEPTOR   *   I    J    K    L    M    N    O    P    Q    R    S    T
------------*------------------------------------------------------------
1. NE       *   .0   .0   .6   .0   .0   .0   .0   .0   .0   .1   .0   .0
2. SE       *   .0   .0   .0   .0   .0   .0   .3   .0   .0   .2   .0   .0
3. SW       *   .0   .0   .0   .0   .0   .0   .6   .0   .0   .0   .2   .0
4. NW       *   .0   .0   .3   .0   .0   .0   .2   .0   .0   .2   .1   .0

□□
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          CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
                   JUNE 1989 VERSION
                   PAGE   1

              JOB: Lawson/T&C/SR-22Ramp,2030,AM,WithProject
              RUN: Hour 1            (WORST CASE ANGLE)
        POLLUTANT: Carbon Monoxide

    I.  SITE VARIABLES

         U=   1.0 M/S              Z0= 175. CM            ALT=     0. (M)
       BRG= WORST CASE             VD=   .0 CM/S
      CLAS=     7 (G)              VS=   .0 CM/S
      MIXH= 1000. M               AMB=  6.6 PPM
     SIGTH=    5. DEGREES        TEMP= 15.0 DEGREE (C)

   II.  LINK VARIABLES

       LINK       *  LINK COORDINATES (M)   *                  EF     H     W
    DESCRIPTION   *   X1    Y1    X2    Y2  * TYPE  VPH   (G/MI)  (M)   (M)
 -----------------*-------------------------*------------------------------
 A. NF            *     7  -450     7  -150 *  AG    600    4.8    .0  15.0
 B. NA            *     9  -150     9     0 *  AG    540    7.6    .0  13.5
 C. ND            *     9     0     9   150 *  AG    540    5.1    .0   9.9
 D. NE            *     7   150     7   450 *  AG    540    4.8    .0  15.0
 E. SF            *    -5   450    -5   150 *  AG   1735    4.8    .0  15.0
 F. SA            *    -7   150    -7     0 *  AG    880    7.4    .0  13.5
 G. SD            *    -7     0    -7  -150 *  AG    945    5.1    .0   9.9
 H. SE            *    -5  -150    -5  -450 *  AG    945    4.8    .0  15.0
 I. WF            *   450     5   150     5 *  AG    635    5.8    .0  15.0
 J. WA            *   150     7     0     7 *  AG    205    9.3    .0  13.5
 K. WD            *     0     7  -150     7 *  AG    795   10.1    .0   9.9
 L. WE            *  -150     5  -450     5 *  AG    795    5.8    .0  15.0
 M. EF            *  -450    -5  -150    -5 *  AG    540    5.8    .0  15.0
 N. EA            *  -150    -7     0    -7 *  AG    390    9.3    .0  13.5
 O. ED            *     0    -7   150    -7 *  AG   1230    7.4    .0   9.9
 P. EE            *   150    -5   450    -5 *  AG   1230    5.8    .0  15.0
 Q. NL            *     0  -150     0     0 *  AG     60    7.4    .0   9.9
 R. SL            *     0   150     0     0 *  AG    855    7.1    .0   9.9
 S. WL            *   150     0     0     0 *  AG    430    8.9    .0   9.9
 T. EL            *  -150     0     0     0 *  AG    150    8.9    .0   9.9

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          CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
                   JUNE 1989 VERSION
                   PAGE   2

              JOB: Lawson/T&C/SR-22Ramp,2030,AM,WithProject
              RUN: Hour 1            (WORST CASE ANGLE)
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        POLLUTANT: Carbon Monoxide


    III.  RECEPTOR LOCATIONS

                   *     COORDINATES (M)
      RECEPTOR     *     X        Y       Z
    ------------*--------------------
    1. NE          *     17       16     1.8
    2. SE          *     17      -16     1.8
    3. SW          *    -16      -16     1.8
    4. NW          *    -16       16     1.8


     IV.  MODEL RESULTS (WORST CASE WIND ANGLE )

                   *        * PRED   *                 CONC/LINK
                   *  BRG   * CONC   *                   (PPM)
      RECEPTOR     * (DEG)  * (PPM)  *   A     B     C     D     E     F     G     H
    -------------*-------*-------*---------------------------------------------
    1. NE          * 263.   *   7.9  *   .0    .0    .0    .0    .0    .1    .0    .0
    2. SE          * 350.   *   7.8  *   .0    .0    .2    .0    .0    .2    .0    .0
    3. SW          *  83.   *   7.9  *   .0    .0    .0    .0    .0    .0    .2    .0
    4. NW          * 127.   *   7.8  *   .0    .0    .0    .0    .0    .3    .0    .0


                   *                            CONC/LINK
                   *                              (PPM)
      RECEPTOR     *   I     J     K     L     M     N     O     P     Q     R     S     T
    ------------*-------------------------------------------------------------------
    1. NE          *   .0    .0    .6    .0    .0    .0    .0    .0    .0    .1    .0    .0
    2. SE          *   .0    .0    .0    .0    .0    .0    .3    .0    .0    .2    .0    .0
    3. SW          *   .0    .0    .0    .0    .0    .0    .6    .0    .0    .0    .2    .0
    4. NW          *   .0    .0    .3    .0    .0    .0    .2    .0    .0    .2    .1    .0

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          CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
                   JUNE 1989 VERSION
                   PAGE   1

              JOB: Lawson/T&C/SR-22Ramp,2030,PM,No Project
              RUN: Hour 1           (WORST CASE ANGLE)
        POLLUTANT: Carbon Monoxide

     I.  SITE VARIABLES

            U=   1.0 M/S             Z0= 175. CM          ALT=      0. (M)
          BRG= WORST CASE            VD=    .0 CM/S
         CLAS=      7 (G)            VS=    .0 CM/S
         MIXH= 1000. M              AMB=   6.6 PPM
        SIGTH=     5. DEGREES      TEMP=  15.0 DEGREE (C)

    II.  LINK VARIABLES

         LINK       *  LINK COORDINATES (M)     *                 EF      H      W
     DESCRIPTION    *   X1    Y1    X2    Y2    * TYPE  VPH    (G/MI)   (M)    (M)
  ------------------*---------------------------*-------------------------------------
  A. NF             *    7  -450     7  -150 *  AG   1171    4.8      .0    15.0
  B. NA             *    9  -150     9     0 *  AG    799    7.6      .0    13.5
  C. ND             *    9     0     9   150 *  AG   1528    5.1      .0     9.9
  D. NE             *    7   150     7   450 *  AG   1528    4.8      .0    15.0
  E. SF             *   -5   450    -5   150 *  AG    705    4.8      .0    15.0
  F. SA             *   -7   150    -7     0 *  AG    400    7.4      .0    13.5
  G. SD             *   -7     0    -7  -150 *  AG    494    5.1      .0     9.9
  H. SE             *   -5  -150    -5  -450 *  AG    494    4.8      .0    15.0
  I. WF             *  450     5   150     5 *  AG    801    5.8      .0    15.0
  J. WA             *  150     7     0     7 *  AG    710    9.3      .0    13.5
  K. WD             *    0     7  -150     7 *  AG    747   10.1      .0     9.9
  L. WE             * -150     5  -450     5 *  AG    747    5.8      .0    15.0
  M. EF             * -450    -5  -150    -5 *  AG    743    5.8      .0    15.0
  N. EA             * -150    -7     0    -7 *  AG    288    9.3      .0    13.5
  O. ED             *    0    -7   150    -7 *  AG    651    7.4      .0     9.9
  P. EE             *  150    -5   450    -5 *  AG    651    5.8      .0    15.0
  Q. NL             *    0  -150     0     0 *  AG    372    7.4      .0     9.9
  R. SL             *    0   150     0     0 *  AG    305    7.1      .0     9.9
  S. WL             *  150     0     0     0 *  AG     91    8.9      .0     9.9
  T. EL             * -150     0     0     0 *  AG    455    8.9      .0     9.9

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          CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
                   JUNE 1989 VERSION
                   PAGE   2

              JOB: Lawson/T&C/SR-22Ramp,2030,PM,No Project
              RUN: Hour 1           (WORST CASE ANGLE)
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        POLLUTANT: Carbon Monoxide


 III.  RECEPTOR LOCATIONS

              *     COORDINATES (M)
   RECEPTOR   *    X         Y        Z
 -------------*---------------------
 1. NE        *      17       16    1.8
 2. SE        *      17      -16    1.8
 3. SW        *     -16      -16    1.8
 4. NW        *     -16       16    1.8


  IV.  MODEL RESULTS (WORST CASE WIND ANGLE )

              *       * PRED  *                     CONC/LINK
              *  BRG  * CONC  *                       (PPM)
  RECEPTOR    * (DEG) * (PPM) *   A     B     C     D     E     F     G     H
--------------*-------*-------*------------------------------------------------
 1. NE        *  262. *   8.0 *   .0    .0    .3    .0    .0    .0    .0    .0
 2. SE        *  352. *   7.8 *   .0    .0    .5    .0    .0    .0    .0    .0
 3. SW        *   82. *   7.6 *   .0    .1    .0    .0    .0    .0    .0    .0
 4. NW        *   96. *   7.8 *   .0    .0    .1    .0    .0    .1    .0    .0


              *                         CONC/LINK
              *                           (PPM)
  RECEPTOR    *   I     J     K     L     M     N     O     P     Q     R     S     T
 -------------*------------------------------------------------------------------------
 1. NE        *   .0    .0    .6    .0    .0    .0    .0    .0    .0    .0    .0    .2
 2. SE        *   .0    .1    .0    .0    .0    .0    .2    .0    .0    .0    .0    .0
 3. SW        *   .0    .2    .0    .0    .0    .0    .4    .0    .0    .0    .0    .0
 4. NW        *   .0    .6    .0    .0    .0    .0    .0    .1    .0    .0    .0    .0

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         CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
                  JUNE 1989 VERSION
                  PAGE   1

             JOB: Lawson/T&C/SR-22Ramp,2030,PM,WithProject
             RUN: Hour 1              (WORST CASE ANGLE)
       POLLUTANT: Carbon Monoxide

  I.  SITE VARIABLES

        U=    1.0 M/S             Z0= 175. CM          ALT=      0. (M)
      BRG= WORST CASE             VD=    .0 CM/S
     CLAS=      7 (G)             VS=    .0 CM/S
     MIXH= 1000. M               AMB=   6.6 PPM
    SIGTH=     5. DEGREES       TEMP=  15.0 DEGREE (C)

  II.  LINK VARIABLES

       LINK        *  LINK COORDINATES (M)    *                 EF       H      W
    DESCRIPTION    *  X1     Y1     X2    Y2  *  TYPE  VPH   (G/MI)   (M)    (M)
  -----------------*--------------------------*------------------------------------
  A. NF            *     7  -450     7  -150 *  AG   1210    4.8      .0   15.0
  B. NA            *     9  -150     9     0 *  AG    820    7.6      .0   13.5
  C. ND            *     9     0     9   150 *  AG   1540    5.1      .0    9.9
  D. NE            *     7   150     7   450 *  AG   1540    4.8      .0   15.0
  E. SF            *    -5   450    -5   150 *  AG    730    4.8      .0   15.0
  F. SA            *    -7   150    -7     0 *  AG    425    7.4      .0   13.5
  G. SD            *    -7     0    -7  -150 *  AG    575    5.1      .0    9.9
  H. SE            *    -5  -150    -5  -450 *  AG    575    4.8      .0   15.0
  I. WF            *   450     5   150     5 *  AG    830    5.8      .0   15.0
  J. WA            *   150     7     0     7 *  AG    710    9.3      .0   13.5
  K. WD            *     0     7  -150     7 *  AG    765   10.1      .0    9.9
  L. WE            *  -150     5  -450     5 *  AG    765    5.8      .0   15.0
  M. EF            *  -450    -5  -150    -5 *  AG    770    5.8      .0   15.0
  N. EA            *  -150    -7     0    -7 *  AG    315    9.3      .0   13.5
  O. ED            *     0    -7   150    -7 *  AG    660    7.4      .0    9.9
  P. EE            *   150    -5   450    -5 *  AG    660    5.8      .0   15.0
  Q. NL            *     0  -150     0     0 *  AG    390    7.4      .0    9.9
  R. SL            *     0   150     0     0 *  AG    305    7.1      .0    9.9
  S. WL            *   150     0     0     0 *  AG    120    8.9      .0    9.9
  T. EL            *  -150     0     0     0 *  AG    455    8.9      .0    9.9

□□

         CALINE4: CALIFORNIA LINE SOURCE DISPERSION MODEL
                  JUNE 1989 VERSION
                  PAGE   2

             JOB: Lawson/T&C/SR-22Ramp,2030,PM,WithProject
             RUN: Hour 1              (WORST CASE ANGLE)
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        POLLUTANT: Carbon Monoxide


 III.  RECEPTOR LOCATIONS

              *     COORDINATES (M)
   RECEPTOR   *     X        Y       Z
 -------------*--------------------------
 1. NE        *     17      16     1.8
 2. SE        *     17     -16     1.8
 3. SW        *    -16     -16     1.8
 4. NW        *    -16      16     1.8


  IV.  MODEL RESULTS (WORST CASE WIND ANGLE )

              *        * PRED   *                 CONC/LINK
              *  BRG   * CONC   *                   (PPM)
  RECEPTOR    * (DEG)  * (PPM)  *    A    B    C    D    E    F    G    H
--------------*--------*--------*----------------------------------------
 1. NE        *  262.  *   8.0  *   .0   .0   .3   .0   .0   .0   .0   .0
 2. SE        *  351.  *   7.8  *   .0   .0   .5   .0   .0   .0   .0   .0
 3. SW        *   82.  *   7.7  *   .0   .1   .0   .0   .0   .0   .0   .0
 4. NW        *  170.  *   7.7  *   .0   .2   .0   .0   .0   .0   .2   .0


              *                          CONC/LINK
              *                            (PPM)
  RECEPTOR    *   I    J    K    L    M    N    O    P    Q    R    S    T
 -------------*------------------------------------------------------------
 1. NE        *  .0   .0   .6   .0   .0   .0   .0   .0   .0   .0   .0   .2
 2. SE        *  .0   .1   .0   .0   .0   .0   .2   .0   .0   .0   .0   .0
 3. SW        *  .0   .2   .0   .0   .0   .0   .4   .0   .0   .0   .0   .0
 4. NW        *  .0   .0   .3   .0   .0   .0   .0   .0   .1   .0   .0   .1

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