City of Pasadena

680 East Colorado Blvd. Commercial Project

Final Environmental Impact Report

July 2009

680 EAST COLORADO BOULEVARD COMMERCIAL PROJECT

Final
Environmental Impact Report

Prepared by:

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680 East Colorado Boulevard Commercial Project EIR

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EXECUTIVE SUMMARY

This Final EIR incorporates information from the Draft EIR (circulated from October 16, 2008, through December 10, 2008), the Revised Draft EIR (circulated from April 10, 2009 through May 25, 2009), clarifications that were made in response to both written and oral comments received during either of the public review periods (see Section 8.0 *Addenda Errata/Comments and Responses*), as well as some updates to setting information. To assist the reader in identifying changes, this final EIR includes all of the Draft EIR sections with new information ~~is~~ shown in underline format and deleted information is shown in ~~strikethrough format~~ throughout this document.

This section summarizes the characteristics of the proposed project, alternatives, environmental impacts associated with the proposed project, recommended mitigation measures, and the level of significance of project impacts after mitigation.

~~A revised Draft EIR was prepared pursuant to California Environmental Quality Act (CEQA) Guidelines § 15088.5. The recirculation requirements and process are discussed in greater detail in Section 1.0, *Introduction*. Pursuant to CEQA Guidelines § 15088.5(c), the Revised Draft EIR included only the sections of the Draft EIR that were changed in response to new information. The following sections of the original Draft EIR are included in the Revised Draft EIR.~~

~~Section 0.0 Executive Summary~~
~~Section 1.0 Introduction~~
~~Section 2.0 Project Description~~
~~Section 4.5 Traffic~~
~~Section 6.0 Alternatives~~

PROJECT SYNOPSIS

Project Applicant

IDS Real Estate Group
515 S. Figueroa Street, 16th Floor
Los Angeles, CA 91105

Project Description

The proposed project involves the demolition of existing improvements, excavation for a six-level subterranean garage, and the subsequent construction of a 159,971 square foot, five-story commercial office building with 522 subterranean spaces. On the ground floor, the building would have 14,407 square feet of retail use. The remainder of the building would contain 145,564 square feet of office use. Loading would be accomplished from an internal bay, accessed on El Molino Avenue. Vehicular access to the subterranean parking structure would also be from El Molino Avenue.

The project incorporates a pedestrian corridor or paseo between the Pasadena Playhouse and the Arcade Lane Building. The paseo provides for future pedestrian line-of-sight between the historic Pasadena Playhouse and the Arcade Lane Building, which is not currently designated, but is eligible for protection as a historical resource. The upper floors of the proposed project would be reserved for office uses. The project will be constructed with techniques consistent with Leadership

in Energy and Environmental Design (LEED) certification pursuant to the requirements of Municipal Code 14.90.040. The LEED program is designed to assign credits for environmentally-friendly design features and construction practices, so that projects may have less impact on the environment than standard construction would.

Summary of Project Characteristics

Lot Size	1.3 acres (57,762 square feet)
Total Floor Area	159,971 square feet total • 14,407 SF of retail use • 145,564 SF of office use
Floor Area Ratio *	2.8
Maximum Building Height	75'-0"
Number of Levels Above Grade	5 levels
Number of Levels Below Grade	6 levels
Parking Spaces	522 **

Source: .Gensler. Plan Set, June 2008
*** The project site contains separate zones with floor area ratios of 2.0 and 3.0. The floor area ratio presented here is an average based on the total square footage proposed as allowed in each zone and the total area of the site.***
**** ~~156~~ 155 of these spaces are proposed to serve the Playhouse District as public parking spaces***

Areas of Public Concern

Two scoping meetings were held for this project, the first of which occurred on July 18, 2007 and the second of which occurred at a Planning Commission meeting on September 26th, 2007. Issues of public concern included design considerations, historic preservation and traffic. Areas of concern with respect to public agencies included the following.

1) Solid waste generation and recycling pursuant to the County of Los Angeles Public Works Department.
2) Air Quality analysis and identification of impacts from both construction and operation pursuant to the concerns of the South Coast Air Quality Management District.
3) Impacts as a result of wastewater generation and flow to the Sewerage System pursuant to the concerns of the County Sanitation Districts of Los Angeles County.
4) Cultural resources impacts and mitigation measures pursuant to the concerns of the Native American Heritage Commission.
5) Traffic impacts and mitigation measures pursuant to the concerns of Caltrans.

Concerns with respect to solid waste, wastewater and cultural resources were addressed in the initial study that was prepared for the project. Concerns regarding air quality and traffic were addressed within the body of the EIR. In addition, general areas of public concern throughout California include the topics of water and global climate change, both of which have been added to the EIR.

ALTERNATIVES

Five alternatives to the proposed project were selected for consideration, as described below.

Alternative 1 - No Project. This alternative assumes that the proposed project would not be developed and that the two-story commercial retail building would not be demolished. Thus the existing building would be preserved along with the 36 surface parking spaces and 28 trees. In addition, the visual character of the Playhouse District would remain in its current state.

Alternative 2 –Off-Site Parking Alternative. This alternative explores providing a portion of the proposed parking at two alternative locations. The two distinct off-site locations are both within one block of the project site and would divert a portion of the project generated traffic off of El Molino Avenue ~~between Colorado Boulevard and Playhouse Alley~~, where ~~a~~ significant street segment impacts occur~~s~~.

Alternative 3 – Dual Access. This alternative explores the provision of split access from both Green Street and El Molino Avenue as a method of diverting a portion of the project generated traffic off of El Molino Avenue ~~between Colorado Boulevard and Playhouse Alley~~ where ~~a~~ significant street segment impacts occur~~s~~.

Alternative 4 – 100% Floor Area Ratio (FAR). This alternative explores project impacts without the requested 10% FAR increase pursuant to Section 17.30.050(C) of the City's Municipal Code, which contains provisions that allow for exceedance of the FAR by 10% within the Central District Specific Plan area.

Alternative 5 – 80% Reduced Project. This alternative would involve reducing the overall square footage of the development from 159, 971 SF to 31,471 SF as an office use and is the only alternative that would eliminate the significant and unavoidable street impacts on the segments of El Molino Avenue between Colorado Boulevard and Playhouse Alley and between Union Street and Colorado Boulevard.

Alternative 6 – Height Averaging Alternative. This alternative maintains the same square footage and uses of the proposed project (145,564 SF of office use plus 14,407 SF of retail use) but changes the massing of the project to include six stories adjacent Colorado Boulevard. The Height Averaging Alternative shifts the project massing such that the building tapers or steps down as it transitions from Zone 1 to Zone 3 (see Figure 6-2) through height averaging per Municipal Code §17.30.050. Under this alternative, 30% of the proposed fifth floor area would be relocated to create a sixth floor on the northern most portion of the property adjacent Colorado Boulevard (see Figure 6-2). The maximum building height would be 88 feet at the top of the sixth floor, 75 feet at the top of the fifth floor, 63 feet at the top of the fourth floor, 50 feet at the top of the third floor, 35 feet at top of the second floor, and about 25 feet at the top of the parking garage canopy. This alternative would require findings by the Design Commission. This alternative would have all of the same impacts as the proposed project.

Alternative 5 is environmentally superior overall since it would eliminate the Class I unavoidably significant impacts to El Molino Avenue between Colorado Boulevard and Playhouse Alley and between Union Street and Colorado Boulevard. None of the other alternatives, including the No-Project Alternative, would reduce the impact to ~~this~~ these de-emphasized street segments for which physical mitigation measures are not allowed. The Reduced Project Alternative would not provide

an economically viable project for the applicant and would not meet the objective of providing a viable commercial project within the Playhouse District.

SUMMARY OF IMPACTS AND MITIGATION MEASURES

Table ES-1 lists the environmental impacts of the proposed project, proposed mitigation measures, and residual impacts. Impacts are categorized by classes. Class I impacts are defined as significant, unavoidable adverse impacts, which require a statement of overriding considerations pursuant to Section 15093 of the *CEQA Guidelines* if the project is approved. Class II impacts are significant adverse impacts that can be feasibly mitigated to less than significant levels and which require findings to be made under Section 15091 of the *CEQA Guidelines*. Class III impacts are adverse, but less than adopted significance thresholds. Class IV impacts are beneficial.

Table ES-1
Summary of Impacts, Mitigation Measures, and Significance After Mitigation

Impact	Mitigation Measures	Significance After Mitigation
AESTHETICS		
Impact AES-1 The proposed project could result in indirect aesthetic impacts on adjacent historic landmarks and landmark-eligible structures due to potential incompatibility of design and scale. However, because the project requires review by the City's Design Commission, these impacts are Class III, less than significant.	None required.	Less than significant.
Impact AES-2 The proposed project would introduce a new 72-foot tall structure plus 15-feet of appurtenances to a site currently occupied by a two-story building. This change would substantially alter the visual character of the site and its surroundings. However, by complying with the Design Review process and adhering to adopted City design guidelines, impacts would be Class III, less than significant.	None required.	Less than significant.
Impact AES-3 The proposed project would result in new sources of light and glare and create new shadows on and around the project site. This would be due to the increased height and scale of development, as well as the larger proportion of glazing and potentially reflective metal materials, in contrast with the existing development on the site. This is a Class II, significant but mitigable impact.	**AES-3 Building Material Specifications**. Prior to the issuance of any building permits, the applicant shall submit plans and specifications for all building materials to the Planning Division for review and approval. All structures facing any public street or neighboring property shall use minimally reflective glass and all other materials used on the exterior of buildings and structures shall be selected with attention to minimizing reflective glare. The use of glass with over 25% reflectivity shall be prohibited except as expressly approved by the Design Review Commission.	Less than significant.

Table ES-1
Summary of Impacts, Mitigation Measures, and Significance After Mitigation

Impact	Mitigation Measures	Significance After Mitigation
AIR QUALITY		
Impact AQ-1 Air pollutant emissions generated by construction of the proposed project would not exceed SCAQMD thresholds for NOx, CO, SO2, or PM10 or PM2.5. However, ROG emissions would exceed SCAQMD thresholds. This is a Class II, significant but mitigable impact.	**AQ-1(a) ROG Control.** The following shall be implemented to minimize daily ROG emissions related to the application of architectural coatings: • Low VOC architectural and asphalt coatings shall be used on site and shall comply with AQMD Rule 1113-Architectural Coatings. **AQ-1(b) Ozone Precursor Control.** The following shall be implemented during construction to minimize emissions from construction equipment: • Equipment engines should be maintained in good condition and in proper tune as per manufacturer's specifications; • Lengthen construction periods during the smog season so as to minimize the number of vehicles and equipment operating simultaneously; and • Use new technologies to control ozone precursor emissions as they become available. **AQ-1(c) Fugitive Dust Control.** The following shall be implemented during construction to minimize fugitive dust emissions: • Water trucks shall be used during construction to keep all areas of vehicle movements damp enough to prevent dust from leaving the site. At a minimum, this will require twice daily applications (once in late morning and once at the end of the workday). Increased watering is required whenever wind speed exceeds 15 mph. Grading shall be suspended if wind gusts exceed 25 mph. • Soil with 5% or greater silt content that is stockpiled for more than two days shall be covered, kept moist, or treated with soil binders to prevent dust generation. Trucks transporting material shall be tarped from the point of origin or shall maintain at least two feet of freeboard. • All material excavated or graded shall be treated with soil binders or shall be sufficiently watered at least twice daily with complete coverage, preferably in the late morning and after work is done for the day. • All clearing, grading, earth moving, or excavation activities shall cease during periods of high winds (i.e., greater than 20 mph averaged over one hour) so as to prevent excessive amounts of dust. • All material transported off-site shall be securely covered to prevent excessive amounts of dust.	Less than significant.

Table ES-1
Summary of Impacts, Mitigation Measures, and Significance After Mitigation

Impact	Mitigation Measures	Significance After Mitigation
	• Face masks shall be used by all employees involved in grading or excavation operations during dry periods to reduce inhalation of dust which may contain the fungus which causes San Joaquin Valley Fever.	
Impact AQ-2 Operation of the proposed project would generate air pollutant emissions, but emissions would not exceed SCAQMD operational significance thresholds. Therefore, the project's operational impact to regional air quality would be Class III, less than significant.	None Required.	Less than significant.
Impact AQ-3 Long-term mobile emissions associated with the proposed project would incrementally increase carbon monoxide (CO) concentrations at heavily congested intersections in the area. However, because CO levels would remain within state and federal standards, and the LOS at affected intersections would be D or better, such impacts are considered Class III, less than significant.	None required.	Less than significant.
NOISE & VIBRATION		
Impact N-1 Project construction would temporarily generate intermittent high noise levels and could generate groundborne vibrations on and adjacent to the site. However, construction generated noise levels and vibrations would be less than significant due to adherence to municipal code requirements and an excavation plan for shoring. This is a Class III, less than significant impact.	None Required	Less than Significant
Impact N-2 Project-generated traffic would incrementally increase noise levels on area roadways. However, the change in noise levels would be less than 1 dBA. Therefore, the effect of increased traffic noise on existing uses would be Class III, less than significant.	None Required	Less than Significant
Impact N-3 Operation of the proposed project would generate noise levels that may periodically be audible to existing uses near the project site. Such noise sources include stationary equipment, such as rooftop ventilation and heating systems, trash hauling,	**N-3 Rooftop Ventilation.** Parapets shall be installed around all rooftop ventilation systems.	Less than significant

Table ES-1
Summary of Impacts, Mitigation Measures, and Significance After Mitigation

Impact	Mitigation Measures	Significance After Mitigation
and parking garage operation, and general commercial activities. This is considered a Class II, significant but mitigable, impact.		
Impact N-4 The proposed project would be constructed in an environment where ambient noise levels may be disturbing to employees unless the building is designed with closed windows and fresh air supply systems. This is a Class II, significant but mitigable impact.	**N-4 Noise Exposure.** The proposed project shall incorporate closed windows and a fresh air supply via a mechanical ventilation system so that windows may remain closed. Exterior glass shall be capable of attenuating noise of 20 decibels.	Less than significant
GEOLOGY AND SOILS		
Impact GEO-1 Seismically-induced ground shaking could destroy or damage proposed structures, resulting in a loss of property and risk to human health. However, the proposed project would be required to comply	None required	Less than significant.
Impact GEO-2 The proposed project includes construction of a five story building atop six levels of subterranean parking. Various design considerations are necessary to ensure that the project is constructed in manner that reduces the potential for adverse effects from differential settlement, corrosive soils, and collapsible soils. The project site is suitable for the proposed development with incorporation of recommendations contained in the geotechnical report. This is a Class II, significant but mitigable impact.	**GEO-2** Adherence to Geotechnical Recommendations. The applicant shall implement, adhere to, and comply with, all recommendations contained in the Geologic and Soils Engineering Report prepared for the project site by MacTec, 2006 or as superseded by any subsequent updates, including the excavation plan included in Appendix D. The plans shall be reviewed by the Building Department for conformance with the recommendations.	Less than significant.
Impact GEO-3 The proposed project involves excavation for six levels of subterranean parking and is estimated to require 63,000 cubic yards of cut, which would be exported. Excavation and soil transport could result in dispersal of soil by air and water. This is a Class II, significant but mitigable impact.	**AQ-1(c) Fugitive Dust Control.** The following shall be implemented during construction to minimize fugitive dust emissions: • Water trucks shall be used during construction to keep all areas of vehicle movements damp enough to prevent dust from leaving the site. At a minimum, this will require twice daily applications (once in late morning and once at the end of the workday). Increased watering is required whenever wind speed exceeds 15 mph. Grading shall be suspended if wind gusts exceed 25 mph. • Soil with 5% or greater silt content that is stockpiled for more than two days shall be covered, kept moist, or treated with soil binders to prevent dust generation. Trucks transporting material shall be tarped from the point of origin or shall maintain at least two feet of freeboard.	Less than significant.

Table ES-1
Summary of Impacts, Mitigation Measures, and Significance After Mitigation

Impact	Mitigation Measures	Significance After Mitigation
TRAFFIC AND CIRCULATION		
Impact TC-1 The proposed project would incrementally increase traffic levels at study area intersections. The increased traffic levels would not cause an exceedance of adopted significance criteria at 12 of the 13 intersections. However, project-generated traffic would cause the El Molino Avenue/Colorado Boulevard intersection to operate at an unacceptable level of service during the PM peak hour. Thus, the proposed project's traffic impacts would be Class II, significant but mitigable.	**TC-1(a) Prohibited Left-Turns.** Left-turn movements at the northbound and southbound approaches on El Molino Avenue at the Colorado Boulevard Intersection shall be prohibited. **TC-1(b) Left-turn Pocket Installation on El Molino Avenue at Union Street Intersection.** A left-turn pocket shall be installed at the northbound approach on El Molino Avenue at the Union Street intersection. The northbound and southbound approaches on El Molino Avenue shall be restriped to accommodate the installation of the northbound left-turn pocket. The resultant lane configurations at the northbound approach to the intersection would be one exclusive left-turn lane and one through lane. The traffic signal at the El Molino Avenue/Union Street Intersection shall be modified to provide northbound left-turn phasing. **TC-1(c) Left-turn Pocket Installation on El Molino Avenue at Green Street Intersection.** The northbound and southbound approaches on El Molino Avenue shall be restriped and a southbound left-turn pocket shall be installed. <u>The re-striping would necessitate reconstruction/modification of the existing catch basin on the northeast corner to accommodate safe movement of vehicles traveling northbound on El Molino Avenue.</u> The resultant lane configurations at the southbound approach to the intersection would be one exclusive left-turn lane and one through lane. The traffic signal at the El Molino Avenue/Green Street intersection shall be modified to provide southbound left-turn phasing. **TC-1(d) Transportation Demand Management (TDM).** The project shall comply with the City's Trip Reduction ordinance. Upon submittal of a TSM Program for review and approval, the owner/developer shall place a deposit based on the current General Fee Schedule with the Department of Transportation prior to the issuance of a building permit. This deposit is subject to a refund or an additional billing in the event that the deposit amount is not sufficient to cover the cost of the review. The developer shall pay an annual Transportation Demand Management status report review fee based on the current General Fee Schedule, in compliance with the requirements of the Trip Reduction Ordinance. <u>The TSM program shall encourage a mix of tenants with varying start/stop times to help reduce AM/PM</u>	Less than significant

Table ES-1
Summary of Impacts, Mitigation Measures, and Significance After Mitigation

Impact	Mitigation Measures	Significance After Mitigation
	peak-hour traffic. The TSM shall also require the use of marketing materials and website design that directs site visitors to the site via the City's arterials and traffic corridors, instead of using de-emphasized streets like El Molino and Glenarm. **TC-1(e) Traffic Reduction and Transportation Improvement Fee.** The City's Traffic Reduction and Transportation Improvement Fee (TR-TIF) program funds key intersection improvements, completes roadway extension projects identified in the Mobility Element, funds improvements to manage traffic on designated multimodal corridors and funds public transit improvements to encourage non-automobile travel in the City. The TR-TIF program is applicable to new industrial, office, retail and residential development. The current fee schedule for the land uses are as follows: • *Industrial use: $3.20 per square-foot of net new space* • *Office use: $3.84 per square-foot of net new space* • *Retail use: $8.89 per square-foot of net new space* • *Residential use: $2,556.88 per net new residential unit the proposed* The applicant shall make the required payment based on the fees in affect at the time of payment, prior to the issuance of building permits. It should be noted that as the existing commercial building which would be removed to accommodate the proposed project is currently vacant, existing use trip credits will not be applied in the TR-TIF program fee calculation.	
Impact TC-2 The proposed project would incrementally increase traffic levels along study area roadways. The projected increases ~~are less than~~ exceed the City's adopted thresholds on ~~four of the five~~ six of the ten study area road segments. ~~However, because the projected increase in traffic on one of the five road segments exceeds the City's thresholds, impacts would be Class I, *unavoidably significant*.~~ Impacts to four of the six street segments are Class II, *significant but mitigable*. However, there are two segments of El Molino Avenue for which impacts would be Class I, *unavoidably significant,* because no physical improvements can be made to this	**TC-2 Street Segment Mitigation.** The following measures are recommended conditions by PASDOT: • *Contribute funds toward a pedestrian safety study in the vicinity of the project. The plan shall study measures such as mid-block signals, curb extensions, pedestrian countdown signals, enhanced crosswalks etc to improve walking safety and convenience to and from parking structures/businesses in the area.* • *Provide wayfinding signage between the parking garage and the Pasadena Playhouse, directing patrons to utilize designated crosswalks at Green Street or Colorado Boulevard. The sign program and format is subject to the review and approval of the Planning Division and the Department of Transportation.* • *Provide pedestrian lighting to and from the project*	Unavoidably Significant

Table ES-1
Summary of Impacts, Mitigation Measures, and Significance After Mitigation

Impact	Mitigation Measures	Significance After Mitigation
de-emphasized street.	*to the nearest transit stops within a quarter mile radius.* • *Offer unbundled parking option with lease.* • *Contribute funds to the Pasadena ARTS program.* • *Provide Metro Corporate Transit Passes to employees of this project site.*	
Impact TC-3 The proposed project would provide 522 parking spaces, of which ~~366~~ 367 would be project-only spaces and ~~156~~ 155 would be public spaces to serve the Playhouse District. The proposed parking spaces would meet the City's parking requirements. Therefore, impacts to parking supply would be Class III, *less than significant*.	None necessary	Less than significant
Impact TC-4 The proposed project would not generate trips exceeding CMP criteria at CMP locations. Thus, impacts to CMP routes are considered Class III, *less than significant*.	None necessary	Less than significant
Impact TC-5 The proposed project would incrementally increase demand for public transit service. However, it is anticipated that the existing transit system could accommodate the project's increase in demand and impacts would be Class III, *less than significant*.	None necessary	Less than significant
Impact TC-6 Access to the subterranean parking structure would be provided by a two-way driveway/ramp from El Molino Avenue. This driveway is consistent with City requirements to provide adequate site access; therefore, impacts relating to site access and circulation are considered Class III, *less than significant*.	None necessary	Less than significant
WATER SERVICE		
Impact W-1 The proposed project would generate increased demand for water. The PWP would be able to supply the projected demand based on existing entitlements provided the proposed project incorporates conservation. Impacts to water supply are considered Class II, significant but mitigable.	**W-1 LEED Water Efficiency Credit 3.1** Employ strategies that in aggregate use 20% less water than the water use baseline calculated for the building (not including irrigation) after meeting the Energy Policy Act of 1992 fixture performance requirements. Calculations are based on estimated occupant usage and shall include only the following fixtures (as applicable to the building): water closets, urinals, lavatory faucets, showers and kitchen sinks.	Less than significant

Table ES-1
Summary of Impacts, Mitigation Measures, and Significance After Mitigation

Impact	Mitigation Measures	Significance After Mitigation
Initial Study Mitigation Measures		
As discussed in the Initial Study that is included in Appendix A of this EIR, the project site is completely developed. There are no known cultural resources; however, there is potential to adversely affect as yet undiscovered cultural resources. The impact is mitigated through application of mitigation measures CUL-1and CUL-2, which are standard City conditions.	**CUL-1** Archaeological Resources. If archaeological resources are encountered during project construction, all construction activities in the vicinity of the find shall halt until an archaeologist certified by the Society of Professional Archaeologists examines the site, identifies the archaeological significance of the find, and recommends a course-of-action. Construction shall not resume until the site archaeologist states in writing that the proposed construction activities will not significantly damage archaeological resources.	Less than significant.
	CUL-2 Paleontological Resources. If paleontological resources are encountered during project construction, all construction activities in the vicinity of the find shall halt until a paleontologist meeting the satisfaction of the Natural History Museum of Los Angles County identifies the paleontological significance of the find, and recommends a course of action. Construction shall not resume until the site paleontologist states in writing that the proposed construction activities will not significantly damage paleontological resources.	Less than significant.

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1.0 INTRODUCTION

This document evaluates the environmental effects of the 680 East Colorado Boulevard Commercial Project, which involves the demolition of existing improvements, excavation for a six-level subterranean garage, and the subsequent construction of a 159,971 square foot five-story commercial office building with ground floor retail space and 522 subterranean spaces.

This section describes the purpose and legal authority of the EIR, the scope and content of the document, agencies with approval authority over the project, and the intended uses of the EIR. It also provides an overview of the environmental review process under CEQA. Section 2.0, *Project Description,* describes the proposed project in detail.

A Draft EIR for the 680 East Colorado Boulevard Commercial Project EIR was circulated for a 45-day public review period of October 16, 2008, through December 1, 2008. In addition, the public review period was informally extended to December 10, 2008 to receive additional oral comments of the Planning Commission and public. During this time written and oral comments were received and responses to comments were formulated. During consideration of the comments, it was determined that additional analysis of street segments along El Molino Avenue would be undertaken to further evaluate the extent of traffic additions to this de-emphasized street north and south of the project site. The traffic analysis revealed that the impacts identified in the Draft EIR extended further to the north and south along El Molino Avenue. Therefore, though the Draft EIR evaluated the most affected portion of this de-emphasized street, the revised Draft EIR evaluated additional segments. The revised Draft EIR incorporated revisions resulting from the additional street segment analysis as well as some clarifications made in response to comments on the original Draft EIR. The Revised Draft EIR and supporting documents were also available for review over a period of 45 days in accordance with CEQA Guidelines § 15088.5 at the Planning and Development Department Public Counter (located at 175 North Garfield Avenue, Pasadena CA 91109) and on the City's website at http://www.ci.pasadena.ca.us/planning/environmental/PlayhousePlaza/PlayHousePlaza_Home.asp.

The public review period for the Revised Draft EIR extended from April 10, 2009 through May 25, 2009. Written responses were prepared for the written and oral comments received during both public review periods and at the City initiated Public Meetings held between November 2008 and May 2009. Each comment received by the City of Pasadena has been included within the EIR. Responses to all comments have been prepared to address the concerns raised by the commenters and to indicate where and how the EIR addresses environmental issues. Responses to comments are contained in Section 8.0 *Addenda Errata/Comments and Responses*.

During the public review periods, written comments ~~may be~~ were forwarded to:

Lead Agency:	City of Pasadena
Contact Person:	John Steinmeyer, Senior Planner Planning Division
Address:	175 N. Garfield Avenue (Hale Building) Pasadena, California 91101-1704

Phone: (626) 744-6880
E-mail: jsteinmeyer@cityofpasadena.net

The Draft EIR and supporting documents ~~are~~ were also available for review at the Planning and Development Department Public Counter located at 175 North Garfield Avenue, Pasadena CA 91109, and on the City's website at http://www.ci.pasadena.ca.us/planning/environmental/PlayhousePlaza/PlayHousePlaza_Home.asp.

1.1 PURPOSE AND LEGAL AUTHORITY

This EIR has been prepared in accordance with the California Environmental Quality Act (CEQA) and the *State CEQA Guidelines*. In accordance with Section 15121 (a) of the *State CEQA Guidelines* (California Administrative Code, Title 14, Division 6, Chapter 3), the purpose of an EIR is to serve as an informational document that:

> *"will inform public agency decision-makers and the public generally of the significant environmental effects of a project, identify possible ways to minimize the significant effects, and describe reasonable alternatives to the project."*

This EIR has been prepared as a Project EIR pursuant to Section 15161 of the *CEQA Guidelines.* A Project EIR is appropriate for a specific development project. As stated in the *CEQA Guidelines:*

> *This type of EIR should focus primarily on the changes in the environment that would result from the development project. The EIR shall examine all phases of the project, including planning, construction, and operation.*

This EIR is to serve as an informational document for the public, and decision-makers of the City of Pasadena. The process will culminate with Planning Commission and City Council hearings to consider certification of a Final EIR and approval of the project.

1.2 SCOPE AND CONTENT

This EIR addresses the issues determined to be potentially significant pursuant to the initial study, input from neighbors in the community, and responses to the Notice of Preparation (NOP), which was circulated for 30 days from July 6, 2007 to August 6, 2007 in accordance with Article 7, Section 15082 of the CEQA Guidelines. This EIR addresses these issues and identifies potentially significant environmental impacts of the project and cumulative development in the City in accordance with provisions set forth in the *CEQA Guidelines.* The EIR also recommends feasible mitigation measures, where possible, that would reduce or eliminate adverse environmental effects.

The issues addressed in this EIR include:

- *Aesthetics*
- *Air Quality*
- *Geology and Soils*
- *Transportation and Circulation*

- *Noise and Vibration*
- *Water Service*

In preparing the EIR, pertinent City policies and guidelines, existing EIRs and technical reports prepared by the applicant and peer reviewed by the City were used. A full reference list is contained in Section 7.0, *References and Preparers.*

The level of detail contained throughout this EIR is consistent with the requirements of CEQA and applicable court decisions. The *CEQA Guidelines* provide the standard of adequacy on which this document is based. The Guidelines state:

> *An EIR should be prepared with a sufficient degree of analysis to provide decision-makers with information which enables them to make a decision which intelligently takes account of environmental consequences. An evaluation of the environmental effects of the proposed project need not be exhaustive, but the sufficiency of an EIR is to be reviewed in light of what is reasonably feasible. Disagreement among experts does not make an EIR inadequate, but, the EIR should summarize the main points of disagreement among the experts. The courts have looked not for perfection, but for adequacy, completeness, and a good faith effort at full disclosure.*

1.3 LEAD, RESPONSIBLE AND TRUSTEE AGENCIES

The *CEQA Guidelines* define "lead," "responsible" and "trustee" agencies. The City of Pasadena is the lead agency for the project because it has the initial responsibility for approving the project.

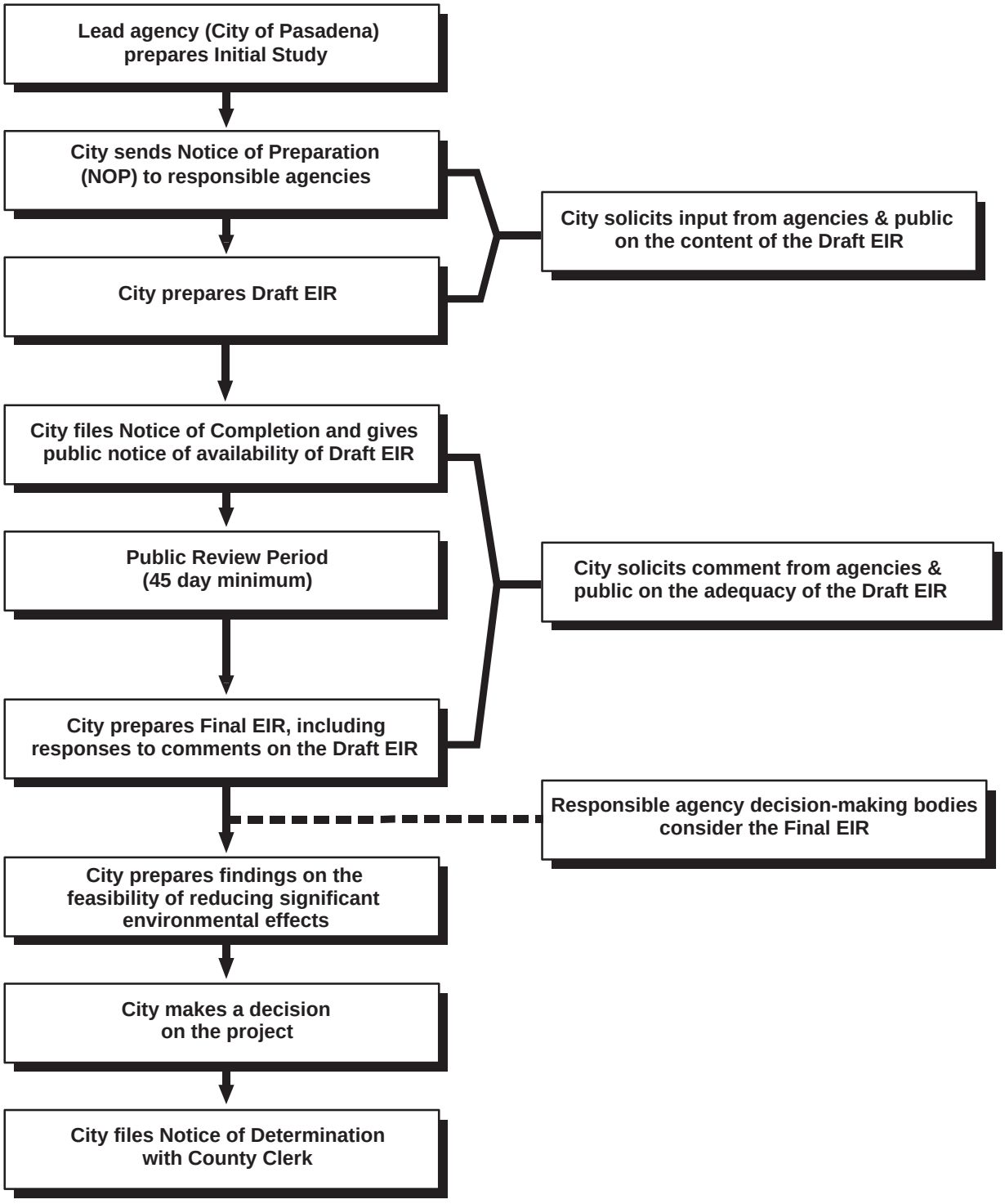
A "responsible agency" refers to a public agency other than the "lead agency" that has discretionary approval over the project. A "trustee agency" refers to a state agency having jurisdiction by law over natural resources affected by a project. There are no responsible or trustee agencies associated with this project.

1.4 ENVIRONMENTAL REVIEW PROCESS

The environmental impact review process, as required under CEQA, is summarized below and illustrated on Figure 1-1. The steps are presented in sequential order.

1 . **Notice of Preparation (NOP) Distributed.** Immediately after deciding that an EIR is required, the lead agency must file a NOP soliciting input on the EIR scope to "responsible," "trustee," and involved federal agencies; to the State Clearinghouse, if one or more state agencies is a responsible or trustee agency; and to parties previously requesting notice in writing. The NOP must be posted in the County Clerk's office for 30 days. A scoping meeting to solicit public input on the issues to be assessed in the EIR is not required, but may be conducted by the lead agency.

2. **Draft Environmental Impact Report (DEIR) Prepared.** The DEIR must contain: a) table of contents or index; b) summary; c) project description; d) environmental setting; e) significant impacts (direct, indirect, cumulative, growth-inducing and



CEQA Environmental Review Process

Figure 1-1

unavoidable impacts); f) alternatives; g) mitigation measures; and h) irreversible changes.

3. **Public Notice and Review**. A lead agency must prepare a Notice of Availability of an EIR. The Notice must be placed in the County Clerk's office for 30 days (Public Resources Code Section 21092) and sent to anyone requesting it. Additionally, public notice of DEIR availability must be given through at least one of the following procedures: a) publication in a newspaper of general circulation; b) posting on and off the project site; and c) direct mailing to owners and occupants of contiguous properties. The lead agency must consult with and request comments on the DEIR from responsible and trustee agencies, and adjacent cities and counties. The minimum public review period for a DEIR is 30 days. When a DEIR is sent to the State Clearinghouse for review, the public review period must be 45 days, unless a shorter period is approved by the Clearinghouse (Public Resources Code 21091). Distribution of the DEIR may be required through the State Clearinghouse.

4. **Notice of Completion.** A lead agency must file a Notice of Completion with the State Clearinghouse as soon as it completes a DEIR.

5. **Final EIR (FEIR).** A FEIR must include: a) the DEIR; b) copies of comments received during public review; c) list of persons and entities commenting; and d) responses to comments.

6. **Certification of FEIR.** The lead agency shall certify: a) the FEIR has been completed in compliance with CEQA; b) the FEIR was presented to the decision-making body of the lead agency; and c) the decision-making body reviewed and considered the information in the FEIR prior to approving a project.

7. **Lead Agency Project Decision.** A lead agency may: a) disapprove a project because of its significant environmental effects; b) require changes to a project to reduce or avoid significant environmental effects; or c) approve a project despite its significant environmental effects, if the proper findings and statement of overriding considerations are adopted.

8. **Findings/Statement of Overriding Considerations.** For each significant impact of the project identified in the EIR, the lead or responsible agency must find, based on substantial evidence, that either: a) the project has been changed to avoid or substantially reduce the magnitude of the impact; b) changes to the project are within another agency's jurisdiction and such changes have or should be adopted; or c) specific economic, social, or other considerations make the mitigation measures or project alternatives infeasible. If an agency approves a project with unavoidable significant environmental effects, it must prepare a written Statement of Overriding Considerations that set forth the specific social, economic or other reasons supporting the agency's decision.

9. **Mitigation Monitoring/Reporting Program.** When an agency makes findings on significant effects identified in the EIR, it must adopt a reporting or monitoring

program for mitigation measures that were adopted or made conditions of project approval to mitigate significant effects.

10. **Notice of Determination.** An agency must file a Notice of Determination after deciding to approve a project for which an EIR is prepared. A local agency must file the Notice with the County Clerk. The Notice must be posted for 30 days and sent to anyone previously requesting notice. Posting of the Notice starts a 30-day statute of limitations on CEQA challenges.

2.0 PROJECT DESCRIPTION

This section provides a detailed description of the proposed project, including the project applicant and location, a description of the major project characteristics, project objectives, and a listing of discretionary approvals needed for the project. The focus is on those characteristics and activities associated with the project that could cause physical changes to the environment.

2.1 PROJECT APPLICANT

IDS Real Estate Group
515 S. Figueroa Street, 16th Floor
Los Angeles, CA 91105
(213) 362-9319

2.2 CITY OF PASADENA CENTRAL DISTRICT SPECIFIC PLAN

As part of the Land Use Element of the City's General Plan, the Central District Specific Plan (CDSP) was adopted in 2004. A specific plan is a tool used by cities to guide development in a defined geographic area. It is an effective approach to implementing the General Plan, and provides a bridge between the goals and policies of the General Plan and individual development projects. Therefore, a specific plan shall be consistent with the General Plan.

The City's Land Use Element of the Comprehensive General Plan establishes an overall pattern of development that directs growth "into specific areas in order to protect residential neighborhoods and create mixed-use urban environments." The Central District is one of seven areas throughout the City requiring preparation of a specific plan to implement this goal. These areas are based on a concept of higher density, mixed-use environments that support transit- and pedestrian-oriented mobility strategies.

The downtown goals of the CDSP are:

- *Carefully consider the types, location and mix of new development to lessen impacts, especially traffic, in residential neighborhoods and on residential streets.*
- *Require new buildings to respect and enhance their surroundings.*
- *Encourage and provide inviting, interesting, and well-landscaped streetscapes and public spaces.*
- *Provide for new development consistent with the scale, density, and urban design features of the historic districts.*
- *Strengthen Downtown's economic vitality by nurturing existing business and providing opportunities for supportive new development.*
- *Preserve and create pleasant ways where one can walk and bike between Sub-districts of the Downtown.*
- *Provide the opportunity to park once and visit many destinations*
- *Maximize the use of transit and transit corridors.*
- *Provide a wide variety of housing options in Downtown in terms of type, location size, and price.*

Within the Central District, the project site is located in the Pasadena Playhouse Sub-district, and in the D-1 Precinct. This Sub-district is often envisioned as a cultural and intellectual center for the Downtown, with a particular focus on the arts. This character is best exemplified by the Pasadena Playhouse—the State of California Historic Theater; located at the heart of the Sub-district, the Playhouse is both an architectural and cultural landmark. This Sub-district is also key to the transformation of Colorado Boulevard into a vibrant and grand, ceremonial street. The objective of this Sub-district is to provide for a vibrant, mixed-use environment focused on Colorado Boulevard and the Playhouse that functions as a cultural and arts center for the community.

Further, within the D-1 Precinct, Colorado Boulevard through the Pasadena Playhouse Sub-district is marked by concentration of commercial activity and period landmark structures, such as the First Trust National Bank building. However, the lack of continuity should be remedied through more intense, mixed-use development; orientation to the street is critical. Connections to areas north are compromised by the relatively disjointed development pattern of Union Street, where there are a number of surface parking lots. This also makes for a rather unattractive streetscape leading up to the Civic Center; infill development is recommended.

2.3 PROJECT LOCATION

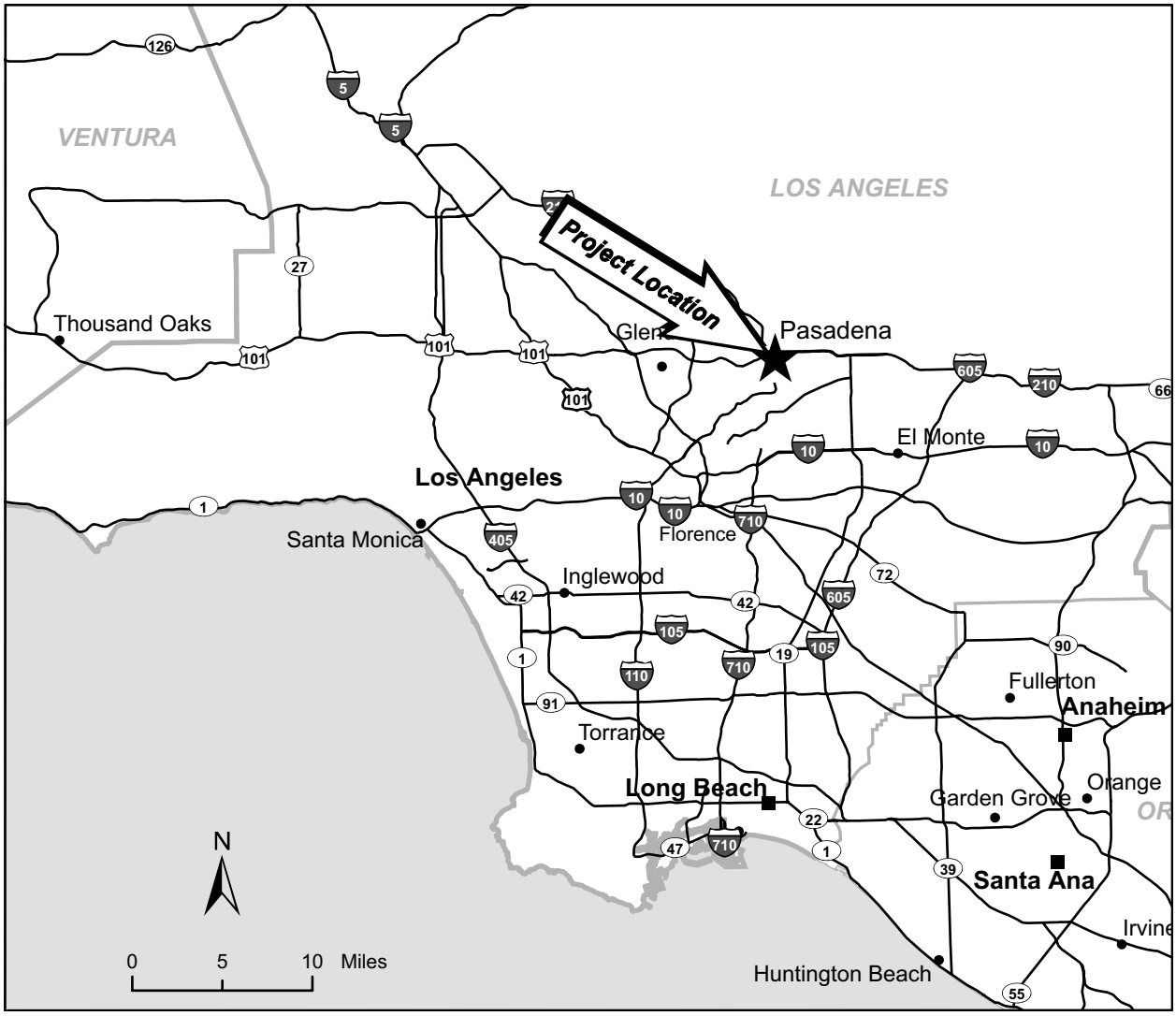
The project site is located in the central portion of Los Angeles County, in the City of Pasadena. Figure 2-1 illustrates the regional location of the project site. The project site is situated at the southeast corner of El Molino Avenue and Colorado Boulevard in the Pasadena Playhouse sub-district of the Central District Specific Plan Area. Figure 2-2 shows the project's location within downtown Pasadena. The project site is regionally accessible from Interstate 210. The site consists of a single parcel totaling approximately 57,762 square-feet (1.3 acres). The site address is 680 East Colorado Boulevard.

2.4 EXISTING SITE CHARACTERISTICS

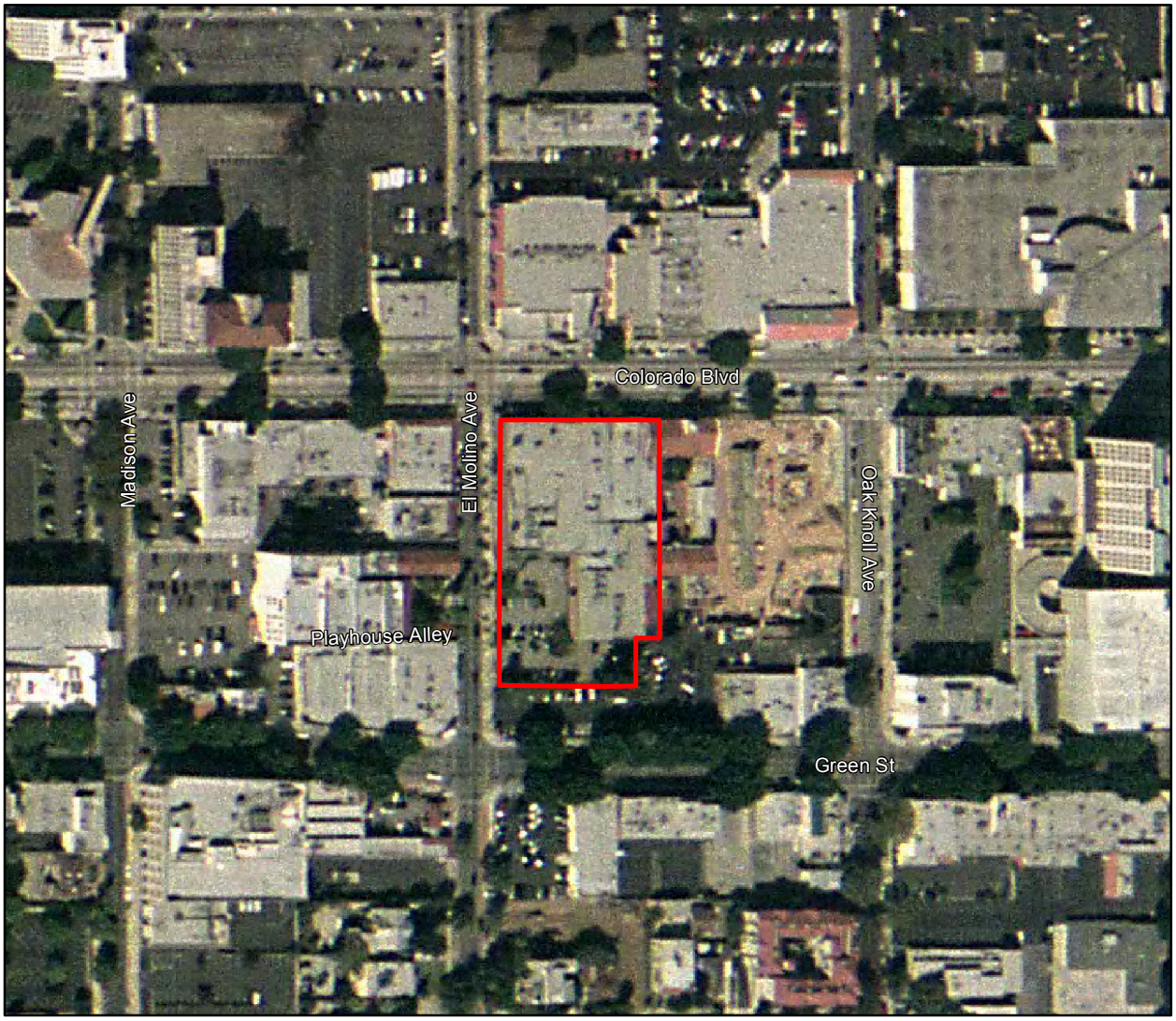
The project site is currently developed with a two-story commercial retail structure totaling approximately 66,000 square-feet (SF) with 36 surface parking spaces. The building was constructed in 1945, but is not historically significant pursuant to the City's Central District Historic Resources Survey of 2003. There are 11 ornamental street trees along El Molino and Colorado Boulevard, with 17 additional trees onsite in landscaped areas within and adjacent to the existing parking lot at the rear of the building. The land use designation is Central District Specific Plan, and the site is zoned CD-4, Pasadena Playhouse Subdistrict. This subdistrict is intended to provide for a vibrant mixed-use environment focused on Colorado Boulevard and the playhouse that functions as a cultural arts center for the community.

The project site is bordered by the following uses.

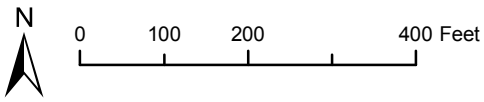
- *North – Commercial and Residential (mixed-use)*
- *East – Historic Arcade building (commercial) followed by residential (mixed-use)*
- *South – Commercial and Residential*
- *West – Historic Pasadena Playhouse State Theater, followed by commercial*



Regional Location Figure 2-1



Source: US Bureau of the Census TIGER 2000 data and Landiscor Image, 2002.



Project Boundary

Site Vicinity

Figure 2-2

2.5 PROJECT CHARACTERISTICS

The proposed project involves the demolition of existing improvements, excavation for a six-level subterranean garage, and the subsequent construction of a 160,000 square foot five-story commercial office building with 522 subterranean spaces. On the ground floor, the building would have 14,407 SF of retail use. The remainder of the building would contain 145,564 SF of office use. Loading would be accomplished from an internal bay, accessed on El Molino Avenue. Vehicular access to the subterranean parking structure would also be from El Molino Avenue (see Figure 2-3). Table 2-1 summarizes project characteristics.

Table 2-1 Summary of Project Characteristics

Lot Size	1.3 acres (57,762 square feet)
Total Floor Area	159,971 square feet total • 14,407 SF of retail use • 145,564 SF of office use
Floor Area Ratio *	2.8
Maximum Building Height	75'0"
Number of Levels Above Grade	5 levels
Number of Levels Below Grade	6 levels
Parking Spaces	522 **

Source: .Gensler. Plan Set, June 2008
** The project site contains separate zones with floor area ratios of 2.0 and 3.0. The floor area ratio presented here is an average based on the total square footage proposed as allowed in each zone and the total area of the site.*
*** 155~~6~~ of these spaces are proposed to serve the Playhouse District as public parking spaces*

The project incorporates an east to west pedestrian corridor to replace existing spaces between the Pasadena Playhouse and the Arcade Building. The 8,600 square foot paseo will serve as public open space and provides for future pedestrian line-of-sight between the historic Pasadena Playhouse and the Arcade Building, which are included in the National Register Historical District. The Playhouse is a local landmark and is listed individually in the National Register. The upper floors of the proposed project would be reserved for office uses and Figure 2-4 shows a typical office floor. Project elevations are shown on Figures 2-5 and 2-6. Figure 2-7 shows how the building will be viewed from Colorado Boulevard and Figure 2-8 shows the pedestrian corridor as viewed from the Arcade Lane Building looking at the Pasadena Playhouse.

The project will be constructed with techniques consistent with Leadership in Energy and Environmental Design (LEED) certification pursuant to the requirements of Municipal Code 14.90.040. The LEED program is designed to assign credits for environmentally-friendly design features and construction practices, so that projects may have less impact on the environment than standard construction would.

The applicant is seeking a Central District Floor Area increase in accordance with Section 17.30.050(C) of the City's Municipal Code, which contains provisions that allow for exceedance

of the Floor Area Ratio (FAR) within the Central District Specific Plan by up to 10%. The increase is contingent upon Commission approval under select circumstances and provided that certain required findings can be made. The intent is to allow sufficient flexibility and facilitate development where unique factors are involved; including but not limited to:

a. *Unusual parcel size and configuration;*
b. A project that facilitates preservation of a historic structure, or sets aside publicly accessible outdoor space; and/or
c. A project eligible for a density bonus as provided by State law.

Findings required to approve an increase in the FAR by the Commission include the following:

a. *The additional floor area allows development that would otherwise be economically infeasible;*
b. The additional floor area will not be injurious to adjacent properties or uses, or detrimental to environmental quality, quality of life, or the health, safety, and welfare of the public;
c. The additional floor area will promote superior design solutions and allow for public amenities that enhance the property and its surroundings; and
d. The additional floor area is consistent with the objectives and policies of the Central District Specific Plan and the General Plan.

The Commission may impose additional mitigation measures or conditions of approval per the subsection including specification for additional architectural design, additional public amenities or additional traffic demand management measures. Applications for the FAR increase are required to be filed in accordance with Section 17.60 of the Municipal Code and the application shall provide evidence in support of the required findings.

The proposed project has several notable goals and objectives, which could potentially benefit the Playhouse Sub-district and the Central District at-large:

- *Construct a substantial commercial building at a prominent corner location and infill a relatively under-utilized site.*
- *Increase employment and provide job opportunities in a Transit Oriented District.*
- *Provide a subterranean parking facility for shoppers, visitors, and entertainment-related venues.*
- *Enhance the architectural and urban character of Colorado Boulevard.*
- *Provide a public plaza that creates a linkage to the Playhouse building.*
- *Support the City's environmental sustainability goals by constructing a LEED certified building.*

The proposed project is intended to complement and promote the preservation of the two adjacent historically significant structures, with a view corridor connection between the open spaces of the Arcade Lane Building and Pasadena Playhouse that promotes pedestrian connectivity. The project likewise provides additional 156 public parking spaces to serve the Central District and Pasadena Playhouse. Through strategic massing and architectural expression, the proposed five-story structure establishes an architectural language compatible

IDS - CALSTRS PLAYHOUSE PLAZA PROJECT

OWNER / APPLICANT CONTACT INFORMATION

DAVID SAETA
IDS REAL ESTATE GROUP
515 S. FIGUEROA STREET
LOS ANGELES

SITE LOCATION: 680 E COLORADO BLVD

ZONE: CD-4

LOT AREA: 57,762 SF

FLOOR AREA/ FAR: 17.30.040

			INCL.10% DENSITY BONUS 17.30.050C
ZONE 1, FAR 3.0	170.75'X175'X3.0=	89,644 SF	98,608 SF
ZONE 2, FAR 2.0	(109.3'X175') + (60'X145')X2.0	55,655 SF	61,221 SF
		145,299 SF	159,829 SF

Proposed Floor Area	GROSS FLOOR AREA
1ST FLOOR	37,602 SF
2nd FLOOR	35,768 SF
3rd FLOOR	35,403 SF
4th FLOOR	28,589 SF
5th FLOOR	22,467 SF
ROOF	0 SF
TOTAL PROPOSED GROSS FLOOR AREA	**159,829 SF**

FLOOR AREA PROVIDED:

50% OF STREET FRONT FOR PEDESTRIAN ORIENTATED USE		14,407 SF
OFFICE:	APPROX.	145,422 SF
		159,829 SF

BUILDING HEIGHT
17.30.030

	ALLOWED
ZONE 1	75' (90')
ZONE 2	50' (60')
ZONE 3	35'

LOADING

17.46.260	REQUIRED	PROVIDED
1/40,000 SF OFFICE BUILDING	4	2
COMMERCIAL USE 8,000 SF TO 20,000 SF	1	

PARKING CALCULATIONS
(BASED ON 17.30.030B)

EXISTING PROJECT PARKING SPACES TO BE DEMOLISHED	45

NEW PARKING 17.30.040			REQUIRED
OFFICE	2.25/1,000 SF (INCL. TOD)	145,422 SF	328
RETAIL	2.7/1,000 SF (INCL. TOD)	14,407 SF	39
TOTAL REQUIRED/MAX. ALLOWED # OF STALLS			367

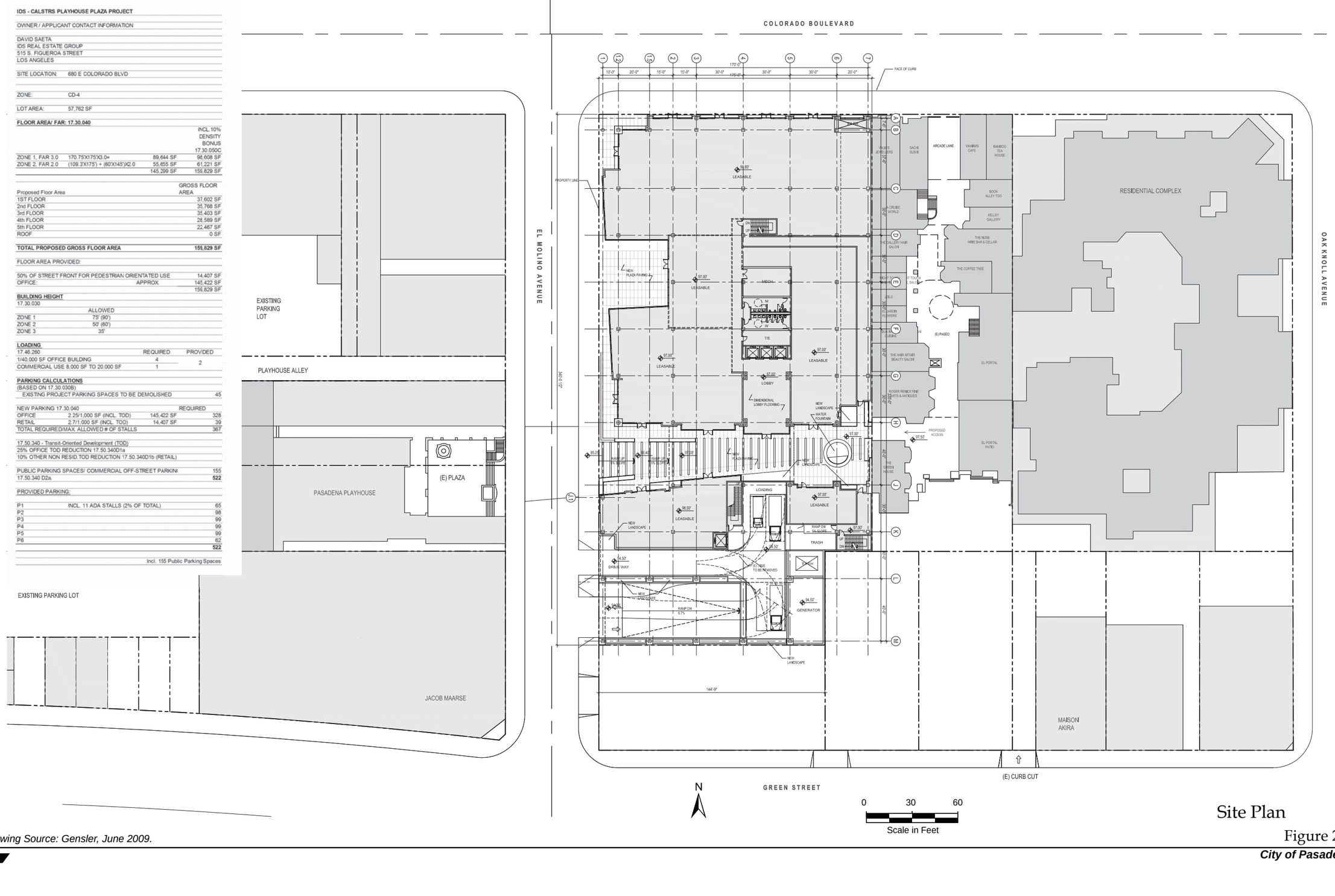
17.50.340 - Transit-Oriented Development (TOD)
25% OFFICE TOD REDUCTION 17.50.340D1a
10% OTHER NON RESID.TOD REDUCTION 17.50.340D1b (RETAIL)

PUBLIC PARKING SPACES/ COMMERCIAL OFF-STREET PARKIN	155
17.50.340 D2a.	522

PROVIDED PARKING:

P1	INCL. 11 ADA STALLS (2% OF TOTAL)	65
P2		98
P3		99
P4		99
P5		99
P6		62
		522

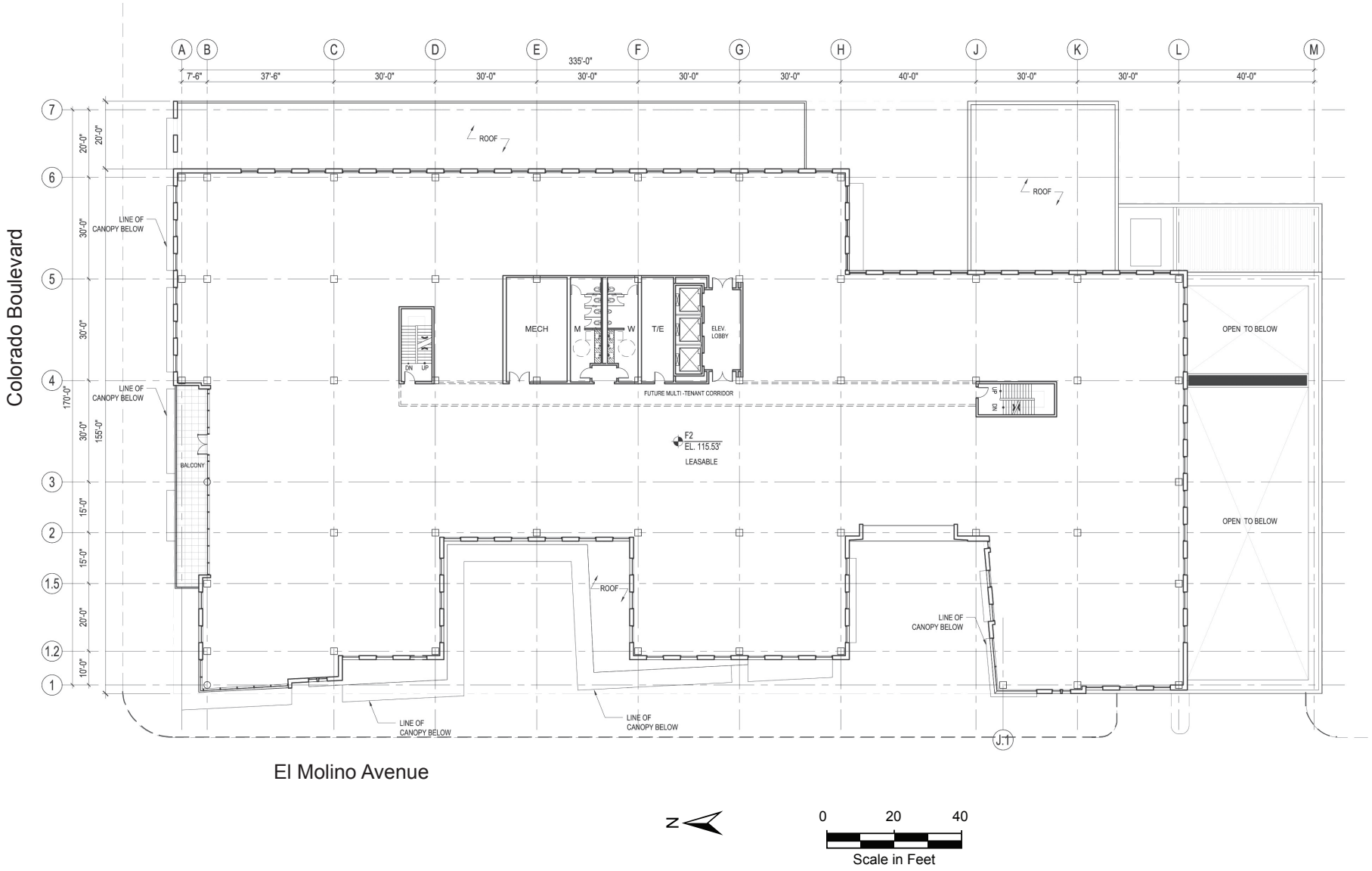
Incl. 155 Public Parking Spaces



Site Plan

Figure 2-3

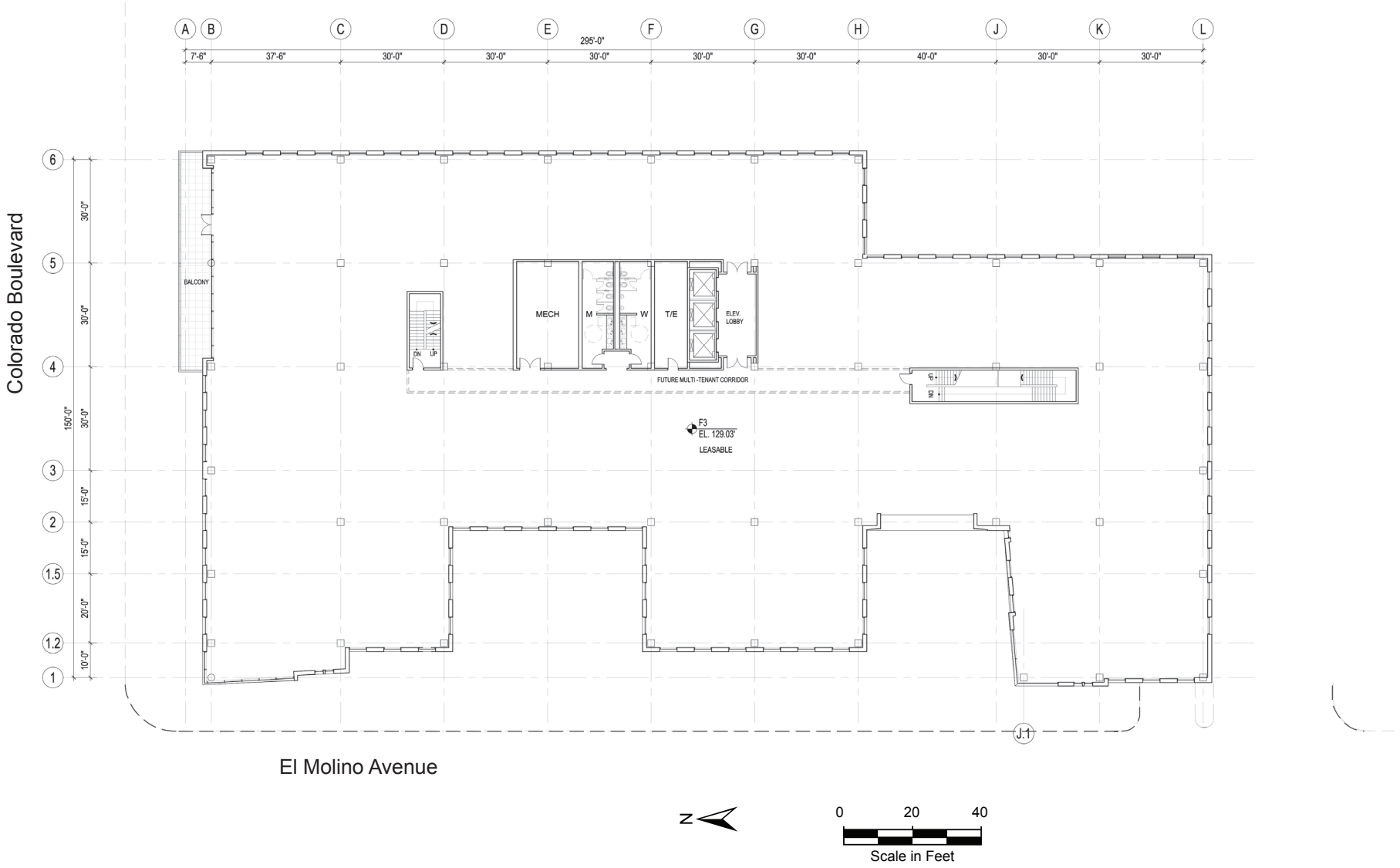
Drawing Source: Gensler, June 2009.



Second Floor Plan

Drawing Source: Gensler, June 2009.

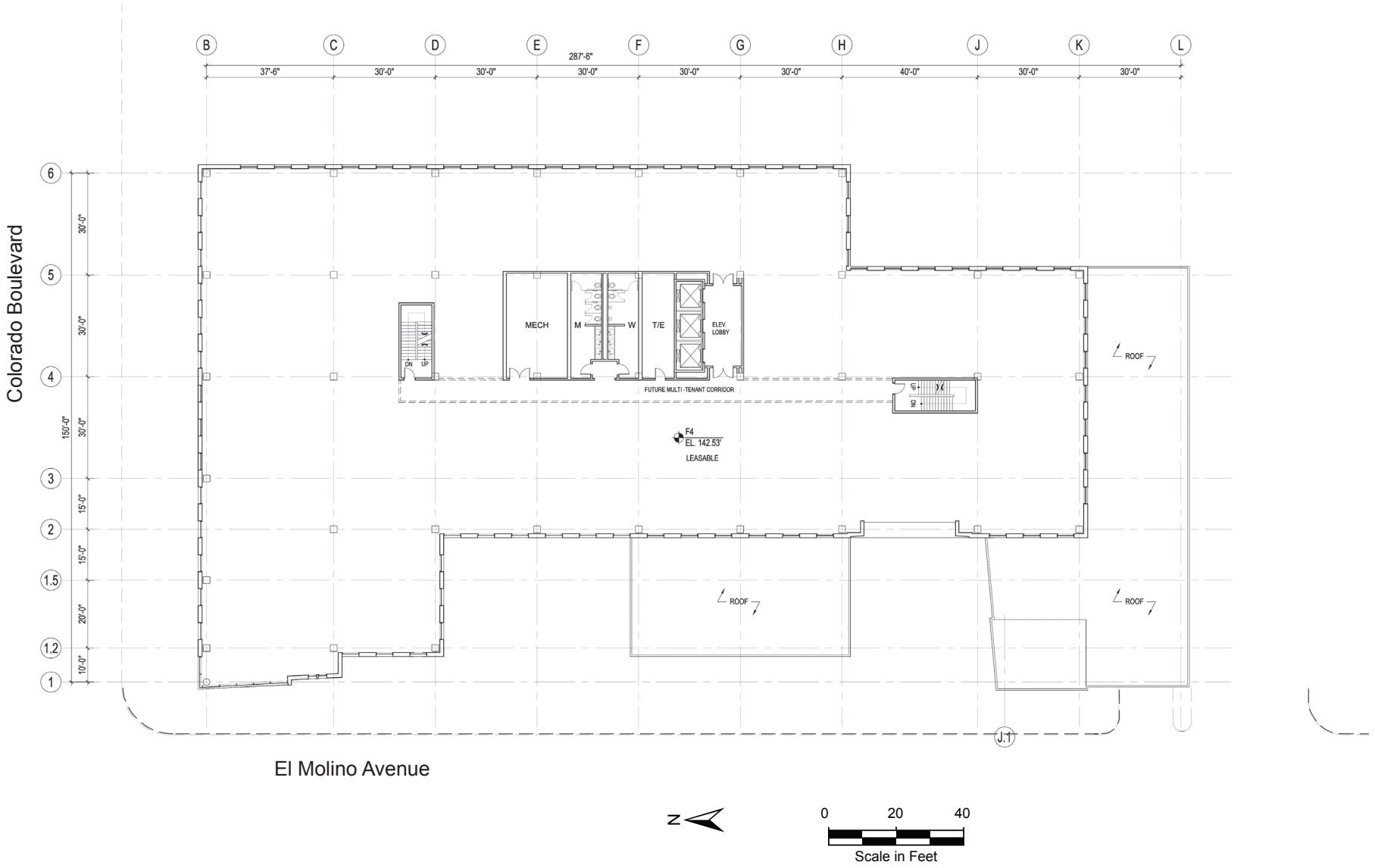
Figure 2-4a



Third Floor Plan

Drawing Source: Gensler, June 2009.

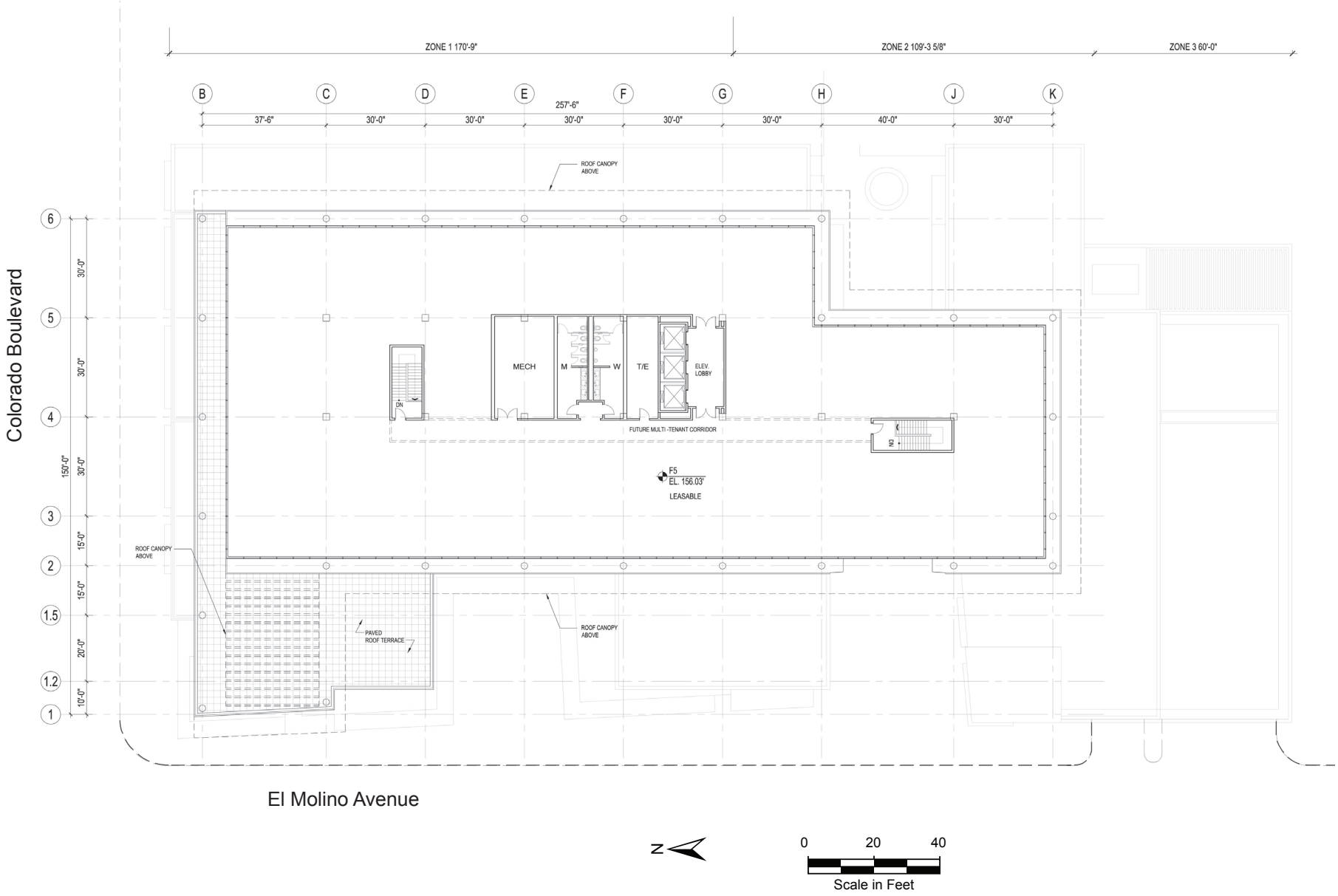
Figure 2-4b



Fourth Floor Plan

Drawing Source: Gensler, June 2009.

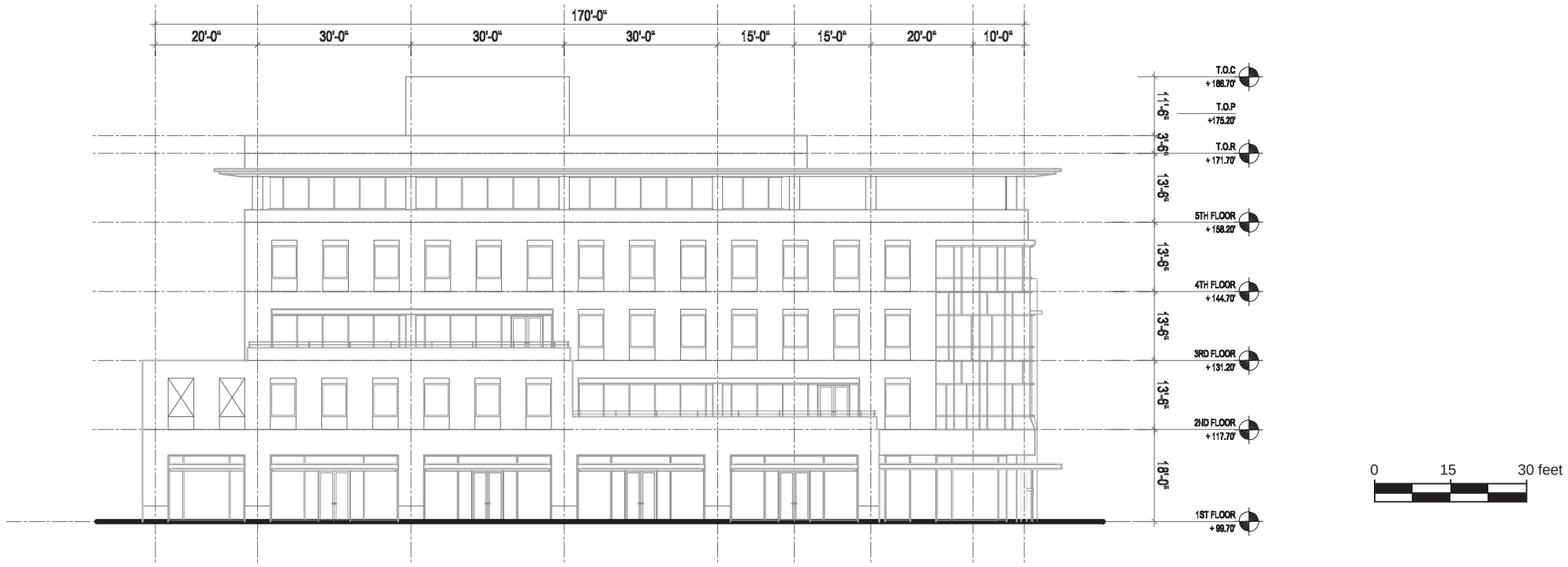
Figure 2-4c



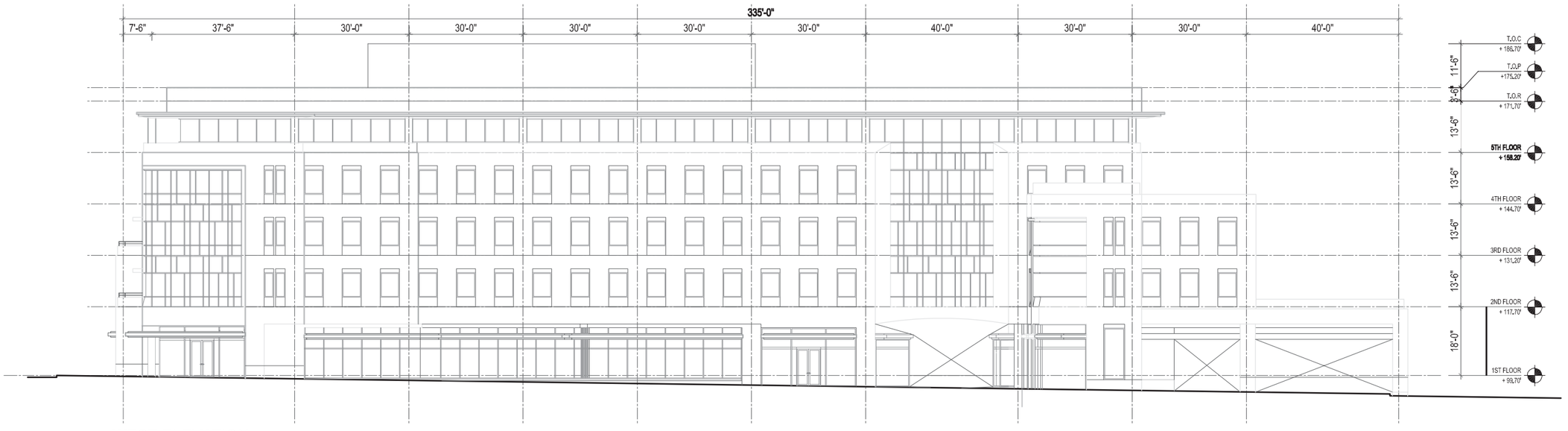
Fifth Floor Plan

Drawing Source: Gensler, June 2009.

Figure 2-4d



NORTH ELEVATION



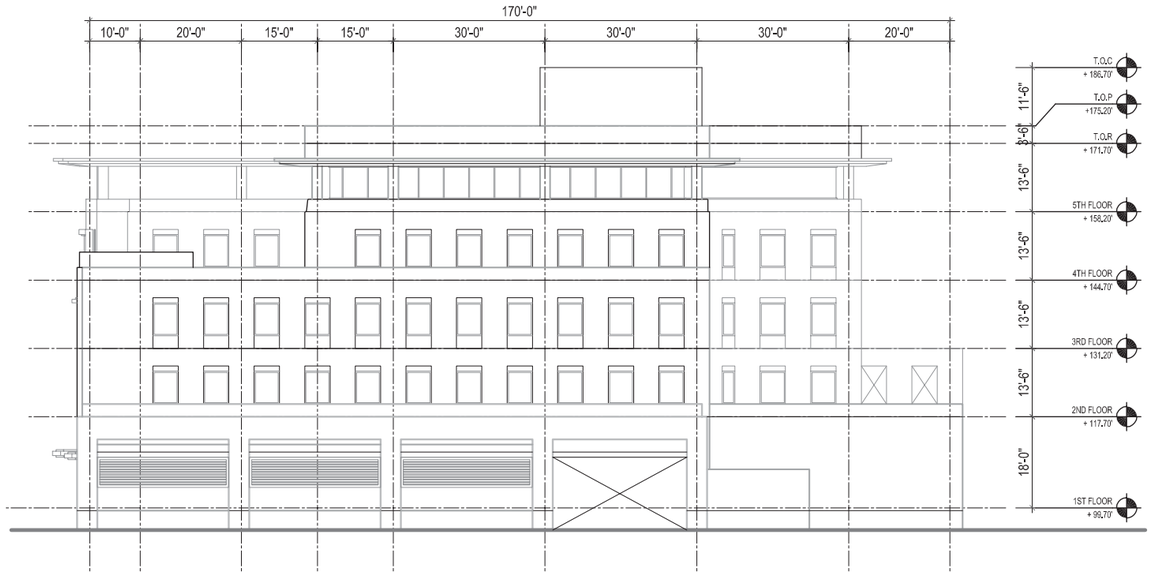
WEST ELEVATION

0 15 30 feet

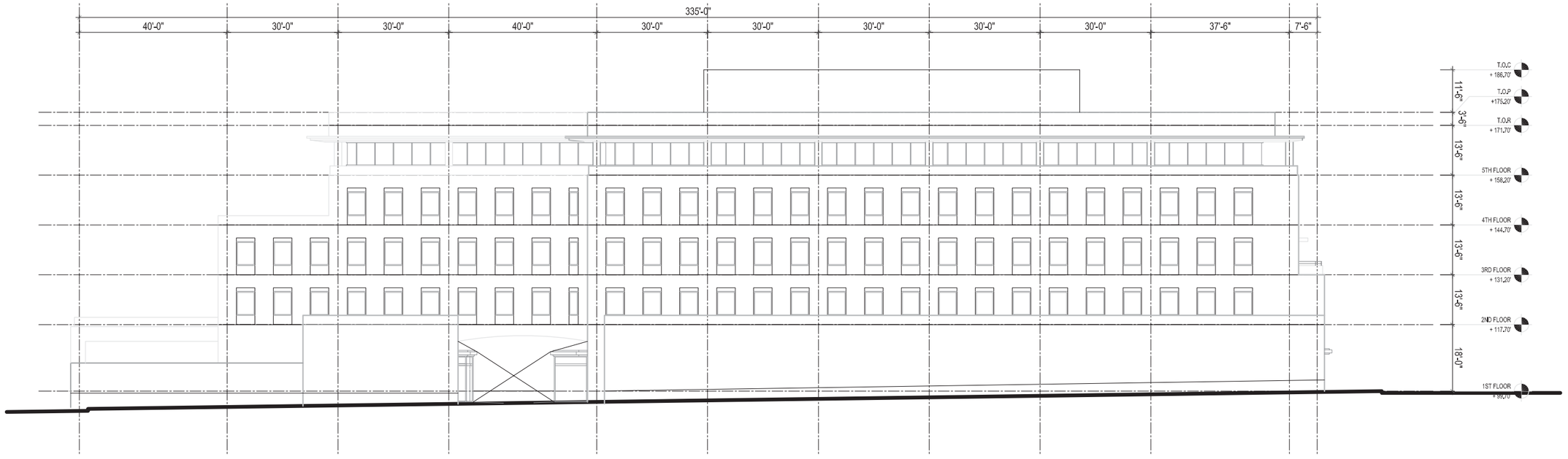
North and West Elevations

Figure 2-5

Drawing Source: Gensler, June 2008.



SOUTH ELEVATION



EAST ELEVATION

0 15 30 Feet

South and East Elevations

Figure 2-6

Drawing Source: Gensler, June 2008.

Colorado Boulevard Frontage

Figure 2-7

Image Source: Gensler, April 2008.

Paseo View from Arcade Lane
Towards the Pasadena Playhouse

Image Source: Gensler, April 2008.

Figure 2-8

with the diverse character of its surroundings. By creating this common architectural language, Playhouse Plaza's compatible, but unique, character will cohesively establish the traditional context of the Playhouse District. The proposed architectural design is discussed in detail in Section 4.1 *Aesthetics*.

The proposed project includes an Adjustment Permit to average density based on the allowable density of three different zones that compose the project site. Adjustment Permits are established and governed by Section 17.61.070 of the City's municipal code and aim to promote and encourage quality development that would not normally occur under standard district development requirements. Approval of the Adjustment Permit would require an application to be filed in compliance with Chapter 17.60 and shall include adequate evidence in support of the findings required by Subsection D of Section 17.61.170.

2.6 PROJECTED CONSTRUCTION SCHEDULE

It is anticipated that construction of the project would commence in 2008 or 2009. The site preparation phase is anticipated to last about four months. Building completion is estimated for 2010 or 2011. However, the construction schedule could be extended depending on weather conditions and their effect on development. It is anticipated that the project would be constructed in a single phase.

The excavation for the subterranean parking structure will require a shoring system. The shoring system is comprised of soldier beams (vertical structural steel beams) with tie-backs (a sloped horizontal hole filled with steel and concrete to support the soldier beams) with wood lagging (wood that spans between the soldier beams to hold back the dirt). This system will reduce the potential for adverse vibratory and noise effects to adjacent historical and residential structures. Additionally, the buildings department and City Engineer will review the shoring and basement construction plans to ensure that the structures on adjacent properties would not be adversely affected.

2.7 PROJECT OBJECTIVES

The applicant's objective for the project is to construct a viable commercial complex in the Playhouse District.

2.8 REQUIRED APPROVALS

The proposed project would require the discretionary approval of the City of Pasadena. Because the project includes a Central District Specific Plan FAR increase and Adjustment permit, decisions would be made by the City Council.

- *Certification of the Final EIR*
- *Statement of Overriding Considerations (SOC) because of the traffic segment impacts on North and South El Molino Avenue that cannot be adequately mitigated*
- *Design Review*
- *Adjustment Permit (AP) for allowable adjustments from the Zoning Code standards*
  - *(a) To exceed FAR in one FAR district*

  - *(b) To Exceed Height in two different height districts*
  - *(c) To provide only two loading spaces (5 are required for 145,000 s.f. office + 15,000 s.f. of retail)*
  - *(d) To not have a 0' building setback on South El Molino Avenue and East Colorado Boulevard*
- *Conditional Use Permit (CUP) for a new construction project exceeding 25,000 s.f.*
- *Minor Conditional Use Permit (MCUP) for a new construction project exceeding 15,000 square feet in the Transit-Oriented District (TOD)*
- *Minor Conditional Use Permit (MCUP) to establish a commercial parking facility (155 commercial public parking spaces for use by Playhouse District)*
- *Central District FAR Increase of 10% (15,983 s.f. for a total of 159,829 s.f.)*
- *Public Art Approval*
- *Tree Removal Permit*
  - *(a) Private Tree Removal to remove one protected specimen tree [Ethrythrina caffra (Coral tree)] from the private property*
  - *(b)Public Street Tree Removal to remove and/or relocate three public street trees (Mexican fan palms) on North El Molino Avenue as approved by the Urban Forestry Advisory Committee on March 2, 2009*
- *Building and Demolition Permits*
- *Any other incidental discretionary approvals needed for the construction and operation of the proposed project.*

3.0 ENVIRONMENTAL SETTING

3.1 REGIONAL SETTING

Pasadena is located approximately 12 miles to the north and east of downtown Los Angeles. The City itself is located within the West San Gabriel Valley, at the base of the San Gabriel Mountains. The City is world renowned for several of its architectural landmarks, arts, institutions and events. The city's popular shops and restaurants blend comfortably with tree-lined streets, distinctive neighborhoods, historic buildings and a vibrant cultural scene.

The City of Pasadena is approximately 23 square miles in area. The City also has a designated sphere of influence area adjacent to the southeastern boundaries of the City (generally north of Huntington Drive and west of Rosemead Boulevard) which is about 883 acres in size. According to the 2000 Census, Pasadena's population was 133,936. According to the California Department of Finance, the City's population in 2007 is estimated to be 147,262, which is an increase of 13,866 from 2000 (Department of Finance, May 2007).

Pasadena is roughly bounded by two open space corridors along the eastern and western perimeters of the City. The open space corridors are situated along two drainages, Arroyo Seco Stream and Eaton Wash. Residential areas bound each of these areas of open space and extend along the northern and southern boundary of the City, surrounding the City's commercial core.

The City enjoys a subtropical and semi-arid climate. The average daytime and nighttime temperatures are 77 degrees and 52 degrees Fahrenheit, respectively, with summer highs typically in the 80s and winter lows in the 40s. Pasadena receives an average annual rainfall of about 20 inches, which primarily falls between the winter months of November and March.

Regional access to Pasadena is provided by the 110 Freeway, State Route 134, and the 210 Freeway. The 110 Freeway connects the City to Downtown Los Angeles, Pasadena, and other areas of the southern California region. The SR-134 and 210 Freeway serve as an east/west corridor, providing access to Ventura and Riverside Counties. The Metro Gold Line provides regional rail access throughout Los Angeles County. Arroyo Parkway, Colorado Boulevard, and Los Robles Avenue are major arterials with Fair Oaks Avenue and Lake Avenues minor arterials that provide for local circulation throughout the City.

3.2 PROJECT SITE SETTING

The project site is located at the southeast corner of Colorado Boulevard and El Molino Avenue. The project site is located within the Central District Specific Plan Area and also within the Pasadena Playhouse sub-district. The project site encompasses 57,762 square-feet, or about 1.3 acres. The northern portion of the property is developed with a two-story commercial building that is currently vacant. The southern portion of the property is developed with surface parking for the furniture store. The building was built in 1916, added onto in 1927, and substantially altered in 1945. The building is not historically significant pursuant to the City's Central District Historic Resources Survey of 2003. There are 11 ornamental street trees along El Molino and Colorado Boulevard, with 17 additional trees onsite in landscaped areas within and

adjacent to the existing parking lot at the rear of the building. The project site is located between two historic resources: the Arcade Lane building is located adjacent the eastern project boundary, while the Pasadena Playhouse is located opposite the project site to the west across El Molino Avenue. The project site is bounded by Colorado Boulevard on the north and by a strip of land that is associated with the Arcade building on the south. Green Street is located about 64 feet south of the southern property boundary.

El Molino Avenue abuts the western boundary of the site and is a de-emphasized street pursuant to the City's Mobility Element. This classification is intended to limit future street improvements that would allow for increased traffic loading on El Molino Avenue in an effort to protect the residential character of neighborhoods abutting the street throughout the City.

The area surrounding the project site is highly urbanized, containing a mix of uses that include commercial uses such as a retail stores, cafes and restaurants; theatre uses including the Pasadena Playhouse and the Laemmle movie theatre opposite the site on the north side of Colorado. The Playhouse District retains many of the original buildings constructed during the 1920s and 1930s. Building styles range from 1920s period revival architecture to contemporary commercial and residential buildings. Building heights range from one to 10 stories. Most structures in the immediate project vicinity are one and two stories in height, with some exceptions such as churches and the Playhouse tower. Several taller buildings are nearby on Colorado Boulevard, including the five-story Trio Apartments on the northwest corner of Colorado Boulevard and El Molino, and the seven-story Bank of the West building further to the west on Colorado Avenue. The three-story Arcade Lane building, dating from 1927, is directly east of the project site.

3.3 CUMULATIVE DEVELOPMENT

Cumulative impacts are defined as two or more individual events that, when evaluated together, are significant or would compound other environmental impacts. Cumulative impacts are the changes in the environment that result from the incremental impact of development of the proposed project and other nearby projects. For example, traffic impacts of two nearby projects may be inconsequential when analyzed separately, but could have a substantial impact when analyzed together.

Section 15130 of the *CEQA Guidelines* requires a discussion of cumulative impacts. The discussion of related or cumulative projects may be drawn from either a "list of past, present, and probable future projects producing related or cumulative impacts" or a "summary of projections contained in an adopted general plan or related planning document or in a prior environmental document which has been adopted or certified, which described or evaluated regional or area wide conditions contributing to the cumulative impact."

Planned and pending developments in the site vicinity are listed in Table 3-1. As indicated, projects within a ½ mile radius of the project site include approximately 1,256 dwelling units and 461,687 square feet of commercial development.

Table 3-1
Planned and Pending Projects in the Site Vicinity

Address	Residential (DU)	Commercial (SF)	Description
44 S Madison Ave.	22	8,000	22 Condo Units and 8,000 sq ft retail with 338 parking spaces replacing 113 space surface lot
301 E Colorado Blvd.	56	8,000	8,000 SF retail, 56-unit luxury condos (Montana)
556 E Colorado Blvd.	0	111,830	10,910 SF retail, 1,550 SF restaurant, and 99,370 SF medical office
592 E Colorado Blvd.	16	3,500	Demo 1,440 SF retail shoe repair and 400 SF take out restaurant, construct 3,500 SF retail and 16 condos
621 E Colorado Blvd.	304	14,602	304-unit residential; 14,602 SF retail, 420 public parking and 456 residential parking
1010 E Colorado Blvd.	0	18,236	Demo 2,434 SF rental car office and 14,000 SF bank and construct new 18,236 SF bank (Citizen's Bank)
62 N El Molino Ave.	104	n/a	(Part of Mill Creek Project at 686-717 E Union, 44-48 N El Molino) Demo 3,207 SF office and construct 104 apts and ground floor retail office
747 E Green St.	30	13,000	Construct 30 condo & 13,000 SF TV Studio
936 E Green St.	46	7,700	Remove 11,000 SF and construct 46-unit Condominiums and 7,700 SF retail
141 S Hudson Ave.	9	3,565	9-unit condo, 3,090 SF office, and 475 SF retail
151 S Hudson Ave.	9	3,500	9 condominium units and 3,500 SF dental office
171 S Hudson Ave.	20	9,000	Demo 6,800 SF office and construct 20 condominiums and 9000 SF office
251 S Hudson Ave.	17	0	17 condos
233 N Hudson Ave.	23	0	23 condos
85 S Lake Ave.	103	24,000	The Lofts at South Lake, 103 apartments and 24,000 SF retail
203 N Lake Ave.	0	212,817	204,910 SF office, 4,236 SF bank, 3,671 SF restaurant
220 N Lake Ave.	106	9,200	106 condos; 9,200 SF retail
240 N Madison Ave	180	0	180-unit student housing (138 new)
128 N Oak Knoll Ave.	53	0	53 condos
135 N Oakland Ave.	n/a	n/a	Fuller Seminary Master Development Plan
680 E Walnut St.	59	7,557	Construct 59 Condos and 7,557 SF retail
712 E Walnut St.	28	3,396	Walnut Place 28 apartments, 3,396 SF retail

Table 3-1
Planned and Pending Projects in the Site Vicinity

Address	Residential (DU)	Commercial (SF)	Description
770 E Walnut St.	71	3,784	Demolish one commercial building, two SFR, and three apartment buildings and construct 103,000 sq-ft mixed use, including 71 units, 1500 sq-ft restaurant, 2284 sq-ft general commercial, and 144 parking spaces
Total	**1,256**	**461,687**	

Source: Related Projects within ½ mile radius, City of Pasadena Department of Transportation, March 28, 2007.
Notes: DU = dwelling units; SF = square feet

4.0 ENVIRONMENTAL IMPACT ANALYSIS

This section discusses the possible environmental effects of the proposed project for the specific issue areas that were identified as having the potential to experience significant impacts. "Significant effect" is defined by the *State CEQA Guidelines §15382* as "a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance. An economic or social change by itself shall not be considered a significant effect on the environment, but may be considered in determining whether the physical change is significant."

The assessment of each issue area begins with a discussion of the setting relevant to that issue area. Following the setting is a discussion of the project's impacts relative to the issue area. Within the impact analysis, the first subsection identifies the methodologies used and the "significance thresholds," which are those criteria adopted by the City, other agencies, universally recognized, or developed specifically for this analysis to determine whether potential effects are significant. The next subsection describes each impact of the proposed project, mitigation measures for significant impacts, and the level of significance after mitigation. Each effect under consideration for an issue area is separately listed in bold text, with the discussion of the effect and its significance following. Each bolded impact listing also contains a statement of the significance determination for the environmental impact as follows:

> ***Class I, Unavoidably Significant:*** *An impact that cannot be reduced to below the threshold level given reasonably available and feasible mitigation measures. Such an impact requires a Statement of Overriding Considerations to be issued if the project is approved.*
>
> ***Class II, Significant but Mitigable:*** *An impact that can be reduced to below the threshold level given reasonably available and feasible mitigation measures. Such an impact requires findings to be made.*
>
> ***Class III, Not Significant:*** *An impact that may be adverse, but does not exceed the threshold levels and does not require mitigation measures. However, mitigation measures that could further lessen the environmental effect may be suggested if readily available and easily achievable.*
>
> ***Class IV, No Impact or Beneficial:*** *Either the project would not alter environmental conditions or would reduce existing environmental problems or hazards.*

Following each environmental impact discussion is a listing of recommended mitigation measures (if required) and the residual effects or level of significance remaining after the implementation of the measures. In those cases where the mitigation measure for an impact could have a significant environmental impact in another issue area, this impact is discussed as a residual effect.

The impact analysis concludes with a discussion of cumulative effects, which evaluates the impacts associated with the proposed project in conjunction with other future development in the area.

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4.1 AESTHETICS

4.1.1 Setting

a. Visual Character of Area. The City of Pasadena is located in the western San Gabriel Valley subregion of southern California. The northernmost portions of the City extend into the San Gabriel Mountains foothills, reaching a maximum elevation of 1,900 feet above mean sea level. The San Rafael Hills along the City's western border rise to about 1,600 feet. The rest of the City generally slopes south from the San Gabriel Mountains, bisected in the western portion by the Arroyo Seco, the prominent drainage feature in the City. The San Gabriel Mountain Range is the most dominant visual feature in the City, followed by the Arroyo Seco. On clear days, the mountains can be viewed from many areas of the City. The City's major north-south arterials provide the most notable view corridors.

Pasadena retains a rich architectural heritage and a strongly legible urban form. Much of the City developed prior to World War II and, as a result, there are numerous examples of architectural styles throughout the City's neighborhoods. One of the most notable is the City's extensive inventory of craftsman style architecture, for which the City is most famous. The central portion of the City is generally laid out on a strongly visual north-south east-west street grid street network. This provides dramatic views for northbound and eastbound motorists of the San Gabriel Mountains. The City is also prominently bisected by a discontinuous freeway system. Interstate 210 (the Foothill Freeway) bisects the City into north and south segments, and separates the Arroyo Seco and the San Rafael hill from the majority of the City. State Route 134 (an extension westerly of Interstate 210) bisects the Arroyo Seco and its neighborhoods, while an incomplete portion of Interstate 710 (Long Beach Freeway) bisects neighborhoods in western Pasadena.

The City's Central District, in which the project is located, includes a diverse mix of land uses, functioning as Pasadena's urban core and supporting the primary business, financial, retail and government center of the City.

b. Visual Character of the Project Site and Surroundings. The project site is located in the Pasadena Playhouse Sub-District of the Central District, which is named for the Pasadena Playhouse, a local landmark constructed in the mid 1920s that is individually listed in the National Register. The Playhouse is a contributing structure to the Playhouse Historic District. The project site is directly adjacent to the Playhouse National Register Historic District, which includes most of the west side of El Molino Avenue across from the project site.

The Playhouse District retains many of the original buildings constructed during the 1920s and 1930s. Building styles range from 1920s historic structures to contemporary commercial and residential buildings. Building heights range from one to 10 stories; most structures in the immediate project vicinity are one to three stories in height, with some exceptions such as churches and the Playhouse Tower. Several taller buildings are nearby on Colorado Boulevard, including the five-story Trio Apartments on the opposite corner from the project site and the nine-story (including the mezzanine floor) Bank of the West building. The three-story Arcade Lane building, dating from 1927, is directly east of the project site. Figure 4.1-1(a-c) shows surrounding development on Colorado Boulevard and El Molino Avenue.

Photo 1 - View of adjacent development to the east on Colorado Boulevard. The existing project site structure is partially visible in the right side of the frame. The Arcade Lane building is directly adjacent.

Photo 2 - View of adjacent development to the west on the south side of Colorado Boulevard, across El Molino Avenue from the project site.

Views of Surrounding Development

Figure 4.1-1a

Photo 3 - Existing development on the opposite (northwest) corner of Colorado Boulevard and El Molino Avenue from the project site.

Photo 4 - Existing development directly across Colorado Boulevard from the project site.

Views of Surrounding Development

Figure 4.1-1b

Photo 5 & Photo 6 - Existing development to the west, directly across El Molino Avenue from the project site.

Photo 7 - View west from the project site, across El Molino Avenue, of the Pasadena Playhouse and Playhouse courtyard.

Views of Surrounding Development

Figure 4.1-1c

Clear and extensive views of the mountains through the project site from El Molino Avenue and Green Street are not available due to intervening vegetation and structures, including the existing commercial building on the site.

The dominant feature on the project site is a two-story commercial retail structure totaling approximately 66,000 square-feet, located on the southeast corner of Colorado Boulevard and El Molino Avenue, with frontages on both streets (see Figures 4.1-2a and 4.1-2b). An existing 36-space surface parking lot is located south of the building, fronting on El Molino Avenue and Green Street. The building, which is of a contemporary design and relatively free of architectural ornamentation, was built in 1916, added onto in 1927, and substantially altered in 1945. The building is not historically significant pursuant to the City's Central District Historic Resources Survey of 2003. Existing landscaping includes 11 ornamental street trees along El Molino Avenue and Colorado Boulevard, with 17 additional trees onsite in landscaped areas within and adjacent to the existing parking lot.

c. Regulatory Setting. The City of Pasadena's General Plan Land Use Element includes citywide design principles that are intended to guide development in the City by encouraging an identifiable and coherent city form and by encouraging architectural design compatible with the existing built environment, including historic structures and the unique urban context of Pasadena.

The project site is within the area governed by the City's adopted Central District Specific Plan (CDSP) and the Pasadena Playhouse Sub-District Design Guidelines. These documents contain design guidelines, recommendations, "proposals" and design concepts intended to set forth a physical design character for the Central District and Playhouse Sub-district. The northern portion of the project site is within the area of the Central District where the tallest building heights are allowed (up to 90 feet average height). This height district, reflecting the sub-area's denser and taller character, is centered generally on the Colorado Boulevard corridor between North Mentor Avenue and the 110 Freeway.

The project is proposed on the southeast corner of Colorado Boulevard and El Molino Avenue. This intersection is identified in the Urban Design section of the CDSP as a Primary Focal Intersection. The CDSP categorizes Colorado Boulevard as a Main Commercial Boulevard with Strong Pedestrian Orientation. The site is also within an area identified as an Activity Node, and is adjacent to a Civic Landmark (the Pasadena Playhouse).

The Pasadena Municipal Code requires design review of new construction and alterations throughout the City. In the Central District, structures greater than 5,000 square feet in size, such as the proposed project, require review and approval by the City's Design Commission. The Design Commission's jurisdiction includes architecture, materials, scale, massing, color, lighting, landscaping, open space and other design concepts (Pasadena Municipal Code, Title 2, Chapter 2.80). The Design Commission also receives and considers comments from the Historic Preservation Commission on projects which have the potential to affect historic resources directly, or indirectly when the Historic Preservation Commission is asked to review them.

Photo 1 - View of project site looking southeast from the opposite (northwest) corner of Colorado Boulevard and El Molino Avenue.

Existing Conditions on the Project Site

Figure 4.1-2a

Photo 2 - Views to the site looking east from the Playouse courtyard, directly across El Molino Avenue.

Photo 3 - View northeast to the project site from the southwest corner of Green Street and El Molino Avenue.

Existing Conditions on the Project Site

Figure 4.1-2b

4.1.2 Impact Analysis

a. Methodology and Significance Thresholds. The assessment of aesthetic impacts involves qualitative analysis that is inherently subjective in nature. Different viewers react to viewsheds and aesthetic conditions differently. This evaluation measures the existing visual resource against the proposed action, analyzing the nature of the anticipated change. The project site was observed and photographically documented, as was the surrounding area, to assist in the analysis.

The checklist in Appendix G of the State CEQA Guidelines suggests that significant impacts could occur if a project:

- *Has a substantial adverse effect on a scenic vista;*
- *Substantially damages scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway;*
- *Substantially degrades the existing visual character or quality of the site and its surroundings; or*
- *Creates a new source of substantial light or glare which would adversely affect day or nighttime view in the area.*

It should be noted that the first of these criteria was eliminated from further consideration in the Initial Study, which determined that the proposed project's impacts related to scenic vistas would be less than significant (see Appendix A for the Initial Study discussion).

b. Project Impacts and Mitigation Measures.

Impact AES-1 The proposed project could result in indirect aesthetic impacts on adjacent historic landmarks and landmark-eligible structures due to potential incompatibility of design and scale. However, because the project requires review by the City's Design Commission, these impacts are Class III, *less than significant*.

The site is directly adjacent to the Playhouse National Register Historic District, which includes most of the west side of El Molino Avenue across from the project site. The proposed new commercial building is directly across El Molino Avenue from the Pasadena Playhouse, a National Historic Landmark constructed in the mid 1920s. The proposed new building is also adjacent to the Arcade Lane buildings, constructed in 1927, which is eligible for designation as a historic resource.

The proposed project would not directly affect these designated or eligible existing historic resources. However, the proposed commercial building would be two- to four times taller than the principal Playhouse structure and the other structures within the Playhouse Historic District across El Molino Avenue. The project would also be two- to three times taller than the Arcade Lane buildings. In addition to the difference in scale and height, the project's contemporary architecture departs from the Mission/Spanish Colonial Revival styles of the Playhouse Historic District. ~~Figure 4.1-3 is a conceptual rendering of the project as it would be seen from across El Molino Avenue looking northeast, provided by the applicant's architect.~~

The proposed project has been designed in consideration of these two adjacent ~~historic~~ resources. The project incorporates a paseo, linking El Molino Avenue with the Arcade Lane buildings. This pedestrian corridor would provide for future pedestrian line-of-sight between the historic Playhouse and the Arcade. The paseo would help to physically and visually link the two structures. The proposed project would be physically and visually set back from the Pasadena Playhouse by El Molino Avenue.

In addition to these aspects of the project that have been designed in consideration of historic resources, the Playhouse District Design Guidelines acknowledge a "unique design eclecticism" that includes "contemporary design" in the district and could accommodate differing architectural themes where appropriate. Nevertheless, the proposed project could result in indirect aesthetic impacts on adjacent historic landmarks and landmark-eligible structures due to potential incompatibility of design and scale.

Pursuant to Chapter 17.61 of the Pasadena Municipal Code, the project requires review and approval by the City's Design Commission. The Design Commission's jurisdiction includes architecture, materials, scale, massing, color, lighting, landscaping, open space and other design concepts, including compatibility with surrounding development. The Design Commission also receives and considers comments from the Historic Preservation Commission on projects which are within their jurisdiction. Among the design guidelines and recommendations that the Design Commission would consider are the following, from the Pasadena Playhouse Sub-District Design Guidelines:

Guideline 1: *Support Progressive Design. Sophisticated, progressive designs will communicate the arts and cultural identity of the area. These will also build upon the Subdistrict's unique design eclecticism.*

Guideline 2: *Reference Historic Structures. Although contemporary design solutions are encouraged, significant and noteworthy buildings in the area have qualities worthy of emulation. The scale, massing, and degree of façade articulation of new structures should be respectful of historical buildings.*

Guideline 3: *Add Rich Visual Detail. An amiable pedestrian character requires buildings with human-scale design elements and decorative detail that modulate the light and invite attention. Nonetheless, details must provide evidence of artistry and craftsmanship.*

Recommendation 1: *Demand a high level of design excellence that is appropriate to an arts-oriented district; variety within the context of a street-oriented development pattern is encouraged.*

Recommendation 2: *Provide for contemporary, progressive and innovative design throughout the area; designs should respect their context, but not mimic historic styles.*

Architect's Rendering of Project as Seen from
Colorado Boulevard and El Molino Avenue Intersection

Image Source: Gensler, June 2008.

Figure 4.1-4

Recommendation 3: *Respect the scale, massing, and articulation of adjacent historic buildings; massing should not overwhelm or diminish historic structures.*

Recommendation 4: *Avoid large, featureless building surfaces, especially along the street and outdoor passages; expansive ground floor windows with interesting displays and special detail at entrances are recommended.*

With the required review and approval by the Design Commission, indirect aesthetic impacts on adjacent historic landmarks and landmark-eligible structures would be less than significant.

Mitigation Measures. As impacts would be less than significant, no mitigation is required.

Significance after Mitigation. Indirect aesthetic impacts on adjacent historic landmarks and landmark-eligible structures due to potential incompatibility of design and scale would be less than significant without mitigation.

Impact AES-2 The proposed project would introduce a new 72-foot tall structure plus 15-feet of appurtenances to a site currently occupied by a two-story building. This change would substantially alter the visual character of the site and its surroundings. However, by complying with the Design Review process and adhering to adopted City design guidelines, impacts would be Class III, *less than significant*.

The proposed new commercial building would be approximately three times taller than the existing structure on the site. The new building would also have a wider frontage on El Molino Avenue, as the new building would occupy a portion of the space that is currently utilized for surface parking. The simple and unadorned existing building is not considered to be of especially high aesthetic value; nevertheless, due primarily to the taller facades and more articulated design of the proposed building, the project would result in a substantial change to the visual character of the site. The existing building is shown in Figure 4.1-2 a and b, and a conceptual renderings of the proposed building ~~are~~ is shown in Figures ~~4.1-3~~ and 4.1-4. The proposed site plan is shown in Figure 2-3 in Section 2.0 *Project Description*.

Context. Pasadena Plaza is a 158,000 sf mixed-use retail and office building situated on the prominent corner of Colorado Boulevard and El Molino Avenue. The district is comprised of a myriad of disparate architectural styles and building types and as such, lacks a cohesive architectural character. Although of different architectural styles, the surrounding context is of a common traditional language, incorporating traditional approaches to massing, proportion and window fenestration.

Colorado Boulevard is a major vehicular artery, its character is predominantly established by four significant projects, the Bank of the West building, the Trio and Archstone residential projects, and the immediately adjacent, Arcade Lane. These structures are all of various traditional styles and

range in height from 3 to 9 floors. The balance of Colorado Blvd. is made up of relatively low scale retail buildings.

In contrast, El Molino Avenue is made up of a variety of 1 story retail with the exception of the historically significant Pasadena Playhouse, a 3-story Mission style structure. It is vital for the pedestrian nature of El Molino to be enhanced to create a vibrant district for the community.

Architectural Strategy. Through strategic massing and architectural expression, the proposed 5-story structure establishes an architectural language compatible with the diverse character of its surroundings. By creating this common architectural language, Playhouse Plaza's compatible, but unique, character will cohesively establish the traditional context of the Playhouse District.

Massing Strategy. The massing of the proposed building addresses the uniquely different scales and characteristics of the two frontage streets and also responds to the scale of Arcade Lane, immediately adjacent to the East. The main building mass is setback from all boundary property lines to allow base or extension elements to relate individually to unique surrounding conditions.

Colorado Boulevard. On Colorado, the upper floors recede to diminish overall height, while a two-story base expression creates a strong vehicular street edge and relates to the scale of the neighboring Arcade Lane, see Figure 4.1-4 in this section and Figure 2-7 in Section 2.0 *Project Description* for views of the Building from Colorado Boulevard.

El Molino Avenue. Along El Molino, the 5 story mass acts as a backdrop for the lower scale building extensions to relate to the low scale retail nature of the pedestrian street. The modulation of these extensions breaks the buildings overall length and creates a rhythm of lower scale structures with intermittent retail courtyards, enriching the vitality of the pedestrian oriented district. Figures 4.1-3 and 4.1-4 show views of the building along the El Molino Avenue frontage.

Pedestrian Paseo. Directly opposing the entry courtyard to the Pasadena Playhouse, a new ~~pedestrian walkway~~ paseo connects Arcade Lane~~,~~ with Playhouse Plaza and visually connects with the ~~anchoring~~ Pasadena Playhouse. ~~With proposed enhanced street paving, the paseo is seen as an extension of the Playhouse courtyard.~~ The new 8,600 square foot paseo, which will serve as public open space is lined with retail and courtyard amenities, creating vibrant pedestrian connectivity for the playhouse district. ~~Figure 4.1-3 in this section and~~ Figure 2-8 in Section 2.0 *Project Description* shows a view~~s~~ of the pedestrian plaza looking towards ~~from~~ the Pasadena Playhouse ~~and~~ from the Arcade Lane Building ~~respectively~~.

Architectural Expression. The contemporary new building utilizes traditional architectural principles; these overarching principles enable the new structure to relate to diverse character of the surrounding contextual conditions, while still maintaining a singular unified expression.

- The new structure incorporates a traditional tripartite expression of base, middle, and top, found extensively throughout the neighboring buildings.

- The fenestration, or approach to window openings, again adopts a traditional "punched window" façade treatment. In strategic locations, the facades or walls are expressed with depth or thickness to further address the pedestrian nature of the street.

- In traditional fashion, the structure is expressed or "grounded". The structure of columns and overhead canopies create rhythm and visual interest, responding to the pedestrian nature of the retail streets.

- Variation in rooflines, window fenestration and base treatments, enable the new structure to relate contextually to uniquely different characteristics of surrounding conditions.

- The prominent corner expression creates identity for the building and announces the gateway to the Playhouse district.

Material Quality. Materially, the proposed building will incorporate appropriate and high quality materials.

- The body of the new building will incorporate pre-cast architectural concrete panels, similar GFRC (Glass Fiber Reinforced Concrete) panels, or hard-toweled finished plaster, similar to the Playhouse.

- To comply with current energy codes, the glazing will be high performance IG (insulated glass) units, allowing for high level of transparency / low level of reflectivity.

- All architectural roof elements, trellises and retail canopies will be constructed of high quality architectural metal panels.

- On the ground floor base, dimensional stone wainscots and accents will be utilized to enhance the quality and durability of the pedestrian experience.

Although the building would be substantially larger than the existing onsite development, it should be noted that the City considers the portion of the Colorado Boulevard corridor that encompasses the project site to be potentially suitable for taller buildings. Height limits on the site and immediate vicinity are among the highest allowed citywide. In addition, although the building would be substantially taller than existing and immediately adjacent buildings, the proposed 72-foot height plus the additional 15-feet of appurtenances would not be out of character with the surrounding area in general, which includes a mix of building heights. The proposed height is similar to that of several structures located within a block or two of the project site, as illustrated in Figure 4.1-1 (a and b), in which other buildings of five or more stories are visible. Both the building's height (72-feet) and the additional height of the appurtenance (15-feet) are within the Central District Maximum Height requirement for the Playhouse District established in the Pasadena Municipal Code (§17.30.030).

Finally, as noted previously, the project requires review and approval by the City's Design Commission. The Design Commission's jurisdiction includes architecture, materials, scale, massing, color, lighting, landscaping, open space and other design concepts, including compatibility with surrounding development. The design review process would ensure that the project, if approved, would meet the City's criteria for a design that does not result in significant adverse impacts to the aesthetic quality of the site.

Mitigation Measures. As impacts to the aesthetic quality and visual character of the site and its surroundings would be less than significant, no mitigation is required.

Significance after Mitigation. Impacts to the aesthetic quality and visual character of the site and its surroundings would be less than significant without mitigation.

Impact AES-3 The proposed project would result in new sources of light and glare and create new shadows on and around the project site. This would be due to the increased height and scale of development, as well as the larger proportion of glazing and potentially reflective metal materials, in contrast with the existing development on the site. This is a Class II, *significant but mitigable,* impact.

Lighting. Implementation of the proposed project would introduce new sources of light and glare. The existing structure is two stories tall; only the first story has windows, and the second story is painted a matte brown color with few reflective materials outside of the blue lettering for the commercial sign, and is not heavily lit. The proposed commercial building would be five stories tall; all floors have windows and materials are muted, earth toned colors, and include additional glass and metal accents. Potential sources of increased lighting include the spillover of interior light onto the street from interior lighting and exterior lights and signage during the nighttime hours. The ingress and egress points for the proposed subterranean garage would also be lighted, and headlights of vehicles exiting the structure at night would cast light onto roadways and surrounding properties.

The project site is located in downtown Pasadena, an area with high levels of existing lighting associated with the dominant commercial uses. The new building would not be immediately adjacent to light-sensitive uses such as residences or sensitive habitat. Nevertheless, the increase in night lighting could result in adverse aesthetic impacts depending on the design and type of lighting. However, the project would be required to adhere to Section 17.40.080 of the City's Municipal Code, which regulates outdoor lighting. Among other limitations, the regulations require lighting to be shielded or recessed so that direct glare and reflections are confined to the maximum extent feasible within the boundaries of the site, and shall be directed downward and away from adjoining properties and public rights-of-way. Flashing lights and high-intensity lights are prohibited. Section 17.48.100, General Provisions for On-Premise Signs, regulates the appearance and lighting of commercial signs, requiring, among other provisions, that the artificial illumination of signs, either from an internal or external source, be designed to eliminate negative impacts on surrounding rights-of-way and properties. External light sources are required to be directed and shielded to limit direct illumination of any object other than the sign, and light sources may not be visible within 100 feet of any residential zoning district. Internally illuminated signs visible from any residential zoning district must be turned off between the hours of 11:00 p.m. and 6:00 a.m. unless they identify an establishment open for business during those hours. Section 17.48.110.D, Neon Signs and Architectural Lighting, limits the use of lighting for architectural accent.

In addition, as noted above, the project requires review and approval by the City's Design Commission. The Design Commission's jurisdiction includes materials and lighting, including

compatibility of lighting with surrounding development. The design review process, in concert with the outdoor lighting regulations, would ensure that the project, if approved, would meet the City's criteria for a design that does not result in significant adverse impacts to the aesthetic quality of the site.

Glare. Potential sources of glare would consist of glazing (windows) and other reflective materials used in the façade of the proposed structures. As noted above, the existing structure is two stories tall, while the proposed commercial building would be five stories tall. Only the first story of the existing structure has windows, and the second story is painted a matte brown color with few reflective materials, while all floors of the proposed commercial building would have windows, materials would be muted, earth toned colors, and additional glass and metal accents are proposed.

As also noted above, the project site is in an urban environment with numerous existing sources of glare. Nevertheless, high levels of glare from materials on the proposed commercial building compared with the existing low glare levels on the site could result in adverse aesthetic impacts, particularly in relation to nearby historic structures. Mitigation measures are required to minimize the glare effects of the five-story structure.

Shadows. The proposed five-story structure would replace an existing two-story structure and would cast shadows onto adjacent properties. Figure 4.1-5 shows summer shadows cast by the structure on exterior spaces of neighboring properties. The two spaces under evaluation include the Pasadena Playhouse courtyard to the west across El Molino Avenue from the project site, and the Arcade Building open terrace courtyard along the eastern boundary of the site (see Figure 4.1-5). During the summer, the proposed project would cast shadows onto the Arcade Building open terrace courtyard in the late afternoon and evening as the sun moves westward.

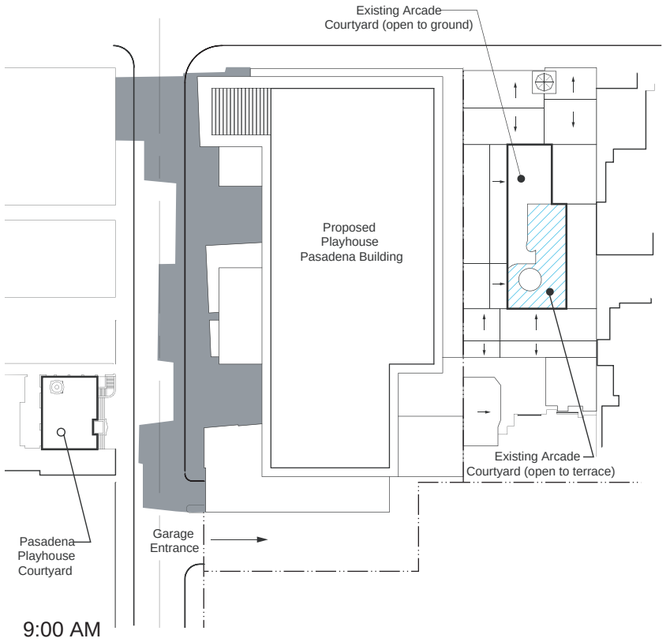
During the winter, the proposed five-story structure would create shadows that are longer than those created in the summer (see Figure 4.1-6). The winter shadows would project onto the northeast corner of the Pasadena Playhouse Courtyard in the morning, and would move northward across Colorado Boulevard during the mid-day. During the afternoon, shadows created by the proposed project would move eastward, shading the entire Arcade Building open terrace courtyard in the late afternoon and projecting further eastward to the interior courtyard of the Archstone Playhouse residential project (see Figure 4.1-6). It should be noted that the Archstone Playhouse residential project is also five stories tall and would itself cast shadows onto its own interior courtyard space as well. There are no thresholds of significance for shadow effects, though it is noted that the proposed project will cast longer shadows than are currently created due to the increased development height (three additional stories). There are no thresholds of significance for shadow impacts and the project's effect with respect to shadows is thus less than significant.

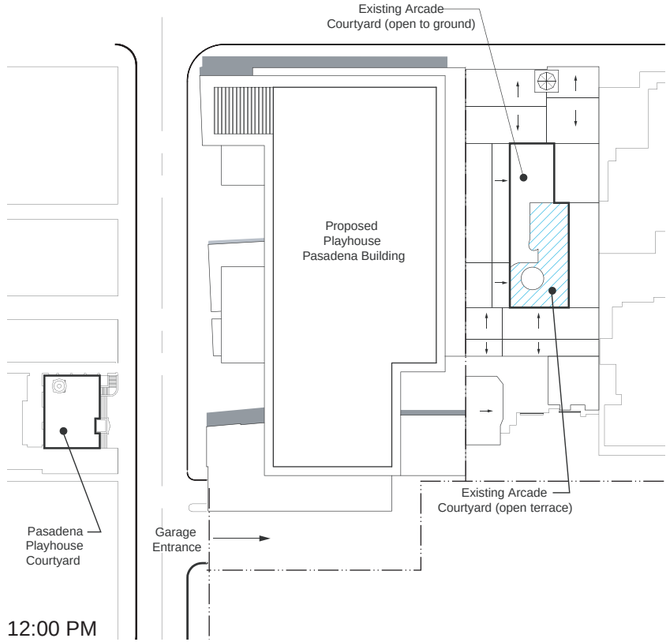
Mitigation Measures. The following mitigation measure would reduce potential glare impacts associated with the proposed project.

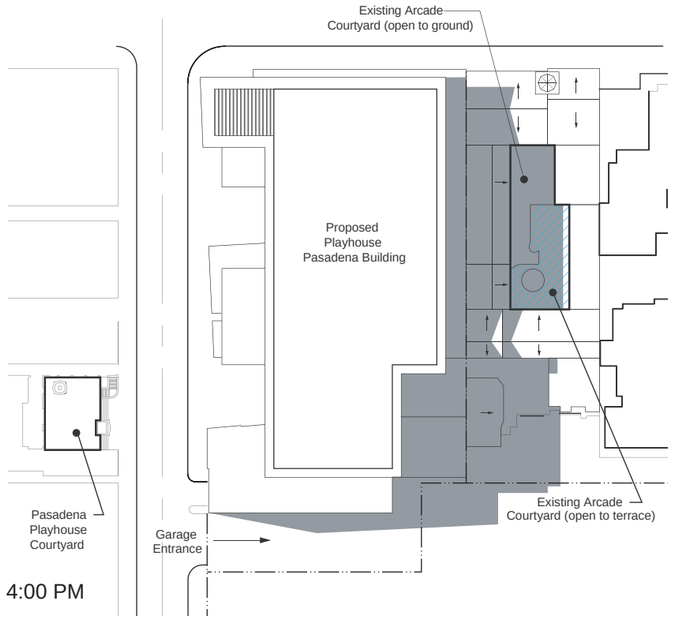
AES-3 **Building Material Specifications.** Prior to the issuance of any building permits, the applicant shall submit plans and specifications for all building materials to the Planning Division for review and approval. All structures facing any public street or neighboring property shall use minimally reflective glass and all other materials used on the exterior of buildings and structures shall be selected with attention to minimizing reflective glare. The use of glass with over 25% reflectivity shall be prohibited except as expressly approved by the Design Review Commission.

Significance After Mitigation. With incorporation of this mitigation measure, impacts related to glare would be reduced to a less than significant level.

c. Cumulative Impacts. Planned and pending developments in the site vicinity are listed in Table 3-1 of Section 3.0, *Environmental Setting*. As indicated, projects within a ½ mile radius of the project site include approximately 1,256 dwelling units and 461,687 square feet of commercial development. These developments include a range of uses including condominiums, office space, restaurants, and a seminary. Such development includes both demolition of existing uses and new developments that could cumulatively increase the urbanized nature and intensity of the project vicinity. However, the City's General Plan, Urban Design Concepts, Design Guidelines and Zoning Ordinance provide a variety of standards, regulations and guidelines specifically intended to ensure that visual impacts from new development projects are minimized and that projects are designed and constructed in accordance with the City's aesthetic vision. These policy and regulatory documents, combined with the City's Design Review process, ensure that cumulative aesthetic impacts would not be cumulatively considerable. Significant cumulative impacts to the aesthetic character and visual resources of downtown Pasadena are not anticipated.



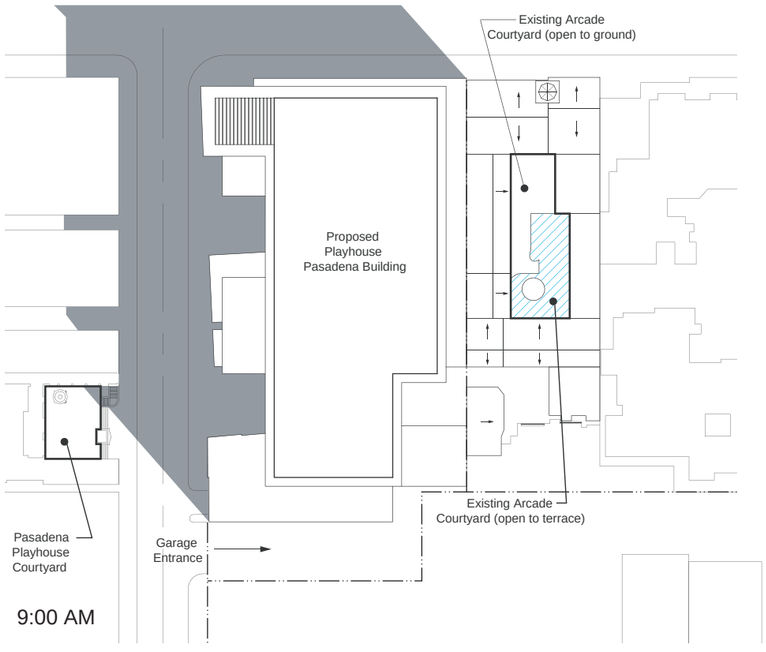


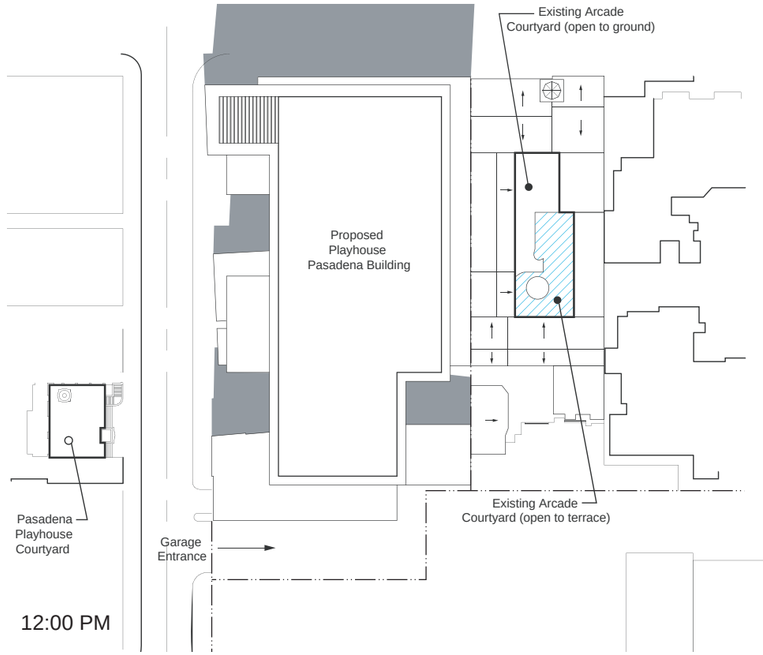


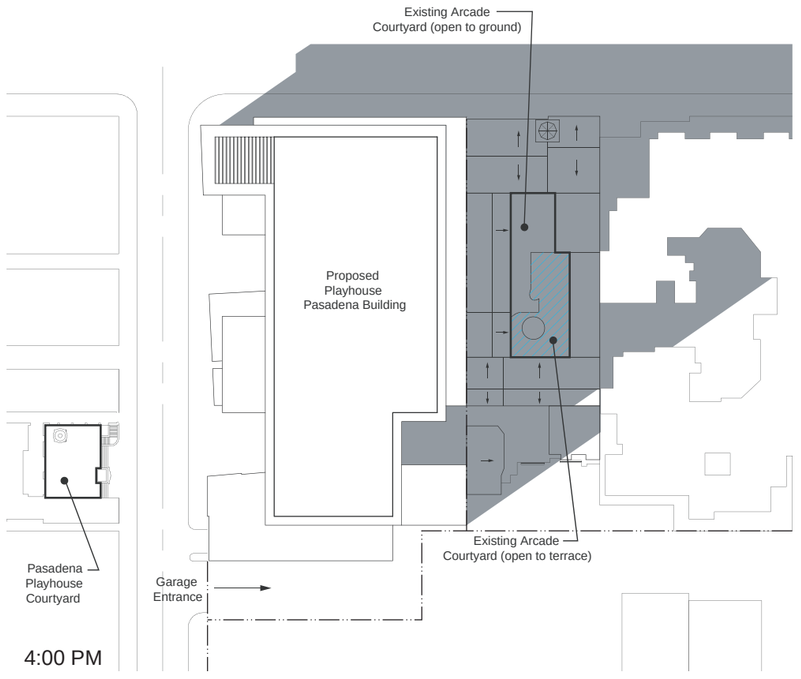
Summer Shadows

Figure 4.1-5

Drawing Source: Gensler, August 2008.







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Winter Shadows

Figure 4.1-6

Drawing Source: Gensler, August 2008.

4.2 AIR QUALITY

4.2.1 Setting

a. Climate and Meteorology. The semi-permanent high-pressure system west of the Pacific coast strongly influences California's weather. It creates sunny skies throughout the summer and influences the pathway and occurrence of low-pressure weather systems that bring rainfall to the area during October through April. As a result, wintertime temperatures in Pasadena are generally mild, while summers are warm and dry. The dominant daily wind pattern in the basin is a daily sea breeze followed by a nightly land breeze. These wind patterns are occasionally broken during the winter by storms coming from the north and northwest and by episodic Santa Ana winds. Santa Ana winds are strong northerly to northeasterly winds that originate from high-pressure areas centered over the desert of the Great Basin. These winds are usually warm, very dry, and often full of dust. They are particularly strong in the mountain passes and at the mouths of canyons. The net effect of the dominant daily wind pattern in the Pasadena area is that daytime air pollutant emissions from coastal sources are carried inland and nighttime winds carry the inland pollution to the coastal areas. However, the weak nighttime wind conditions can allow for localized stagnation of pollutants inland.

The City of Pasadena is located in a transitional climate zone which is influenced by both the ocean and warm continental air masses. Pasadena is also located in a thermal belt which means that cold air that occurs during winter nights drains off to lower elevations. Temperatures in the City range from an average annual minimum of 48° Fahrenheit (F) to an average annual maximum of 76° F with a mean annual temperature of 62° F. Precipitation is generally limited to a few storms during the winter season between November and April with annual average rainfall of about 12 to 13 inches per year.

b. Air Pollution Regulation. Air quality is regulated federally by the Environmental Protection Agency, statewide by the California Air Resources Board (CARB). Local control in air quality management is provided by the CARB through county-level Air Pollution Control Districts (APCDs). The CARB has established air quality standards and is responsible for the control of mobile emission sources, while the local APCDs are responsible for enforcing standards and regulating stationary sources. The CARB has established 14 air basins statewide. The non-desert portions of Los Angeles, San Bernardino, and Riverside Counties, together with all of Orange County, comprise the South Coast Air Basin (SCAB), which is controlled by South Coast Air Quality Management District (SCAQMD). The City of Pasadena is located in the SCAB.

Federal and state standards have been established for ozone (O_3), carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), particulates less than 10 and 2.5 microns in diameter (PM_{10} and $PM_{2.5}$), and lead (Pb) (refer to Table 4.2-1). California has also set standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility reducing particles. The SCAQMD is required to monitor air pollutant levels to assure that air quality standards are met and, in the event they are not, to develop strategies to meet these standards. Depending on whether the standards are met or exceeded, the local air basin is classified as being in "attainment" or "nonattainment."

The South Coast Air basin is a federally designated nonattainment area for ozone and PM_{10}. Current state nonattainment designations within this basin exist for ozone, PM_{10}, and $PM_{2.5}$.

Table 4.2-1
Current Federal and State Ambient Air Quality Standards

Pollutant	Federal Standard	California Standard
Ozone	0.08 ppm (8-hr avg)	0.09 ppm (1-hr avg) 0.07 ppm (8-hr avg)
Carbon Monoxide	9.0 ppm (8-hr avg) 35.0 ppm (1-hr avg)	9.0 ppm (8-hr avg) 20.0 ppm (1-hr avg)
Nitrogen Dioxide	0.053 ppm (annual avg)	0.25 ppm (1-hr avg)
Sulfur Dioxide	0.03 ppm (annual avg) 0.14 ppm (24-hr avg) 0.5 ppm (3-hr avg)	0.04 ppm (24-hr avg) 0.25 ppm (1-hr avg)
Lead	1.5 $\mu g/m^3$ (annual avg)	1.5 $\mu g/m^3$ (30-day avg)
Particulate Matter (PM_{10})	50 $\mu g/m^3$ (annual avg) 150 $\mu g/m^3$ (24-hr avg)	20 $\mu g/m^3$ (annual avg) 50 $\mu g/m^3$ (24-hr avg)
Particulate Matter ($PM_{2.5}$)	15 $\mu g/m^3$ (annual avg) 65 $\mu g/m^3$ (24-hr avg)	12 $\mu g/m^3$ (annual avg)

ppm= parts per million
$\mu g/m^3$ = micrograms per cubic meter
Source: California Air Resources Board, ww.arb.ca.gov/aqs/aaqs2.pdf, October 26, 2006.

The potential health effects of pollutants for which the South Coast Air Basin is in nonattainment are described below.

Ozone. Ozone is produced by a photochemical reaction (triggered by sunlight) between nitrogen oxides (NO_x) and reactive organic gases (ROG). Nitrogen oxides are formed during the combustion of fuels, while reactive organic gases are formed during combustion and evaporation of organic solvents. Because ozone requires sunlight to form, it is formed primarily between the months of April and October. Ozone is a pungent, colorless toxic gas with direct health effects on humans including respiratory and eye irritation and possible changes in lung functions. Groups most sensitive to ozone include children, the elderly, people with respiratory disorders, and people who exercise strenuously outdoors.

Carbon Monoxide. Carbon monoxide (CO) is a colorless, odorless, poisonous gas that is only found in high concentrations when very near its source. The major local source of CO is automobile traffic. Elevated concentrations are usually only found near areas of high traffic volumes. The adverse effect of CO on human health is a function of its affinity for hemoglobin in the blood. At high concentrations, CO reduces the amount of oxygen in the blood, causing heart difficulties in people with chronic diseases, reduced lung capacity, and impaired mental abilities.

Nitrogen Dioxide. Nitrogen dioxide (NO_2) is a by-product of fuel combustion, with the primary source being motor vehicles and industrial boilers and furnaces. The principal form of

nitrogen oxide produced by combustion is nitric oxide (NO), but NO reacts rapidly to form NO_2, creating the mixture of NO and NO_2 commonly called NO_x. Nitrogen dioxide is an acute irritant. A relationship between NO_2 and chronic pulmonary fibrosis may exist, and an increase in bronchitis in young children at concentrations below 0.3 parts per million (ppm) may occur. Nitrogen dioxide absorbs blue light and causes a reddish brown cast to the atmosphere and reduced visibility. It can also contribute to the formation of PM_{10} and acid rain.

Suspended Particulates. Atmospheric particulate matter is comprised of finely divided solids and liquids such as dust, soot, aerosols, fumes, and mists. The particulates that are of particular concern are PM_{10} which measures no more than 10 microns in diameter, and $PM_{2.5}$, a fine particulate measuring no more than 2.5 microns in diameter. The characteristics, sources, and potential health effects associated with the small particulates (those between 2.5 and 10 microns in diameter) and fine particulates ($PM_{2.5}$) can be very different. Major man-made sources of PM_{10} are agricultural operations, industrial processes, combustion of fossil fuels, construction, demolition operations, and entrainment of road dust into the atmosphere. Natural sources include wind blown dust, wildfire smoke, and sea spray salt. The finer, $PM_{2.5}$ particulates are generally associated with combustion processes as well as being formed in the atmosphere as a secondary pollutant through chemical reactions. Fine particulate matter is more likely to penetrate deeply into the lungs and poses a serious health threat to all groups, but particularly to the elderly, children, and those with respiratory problems. More than half of the small and fine particulate matter that is inhaled into the lungs remains there, which can cause permanent lung damage. These materials can damage health by interfering with the body's mechanisms for clearing the respiratory tract or by acting as carriers of an absorbed toxic substance.

c. Current Ambient Air Quality. The SCAQMD monitors air pollutant concentrations throughout the basin at various monitoring stations. The SCAQMD has divided the basin among 38 separate monitoring stations. The nearest SCAQMD monitoring station is located on the Caltech campus at 752 S Wilson Avenue. However, particulate matter less than 10 microns data is not available from the Pasadena monitoring station; therefore, data for this pollutant has been taken from the Los Angeles-North Main Street station, located at 1630 North Main Street, roughly 10 miles south and west of Pasadena. Table 4.2-2 summarizes exceedances of the federal and/or state standards for ozone, carbon monoxide, nitrogen dioxide and particulate matter less than 10 microns and less than 2.5 microns within the Pasadena, and nearby area.

As shown in table 4.2-2, state and federal thresholds for ozone were exceeded in Pasadena during the past three years. The state threshold for PM_{10} was exceeded three times in 2005 and five times in 2007 in nearby Los Angeles. The federal threshold for $PM_{2.5}$ was exceeded one time in 2007. There were no state or federal exceedances of carbon monoxide or nitrogen dioxide in the last three years, and no exceedances of federal PM_{10} standards.

Table 4.2-2

Ambient Air Quality Data

Pollutant	2005	2006	2007
[a]Ozone, ppm - Worst Hour	0.145	0.151	0.149
Number of days of State exceedances (>0.09 ppm)	13	26	13
Number of days of Federal exceedances (>0.12 ppm)	2	5	3
[a]Carbon Monoxide, ppm - Worst 8 Hours	2.83	2.80	2.28
Number of days of State/Federal exceedances (>9.0 ppm)	0	0	0
[a]Nitrogen Dioxide, ppm - Worst Hour	0.104	0.120	0.092
Number of days of State exceedances (>0.25 ppm)	0	0	0
[b]Particulate Matter <10 microns, $\mu g/m^3$ Worst 24 Hours	70.0	59.0	78
Number of samples of State exceedances (>50 $\mu g/m^3$)	3	3	5
Number of samples of Federal exceedances (>150 $\mu g/m^3$)	0	0	0
[a]Particulate Matter <2.5 microns, $\mu g/m^3$ Worst 24 Hours	62.8	45.8	68.8
Number of samples of Federal exceedances (>65 $\mu g/m^3$)	0	0	1

[a] *Pasadena-S Wilson Avenue Station*
[b] *Los Angeles-North Main Street Monitoring Station*
Source: CARB, 2005, 2006, & 2007 Annual Air Quality Data Summaries available at http://www.arb.ca.gov

d. Sensitive Receptors in the Project Area. Certain population groups are considered more sensitive to air pollution than others. Sensitive population groups include children, the elderly, the acutely ill and the chronically ill, especially those with cardio-respiratory diseases. Residential uses are also considered sensitive to air pollution because residents (including children and the elderly) tend to be at home for extended periods of time, resulting in sustained exposure to any pollutants present. Sensitive receptors within the vicinity of the project site include the multi-family residential building on the northwest corner of Colorado Boulevard and El Molino Avenue and the multi-family residential building on the southwest corner or Colorado Boulevard and South Oak Knoll Avenue.

4.2.2 Impact Analysis

a. Methodology and Significance Thresholds. The air quality analysis conforms to the methodologies recommended in the South Coast Air Quality Management District *CEQA Air Quality Handbook* (1993). Quantitative pollution emissions estimates for the proposed project were calculated using URBEMIS 2007 (Version 9.2.4), which was developed by the California Air Resources Board to evaluate construction emissions, area emissions and operational emissions associated with new development. Construction emissions are based on the amount of demolition, grading and building construction that would occur due to project development. Area emissions include natural gas consumption, hearth fuel combustion, landscape fuel combustion, consumer products, and architectural coatings. Operational emissions are associated with motor vehicle trip generation resulting from the project. Trip generation

estimates for the project were obtained from a traffic study conducted by Linscott, Law and Greenspan Engineers (July 2008). The traffic study is included in the attached appendices.

A significant adverse air quality impact may occur when a project individually or cumulatively interferes with progress toward the attainment of the ozone standard by releasing emissions that equal or exceed the established long-term (operation) or temporary (construction) quantitative thresholds for pollutants, or causes an exceedance of a state or federal ambient air quality standard for any criteria pollutant. Table 4.2-3, below, lists the project and cumulative significance thresholds recommended by the SCAQMD for project operations within the South Coast Air Basin.

Table 4.2-3
SCAQMD Air Quality Significance Thresholds

Pollutant	Construction	Operation
ROG	75 lbs/day	55 lbs/day
NO_x	100 lbs/day	55 lbs/day
CO	550 lbs/day	550 lbs/day
SO_x	150 lbs/day	150 lbs/day
PM_{10}	150 lbs/day	150 lbs/day
$PM_{2.5}$	55 lbs/day	55 lbs/day

Source: SCAQMD, 2006, http://www.aqmd.gov/cega/hdbk.html

Localized significance thresholds (LSTs) have been established by the SCAQMD in response to the Governing Board's Environmental Justice Enhancement Initiative (1-4), which was prepared to update the SCAQMD's CEQA Air Quality Handbook. The LSTs were devised in response to public concern regarding exposure of individuals to criteria pollutants in local communities. The LSTs represent the maximum emissions from a project that will not cause or contribute to an air quality exceedance of the most stringent applicable federal or state ambient air quality standard at the nearest sensitive receptor, taking into consideration ambient concentrations in each source receptor area (SRA), project size, distance to the sensitive receptor, etc. However, the LSTs only apply to emissions within a fixed stationary location, including idling emissions during both project construction and operation, and LSTs have been developed only for NOx, CO, and PM_{10}. LSTs have been developed for emissions within areas up to five acres in size, with air pollutant modeling recommended for activity within larger areas. Table 4.2-4 includes LSTs for projects of two acres in size in Source Receptor Area 2 (SRA-8), which is designated by the SCAQMD as the West San Gabriel Valley area and includes the City of Pasadena. Additionally, it should be noted that LSTs are not applicable to mobile sources such as cars on a roadway (Final Localized Significance Threshold Methodology, SCAQMD, June 2003). Comparison of the project's operational emissions to LSTs was deemed unnecessary, as the majority of operational air pollutants from the proposed project would be generated from vehicles that travel to and from the site.

Table 4.2-4
SCAQMD LSTs for Construction in SRA-8

Pollutant	Allowable emissions(lbs/day) as a function of receptor distance in feet from a two acre site boundary				
	82	164	328	656	1,640
	lbs/day				
Gradual conversion of NO_x to NO_2	180	175	190	227	321
CO	681	938	1,295	2,263	6,465
$PM_{2.5}$ ($\mu g/m^3$)	4	5	9	21	82
PM_{10} ($\mu g/m^3$) Construction	6	19	34	66	160

Source: http://www.aqmd.gov/cega/handbook/LST/LST.html#Appendix%20C; July 2005, With Links to: 1) SRA/City Table; and 2) Appendix C - Mass Rate LST Look-up Tables

b. Project Impacts and Mitigation Measures.

Impact AQ-1 Air pollutant emissions generated by construction of the proposed project would not exceed SCAQMD thresholds for NO_x, CO, SO_2, or PM_{10} or $PM_{2.5}$. However, ROG emissions would exceed SCAQMD thresholds. This is a Class II, *significant but mitigable* impact.

The majority of construction related emissions result from grading, and building, due to use of heavy equipment and architectural coatings, respectively. The ozone precursor NO_x is primarily a byproduct of diesel combustion. ROG is released primarily during the finishing phase of construction upon application of paints and varnishes. The URBEMIS computer program calculates construction emissions based on demolition (Phase I), grading (Phase II), building construction (Phase III) and architectural coating (Phase IV).

Since the precise construction schedule has not yet been defined, a maximum emission scenario was used in order to analyze the construction impacts associated with a single stage construction scenario that is further broken down into the phases described above. The scenario assumes that 660,000 cubic feet of structure would be demolished with a daily maximum amount of 10,000 cubic feet. Each truck is assumed to have a capacity of 20 cubic yards and would make five round trips a day. The waste would be hauled off site to a landfill or recycling facility that is located 10 miles from the project site.

The URBEMIS 2007, version 9.2.4 model was used to calculate emissions associated with the construction of the proposed project based on the proposed land use, length of construction, operation of construction equipment and other activities associated with the construction phase of the proposed commercial building. Estimates of construction related project emissions are shown below in Table 4.2-5. As indicated, emissions would not exceed SCAQMD thresholds for

NO_x, CO, SO_2, PM_{10} or $PM_{2.5}$. However, emissions of ROG could exceed the daily threshold of 75 lbs/day during application of architectural coatings (see Table 4.2-5)

Table 4.2-5
Estimated Maximum Daily Air Pollutant Emissions During Construction

	Unmitigated Emissions (lbs/day)					
	ROG *	**NO_x**	**CO**	**SO_2**	**Total PM_{10}**	**Total $PM_{2.5}$**
Phase I Demolition	1.52	11.44	7.25	0.00	5.00	1.60
Phase II Mass Grading	3.22	26.53	14.14	0.00	38.14	8.92
Phase III Building	4.43	20.02	24.97	0.01	1.45	1.31
Phase IV Architectural Coating	97.95	0.07	1.24	0.02	0.01	0.00
Maximum lbs/day[a]	***97.95***	***26.53***	***24.97***	***0.02***	***38.14***	***8.92***
SCAQMD Thresholds	*75*	*100*	*550*	*150*	*150*	*55*
Threshold Exceeded?	**Yes**	No	No	No	No	No

Notes:Construction phases do not occur concurrently. Maximum lbs/day is based on highest emissions in either construction year 1 or 2.
** ROG (VOC) emissions presented as URBEMIS 2007 v.9.2.4 mitigated value to account for manufacturing implemented VOC reduction of 62% per SCAQMD Rule 1113 (average of 100g VOC/liter of coating).*

Source: URBEMIS 2007, Version 9.2.4, see Appendix B for calculations.

A comparison of estimated construction emissions using the SCAQMD's spreadsheet for LST's is shown in Table 4.2-6.

Table 4.2-6
Total On-Site Construction Criteria Pollutant Emissions for Localized Significance Thresholds

	CO	**NO_x**	**PM_{10}**	**$PM_{2.5}$**
Demolition	27.1	53.4	3.5	3.0
Site Preparation	20.7	44.9	4.8	2.6
Grading	24.9	53.2	3.6	2.8
Building	11.0	26.0	1.5	1.3
Arch Coating and Paving	17.6	36.0	2.6	2.4
Localized Significance Threshold*	*180*	*681*	*6*	*4*
Exceed Significance?	**No**	**No**	**No**	**No**

Source: SCAQMD's Sample Construction Scenarios spreadsheet for LST analysis. See Appendix B for calculations.
**LSTs are for a two-acre project site in SRA-8 at a distance of 82 feet from the site boundary.*
Please consult http://www.aqmd.gov/cega/handbook/LST/LST.html for the Methodology Paper for applicable LSTs.

It is noted that the output results for URBEMIS as compared with the LST spreadsheet output results differ. Discussions with SCAQMD staff indicated that these tools overestimate emissions, and that the URBEMIS tool is intended to be utilized first. In the event that emissions as quantified by URBEMIS meet or exceed thresholds, additional quantification and analysis is warranted. The LST spreadsheets represent a less conservative model in that they do not overestimate to the degree that the URBEMIS program does. However, the LST analysis results are still considered conservative by SCAQMD and are the recommended method of analysis for estimating air quality impacts to the closest sensitive receptors. As indicated in Table 4.2-6, the estimated daily construction emissions of criteria pollutants are below the LST's for this location. Therefore, impacts from construction generated emissions relative to LSTs would be less than significant.

Mitigation Measures. Project emissions would not exceed SCAQMD thresholds for NO_x, CO, SO_2, or PM_{10} or $PM_{2.5}$. Therefore, impacts would be less than significant without mitigation for these pollutants; however, emissions of ROG could exceed the daily threshold of 75 lbs/day depending on the types of coatings used and the rate of application. Therefore, mitigation is required to reduce the potential for adverse effects to a level that is less than significant. Additionally, though adverse effects related to fugitive dust and NOx are not anticipated, standard dust control and ozone precursor control is recommended for all construction projects in the SCAQMD.

AQ-1(a) **ROG Control.** The following shall be implemented to minimize daily ROG emissions related to the application of architectural coatings:

- *Low VOC architectural and asphalt coatings shall be used on site and shall comply with AQMD Rule 1113-Architectural Coatings.*

AQ-1(b) **Ozone Precursor Control.** The following shall be implemented during construction to minimize emissions from construction equipment:

- *Equipment engines should be maintained in good condition and in proper tune as per manufacturer's specifications;*
- *Lengthen construction periods during the smog season so as to minimize the number of vehicles and equipment operating simultaneously; and*
- *Use new technologies to control ozone precursor emissions as they become available.*

AQ-1(c) **Fugitive Dust Control.** The following shall be implemented during construction to minimize fugitive dust emissions:

- *Water trucks shall be used during construction to keep all areas of vehicle movements damp enough to prevent dust from leaving the site. At a minimum, this will require twice daily applications (once in late morning and once at the end of the workday). Increased watering is required whenever wind speed exceeds 15 mph. Grading shall be suspended if wind gusts exceed 25 mph.*

- *Soil with 5% or greater silt content that is stockpiled for more than two days shall be covered, kept moist, or treated with soil binders to prevent dust generation. Trucks transporting material shall be tarped from the point of origin or shall maintain at least two feet of freeboard.*
- *All material excavated or graded shall be treated with soil binders or shall be sufficiently watered at least twice daily with complete coverage, preferably in the late morning and after work is done for the day.*
- *All clearing, grading, earth moving, or excavation activities shall cease during periods of high winds (i.e., greater than 20 mph averaged over one hour) so as to prevent excessive amounts of dust.*
- *All material transported off-site shall be securely covered to prevent excessive amounts of dust.*
- *Face masks shall be used by all employees involved in grading or excavation operations during dry periods to reduce inhalation of dust which may contain the fungus which causes San Joaquin Valley Fever.*

Significance After Mitigation. Use of Low VOC coatings (ROG = VOC) would result in maximum daily emissions of ROG of 39.2 lbs/day, which is below the 75 lb/day threshold. Although mitigation is not required for other pollutants as projected maximum daily emissions are below SCAQMD thresholds, the recommended mitigation measures would further reduce construction related emissions of fugitive dust and ozone precursors to the greatest extent feasible.

Impact AQ-2 Operation of the proposed project would generate air pollutant emissions, but emissions would not exceed SCAQMD operational significance thresholds. Therefore, the project's operational impact to regional air quality would be Class III, *less than significant*.

The net increase in long-term emissions associated with the proposed project, as presented in Table 4.2-6, includes those emissions associated with vehicle trips (mobile emissions) and the use of natural gas and landscaping maintenance equipment (area emissions) upon buildout of the project.

The project was analyzed for operational impacts based on the type of land use and the associate square footage. Since the project involves 159,971 square feet (sf) of office use[1], it is estimated to generate 1,761 average daily vehicle trips (ADT). In addition to the 1,761 ADT generated by the project, increased electricity and natural gas would be consumed by the 159,971 square feet of development. As such, project operation would increase emissions of air pollutants that incrementally contribute to the degradation of regional air quality.

[1] *The proposed project consists of an office building with approximately 145,564 square feet of office uses and 14,407 square feet of ground floor commercial uses. The description contained in the "Trip Generation" manual for the ITE Land Use 710 category states that an office building may contain a mixture of tenants, including professional services, insurance companies, investment brokers, and tenant services such as a bank, restaurant or cafeteria, and service retail facilities. Therefore, the ancillary ground floor commercial space (i.e., non general office space) to be provided as part of the project was included in the total building square footage for trip generation forecasting purposes.*

The URBEMIS 2007 model was used to calculate emissions associated with the proposed project based on the proposed land use and the number of trips generated by the new development. Estimates of project emissions are shown below in Table 4.2-6. As indicated, overall emissions would not exceed project and cumulative SCAQMD thresholds for ROG, NOx, CO, SO_2, or PM_{10} or $PM_{2.5}$. Therefore, operational impacts to air quality would be less than significant.

Table 4.2-7 Operational Emissions Associated with the Proposed Project (lbs/day)

Emission Source	ROG	NO_x	CO	SO_2	PM_{10}	$PM_{2.5}$
Area Source	1.32	1.12	3.99	0.00	0.01	0.01
Vehicle Emissions	14.87	20.68	184.50	0.19	31.10	6.05
Total Emissions	**16.19**	**21.80**	**188.49**	**0.19**	**31.11**	**6.06**
SCAQMD Thresholds	*55*	*55*	*550*	*150*	*150*	*55*
Threshold Exceeded?	No	No	No	No	No	No

Source: URBEMIS 2007, Version 9.2.4, see Appendix B for calculations.

As indicated in Table 4.2-4, the incremental increase in ROG, NO_x, CO, SO_2, PM_{10}, and $PM_{2.5}$ emissions associated with the proposed project is less than the SCAQMD's project and cumulative thresholds of 55 lbs per day or more of ROG, NOx, or $PM_{2.5}$, or 550 lbs per day or more of CO, and 150 lbs per day or more of PM_{10}. Comparison of project emissions to LSTs was not deemed necessary, as the majority of operational air pollutants from the proposed project would be generated from vehicles that travel to and from the site.

Mitigation Measures. No mitigation required.

Significance after Mitigation. Project operational air quality impacts are less than significant without mitigation.

Impact AQ-3 Long-term mobile emissions associated with the proposed project would incrementally increase carbon monoxide (CO) concentrations at heavily congested intersections in the area. However, because CO levels would remain within state and federal standards, and the LOS at affected intersections would be D or better, such impacts are considered Class III, *less than significant*.

Areas with high vehicle density, such as congested intersections, have the potential to create high concentrations of CO, known as CO "hot spots". A project's localized air quality impact is considered significant if CO emissions create a hot spot where either the California one-hour standard of 20 ppm or the federal and state eight-hour standard of 9.0 ppm is exceeded. This typically occurs at severely congested intersections (LOS E or worse). Reports from the

Pasadena –S Wilson Avenue station indicate that CO level highs over the past three years ranged from 2.28- 2.83 ppm, well below the 9 ppm 8-hour standard. Historical data for maximum hourly CO levels at this station range from 5-7 ppm, well below the 20 ppm hourly standard.

The proposed project was analyzed to determine whether a carbon monoxide (CO) "hotspot" analysis was required pursuant to Caltrans' CO protocol. "Hotspots" are locations where the federal or state ambient air quality standards could be exceeded because of the concentration of motor vehicles that are idling. Other factors contributing to a CO hotspot include the configuration of the intersection, distance to the receptors and patterns of air circulation.

Exceedance of CO standards is most likely to occur at those locations with significant traffic congestion, meaning LOS operations of E or F. Based on the LOS criteria and the results of the traffic study prepared by Lindscott, Law and Greenspan Engineers (2008), there are no intersections in the project area that would require a CO hotspot analysis. All intersections in the project area are expected to operate at LOS D or better for existing plus pending projects and ambient growth plus the proposed project. Thus, the proposed project does not require a CO hotspot analysis.

Further, the proposed project is in an area that is in attainment for CO (CARB, 2007), and levels are decreasing, due to more stringent motor vehicle emissions regulations. Project-generated traffic would have a less than significant impact with respect to CO hotspots at study area intersections.

Mitigation Measures. None are necessary because the impacts would be less than significant.

Significance After Mitigation. Impacts would be less than significant without mitigation.

Impact AQ-4 Emissions generated by the long-term operations of the proposed project could contribute to the inability for the air basin to reach attainment. However, the proposed project is in compliance with the AQMP, which is intended to bring the basin into attainment and compliance with standards. Therefore, regional air quality impacts are Class III, *less than significant*.

The Air Quality Management Plan (AQMP) is a document produced by the SCAQMD that builds upon improvements accomplished from the previous plans, and aims to incorporate all feasible control measures while balancing costs and socioeconomic impacts. The 2007 AQMP is the current regulating document, adopted June 1, 2007 and replaces the previous 2003 AQMP. The 2007 AQMP relies on a comprehensive and integrated control approach aimed at achieving the PM2.5 standard by 2015 through implementation of short-term and midterm control measures and achieving the 8-hour ozone standard by 2024 based on implementation of additional long-term measures.

The SCAQMD has designated two key indicators of consistency with air quality policies. The first criterion requires that the project not result in an increase in the frequency or severity of existing air quality violations, cause or contribute to new violations, or delay the timely attainment of air quality standards or the interim emissions reductions specified in the AQMP. The second criterion requires that the project not exceed the assumptions made in preparing the AQMP.

With respect to the first criterion, SCAQMD methodologies require that an air quality analysis include forecasts of project emissions in a regional context during construction and operation. These forecasts are provided earlier in this section. Since the consistency criteria identified under the first criterion pertain to pollutant concentrations, rather than to total regional emissions, an analysis of the proposed project's pollutant emissions on localized pollutant concentrations is used as the basis for evaluating project consistency (SCAQMD, 1993).

As previously indicated in impacts AQ-1 through AQ-3, air pollutant emissions are less than significant, or can be mitigated to less than significant levels. Thus, the project is consistent with the first criterion.

The second consistency criterion requires that the project does not exceed the assumptions in the AQMP. A project is consistent with the AQMP if it is consistent with the population, housing and employment assumptions which were used in the development of the AQMP. The 2007 AQMP, the most recent AQMP adopted by the SCAQMD, incorporates, in part, SCAG's 2004 Regional Transportation Plan (RTP) socioeconomic forecast projections of regional population and employment growth. SCAG recently adopted the 2008 RTP, which includes updated forecasts. However, using these figures would not be consistent with the figures and projections for the 2007 AQMP. The 2004 RTP is based on growth assumptions through 2030 developed by each of the cities and counties in the SCAG region. All projects in the region contribute to regional pollution and the emissions associated with these projects are modeled by the SCAQMD to determine future air quality conditions. If pollutant concentrations are shown by the model to exceed state or federal ambient air quality standards, SCAQMD, SCAG, and CARB develop additional control strategies to offset emissions and reduce concentrations to a level below the standards. The project site is located in the San Gabriel Valley Council of Governments subregion of the SCAG. San Gabriel Valley Council of Governments growth forecasts have been incorporated into the 2030 SCAG projections. The 2004 RTP projected population to reach 152,908 people by 2015. The current population as recorded by the California Department of Finance is 148,126 (2008). The proposed project is an office building and would not directly add to population that could increase the possibility of the SCAG projections to be exceeded. The proposed project is consistent with growth assumptions included in the AQMP. In addition, the proposed project is consistent with the City General Plan which is consistent with the RTP. As such, the impact would be less than significant.

Mitigation Measures. The proposed project is consistent with the AQMP. Impacts are less than significant.

Significance after Mitigation. Impacts are less than significant without mitigation.

c. Cumulative Impacts. The South Coast Air Basin is a non-attainment area for federal and state standards for ozone and PM_{10}. Attainment and maintenance plans for the Federal CO threshold was approved by the US EPA on June 11, 2007. Any growth within the Los Angeles metropolitan area contributes to existing exceedances of ambient air quality standards when taken as a whole with existing development in the region. However, every new development project is evaluated independently for its adverse effects to air quality. Emissions associated with this development, in combination with other development throughout the South Coast Air Basin, would incrementally contribute to the degradation of regional air quality. Adding the proposed project to the cumulative projects list (Table 3-1), the proposed project would account for approximately 26% of the total cumulative square footage. While, this represents a large figure for overall development, the proposed project does not include project or regional air quality impacts. Increased emissions associated with cumulative development could potentially hinder the attainment of State and Federal air quality standards if numerous individual projects cannot fully mitigate associated emissions. However, it is anticipated that each development contained in the cumulative project list would undergo evaluation for air quality impacts at the project level, thereby incorporating mitigation to reduce impacts to the greatest extent feasible. Additionally, it should be noted that regional development is generally envisioned and accounted for in the Air Quality Management Plan for the region and as indicated in Impact AQ-4, consistency occurs between the proposed project and the AQMP. Thus, the project would not add an incremental effect to the cumulative analysis and impacts are not considered cumulatively considerable.

Greenhouse Gas Emissions

With regard to new projects in California, GHG impacts are nearly always exclusively cumulative impacts; there are no non-cumulative GHG emission impacts from a climate change perspective (CAPCOA, 2008; AEP, 2007). As with other individual relatively small projects (i.e., projects that are not cement plants, oil refineries, electric generating facilities/providers, co-generation facilities, or hydrogen plants or other stationary combustion sources that emit more than 25,000 MMT CO_2E/yr), the primary concern would be whether the project would be in conflict with the state goals (AB 32) for reducing greenhouse gas emissions.

Three types of analyses are used to determining whether the project could be in conflict with the state goals for reducing greenhouse gas emissions. The analyses are reviews of:

A. The potential conflicts with the CARB 44 early action strategies (as shown below in Table 4.2-8);
B. The relative size of the project in comparison to the estimated greenhouse reduction goal of 174 $MMTCO_2E$ by 2020 and in comparison to the size of major facilities that are required to report greenhouse gas emissions (25,000 metric tons of CO_2E/yr) (CARB, 2007f); and
C. The basic parameters of the project to determine whether its design is inherently energy efficient.

The proposed project would construct a LEED silver commercial office building with ground floor retail uses in the Central District Specific Plan area of downtown Pasadena. With regard

to Item A, the project does not pose any apparent conflict with the list of the CARB early action strategies, as shown in Table 4.2-8.

Table 4.2-8
Recommended AB 32 Greenhouse Gas Measures to be Initiated by the California Air Resources Board Between 2007 and 2012

ID #	Sector	Strategy Name
1	Fuels	Above Ground Storage Tanks
2	Transportation	Diesel – Off-road equipment (non-agricultural)
3	Forestry	Forestry protocol endorsement
4	Transportation	Diesel – Port trucks
5	Transportation	Diesel – Vessel main engine fuel specifications
6	Transportation	Diesel – Commercial harbor craft
7	Transportation	Green ports
8	Agriculture	Manure management (methane digester protocol)
9	Education	Local government Greenhouse Gas (GHG) reduction guidance / protocols
10	Education	Business GHG reduction guidance / protocols
11	Energy Efficiency	Cool communities program
12	Commercial	Reduce high Global Warming Potential (GWP) GHGs in products
13	Commercial	Reduction of PFCs from semiconductor industry
14	Transportation	SmartWay truck efficiency
15	Transportation	Low Carbon Fuel Standard (LCFS)
16	Transportation	Reduction of HFC-134a from DIY Motor Vehicle AC servicing
17	Waste	Improved landfill gas capture
18	Fuels	Gasoline disperser hose replacement

Table 4.2-8
Recommended AB 32 Greenhouse Gas Measures to be Initiated by the California Air Resources Board Between 2007 and 2012

19	Fuels	Portable outboard marine tanks
20	Transportation	Standards for off-cycle driving conditions
21	Transportation	Diesel – Privately owned on-road trucks
22	Transportation	Anti-idling enforcement
23	Commercial	SF6 reductions from the non-electric sector
24	Transportation	Tire inflation program
25	Transportation	Cool automobile paints
26	Cement	Cement (A): Blended cements
27	Cement	Cement (B): Energy efficiency of California cement facilities
28	Transportation	Ban on HFC release from Motor Vehicle AC service / dismantling
29	Transportation	Diesel – offroad equipment (agricultural)
30	Transportation	Add AC leak tightness test and repair to Smog Check
31	Agriculture	Research on GHG reductions from nitrogen land applications
32	Commercial	Specifications for commercial refrigeration
33	Oil and Gas	Reduction in venting / leaks from oil and gas systems
34	Transportation	Requirement of low-GWP GHGs for new Motor Vehicle ACs
35	Transportation	Hybridization of medium and heavy-duty diesel vehicles
36	Electricity	Reduction of SF6 in electricity generation
37	Commercial	High GWP refrigerant tracking, reporting and recovery program
38	Commercial	Foam recovery / destruction program

Table 4.2-8
Recommended AB 32 Greenhouse Gas Measures to be Initiated by the California Air Resources Board Between 2007 and 2012

39	Fire Suppression	Alternative suppressants in fire protection systems
40	Transportation	Strengthen light-duty vehicle standards
41	Transportation	Truck stop electrification with incentives for truckers
42	Transportation	Diesel – Vessel speed reductions
43	Transportation	Transportation refrigeration – electric standby
44	Agriculture	Electrification of stationary agricultural engines

Source: California Air Resources Board, 2007

With regard to Item B, temporary project construction greenhouse gas emissions would be approximately 386 metric tons of CO_2/yr, based on URBEMIS 2007 estimates. Based on URBEMIS 2007 estimates, the CAPCOA White paper (2008), and the California Climate Action Registry General Reporting Protocol (March 2007), the long-term emissions generated by the proposed project would be an estimated 5,203 metric tons of CO_2E/yr from operation (including emissions from vehicle trips, space heating and indirect emissions from use of electricity). The project would not be classified as a major source of greenhouse gas emissions (the maximum annual emissions would be during operation of the project and would be about 21 percent of the lower reporting limit for major sources, which is 25,000 metric tons of CO_2E/yr). Moreover, the proposed project would be a LEED project, and would include energy efficiency features that are designed to reduce the project's long term effects on the environment throughout the life of the project. At this stage of the project, specific features have not yet been defined; however, the project appears to capitalize on natural light, and is situated in a mixed use area with abundant residential development and mass transit.

It is recommended that the following features be incorporated into the LEED designs as priority design features that would specifically reduce transportation, energy efficiency and water usage impacts of the overall development.

- **Sustainable Site Credit 4.2.** For commercial or institutional buildings, provide secure bicycle racks and/or storage (within 200 yards of a building entrance) for 5% or more of all building users (measured at peak periods), AND, provide shower and changing facilities in the building, or within 200 yards of a building entrance, for 0.5% of Full-Time Equivalent (FTE) occupants. (1 point)

- **Sustainable Site Credit 4.3.** Provide low-emitting and fuel-efficient vehicles for 3% of Full-Time Equivalent (FTE) occupants AND provide preferred parking for these vehicles; OR provide preferred parking for low-emitting and fuel-efficient vehicles

for 5% of the total vehicle parking capacity of the site. For the purposes of this credit, low-emitting and fuel-efficient vehicles are defined as vehicles that are either classified as Zero Emission Vehicles (ZEV) by the California Air Resources Board or have achieved a minimum green score of 40 on the American Council for an Energy Efficient Economy (ACEEE) annual vehicle rating guide. "Preferred parking" refers to the parking spots that are closest to the main entrance of the project (exclusive of spaces designated for handicapped) or parking passes/spaces provided at a discounted price.

- **Water Efficiency Credit 3.2.** Employ strategies that in aggregate use 30% less water than the water use baseline calculated for the building (not including irrigation) after meeting the Energy Policy Act of 1992 fixture performance requirements. Calculations are based on estimated occupant usage and shall include only the following fixtures (as applicable to the building): water closets, urinals, lavatory faucets, showers and kitchen sinks. (2 point)

- **Energy and Atmosphere Credit 2.** Use on-site renewable energy systems to offset building energy cost. Calculate project performance by expressing the energy produced by the renewable systems as a percentage of the building annual energy cost and using the table below to determine the number of points achieved. Use the building annual energy cost calculated in EA Credit 1 or use the Department of Energy (DOE) Commercial Buildings Energy Consumption Survey (CBECS) database to determine the estimated electricity use.

  % Renewable Energy Points
  - 2.5% (1 point) or
  - 7.5% (2 points) or
  - 12.5% (3 points)or

The proposed project would be required to be a minimum of Silver LEED certification, accruing a minimum of 33 points above standard building and construction practices. The project's contribution of 5,203 metric tons of CO_2E/year based on standard electricity consumption, natural gas consumption, and average daily trips does not account for reductions that would be associated with a LEED silver project. It would be speculative to assign additional reductions without a method of quantifying reductions for the project; however it is plausible that the project's generation of 5,203 metric tons of CO2E per year will be further reduced due to silver LEED certification.

With regard to Item C, about 72 percent of the project GHG emissions are estimated to come from vehicle trips. Implementation of Mitigation Measure TC-2(a), as discussed in Section 4.5, *Traffic and Circulation*, would require the applicant to conform to the provisions of the City of Pasadena's Transportation Management Ordinance. Pursuant to the Transportation Management Ordinance the applicant shall submit and implement a Transportation Systems Management Plan. This plan is used to implement measures that would decrease the number of vehicular trips by persons traveling to the project site by offering specific facilities, services and actions designed to increase the use of alternative transportation modes (e.g., walking, bicycling, transit, etc.) and ridesharing. In addition, the project would be constructed with

techniques consistent with Leadership in Energy and Environmental Design (LEED) certification pursuant to the requirements of Municipal Code 14.90.040. The LEED program is designed to assign credits for environmentally-friendly design features and construction practices, so that projects may have less impact on the environment than standard construction would. Both the Transportation Systems Management Plan and the LEED building techniques would result in a reduction of project GHG emissions and a more energy efficient project.

Based on project construction and operation greenhouse gas emissions estimates, it is not anticipated that the project emissions alone would substantially add to the global inventory of greenhouse gas emissions. The operational emissions of greenhouse gas emissions from the project (5,203 tons) would be about 0.001 percent of California's current greenhouse gas emissions (478.65 million metric tons, according to the 2004 inventory). Recognizing that there is a great amount of public concern regarding GHGs, the majority of the information given above is for disclosure purposes as required by CEQA. There is no agreement among air quality experts, or guidance at the state level, regarding the level at which an individual project's incremental GHG effect is cumulatively considerable. Given the emerging level of experience within the air quality industry with GHG analyses, coupled with the fact that the policies implementing the state goal of reducing greenhouse gas emissions in California to 1990 levels by 2020, as set forth by the timetable established in AB 32, California Global Warming Solutions Act of 2006, have not been adequately defined, there is no way to state with reasonable scientific certainty that the project would conflict with these policies.

It should also be noted that the global climate change would not be expected to have a substantial impact on the project. The project location would not be affected by minor changes in sea level and the project would not require a substantial volume of water resources so any changes in available water resources (resulting from climate change) would not have a substantial effect on the viability of the project. Given that the project will be a LEED Silver project, incorporating long term design and operational features that are sustainable, and the project's effects represent about 0.001% of California's 2004 inventory, the project's effects are not cumulatively considerable.

4.3 NOISE & VIBRATION

4.3.1 Setting

a. Overview of Sound Measurement. Noise level (or volume) is generally measured in decibels (dB) using the A-weighted sound pressure level (dBA). The A-weighting scale is an adjustment to the actual sound power levels to be consistent with that of human hearing response, which is most sensitive to frequencies around 4,000 Hertz (about the highest note on a piano) and less sensitive to low frequencies (below 100 Hertz).

The sound pressure level is measured on a logarithmic scale with the 0 dB level based on the lowest detectable sound pressure level that people can perceive (an audible sound that is not zero sound pressure level). Based on the logarithmic scale, a doubling of sound energy is equivalent to an increase of 3 dB, and a sound that is 10 dB less than the ambient sound level has no effect on ambient noise. Because of the nature of the human ear, a sound must be about 10 dB greater than the reference sound to be judged as twice as loud. In general, a 3 dB change in community noise levels is noticeable, while 1-2 dB changes generally are not perceived. Quiet suburban areas typically have noise levels in the range of 40-50 dBA, while those along arterial streets are in the 50-60+ dBA range. Normal conversational levels are in the 60-65 dBA range, and ambient noise levels greater than 65 dBA can interrupt conversations.

Noise levels typically attenuate (or drop off) at a rate of 6 dBA per doubling of distance from point sources such as industrial machinery. Noise from lightly traveled roads typically attenuates at a rate of about 4.5 dBA per doubling of distance. Noise from heavily traveled roads typically attenuates at about 3 dBA per doubling of distance.

In addition to the actual instantaneous measurement of sound levels, the duration of sound is important since sounds that occur over a long period of time are more likely to be an annoyance or cause direct physical damage or environmental stress. One of the most frequently used noise metrics that considers both duration and sound power level is the equivalent noise level (Leq). The Leq is defined as the single steady A-weighted level that is equivalent to the same amount of energy as that contained in the actual fluctuating levels over a period of time (essentially, the average noise level). Typically, Leq is summed over a one-hour period.

The actual time period in which noise occurs is also important since noise that occurs at night tends to be more disturbing than that which occurs during the daytime. Two commonly used noise metrics – the Day-Night average level (Ldn) and the Community Noise Equivalent Level (CNEL) - recognize this fact by weighting hourly Leqs over a 24-hour period. The Ldn is a 24-hour average noise level that adds 10 dB to actual nighttime (10 PM to 7 AM) noise levels to account for the greater sensitivity to noise during that time period. The CNEL is identical to the Ldn, except it also adds a 5 dB penalty for noise occurring during the evening (7 PM to 10 PM).

b. Sensitive Receptors. Noise exposure goals for different land uses reflect the varying noise sensitivities associated with those uses. Residences, hospitals, schools, guest lodging, and libraries are most sensitive to noise intrusion and therefore have more stringent noise exposure targets than manufacturing or industrial uses that are not subject to effects such as sleep disturbance. Noise-sensitive receptors located in the vicinity of the project site include the multi-family residential building on the northwest corner of Colorado Boulevard and El Molino

Avenue and the multi-family residential building on the southwest corner of Colorado Boulevard and South Oak Knoll Avenue.

c. Regulatory Setting. The City of Pasadena adopted its Noise Ordinance (Ordinance No. 5118) in 1973, which establishes exterior noise standards generally by land use and the maximum duration of time that the noise standards may be exceeded without being considered a nuisance punishable by law. The Ordinance, as set forth in the City's Municipal Code Title 9 Section 36, *Noise Restrictions*, regulates ambient noise levels, which it defines as either actual measured ambient noise levels, or presumed ambient noise levels throughout the City, whichever is highest. The Noise Ordinance prohibits any "unnecessary, excessive, or annoying noise" in the City. The Ordinance does not control traffic noise, but applies to all noise sources located on private property.

On July 28, 2008, the City of Pasadena amended the noise ordinance (Title 9, Chapter 9.36). Applicable changes to the noise ordinance that affect the proposed project include the addition an interior noise standard for multifamily residential property (9.36.060) and the deletion of references to noise districts. The new multi-family interior noise standard prohibits noise to exceed those indicated in Table 4.3-1 inside the dwelling unit or 20 feet from the outside of the dwelling unit in which the noise source or sources may be located.

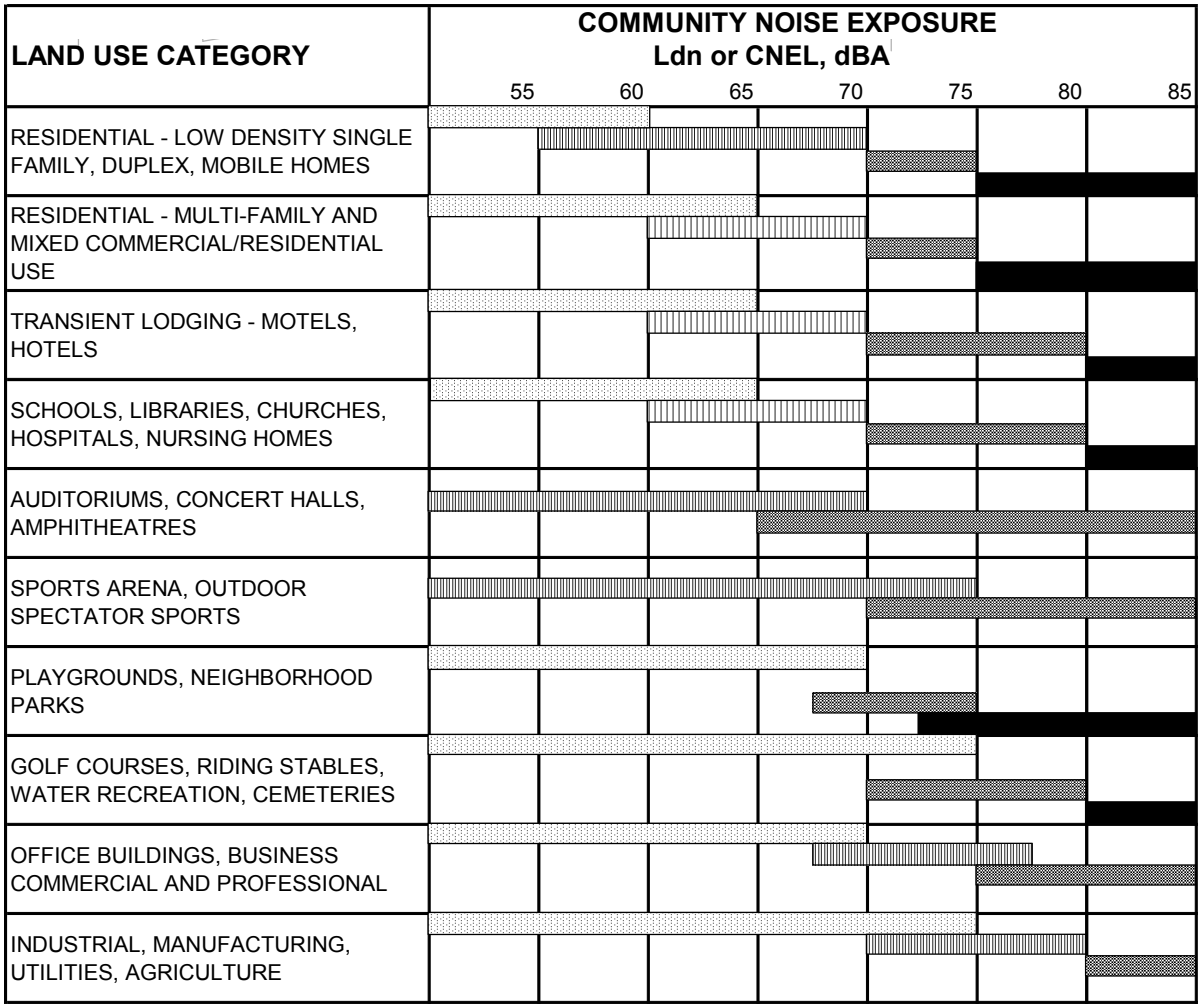
Table 4.3-1
Multi-Family Interior Noise Standards

Time Interval	Interior Noise Standards (dBA)
7:00 AM to 10:00 PM	60
10:00 PM to 7:00 AM	50

Source: City of Pasadena, Noise Ordinance Section 9.36.060.

The City of Pasadena adopted an updated General Plan Noise Element in 2003. The Noise Element was updated to provide a description of existing and projected future noise levels, and to incorporate comprehensive goals, policies, and implementing actions. The Noise Element includes a Land Use/Noise Compatibility Matrix, shown on Figure 4.3-1, which identifies the compatibility of different land uses with a range of noise levels, from less than 55 dBA CNEL to over 80 dBA CNEL. For example, with mitigation, multi-family residential uses are considered compatible with noise environments of up to 75 dBA CNEL, while schools and libraries are considered compatible with noise environments of up to 80 dBA with mitigation.

d. Existing Noise Conditions and Sources. The most common sources of noise in the project vicinity are transportation-related, such as automobiles, trucks, and motorcycles. Motor vehicle noise is of concern because it is characterized by a high number of individual events, which often create a sustained noise level, and because of its proximity to areas sensitive to noise exposure. The primary sources of roadway noise near the project site are Colorado Boulevard on the north, Green Street on the south, South Oak Knoll Avenue on the east and El



CLEARLY ACCEPTABLE
Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.

CONDITIONALLY ACCEPTABLE
If new construction or development proceeds, an analysis of the noise reduction requirements should be made and needed noise insulation features included in the design.

NORMALLY ACCEPTABLE
New construction or development should be undertaken after an analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.

NORMALLY UNACCEPTABLE
New construction or development should generally not be undertaken, unless it can be demonstrated that an interior level of 45 dBA can be achieved.

** Please note that these guidelines are general and may not apply to specific sites.*

Source: California General Plan Guidelines, 1998, as modified by the City of Pasadena, 2002.

Guidelines for Noise Compatible Land Uses Figure 4.3-1

Molino Avenue on the west. Weekday morning 20-minute noise measurements were taken using an ANSI Type II integrating sound level meter. Results of noise monitoring on June 11, 2007 are shown in Table 4.3-2 and complete noise monitoring data can be found in Appendix C of this document.

Table 4.3-2
Noise Monitoring Results

Measurement Location	Primary Noise Source	Approximate Distance to Primary Noise Source	Leq (dBA)	Nearest Sensitive Receptor
E. of El Molino Avenue, mid-block between Colorado Ave. and Green St.	El Molino Avenue	25 feet from centerline of El Molino Avenue	71.3	Multi-family residences
Southeast corner of Colorado Boulevard and El Molino Avenue	Colorado Boulevard	35 feet from centerline of Colorado Boulevard	64.0	Multi-family residences

Source: Field visit using ANSI Type II Integrating sound level meter.

See Appendix C for noise monitoring data sheets

The traffic study for the project analyzed 13 study intersections (see Appendix E). Of these 13 study intersections, the following roadway segments were determined to have some potential for noise impacts due to their proximity to existing sensitive noise uses and estimated change in the roadway volume to capacity ratio:

1. *Colorado Boulevard between Los Robles Avenue and El Molino Avenue (nearest existing use: multi-family residences)*
2. *Colorado Boulevard between El Molino Avenue and South Oak Knoll Avenue (nearest existing use: multi-family residences)*
3. *El Molino Avenue between Colorado Boulevard and Green Street (nearest existing use: multi-family residences)*
4. *El Molino Avenue between Colorado Boulevard and Union Street (nearest existing use: multi-family residences)*
5. *South Oak Knoll Avenue between Colorado Boulevard and Green Street (nearest existing use: multi-family residences)*

4.3.2 Impact Analysis

a. Methodology and Significance Thresholds. Noise levels associated with existing and future traffic along area roadways were calculated using the Caltrans California Vehicle Noise Emission Levels (CALVENO) and standard noise modeling equations adapted from the Federal Highway Administration noise prediction model (Noise Modeling Data sheets can be viewed in Appendix C of this document). The model calculations are based on traffic data from the EIR traffic study (see Appendix E). Cumulative conditions correspond to assumed buildout of pending development within the City as indicated in Section 3.0, Table 3-1.

The 2004 Final Environmental Impact Report for the 2004 Land Use and Mobility Elements, Zoning Code Revisions, and Central District Specific Plan, states that a significant noise impact would be created under the following circumstances.

- *Development pursuant to the project will increase ambient noise levels above the "normally acceptable" category for any land use, as established in the City's noise/land use compatibility matrix in the Noise Element.*
- *The project will allow new noise sensitive development, such as residences, to be located in areas experiencing above "normally acceptable" levels of noise.*

For traffic-related noise, impacts are considered significant if project-generated traffic results in exposure of sensitive receptors to unacceptable noise levels. Because the City of Pasadena does not have thresholds specific to traffic–generated noise, the Federal Interagency Committee on Noise (FICON) recommendations were used to determine whether or not increases in roadway noise would be considered significant. The FICON recommendations were developed as a result of studies that relate aircraft noise levels to the percentage of people highly annoyed by various noise levels. Although these recommendations were developed specifically for aircraft noise impacts, they are considered applicable to all noise sources that use noise exposure metrics such as the Ldn and CNEL. The level of significance changes with increasing noise exposure, such that smaller changes in ambient noise levels result in significant impacts at higher existing noise levels. Table 4.3-3 shows the significance thresholds for increases in traffic related noise levels caused either by the project alone or by cumulative development.

Table 4.3-3
Significance of Changes in
Operational Roadway Noise Exposure

Ambient Noise Level Without Project (Ldn or CNEL)	Significant Impact
< 60 dB	+ 5.0 dB or more
60 – 65 dB	+ 3.0 dB or more
> 65 dB	+ 1.5 dB or more

Source: Federal Interagency Committee on Noise (FICON), August 1993

If residential development or other sensitive receptors would be exposed to traffic noise increases exceeding the above criteria, impacts would be considered significant. The City of Pasadena Municipal Code (§9.36.070) restricts construction activity within a residential district or within a radius of 500 feet to between the hours between 7:00 AM and 7:00 PM Monday through Friday, between 8:00 AM and 5:00 PM on Saturday, and does not allow construction activity to occur on Sundays or major National holidays. Section 9.36.080 states that it is unlawful for any person to operate any powered construction equipment if the operation of such equipment emits noise at a level in excess of 85 dBA when measured within a radius of 100 feet from such equipment.

For stationary and general operational noise sources, the project would result in a significant operational noise impact if the operation of any machinery, equipment, pump, fan, air conditioning apparatus, or similar mechanical device which would cause the ambient noise level at the property line to exceed five dBA.

Vibrations would be significant if they would have the potential to cause structural damage. The Federal Transit Authority (FTA) documents that minor structural damage (possible cracks in plaster walls) is associated with 95 velocity decibels (VdB) for fragile historic buildings, or 100 VdB for fragile buildings. Vibration impacts would be significant if vibrations at the adjacent Arcade Building or Pasadena Playhouse building would exceed the 95 VdB FTA threshold for historic buildings.

b. Project Impacts and Mitigation Measures.

Impact N-1 Project construction would temporarily generate intermittent high noise levels and could generate groundborne vibrations on and adjacent to the site. However, construction generated noise levels and vibrations would be less than significant due to adherence to municipal code requirements and an excavation plan for shoring. This is a Class III, *less than significant* impact.

Nearby noise-sensitive land uses, including the multi-family residential building located approximately 150 feet northwest of the project site, across Colorado Boulevard, and the multi-family residential building located approximately 100 feet east of the project site, may be exposed to temporary construction noise during development of the proposed project. Noise impacts are a function of the type of activity being undertaken and the distance to the receptor location. In addition, groundborne vibrations during project construction could adversely affect the Arcade Building (eastern site boundary), which is eligible for protection as a historic resource, and the Pasadena Playhouse (located across El Molino Avenue from the project site), which is a designated historic resource.

Table 4.3-4 shows typical noise levels (in dBA) associated with activities during various phases of construction at a distance of 50 feet from the noise source. Typical construction noise levels range from about 78 to 88 dB. The grading/excavation phase of project construction tends to create the highest construction noise levels because of the operation of heavy equipment. However, during grading operations, the equipment would be dispersed in various portions of the site in both time and space. Moreover, for the majority of excavation for the six-level subterranean garage, the equipment would be located below grade. Physically, a limited amount of equipment can operate near a given location at a particular time. The excavation plan that was submitted for the project (Appendix D) indicates that the following equipment would be present on site at one time, but may or may not be operating all at once.

- Large excavator or loader
- Small loader
- Small dozer
- Drill rig
- 2 concrete trucks
- Concrete pump
- 4 dump trucks
- Fork lift

Construction activity could result in temporary noise level increases for sensitive receptors at the multi-family residential buildings to the northwest and east of the project site. The multi-family residences northwest of the project site are separated from the project site by Colorado Boulevard and the multi-family residential building east of the project site is separated from the project site by the existing arcade building. Given the distance from the project site to the multi-family residences (100 to 150 feet) combined with the City's time restrictions on construction

activities, and municipal code requirements prohibiting noise in excess of 85 dBA within 100 feet of the equipment, noise levels during construction activities would not be expected to exceed allowable levels at the multi-family residential buildings.

Table 4.3-4
Typical Noise Levels at Construction Sites

Construction Phase	Average Noise Level at 50 Feet	
	Minimum Required Equipment On-Site	**All Pertinent Equipment On-Site**
Clearing	84 dBA	84 dBA
Excavation	78 dBA	88 dBA
Foundation/Conditioning	88 dBA	88 dBA
Laying Subbase, Paving	78 dBA	79 dBA
Finishing and Cleanup	84 dBA	84 dBA

Source: Bolt, Beranek and Newman, "Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances," prepared for the U.S. Environmental Protection Agency, 1971.

As stated above, the project site is adjacent to the Arcade Building (eastern site boundary), which is eligible for protection as a historic resource. In addition, the project site is located across El Molino Avenue, opposite the Pasadena Playhouse, which is a designated historic resource. The geotechnical report prepared for the proposed project by MACTEC Engineering and Consulting, Inc. (2006) stated that vibratory equipment may be required to install soldier piles. However, the applicant has submitted a shoring plan which avoids the use of vibratory equipment (see Appendix D). Construction procedures include drilling and backfilling of soldier piles to reduce groundborne vibrations. The drilling process generally does not cause noticeable vibration. This process is common throughout the world and in particular adjacent to old structures. Additionally, the buildings department and City Engineer will review the shoring and basement construction plans to ensure that the structures on adjacent properties would not be adversely affected. Implementation of the construction measures indicated in the Excavation Plan (Appendix D) would reduce the potential for adverse impacts related to vibrations to local historic buildings to less than significant. Section 4.4 Geology also contains a discussion of the potential adverse effects related to excavation of the subterranean garage.

Mitigation Measures. With adherence to municipal code requirements for noise in addition to the excavation plan which is included in Appendix D, the potential for adverse effects related to construction noise and vibration is less than significant without mitigation.

Significance After Mitigation. Less than significant without mitigation.

Impact N-2 Project-generated traffic would incrementally increase noise levels on area roadways. However, the change in noise levels would be less than 1 dBA. Therefore, the effect of increased traffic noise on existing uses would be Class III, *less than significant*.

Development of the proposed project would increase the amount of vehicle trips to and from the site, which would increase traffic noise on area roadways. The project could therefore increase noise at neighboring uses. These include the apartments on the northwest corner of Colorado Boulevard and El Molino Avenue and the multi-family residences on the corner of Colorado Boulevard and El Molino Avenue, as listed for each street segment in the *Setting*.

As shown in Figure 4.3-1, the "clearly acceptable" exterior ambient noise level at the multi-family residential buildings is 65 dBA CNEL and the "conditionally acceptable ambient noise levels at multi-family residential buildings could be as high as 75 dBA CNEL (City of Pasadena Noise Element, 2003).Estimated average daily traffic (ADT) values from the traffic study were used to model the change in noise levels resulting from increased traffic on 5 roadway segments. Table 4.3-5 indicates noise levels at 50 feet from the centerline of each roadway segment.

Table 4.3-5
Noise Levels Associated with Traffic on Area Roadways* (dBA CNEL)

Roadway	Existing	Existing Plus Project	Existing Plus Cumulative	Existing Plus Cumulative Plus Project	Change In Noise Level Due to Project	Change in Noise Level Due to All Future Growth** plus Project
Colorado Boulevard between Los Robles Avenue and El Molino Avenue	60.9	60.9	62.0	62.0	0.0	1.1
Colorado Boulevard between El Molino Avenue and South Oak Knoll Avenue	61.1	61.1	61.9	61.9	0.0	0.8
El Molino Avenue between Colorado Boulevard and Green Street	55.5	55.7	56.5	56.7	0.2	1.2
El Molino Avenue between Colorado Boulevard and Union Street	55.5	55.7	56.3	56.5	0.2	1.0
South Oak Knoll Avenue between Colorado Boulevard and Green Street	53.5	53.5	53.8	53.8	0.0	0.3

** At a distance of 50 feet from roadway centerline.*
*** Future Growth includes Ambient Growth and Cumulative Projects*
See Noise Modeling Data sheets in Appendix C of this document.

Noise levels at distances greater than 50 feet from the centerline would be less due to attenuation provided by increased distance from the noise source. Generally, noise from heavily traveled roadways would experience a decrease of approximately 3 dBA for every doubling of distance. As shown in Table 4.3-5, the highest noise level increase due to the project would be 0.2 dBA. This project related increase would generally not be audible, since it is less than the thresholds established by FICON as shown in Table 4.3-3. Therefore, impacts related to traffic generated noise as a result of the proposed project would be less than significant. Furthermore, both the existing and future noise environments on all analyzed street segments would continue to be within the compatibility guidelines of 65 dBA CNEL ("clearly acceptable") for multi-family residential uses.

Mitigation Measures. Mitigation is not required.

Significance After Mitigation. The proposed project's impact related to traffic noise levels on study roadway segments would be less than significant without mitigation.

Impact N-3 Operation of the proposed project would generate noise levels that may periodically be audible to existing uses near the project site. Such noise sources include stationary equipment, such as rooftop ventilation and heating systems, trash hauling, and parking garage operation, and general commercial activities. This is considered a Class II, *significant but mitigable*, impact.

Existing uses near the project site may periodically hear noises associated with operation of the proposed project, including noise that is typical of commercial developments such as music, conversations, doors slamming, car horns, etc. Onsite operations are expected to also involve noise associated with rooftop ventilation and heating systems, delivery trucks, and trash hauling. Daytime activities associated with the project, such as deliveries and trash pickups would not adversely affect nearby sensitive receptors, due to their relatively low frequency and the lower noise level sensitivity of receptors during the day. Furthermore, the delivery and trash pick-up area would be located within a semi-enclosed area with no direct line-of-sight to sensitive receptors and accessed from El Molino Avenue. Noise generated by refuse collection can potentially generate significant noise levels and is regulated in the Municipal Code. Section 8.60.205 (Times of Solid Waste Collection) of the Municipal Code prohibits refuse collection between 5 PM and 7 AM Monday through Saturday. Section 8.60.205 is designed to prevent refuse collection during the times that would disturb sensitive receptors. Therefore, the project would not result in a significant impact regarding refuse collection. General parking lot noise, including the movement of vehicles through the parking garage, and the slamming of doors, conversations, etc., would be reduced due to the placement of most of these activities within the proposed subterranean parking garage.

However, noise from rooftop ventilation systems may result in noise impacts on the nearby residential uses in the area. Mechanical equipment (e.g., parking structure air vents, pool machinery, and heating ventilation and air conditioning (HVAC) equipment) would be designed so as to be located within an enclosure or confined to the rooftop of the proposed structures. In addition, and in accordance with Section 17.64.230 (Screening of Mechanical Equipment) of the Municipal Code, mechanical equipment would be screened or located out-of-view from public-rights-of-way. Operation of mechanical equipment would not be anticipated

to increase ambient noise levels by five dBA. Therefore, impacts related to operational noise are less than significant. Despite, less than significant levels, mitigation is included to further reduce noise from rooftop ventilation.

Mitigation Measure. The following measures are recommended to reduce the potential for adverse noise effects from the proposed project on sensitive uses.

N-3 **Rooftop Ventilation.** Parapets shall be installed around all rooftop ventilation systems.

Significance After Mitigation. Impacts related to project operational noise levels would be less than significant after implementation of Mitigation Measure N-2.

N-4 **The proposed project would be constructed in an environment where ambient noise levels may be disturbing to employees unless the building is designed with closed windows and fresh air supply systems. This is a Class II, *significant but mitigable* impact.**

The ambient noise levels as measured adjacent the site on El Molino Avenue and Colorado Boulevard range from 64 to 71 dBA Leq, which is an average noise level exposure. The Guidelines for Noise Compatible Uses as indicated on Figure 4.3-1 indicate that the clearly acceptable allowable average noise level for office uses is below 70 dBA, while the normally acceptable range is from about 67 dBA to 77 dBA. The project site exceeds the Clearly Acceptable noise level by about one dBA as measured along El Molino Avenue.

Mitigation Measures. The Clearly Acceptable noise level range requires no special design considerations, while the Normally Acceptable noise level range recommends conventional construction with closed windows and fresh air supply systems or air conditioning. Conventional construction generally affords about a 20 dB reduction within interior spaces. Therefore, the indoor ambient noise environment would be anticipated to range from about 44 to 51 dBA with incorporation of closed windows and fresh air supply or air conditioning. The following mitigation measure would reduce the potential of future noise exposure of building employees to a level that is less than significant.

N-4 **Noise Exposure.** The proposed project shall incorporate closed windows and a fresh air supply via a mechanical ventilation system so that windows may remain closed. Exterior glass shall be capable of attenuating noise of 20 decibels.

Significance After Mitigation. With incorporation of mitigation measure N-4, the proposed project would not expose future employees to unacceptable noise levels and the noise exposure impact would be less than significant.

c. Cumulative Impacts. Traffic noise impacts associated with cumulative development within the City would incrementally increase noise levels along roadways and could potentially subject sensitive receptors to noise exceeding City standards. Model results indicate that the largest increase in noise would be an increase of 1.2 dBA CNEL on El Molino Avenue between Colorado Boulevard and Green Street assuming buildout of cumulative development as shown in Table 3-1. However, as shown in Table 4.3-4, the estimated noise increase resulting from

cumulative development in the City would not exceed FICON thresholds shown in Table 4.3-3 for area roadway segments. Therefore, noise level increases due to cumulative traffic increases would not be considered significant cumulative impacts. The proposed project would result in 0 to 0.2 dBA increase along the roadway segments, which is not a cumulatively considerable contribution to the cumulative noise impact. Cumulative development would be required to comply with the Land Use/Noise Compatibility Matrix contained in the City's Noise Element, which would ensure an acceptable noise environment for City residents.

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4.4 GEOLOGY

This section assesses impacts relating to the geologic and geotechnical conditions at the site. Information and analysis presented in this section is based on a geotechnical report prepared for the project by MacTec Engineering and Consulting, Inc. dated November 29, 2006. The full text of the geotechnical report is contained in Appendix D.

4.4.1 Setting

The project site is located at 680 East Colorado Boulevard, approximately 0.4 miles south of the 210 Freeway and 1.1 miles east of the 710 Freeway, in the City of Pasadena.

a. Regional Geology. The City of Pasadena is situated at the boundary of two of southern California's geomorphic provinces, the Transverse Ranges and the Peninsular Ranges. Both provinces are considered seismically active. The area is undergoing compression by geological forces associated with movement of the Pacific and North American tectonic plates. Plate movement is causing the portion of the Los Angeles basin containing Pasadena to rotate clockwise. As part of this rotation, several of the faults in the area move laterally, in a left-lateral strike-slip manner. The primary faults in the Pasadena area are the Sierra Madre fault, a reverse fault that extends across the City's northern boundary, and the Raymond fault, a left-lateral strike-slip fault that extends into the southern and eastern boundaries of the City (City of Pasadena, 2002). The project site is located in the San Gabriel/Raymond groundwater basin.

b. Site Geology. Regional geologic mapping depicts the bedrock underlying the project site as Tertiary sedimentary rock, specifically classified as undivided Miocene nonmarine (Jennings, 1969). The Geologic Map of the Pasadena Quadrangle (Dibblee, 1989) shows the soil underlying the project site as Quaternary alluvial fan gravel and sand derived from the San Gabriel Mountains. Exploratory borings confirmed that the site is directly underlain by alluvium to a depth of at least 70 feet below grade (MacTec, 2006).

The site is relatively level, and is crossed by various underground utility lines. No measurable amounts of groundwater were recorded within 70 feet below the existing grade at the site. The natural soils on the project site consist of stiff to hard sandy silt and loose to dense silty sand for the upper 8 to 22 feet. The underlying natural soils are primarily composed of medium dense to very dense clean sand containing varying amounts of gravel and cobbles and a few layers of medium to very dense silty sand and very stiff to hard sandy silt and silty clay. On at least one portion of the site, fill soil consisting of silty sand with some gravel and construction fragments comprises the upper 3.5 feet. This existing fill soil is not uniformly well compacted, and should be removed. The natural soils on the site are suitable for fill. The on-site soils are moderately corrosive to ferrous metals and have a low potential for sulfate attack on Portland cement concrete (MacTec, 2006).

c. Seismic Hazards.

Seismic Potential. The 1997 Uniform Building Code (UBC) defines different regions of the United States and ranks them according to their seismic hazard potential. Four regions have been established. These are designated as Seismic Zones 1 through 4, with Zone 1 having

the least seismic hazard potential and Zone 4 having the highest seismic hazard potential. The project site is within Seismic Zone 4.

The U.S. Geological Survey defines active faults as those that have had surface displacement within Holocene time (about the last 11,000 years). Surface displacement can be recognized by the existence of cliffs in alluvium, terraces, offset stream courses, fault troughs and saddles, the alignment of depressions, sag ponds, and the existence of steep mountain fronts. Potentially active faults are those that have had surface displacement during the last 1.6 million years. Inactive faults have not had surface displacement within the last 1.6 million years.

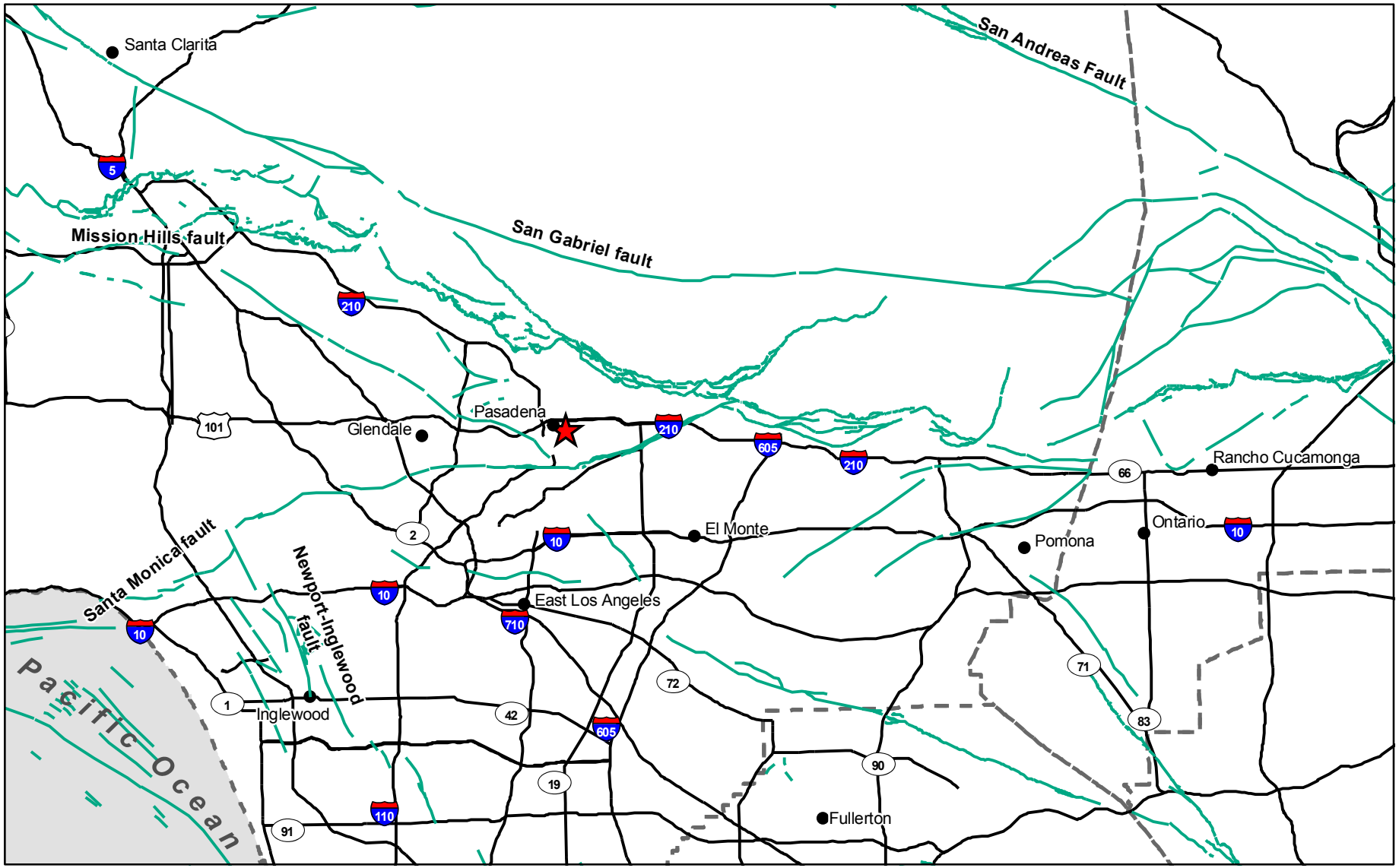
Several active and potentially active faults are located in the regional site vicinity (see Figure 4.4-1). The site is within 2 kilometers of the Raymond Fault, which has been determined to be a Type B seismic source by the California Division of Mines and Geology. The Type B designation indicates that existing paleoseismic data is not adequate to constrain the recurrence interval of large events. In addition to the Raymond Fault, the following faults are within the regional vicinity of the project site.

- Sierra Madre
- Verdugo
- Hollywood
- Whittier
- Elysian Park
- San Gabriel
- Eagle Rock
- Newport-Inglewood
- San Andreas

The proximity of active faults is such that the project area has experienced and will continue to experience strong seismically induced ground motion. The San Andreas Fault has the highest probability of causing a major earthquake, and although it is further from Pasadena than other faults, it has the potential to cause damage within the City (City of Pasadena, 2004). Faults generally produce damage in two ways: surface rupture and seismically induced ground shaking. Surface rupture is limited to areas very near the fault, while ground shaking can affect a wide area.

Surface Rupture. Surface rupture along a fault is the surface expression of fault displacement. Fault displacement occurs when material on one side of a fault moves relative to the material on the other side of the fault. Surface displacement can range from a few inches to tens of feet during a rupture event. This can have detrimental consequences, including injury and loss of life, when buildings are located within the rupture zone. It is not practically feasible (structurally or economically) to design and build structures that can withstand the rapid displacement involved with surface rupture. The Alquist-Priolo Special Studies Zone Act establishes State criteria for identifying special zones for active faults considered to possess a relatively high potential for ground rupture. Structures designed for human occupancy are generally not permitted within these zones.

The Alquist-Priolo maps show only one Fault Zone in the City of Pasadena, the Raymond Fault Earthquake Fault Zone. The southernmost portions of the City lie within this Fault Zone. The Safety Element of the City's 2002 General Plan identifies three additional zones of potential fault rupture: the Eagle Rock Fault Hazard Management Zone, the Sierra Madre Fault Hazard Management Zone, and a Fault Hazard Management Zone for Critical Facilities located along a Possible Active Strand of the Sierra Madre Fault (City of Pasadena, 2002). These three Fault Zones are located on the outskirts of the City and the project site does not overlap with any of these zones.



Fault Lines

Project Location

Source: Bryant, W.A. (compiler), 2005, Digital Database of Quaternary and Younger Faults from the Fault Activity Map of California, version 2.0: California Geological Survey Web Page, <http://www.consrv.ca.gov/CGS/information/publications/QuaternaryFaults_ver2.htm>; (1/31/07).

N

0 2.5 5 Miles

Regional Fault Map

Figure 4.4-1

Seismically Induced Ground Shaking. Ground shaking is a result of the seismic waves produced by a fault rupture event. Ground shaking typically covers a wide area and is greatly influenced by the distance of the site to the seismic source, soil conditions, and depth to groundwater. Secondary hazards associated with seismically induced ground shaking include liquefaction, seismically induced settlement, and earthquake-triggered landslides. Movement along any of the faults shown in Figure 4.4-1 could potentially generate substantial ground shaking at the project site.

The strength of ground shaking in an area is primarily a function of the distance between an area and the seismic source, the type of material underlying a property, and the motion of fault displacement. In addition, the Northridge (1994) earthquake showed how peculiarities in basin effects can increase ground accelerations in particular areas. For instance, ground accelerations exceeding 1.0 gravity (g) were recorded at areas far from the epicenter of the Northridge earthquake. Because of the proximity to major active faults, such as the San Andreas and Newport-Inglewood fault systems, it is possible that accelerations near or over 1.0g could occur anywhere within Pasadena, including the project site.

d. Secondary Seismic Hazards and Soil Hazards.

Liquefaction. Liquefaction is a temporary, but substantial, loss of shear strength in granular solids, such as sand, silt, and gravel, usually occurring during or after a major earthquake. Liquefaction occurs when the shock waves from an earthquake of sufficient magnitude and duration compact and reduce the volume of the soil. If drainage cannot occur, this reduction in soil volume can increase the pressure exerted on the water contained in the soil, forcing it upward to the ground surface. This process can transform stable granular material into a fluid-like state. The potential for liquefaction to occur is greatest in areas with loose, granular, low-density soil, where the water table is within the upper 40 to 50 feet of the ground surface. Liquefaction can result in slope and foundation failure. Table 4.4-1 lists the relationship between liquefaction hazard and groundwater depth.

Table 4.4-1 Liquefaction Zone Criteria

Geologic Unit	Depth to Groundwater	
	Greater than 40 feet	Less than 40 feet
Quaternary alluvium (Qa)	Low	High
All other	Low	Low

Source: CDMG, 1999.

The project site is not within a State of California designated Liquefaction Hazard Zone; ground water is deeper than 50 feet below the site and is not anticipated to rise to within 50 feet within the design life of the structure. Therefore, liquefaction potential at the site is low (MacTec, 2006).

Expansive Soils. Expansive soils are soils that are generally clayey, swell when wetted and shrink when dried. Wetting can occur in a number of ways (i.e., absorption from the air, rainfall, groundwater fluctuations, lawn watering, broken water or sewer lines, etc.). Wetting from groundwater fluctuation is not a concern at the project site. Expansive soils located

beneath structures can result in cracks in foundations, walls, and ceilings. According to the geotechnical report prepared for this project, the project site is underlain by alluvial material from the San Gabriel Mountains. This soil consists primarily of sand and gravel, which are generally associated with low to moderate expansion risk; however, a few layers of silt and clay were encountered in exploratory borings.

Settlement. Seismically induced settlement occurs in loose to medium dense unconsolidated soil above groundwater. These soils compress when subject to seismic shaking. The settlement can be exacerbated by increased loading, such as from the construction of onsite buildings. The geotechnical report identified the potential for onsite soils to be subject to collapse during construction due to the loose sandy texture of the soils. The report includes recommendations that would mitigate these risks.

4.4.2 Impact Analysis

a. Methodology and Significance Thresholds. An impact is considered potentially significant if it will expose people or structures to major geologic hazards. All areas of Southern California are subject to certain risks associated with seismic and geologic activity. Therefore, impacts are considered significant if the project would be exposed to an unusually high potential for hazards relating to ground shaking, subsidence, liquefaction, or shrink-swell of soils without incorporation of appropriate design techniques to minimize the potential for structural damage.

b. Project Impacts and Mitigation Measures.

Impact GEO-1 **Seismically-induced ground shaking could destroy or damage proposed structures, resulting in a loss of property and risk to human health. However, the proposed project would be required to comply with applicable provisions of the Uniform and California Building Codes, which would reduce potential impacts to Class III, *less than significant*.**

The strongest ground-shaking event in the City of Pasadena is calculated to occur from a rupture of the Sierra Madre Fault (City of Pasadena, 2002). The faults described in this report are not the only faults in the area that can produce earthquakes, but they are the most likely to affect the project site according to the latest data. Earthquakes along these faults could produce potentially significant impacts to structures on-site. Although nothing can ensure that structures do not fail under seismic stress, proper engineering, in accordance with the codes identified below, can minimize the risk to life and property.

The 1997 Uniform Building Code (UBC) and the 2001 California Building Code (CBC) require that the design and construction of new structures be engineered to withstand the expected ground acceleration that may occur at this site. The calculated design base ground motion for the site should take into consideration the soil type, potential for liquefaction, and the most current and applicable seismic attenuation methods that are available.

Mitigation Measures. No mitigation is required due to conformance with UBC and CBC requirements.

Significance After Mitigation. It is impossible to reduce the probability of a powerful earthquake with high ground acceleration to zero. Any structure built in California is susceptible to failure due to seismic activity. However, the potential for structural failure due to seismic ground shaking would be considered less than significant through implementation of the most recent industry standards (UBC and CBC) for structural design.

Impact GEO-2 The proposed project includes construction of a five story building atop six levels of subterranean parking. Various design considerations are necessary to ensure that the project is constructed in manner that reduces the potential for adverse effects from differential settlement, corrosive soils, and collapsible soils. The project site is suitable for the proposed development with incorporation of recommendations contained in the geotechnical report. This is a Class II, *significant but mitigable* impact.

The site is primarily underlain by alluvial material consisting of sand and gravel, which generally have a low to moderate expansion index. However, a few layers of silt and clay were encountered in exploratory borings at the project site. The geotechnical report recommends removal of silt and clay layers during the excavation with foundations deepened in natural sand layers.

Soils on the project site may be subject to collapse during construction due to the loose sandy texture of the soils. The geotechnical report includes recommendations for shoring during construction to reduce the potential for collapse. The geotechnical report recommends vibratory equipment as part of the shoring process; however, because of the potential for adverse effects to adjacent structures, an excavation plan was submitted that supersedes this recommendation (see Appendix D). The shoring system is comprised of soldier beams (vertical steel beams) with tie backs (a sloped horizontal hole filled with steel and concrete to support the soldier beams) and wood lagging (wood that spans between the soldier beams to hold back the soil).

The solder beams will be installed by first drilling a vertical hole, installing a steel beam, filling the hole with regular concrete at the bottom, for the foundation, and lean concrete from the top of the foundation to the top of the soldier beam. For this procedure a drill rig will be on site with a small loader to move dirt and generally not more that 2 concrete trucks at a time to fill the hole.

After the soldier beams are installed the excavation can begin. The excavation will be performed by either a loader or excavator. As the excavation proceeds, lagging is installed between the soldier beams to support the dirt. For this process not more than 3 pieces of excavation equipment will be on site with 4 dump trucks in the queue to be filled with dirt.

At certain depths the excavation will stop until tie-backs are installed. The tie-backs are installed by first drilling a sloped horizontal hole behind each soldier beam. Reinforcing steel is placed in the hole and then filled with concrete. After the concrete is cured the steel will be

fastened to the solder beam. This operation will require a drill rig, concrete pump and generally not more that 2 concrete trucks.

After the tie-backs are installed, the excavation process continues until the excavation reaches the bottom of the hole or the elevation of the next row of tie-backs is reached.

The load of the structure on the underlying soil in combination with variable soil texture could result in the potential for differential settlement which could cause foundations to crack. The geotechnical report contains recommendations related to the design of spread footings that will distribute the load of the structure and reduce risks from settlement. Additional evaluation with respect to structural design is required once the final plans are completed to assess settlement based on the bearing load of the actual structural components chosen. However, the normal building permit and plan check process includes provisions for adherence to CBC and UBC requirements regarding structural design.

The project site is underlain by soils that are moderately corrosive to iron, resulting in potential risks to life and property. The geotechnical report contains detailed recommendations for materials to be used to protect various types of piping from corrosive soils.

Mitigation Measures. The following mitigation would reduce project-level impacts related to geological influences to less than significant.

GEO-2 **Adherence to Geotechnical Recommendations.** The applicant shall implement, adhere to, and comply with, all recommendations contained in the Geologic and Soils Engineering Report prepared for the project site by MacTec, 2006 or as superseded by any subsequent updates, including the excavation plan included in Appendix D. The plans shall be reviewed by the Building Department for conformance with the recommendations.

Significance After Mitigation. Adherence to the recommendations in the geotechnical report would ensure that the project is designed and constructed in a manner that would reduce the potential for adverse effects from soil expansivity, soil settlement, soil corrosivity, and soil collapse to a level that is less than significant. Shoring and excavation according to the excavation plan as described above and included in Appendix D would result in a less than significant impact with respect to excavation and construction stability.

Impact GEO-3 **The proposed project involves excavation for six levels of subterranean parking and is estimated to require 63,000 cubic yards of cut, which would be exported. Excavation and soil transport could result in dispersal of soil by air and water. This is a Class II, significant but mitigable impact.**

Construction of the project will require about 63,000 cubic yards of cut, which is planned for export, to construct the six-level subterranean garage. The proposed project would involve construction in an urbanized environment and the earthwork will be confined by the building site envelope and depth of the excavation. Nevertheless, because the site soils will be moved around and exported, there is potential for soil to be transported by wind and water. The

transport of soil by wind could result in adverse air quality, while the transport of soil by water could adversely affect the storm drain system through accumulation of sediment.

Mitigation Measures. Mitigation measure AQ-1c included in Section 4.2 *Air Quality*, would ensure that the construction site is maintained through application of soil binders or watering and sweeping such that loose soil is not tracked onto the surrounding roadway or significantly entrained into the air. In addition, Mitigation measure AQ-1c requires covering of soil transport trucks to ensure that soil is not blown into the air during transport. With adherence to this mitigation measure, the potential for adverse erosional effect would be less than significant.

Significance after Mitigation. With measure AQ-1c incorporated, impacts related to soil dispersal will be reduced to less than significant.

c. Cumulative Impacts. The proposed development, in conjunction planned and pending development, including 1,256 residences and 461,687 square feet of commercial development (see Table 3-1 in Section 3.0 *Environmental Setting*) would expose additional people and property to geologic hazards. Cumulative impacts from geologic hazards such as seismically related ground shaking, and soil stability would be similar to what is described under this project's impact analysis, and would be addressed on a project-by-project basis. Adherence to Uniform Building Code requirements and site specific geotechnical recommendations for individual projects would reduce the potential for adverse effects to a level that is less than significant. This project's impacts are not cumulatively considerable.

4.5 TRAFFIC AND CIRCULATION

This section evaluates existing conditions and potential impacts to the local circulation system. The analysis summarizes the findings of a traffic impact analysis prepared by Linscott, Law and Greenspan Engineers, dated July 3, 2008 (See Appendix E) and subsequent analysis prepared by the City of Pasadena Department of Transportation with the assistance of Linscott, Law and Greenspan Engineers, dated March 10, 2009. The traffic analysis evaluated the potential for traffic impacts on the local street system and assessed the adequacy of the proposed site access and parking plan. The July 2008 report reflected analysis of thirteen intersections and five street segments. The subsequent traffic impact report dated March 2009 reflected analysis of five additional street segments in the project vicinity. Traffic volumes were based on traffic count data contained in a previous traffic study prepared for the proposed project, titled *Draft Traffic Impact Study, Mixed-Use Project 680 E. Colorado Boulevard, City of Pasadena, CA,* dated June 8, 2007 and prepared by Willdan. Count data for the supplemental segment analysis was obtained in February 2009.

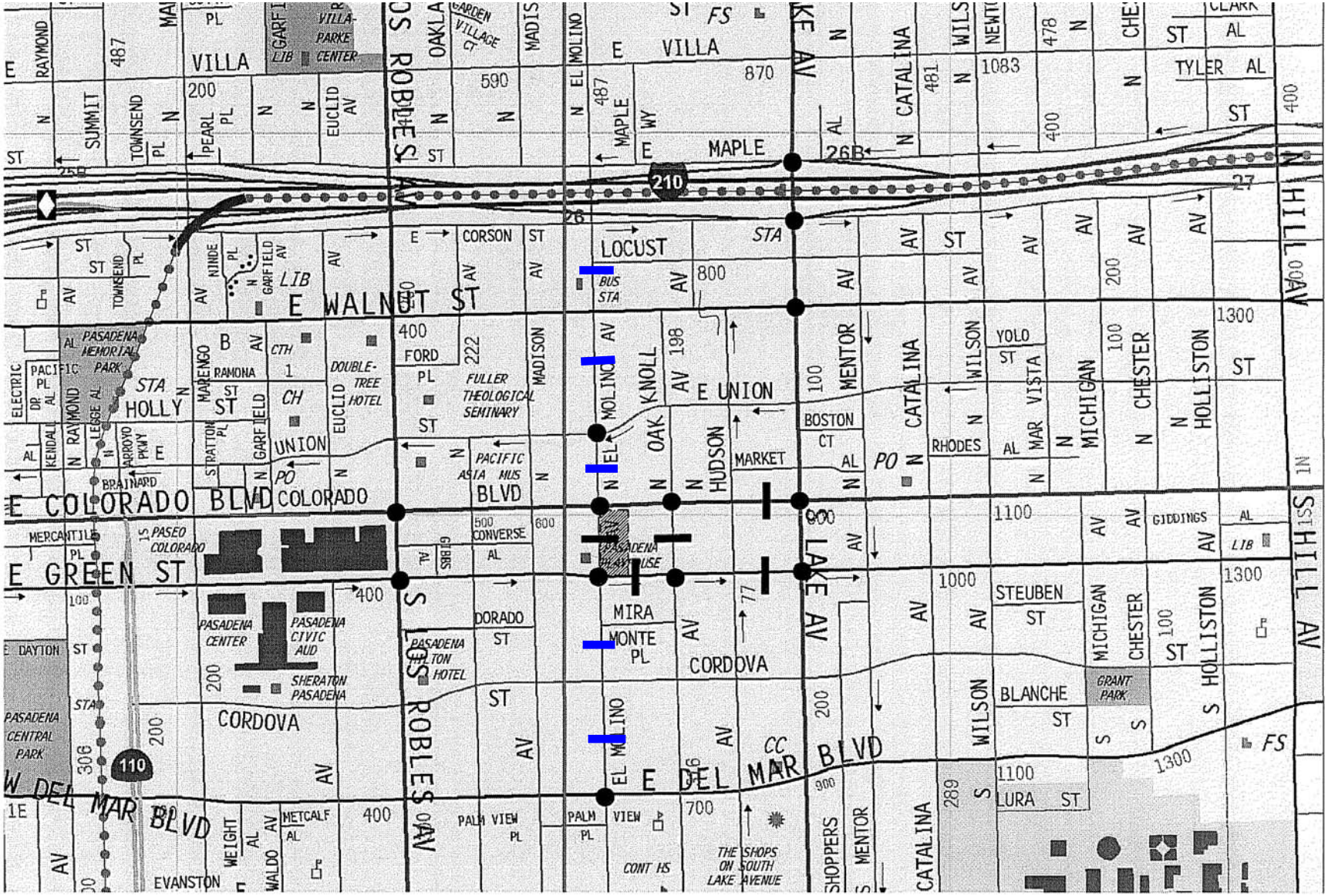
4.5.1 Setting

a. Existing Traffic Circulation Network. All of the study intersections are within the City limits of Pasadena. The following text describes the general characteristics of the major study area roadways. Figure 4.5-1 shows the locations of the street segments and study intersections relative to the project.

Los Robles Avenue is a north-south roadway located three blocks west of the project site. Los Robles Avenue is classified as a Principal Arterial in the City's General Plan Mobility Element (November 2004). Los Robles Avenue is also designated as a multimodal corridor north of Del Mar Boulevard and a de-emphasized street from Del Mar Boulevard to the southerly border of the City of Pasadena in the City's General Plan Mobility Element. Two through travel lanes are provided in each direction in the project study area. Exclusive left-turn and right-turn lanes are provided in both directions at the Colorado Boulevard intersection. An exclusive left-turn lane is also provided in the southbound direction at the Green Street intersection. Curbside parking is generally prohibited along both sides of Los Robles Avenue south of Colorado Boulevard in the project study area. However, north of Colorado Boulevard metered parking is provided along both sides of Los Robles Avenue. Los Robles Avenue has a posted speed limit of 30 miles per hour in the project study area.

EI Molino Avenue is a north-south roadway that borders the project site to the west. EI Molino Avenue is classified as a Minor Arterial in the City's General Plan Mobility Element (November 2004). EI Molino Avenue is also designated as a de-emphasized street in the City's General Plan Mobility Element. One through travel lane is provided in each direction in the project study area. Curbside parking is generally prohibited along both sides of EI Molino Avenue in the project study area. However, between Colorado Boulevard and Green Street one-hour parking is provided along the west side of the roadway. South of Cordova Street, two-hour parking is provided along the east side of El Molino Avenue. EI Molino Avenue has a posted speed limit of 25 miles per hour in the project study area.

Oak Knoll Avenue is a north-south roadway located one block east of the project site. Oak Knoll Avenue is classified as a Minor Arterial in the City's General Plan Mobility Element (November



Study Area Intersections and Street Segments

Figure 4.5-1

Source: Linscott, Law & Greenspan, Engineers, June 5, 2008).

2004). One through travel lane is provided in each direction in the project study area. One-hour curbside parking is generally provided along both sides of Oak Knoll Avenue in the project study area. However, south of Green Street two-hour parking is provided along both sides of Oak Knoll Avenue. Oak Knoll Avenue has a posted speed limit of 25 miles per hour in the project study area.

Lake Avenue is a north-south roadway located approximately one-quarter mile east of the project site. Lake Avenue is classified as a Minor Arterial in the City's General Plan Mobility Element (November 2004). Lake Avenue is also designated as a multimodal corridor between Woodbury Road and California Boulevard in the City's General Plan Mobility Element. Two to three through lanes are generally provided in each direction in the project study area. Dual left-turn lanes are provided in the northbound direction at the I-210 Freeway westbound (WB) ramps/Maple Street intersection. Dual left-turn lanes are also provided in the southbound direction at the I-210 Freeway eastbound (EB) ramps/Corson Street intersection. Exclusive left-turn lanes are provided in both directions at the Walnut Street and Colorado Boulevard intersections as well as in the southbound direction at the Green Street intersection. Separate right-turn lanes are provided in the southbound direction at the 1-210 Freeway WB ramps-Maple Street and Colorado Boulevard intersections and in the northbound direction at the I-210 Freeway EB ramps-Corson Street, Walnut Street, and Green Street intersections. Parking is generally prohibited along both sides of Lake Avenue between the I-210 Freeway ramps and Colorado Boulevard. South of Green Street, one-hour parking is provided along both sides of Lake Avenue. Lake Avenue has a posted speed limit of 35 miles per hour north of the 1-210 Freeway and 25 miles per hour south of Walnut Street.

Walnut Street is an east-west oriented roadway that is located two blocks north of the project site. Walnut Street is classified as a Minor Arterial in the City's General Plan Mobility Element (November 2004). Walnut Street is also designated as a multimodal corridor in the City's General Plan Mobility Element. Two through travel lanes are provided in each direction within the project study area. Dual left-turn lanes are provided in the eastbound direction and an exclusive left-turn lane is provided in the westbound direction on Walnut Street at the Lake Avenue intersection. Parking is generally prohibited on both sides of Walnut Street near Lake Avenue within the project study area. Walnut Street has a posted speed limit of 30 miles per hour in the project vicinity.

Colorado Boulevard is an east-west roadway that borders the project site to the north. Colorado Boulevard is classified as a Principal Arterial in the City's General Plan Mobility Element (November 2004). Colorado Boulevard is also designated as a multimodal corridor in the City's General Plan Mobility Element. Two through travel lanes are provided in each direction on Colorado Boulevard in the project vicinity. Exclusive left-turn and right-turn lanes are provided in each direction at all signalized locations near the project site (e.g., Los Robles Avenue, El Molino Avenue, Oak Knoll Avenue, etc.). Dual left-turn lanes are provided in the eastbound direction and an exclusive left-turn lane is provided in the westbound direction on Colorado Boulevard at the Lake Avenue intersection. One-hour parking between the hours of 9:00 AM and 6:00 PM is provided along both sides of Colorado Boulevard in the project vicinity. Colorado Boulevard has a posted speed limit of 30 miles per hour near the project site.

Green Street is a one-way eastbound roadway that borders the project site to the south. Green Street extends between Grand Avenue to the west and Hill Avenue to the east. Green

Street is classified as a Collector roadway in the Mobility Element of the City's General Plan Mobility Element (November 2004). Green Street is also designated as a multimodal corridor in the City's General Plan Mobility Element. Three through lanes are provided in the eastbound direction within the project study area. Exclusive left-turn and right-turn lanes are provided on Green Street in the eastbound direction at the Los Robles Avenue and Lake Avenue intersections. One-hour parking is generally provided along both sides of the roadway in the project study area. Green Street has a posted speed limit of 30 miles per hour in the project vicinity.

Del Mar Boulevard is an east-west roadway located two blocks south of the project site. Del Mar Boulevard is classified as a Minor Arterial in the City's General Plan Mobility Element (November 2004). Del Mar Boulevard is also designated as a multimodal corridor in the City's General Plan Mobility Element. Two through travel lanes are provided in each direction on Del Mar Boulevard in the project vicinity. Exclusive left-turn lanes are provided in each direction at the EI Molino Avenue intersections. Two-hour parking between the hours of 9:00 AM and 4:00 PM is provided along both sides of Del Mar Boulevard in the project vicinity. Del Mar Boulevard has a posted speed limit of 30 miles per hour in the project study area.

The following roadways and intersections were identified by the City for inclusion in the traffic analysis. The study area intersections include:

1. *Los Robles Avenue/Colorado Boulevard*
2. *Los Robles Avenue/Green Street*
3. *El Molino Avenue/Union Street*
4. *El Molino Avenue/Colorado Boulevard*
5. *El Molino Avenue/Green Street*
6. *El Molino Avenue/Del Mar Boulevard*
7. *Oak Knoll Avenue/Colorado Boulevard*
8. *Oak Knoll Avenue/Green Street*
9. *Lake Avenue Maple-Street/I-210 Freeway Westbound (WB) Ramps*
10. *Lake Avenue-Corson Street/I-210 Freeway Eastbound (EB) Ramps*
11. *Lake Avenue/Walnut Street*
12. *Lake Avenue/Colorado Boulevard*
13. *Lake Avenue/Green Street*

The following ten street segment locations were identified for analysis by City of Pasadena staff for inclusion in the ADT analysis:

1. *El Molino Avenue south of Colorado Boulevard (between Colorado Boulevard and Playhouse Alley)*
2. *Oak Knoll Avenue south of Colorado Boulevard (between Colorado Boulevard and Green Street)*
3. *Colorado Boulevard east of Hudson Avenue (between Hudson Avenue and Lake Avenue)*
4. *Green Street east of El Molino Avenue (between El Molino Avenue and Arcade Alley)*
5. *Green Street east of Hudson Avenue (between Hudson Avenue and Lake Avenue)*
6. *El Molino Avenue north of Walnut Street*
7. *El Molino Avenue between Walnut Street and Union Street*
8. *El Molino Avenue between Union Street and Colorado Boulevard*
9. *El Molino Avenue between Green Street and Cordova Street*
10. *El Molino Avenue between Cordova Street and Del Mar Boulevard*

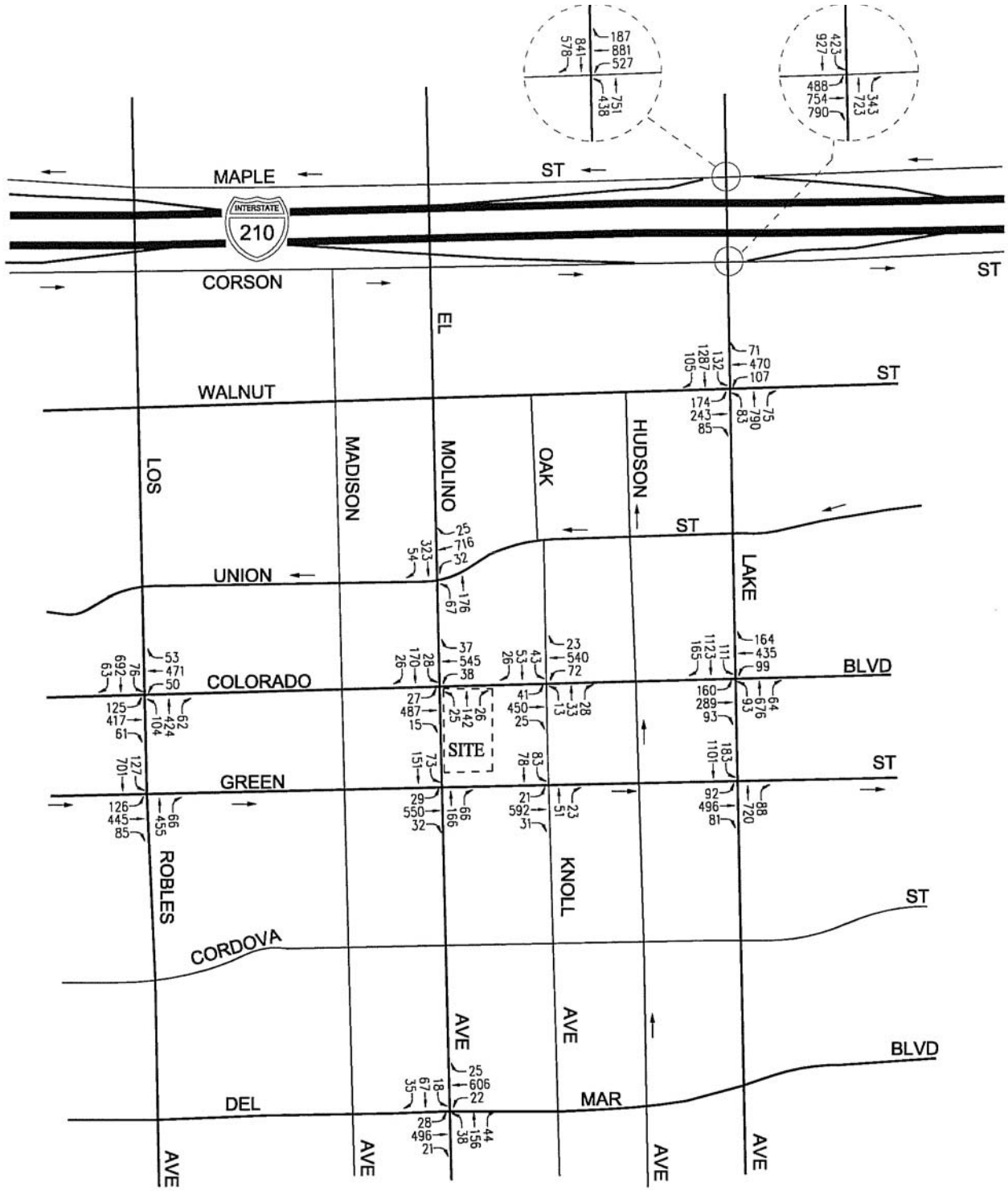
b. Existing Intersection Levels of Service. "Level of Service" (LOS) A through F are used to rate roadway operations, with LOS A indicating very good operating conditions and LOS F indicating poor conditions (more complete definitions of level of service are contained in Appendix E for reference). LOS A through LOS C are generally considered acceptable, while LOS D through LOS F indicate poor conditions. The Intersection Capacity Utilization (ICU) method of intersection analysis, per the City of Pasadena's requirements for analyzing intersection conditions, was used to determine the intersection volume-to-capacity (V/C) ratio and corresponding LOS for each study intersection.

Table 4.5-1 summarizes the existing level of service (LOS) at study area intersections, all of which are controlled by traffic signals. Figures 4.5-2 and 4.5-3 show the existing AM and PM peak hour traffic volumes. Under the existing (year 2008) conditions, ten of the study intersections operate at LOS C or better during the weekday a.m. and p.m. peak periods. The Lake Avenue-Corson Street/I-210 Freeway WB Ramp intersection currently operates at LOS D during both the a.m. and p.m. peak periods. The intersections of Lake Avenue-Corson Street/I-210 Freeway EB Ramp and Lake Avenue/Colorado Boulevard would operate at LOS C or better during the a.m. peak period and LOS D during the p.m. peak period.

Table 4.5-1
Peak Hour Levels of Service – Existing (2008) Conditions

Intersection	AM Peak		PM Peak	
	V/C	LOS	V/C	LOS
1. Los Robles Avenue/Colorado Boulevard	0.576	A	0.684	B
2. Los Robles Avenue/Green Street	0.415	A	0.596	A
3. El Molino Avenue/Union Street	0.513	A	0.514	A
4. El Molino Avenue/Colorado Boulevard	0.423	A	0.636	B
5. El Molino Avenue/Green Street	0.400	A	0.542	A
6. El Molino Avenue/Del Mar Boulevard	0.453	A	0.510	A
7. Oak Knoll Avenue/Colorado Boulevard	0.362	A	0.645	B
8. Oak Knoll Avenue/Green Street	0.321	A	0.465	A
9. Lake Avenue Maple-Street/I-210 Freeway WB Ramp	0.844	D	0.863	D
10. Lake Avenue-Corson Street/I-210 Freeway EB Ramp	0.643	B	0.803	D
11. Lake Avenue/Walnut Street	0.638	B	0.758	C
12. Lake Avenue/Colorado Boulevard	0.708	C	0.833	D
13. Lake Avenue/Green Street	0.521	A	0.628	B

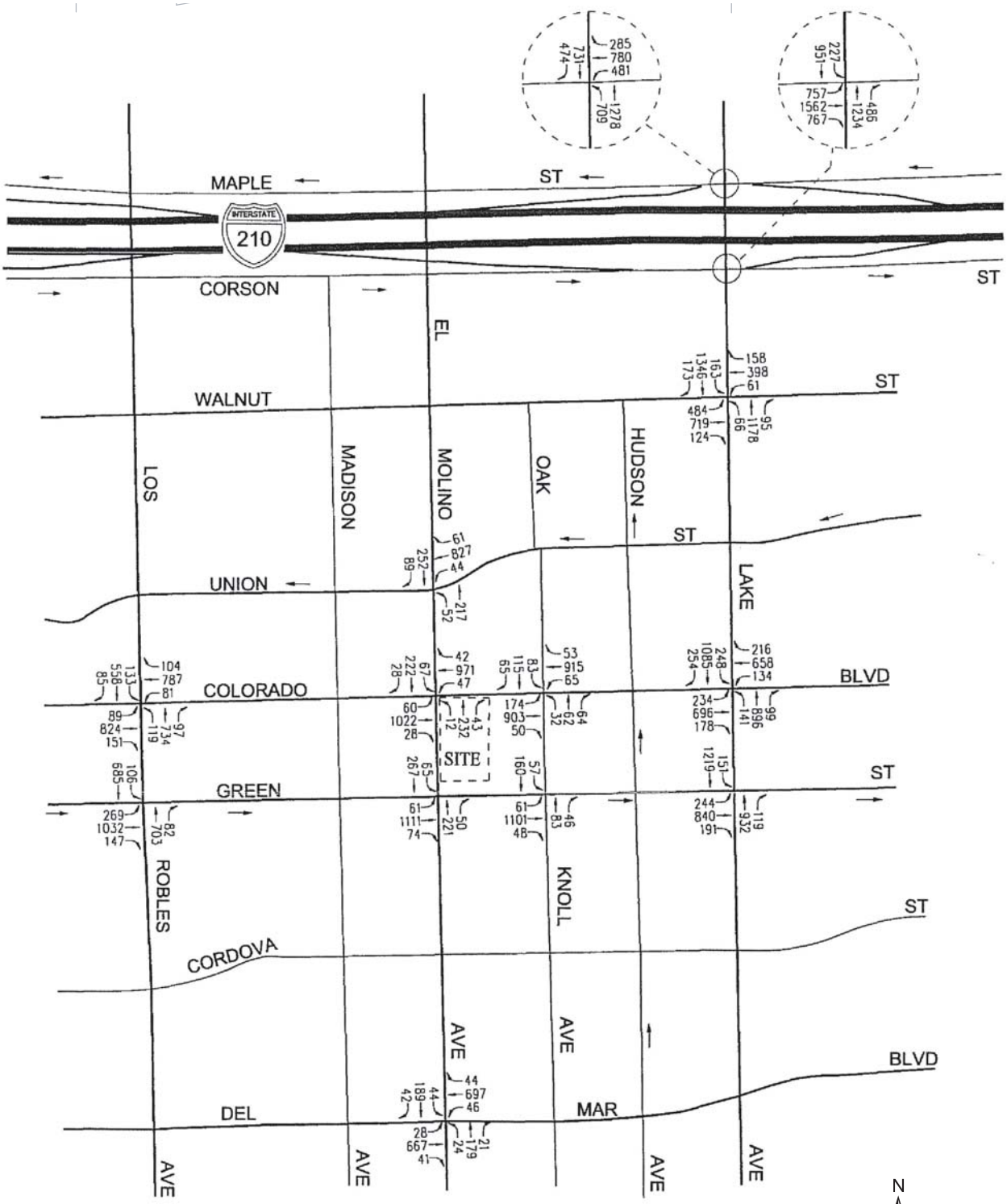
Source: Linscott, Law and Greenspan, June 2008. See Appendix E for complete traffic study.



Source: Linscott, Law & Greenspan, Engineers, June 5, 2008).

Existing AM Peak Hour Traffic Volumes

Figure 4.5-2



Source: Linscott, Law & Greenspan, Engineers, October, 2008).

Existing PM Peak Hour Traffic Volumes

Figure 4.5-3

c. Existing Roadway Segment Operations. Table 4.5-2 summarizes the ten daily traffic volume counts utilized for the analysis of roadway segments within the traffic study area.

Table 4.5-2
Existing Daily Roadway Volumes

Roadway Segment	Average Daily Traffic Volume
1. El Molino Avenue south of Colorado Boulevard (between Colorado Boulevard and Playhouse Alley)	6,528
2. Oak Knoll Avenue south of Colorado Boulevard (between Colorado Boulevard and Green Street)	4,610
3. Colorado Boulevard east of Hudson Avenue (between Hudson Avenue and Lake Avenue)	25,842
4. Green Street east of El Molino Avenue (between El Molino Avenue and Arcade Alley)	10,726
5. Green Street east of Hudson Avenue (between Hudson Avenue and Lake Avenue)	11,098
6. El Molino Avenue north of Walnut Street	7,606
7. El Molino Avenue between Walnut Street and Union Street	7,619
8. El Molino Avenue between Union Street and Colorado Boulevard	7,973
9. El Molino Avenue between Green Street and Cordova Street	6,414
10. El Molino Avenue between Cordova Street and Del Mar Boulevard	5,592

d. Bus and Light Rail Service. Public bus transit service within the Playhouse Plaza project study area is currently provided by Metro, Foothill Transit Service, and Pasadena Area Rapid Transit Service (ARTS). The Metro Gold Line is a light rail transit line that runs east-west from East Pasadena to the Pasadena Civic Center area and north-south from the Pasadena Civic Center area to Union Station in downtown Los Angeles. The Gold Line travels within the median of the Foothill (I-210) Freeway and in Metro right-of-way between Raymond Avenue and Arroyo Parkway in the project vicinity. The Gold Line Light Rail system provides six stations in the City of Pasadena: 1) Sierra Madre Villa station, 2) Allen Avenue station, 3) Lake Avenue station, 4) Memorial Park station, 5) Del Mar station and 6) Fillmore Street station. The Lake Avenue station is located approximately one-half mile northeast from the project site. The station serves as a transportation hub that connects travelers to local and regional transit services provided by Pasadena ARTS, Foothill Transit, Metro, and others.

f. Parking. The project site is currently developed with a two-story commercial retail structure totaling approximately 66,000 square feet (SF) with 36 surface parking spaces. The proposed project involves the demolition of existing improvements, excavation for a six-level subterranean garage, and the subsequent construction of an approximately 160,000 SF, five-story commercial office building with 522 parking spaces to be provided in the six subterranean levels, of which 367~~6~~ would be project-only spaces and 155~~6~~ would be public spaces to serve the Playhouse District.

4.5.2 Impact Analysis

a. Methodology and Significance Thresholds. In order to estimate the traffic impact characteristics of the project, a multi-step process has been utilized. The first step is trip generation, which estimates the total arriving and departing traffic volumes on a peak hour and daily basis. The traffic generation potential is forecast by applying the appropriate vehicle trip generation equations or rates to the project development tabulation.

The second step of the forecasting process is trip distribution, which identifies the origins and destinations of inbound and outbound project traffic volumes. These origins and destinations are typically based on demographics and existing/anticipated travel patterns in the study area.

The third step is traffic assignment, which involves the allocation of project traffic to study area streets and intersections. Traffic assignment is typically based on minimization of travel time, which mayor may not involve the shortest route, depending on prevailing operating conditions and travel speeds. Traffic distribution patterns are indicated by general percentage orientation, while traffic assignment allocates specific volume forecasts to individual roadway links and intersection turning movements throughout the study area.

With the forecasting process complete and project traffic assignments developed, the impact of the proposed project is isolated by comparing operational (i.e., Levels of Service) conditions at the selected key intersections using expected future traffic volumes with and without forecast project-related traffic. The need for site-specific and/or cumulative local area traffic improvements can then be evaluated and the significance of the project's impacts identified.

Project Trip Generation. Traffic volumes expected to be generated by the proposed project during the AM and PM peak hours, as well as on a daily basis, were estimated using rates published in the Institute of Transportation Engineers' (ITE) *Trip Generation* manual, 7th Edition, 2003. Traffic volumes expected to be generated by the proposed project were based upon rates per thousand square feet of building floor area. ITE Land Use Code 710 (General Office Building) trip generation average rates were used to forecast traffic volumes expected to be generated by the proposed project. It should be noted that the description contained in the *Trip Generation* manual for the ITE Land Use Code 710 category states that an office building may contain a mixture of tenants, including professional services, insurance companies, investment brokers and tenant services such as a bank, restaurant or cafeteria, and service retail facilities. Therefore, ancillary ground floor commercial space (i.e., non-general office space) to be provided as part of the proposed project was included in the total building square footage for trip generation forecasting purposes. Additionally, as the existing commercial building which will be removed to accommodate the proposed project has been vacated, existing use trip credits were not applied to the project trip generation forecasts in order to provide a conservative trip generation forecast.

The trip generation rates and forecast of the vehicular trips anticipated to be generated by the proposed project are presented in Table 4.5-3. The project trip generation forecast was submitted for review and acceptance by PasDOT staff. As presented in Table 4.5-3, the proposed project is expected to generate a net increase of 223 vehicle trips (196 inbound trips and 27 outbound trips) during the AM peak hour. During the PM peak hour, the proposed project is expected to generate a net increase of 214 vehicle trips (36 inbound trips and 178

outbound trips). Over a 24-hour period, the proposed project is forecast to generate a net increase of 1,585 daily trip ends during a typical weekday (approximately 793 inbound trips and 7923 outbound trips).

Table 4.5-3
Project Trip Generation Estimates[a]

Land Use	Size	Average Daily Trips[b]	A.M. Peak Hour[b]			P.M. Peak Hour[b]		
			In	Out	Total	In	Out	Total
Office[c]	159,971 GSF	1,761	218	30	248	40	198	238
Less 10% Transit Credit[d]		(176)	(22)	(3)	(25)	(4)	(20)	(24)
Net Increase		1,585	196	27	223	36	178	214

[a] *Based on trip generation rates from Institution of Transportation Engineers' "Trip Generation", 7th Edition, 2003.*
[b] *Trips are one-way traffic movements, entering or leaving.*
[c] *ITE Land Use Code 710 (General Office) trip generation average rates per 1,000 square feet of gross floor area.*
- *Daily Trip Rate: 11.01 trips/] ,000 GSF; 50% inbound!50% outbound*
- *AM Peak Hour Trip Rate: 1.55 trips/] ,000 GSF; 88% inbound/] 2% outbound*
- *PM Peak Hour Trip Rate: 1.49 trips/] ,000 GSF; 17% inbound/83% outbound*

The proposed project consists of an office building with approximately 145,564 square feet of office uses and 14,407 square feet of ground floor commercial uses. The description contained in the "Trip Generation" manual for the ITE Land Use 710 category states that an office building may contain a mixture of tenants, including professional services, insurance companies, investment brokers, and tenant services such as a bank, restaurant or cafeteria, and service retail facilities. Therefore, the ancillary ground floor commercial space (i.e., non general office space) to be provided as part of the project was included in the total building square footage for trip generation forecasting purposes.

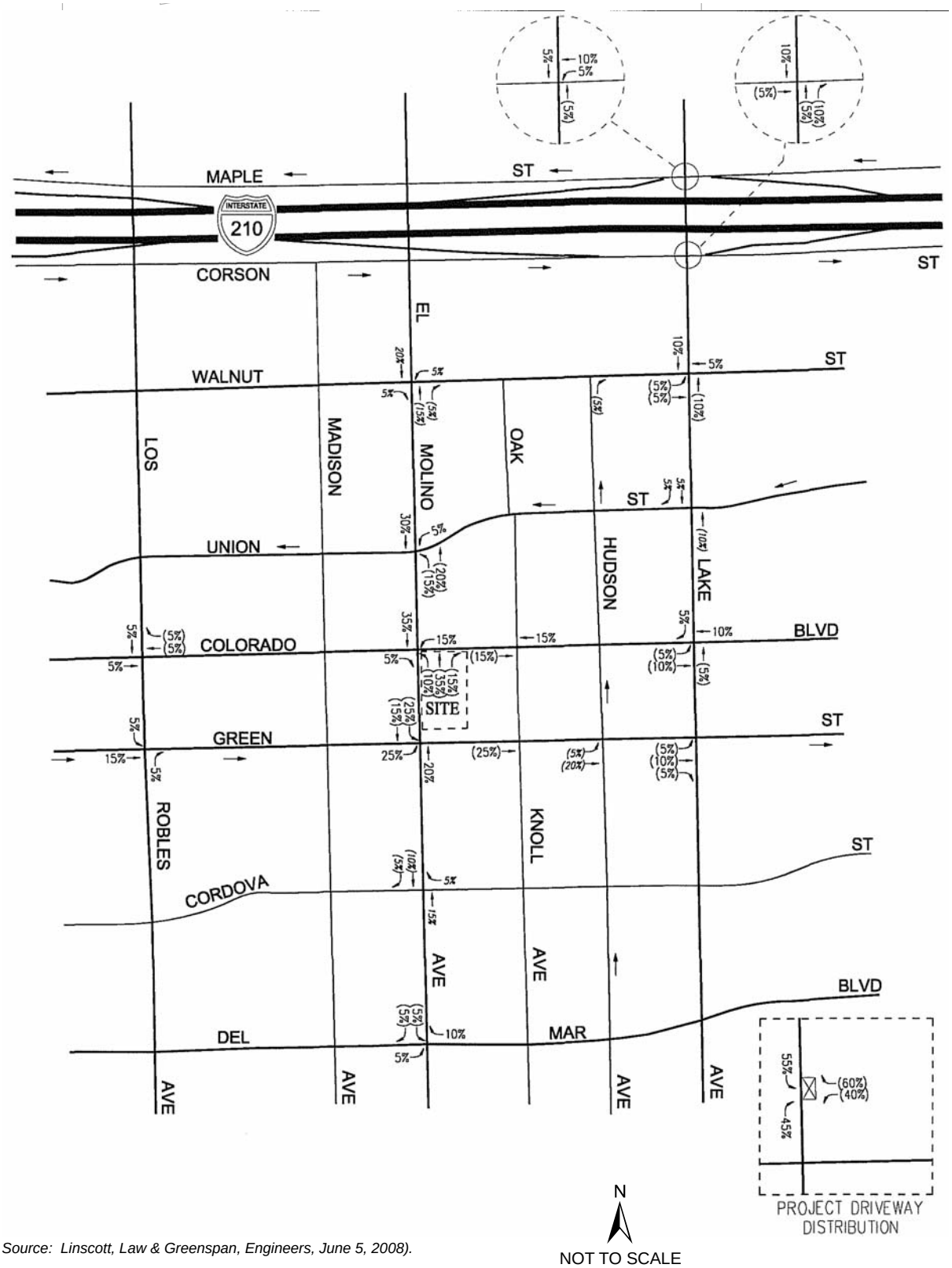
[d] *The project site is located within one-half mile of the Lake Avenue Gold Line light rail transit station and is adjacent to transit corridors within the City of Pasadena.*

Source: Linscott, Law and Greenspan Engineers, 2008. See Appendix E for complete traffic report.

Project Trip Distribution and Assignment. Project traffic volumes both entering and exiting the site have been distributed and assigned to the adjacent street system based on the following considerations:

- *The site's proximity to major traffic corridors (i.e., Los Robles Avenue, Lake Avenue, Walnut Street, Union Street, Colorado Boulevard, Green Street, etc.)*
- *Expected localized traffic flow patterns based on adjacent roadway channelization and presence of traffic signals;*
- *Existing intersection traffic volumes;*
- *Ingress/egress availability at the project site;*
- *The site access and circulation schemes for each of the four project alternatives;*
- *The location of existing and proposed parking areas; and*
- *Input from PasDOT staff.*

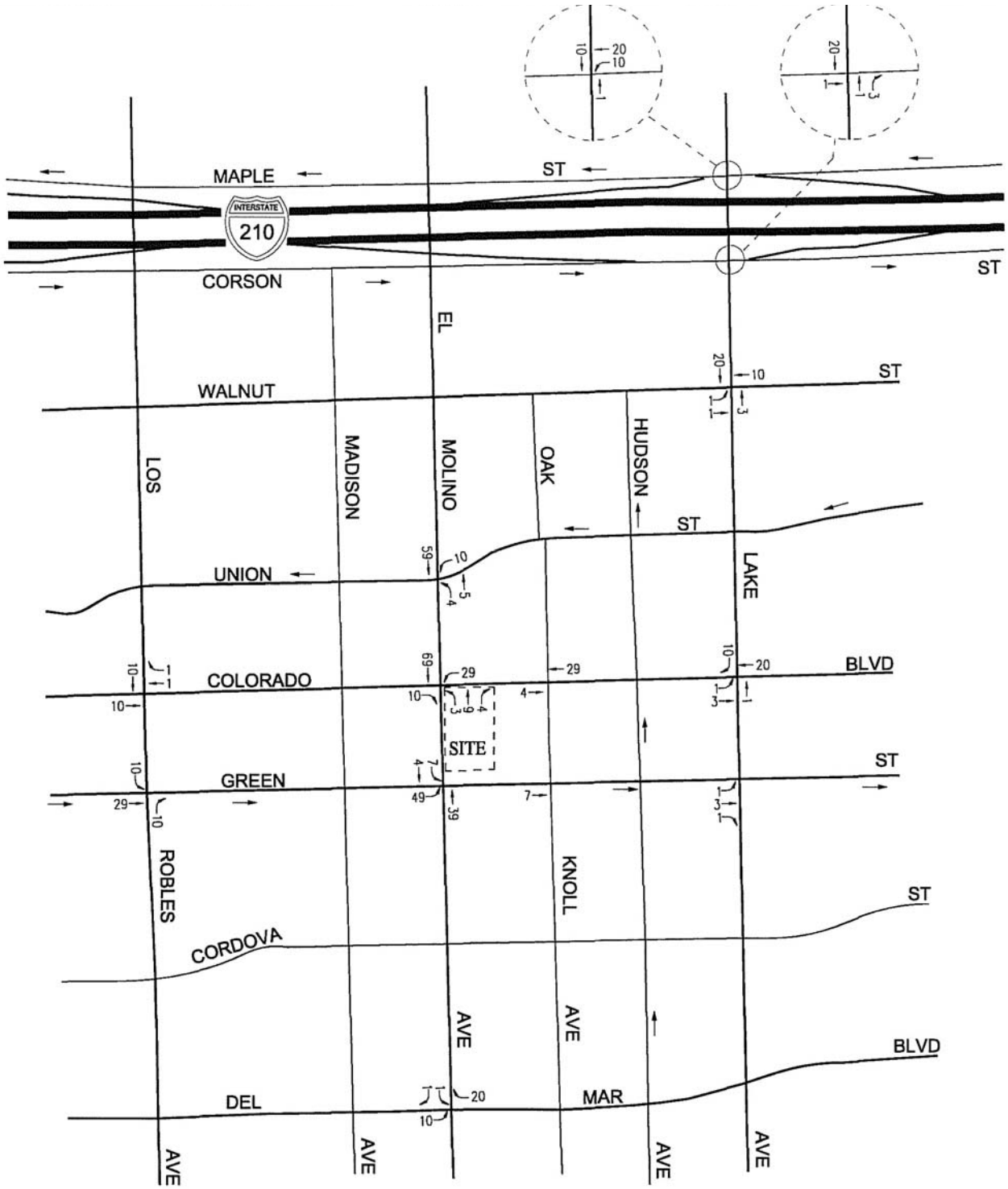
The traffic analysis assumes the provision of all parking spaces onsite and one site driveway on El Molino Avenue. The general, directional traffic distribution pattern for the proposed project is presented on Figure 4.5-4. The forecast AM and PM peak hour project traffic volumes associated with the proposed project are presented in Figures 4.5-5 and 4.5-6, respectively.



Source: Linscott, Law & Greenspan, Engineers, June 5, 2008).

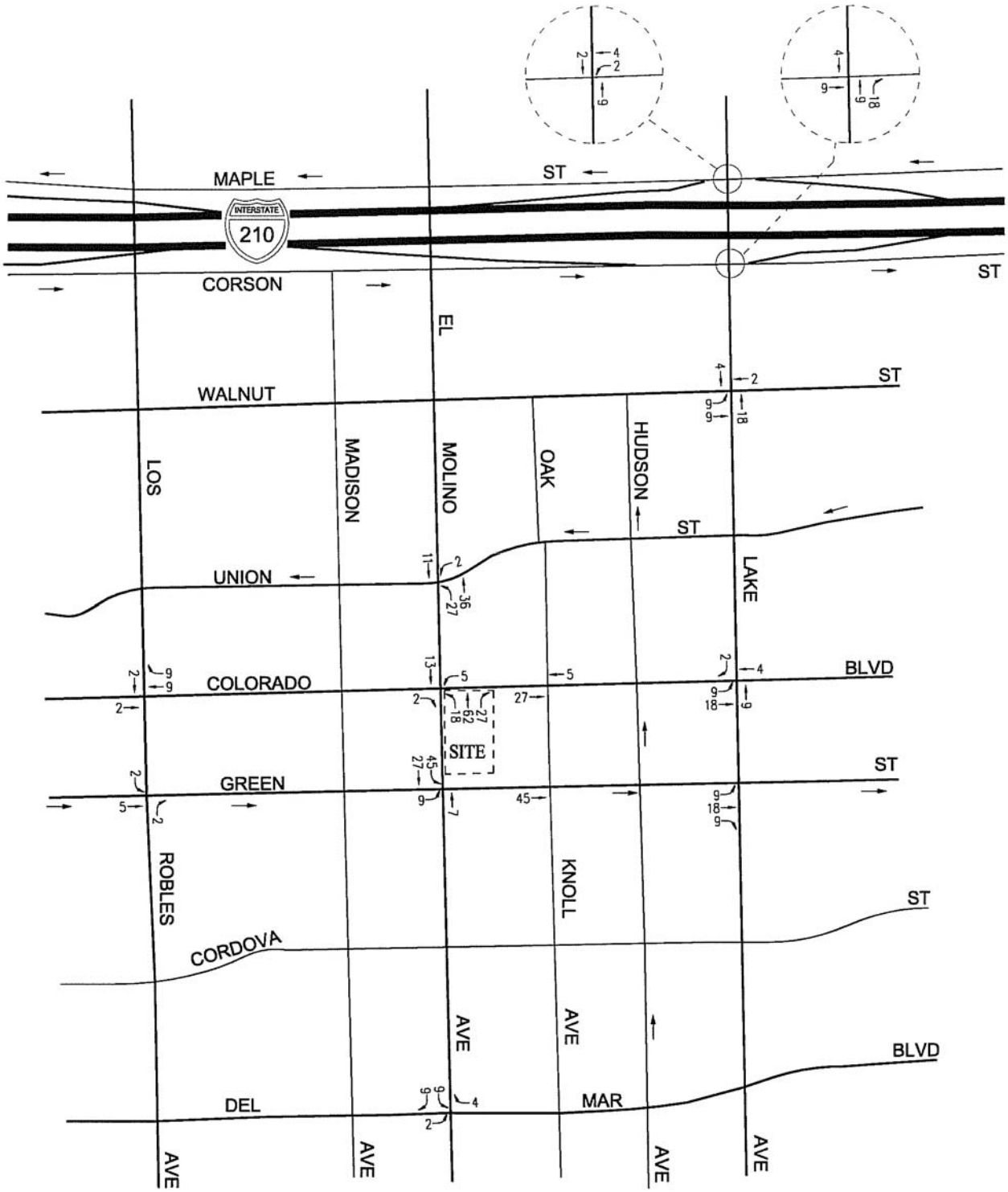
Project Traffic Distribution

Figure 4.5-4



Source: Linscott, Law & Greenspan, Engineers, June 5, 2008).

Project Only AM Peak Hour Traffic Volumes Figure 4.5-5



Source: Linscott, Law & Greenspan, Engineers, June 5, 2008).

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Project Only PM Peak Hour Traffic Volumes Figure 4.5-6

Traffic Impact Assessment Scenarios. Traffic impacts at the study intersections were analyzed for the following conditions:

a) Existing conditions.
b) Condition (a) plus 1.5 percent (1.5%) ambient traffic growth through year 2010.
c) Condition (b) with completion and occupancy of the related projects.
d) Condition (c) with completion and occupancy of the proposed project.
e) Condition (d) with implementation of project mitigation measures, where necessary.

The traffic volumes for each new condition were added to the volumes in the prior condition to determine the change in capacity utilization at the 13 study intersections. Summaries of the V/C ratios and LOS values for the study intersections during the AM and PM peak hours associated with the proposed project are shown in Table 4.5-8. The ICU data worksheets for the analyzed intersections associated with the proposed project are contained in Appendix E.

Operational Thresholds. The City of Pasadena Department of Transportation has established threshold criteria for determining whether or not project related traffic may have a significant impact at local intersections. According to these criteria, a project impact would be considered significant if the conditions in Table 4.5-4 were met:

Table 4.5-4
Significant Impact Criteria
for Pasadena Intersections

Existing LOS	Project-related Increase in V/C
A	equal to or greater than 0.06
B	equal to or greater than 0.05
C	equal to or greater than 0.04
D	equal to or greater than 0.03
E	equal to or greater than 0.02
F	equal to or greater than 0.01

The City's Sliding Scale Method requires mitigation of project traffic impacts whenever traffic generated by the proposed development causes an increase of the analyzed intersection V/C ratio by an amount equal to or greater than the values shown above.

The ICU calculations use a lane capacity of 1,700 vehicles per hour (vph) for left-turn, through and right-turn lanes, and a dual turn lane capacity of 3,060 vph. A clearance interval of 0.10 is also included in the ICU calculations.

Street Segments Thresholds. The City of Pasadena has established criteria for determining significant impacts on street segments. A street segment is deemed significantly impacted based on an increase in the projected ADT volumes, as shown in Table 4.5-5.

Table 4.5-5
Significant Impact Criteria for Pasadena Street Segments

ADT Growth on Street Segment	Required Traffic Mitigation
0.0% - 2.4% ADT Growth Project Review and Initial Study	• Staff review and Conditions
2.5% - 4.9% ADT Growth Examined by Initial Study Focused Traffic Study	• Soft mitigation required • TDM, Rideshare, etc.
5.0% - 7.4% ADT Growth Examined by Initial Study Full Traffic Study	• Soft mitigation required • Physical mitigation required • Project alternatives considered
7.5% + ADT Growth Examined by Initial Study Full Traffic Study	• Soft mitigation required • Extensive physical mitigation required • Project alternatives considered

Parking Thresholds. Impacts to onsite parking availability are considered significant if the proposed project would cause a deficiency in parking, or if an individual project does not provide adequate parking for the specific use that is proposed.

b. Project Impacts and Mitigation Measures.

Impact TC-1 The proposed project would incrementally increase traffic levels at study area intersections. The increased traffic levels would not cause an exceedance of adopted significance criteria at 12 of the 13 intersections. However, project-generated traffic would cause the El Molino Avenue/Colorado Boulevard intersection to operate at an unacceptable level of service during the PM peak hour. Thus, the proposed project's traffic impacts would be Class II, *significant but mitigable*.

In order to evaluate potential impacts of the proposed project on the street system, it was necessary to develop estimates of future traffic conditions in the study area both with and without the project. Future (year 2010) traffic volumes were first estimated for the study area without the project. These future traffic increases due to general regional growth and traffic expected to be generated by other specific development projects in the vicinity (refer to Table 3-1 in Section 3.0, *Environmental Setting,* for the list of planned and pending projects). They represent cumulative base (no project) conditions. The additional amount of traffic expected to result from the proposed project was then estimated and separately assigned to the surrounding street system. The sum of the cumulative base and project-generated traffic represents the cumulative plus project conditions.

The peak hour traffic counts used in this study were performed in 2007. Manual traffic counts of vehicular turning movements were conducted at each of the study intersections during the weekday morning and afternoon commuter periods to determine the peak hour traffic volume. The manual traffic counts at the study intersections were conducted from 7:00 to 9:00 AM to determine the AM peak commuter hour and from 4:00 to 6:00 PM to determine the PM peak

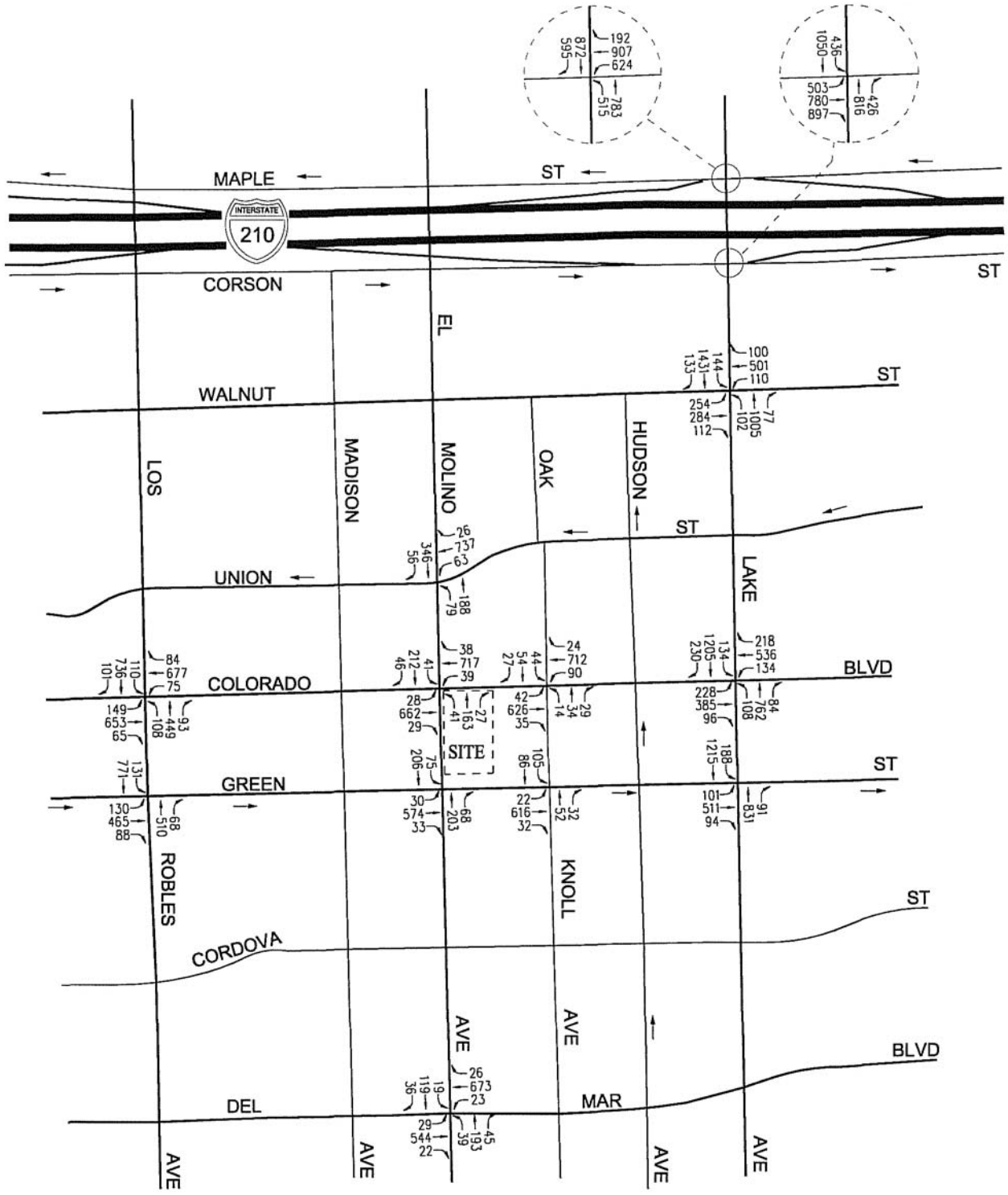
commuter hour. Traffic volumes at the study intersections show the typical peak periods between 7:00 to 9:00 AM generally associated with the peak morning commuter hours, and 4:00 to 6:00 PM generally associated with the afternoon commuter hours.

The cumulative base traffic projections were estimated for this study based on discussions with Pasadena Department of Transportation staff. Based on their knowledge of the study area, it was determined that an annual growth rate of 1.5% would adequately account for ambient growth.

A total of 23 related projects were identified in the study area and are listed with the relative location of each project in Table 3.1 in Section 3.0, *Environmental Setting*. Information regarding potential future projects that are either under construction, being planned or proposed for development was obtained from several sources, including recently conducted traffic studies and City of Pasadena files. As summarized in Appendix E, the related projects are expected to generate approximately 1,680 trips during the morning peak hour and 1,800 trips during the evening peak hour. Trips from the related projects were assigned to the roadway system based on distribution patterns from their respective studies and the type and location of the project. It should be noted that these projections are conservative in that they do not in every case account for either the existing uses to be removed or the likely use of non-motorized travel modes (transit, walking, etc.). Figures 4.5-7 and 4.5-8 show the cumulative base AM and PM peak hour traffic volumes. Figures 4.5-9 and 4.5-10 show the cumulative plus project peak hour traffic volumes during the AM and PM periods.

The resulting cumulative AM and PM base traffic volumes, representing future conditions both with and without the project for year 2010, are presented in Table 4.5-6. These cumulative projections take into account the overall growth in the surrounding area and traffic from known related projects in the study area. The cumulative plus project peak hour traffic volumes were analyzed to determine the forecasted 2010 operating conditions with the inclusion of proposed project traffic. The results of the cumulative plus project analysis are presented in Table 4.5-6. Traffic associated with the proposed project would incrementally increase delays at study area intersections. As shown in Table 4.5-6, impacts related to the increase in traffic at study area intersections as a result of the proposed project would be less than significant at 12 of the 13 study area intersections. However, the project's contribution to the increase in V/C at the intersection of El Molino Avenue and Colorado Boulevard would exceed the City's impact threshold criteria (see Table 4.5-4). Therefore, the proposed project would create a potentially significant impact at this intersection.

Mitigation Measures. As discussed above, impacts related to the increase in traffic at study area intersections as a result of the proposed project would be less than significant without mitigation at 12 of the 13 study area intersections. The following mitigation measures are required to reduce impacts at the intersection of El Molino Avenue/Colorado Boulevard to a less than significant level.



Source: Linscott, Law & Greenspan, Engineers, June 5, 2008).

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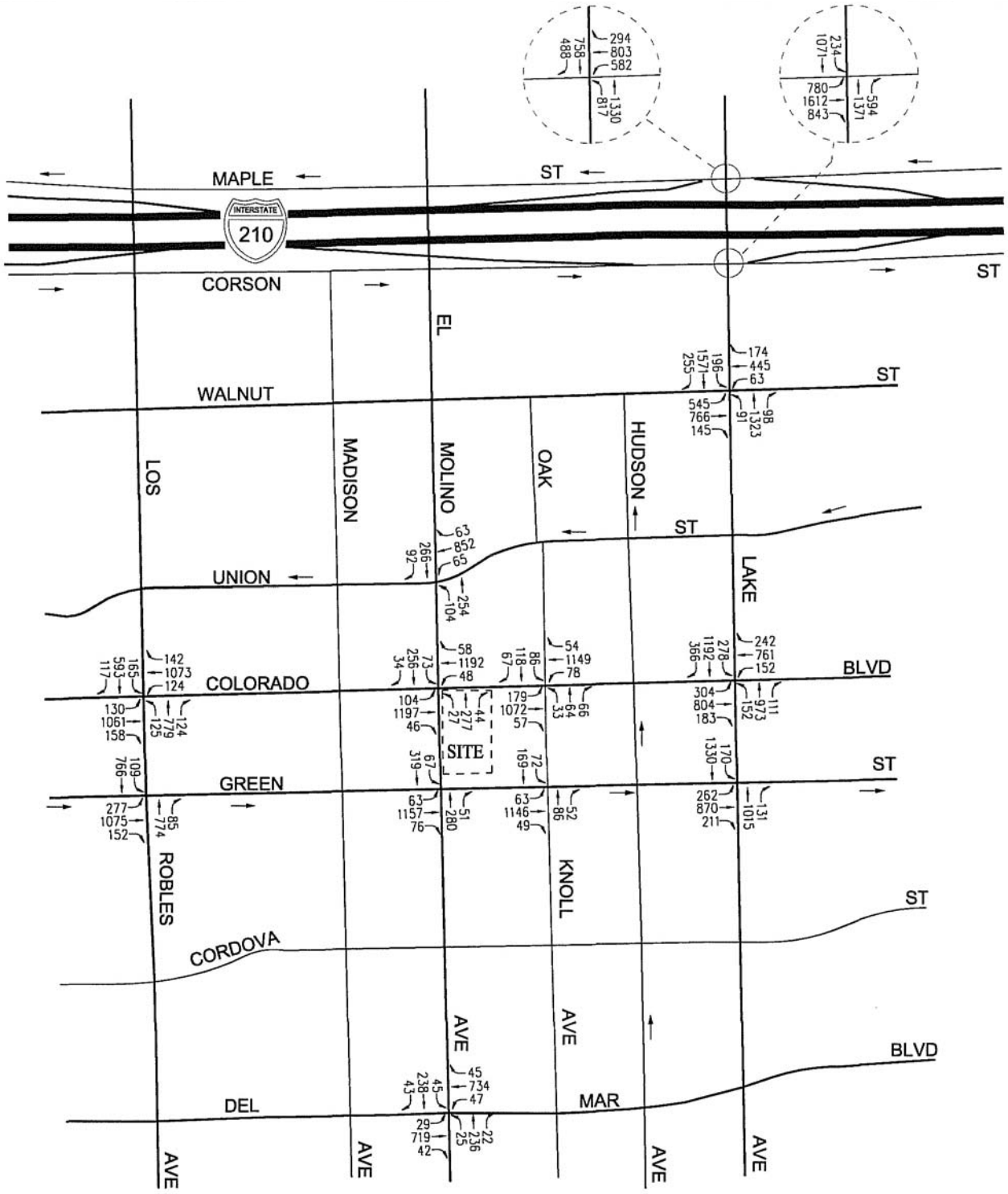
Cumulative AM Peak Hour Traffic Volumes Figure 4.5-7



Source: Linscott, Law & Greenspan, Engineers, June 5, 2008).

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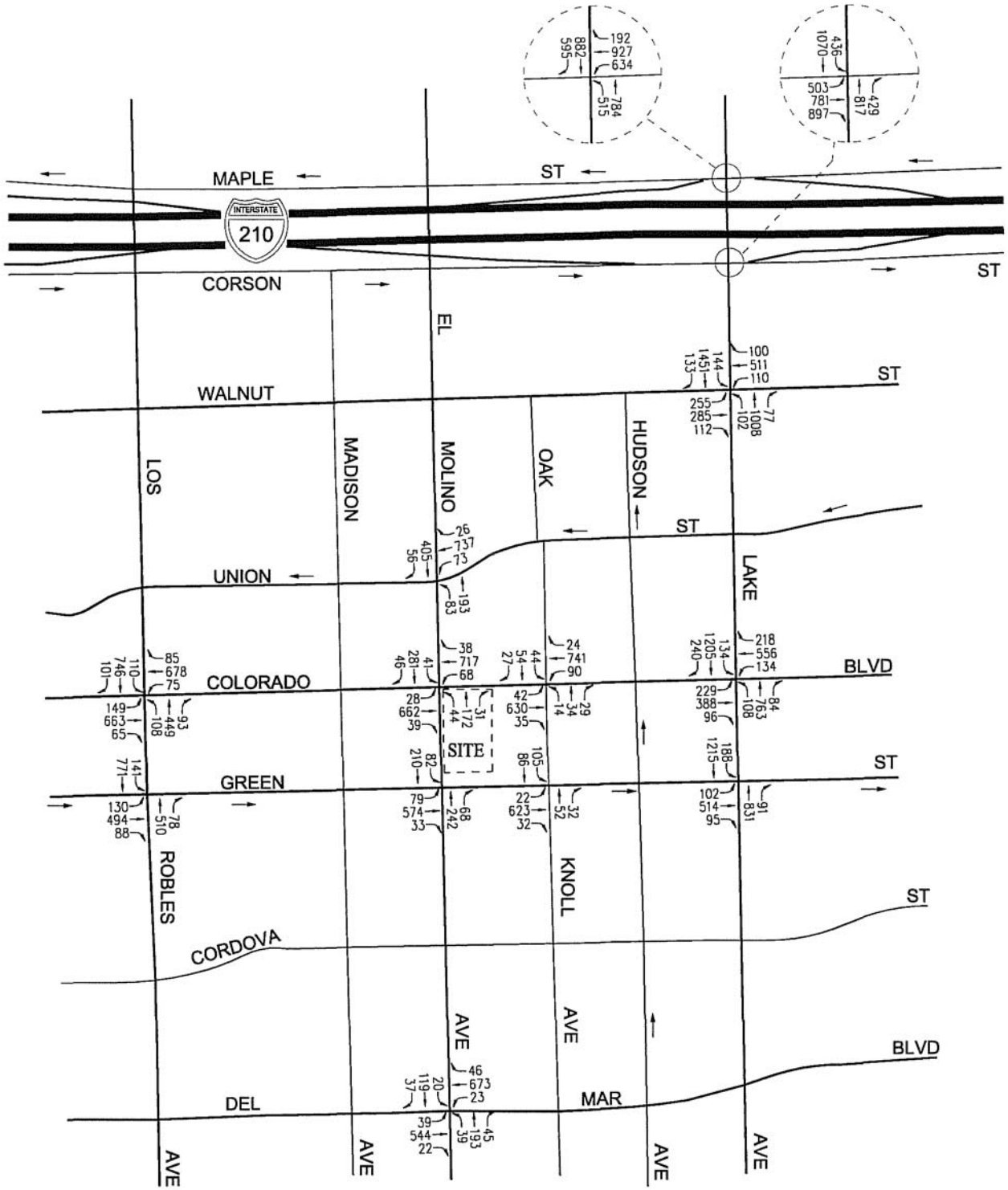
Cumulative PM Peak Hour Traffic Volumes Figure 4.5-8



Source: Linscott, Law & Greenspan, Engineers, June 5, 2008).

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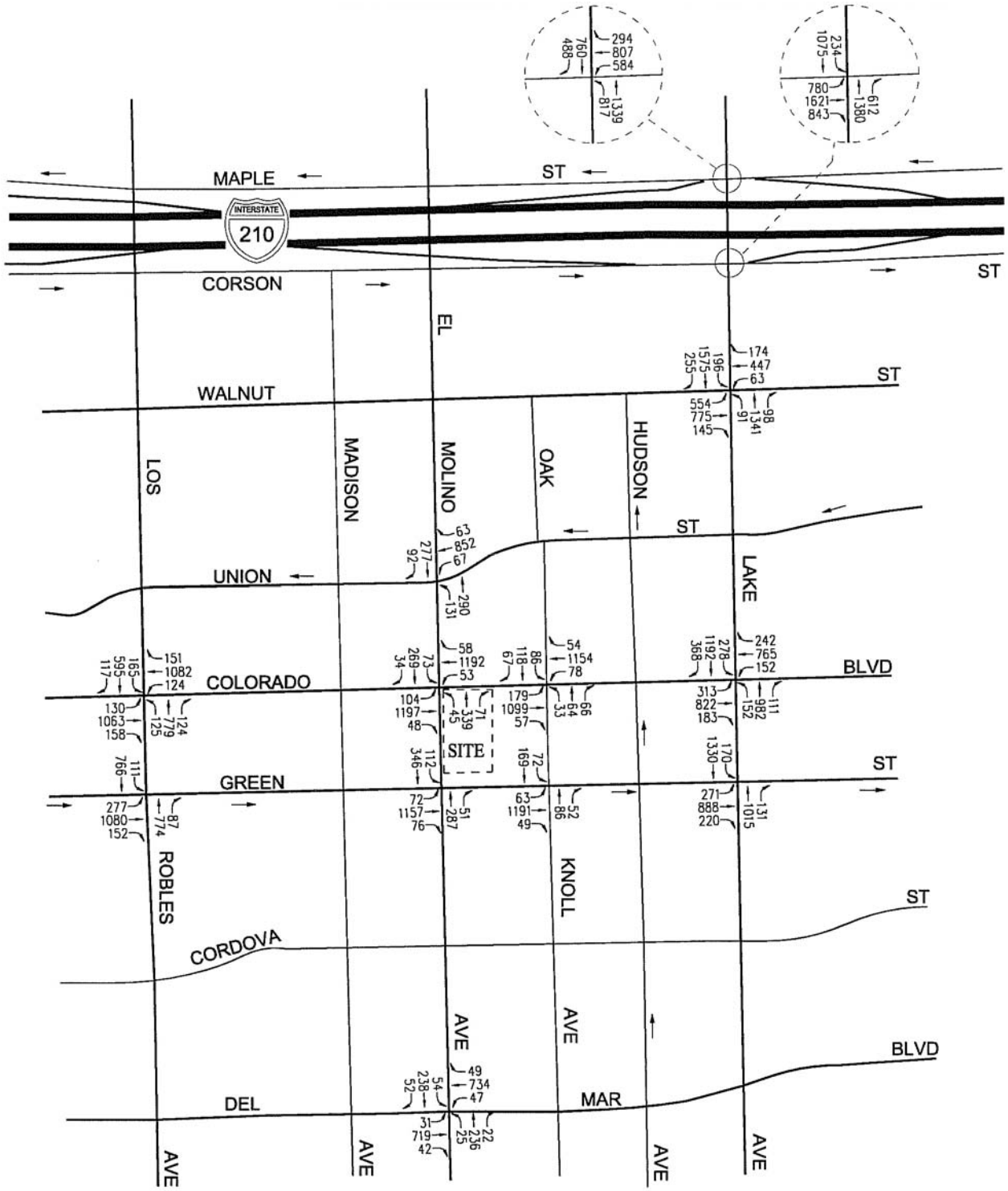
Cumulative + Project AM
PM Peak Hour Traffic Volumes

Figure 4.5-9



Source: Linscott, Law & Greenspan, Engineers, June 5, 2008).

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Cumulative + Project PM
PM Peak Hour Traffic Volumes

Figure 4.5-10

Table 4.5-6
Year 2010 Future Conditions Levels of Service

Intersection		Peak Hour	Existing (Year 2008)		Existing + Cumulative* (Year 2010)		Existing + Cumulative + Project		Change in V/C	Significant Impact?
			V/C	LOS	V/C	LOS	V/C	LOS		
1.	Los Robles Ave/Colorado Blvd	AM	0.576	A	0.666	B	0.670	B	0.004	NO
		PM	0.684	B	0.818	D	0.821	D	0.003	NO
2.	Los Robles Ave/Green St	AM	0.415	A	0.438	A	0.453	A	0.015	NO
		PM	0.596	A	0.627	B	0.630	B	0.003	NO
3.	El Molino Ave/Union St	AM	0.513	A	0.545	A	0.584	A	0.039	NO
		PM	0.514	A	0.563	A	0.586	A	0.023	NO
4.	El Molino Ave/Colorado Blvd	AM	0.423	A	0.528	A	0.577	A	0.049	NO
		PM	0.636	B	0.759	C	**0.822**	**D**	**0.063**	**YES**
5.	El Molino Ave/Green St	AM	0.400	A	0.429	A	0.466	A	0.037	NO
		PM	0.542	A	0.588	A	0.625	B	0.037	NO
6.	El Molino Ave/Del Mar Blvd	AM	0.453	A	0.497	A	0.509	A	0.012	NO
		PM	0.510	A	0.558	A	0.569	A	0.011	NO
7.	Oak Knoll Ave/Colorado Blvd	AM	0.362	A	0.419	A	0.424	A	0.005	NO
		PM	0.645	B	0.722	C	0.724	C	0.002	NO
8.	Oak Knoll Ave/Green St	AM	0.321	A	0.344	A	0.345	A	0.001	NO
		PM	0.465	A	0.488	A	0.497	A	0.009	NO
9.	Lake Ave/Maple St-I 210 Frwy WB Ramps	AM	0.844	D	0.900	D	0.905	E	0.005	NO
		PM	0.863	D	0.928	E	0.929	E	0.001	NO
10.	Lake Ave/Corson St-I-210 Frwy EB Ramps	AM	0.643	B	0.690	B	0.691	B	0.001	NO
		PM	0.803	D	0.856	D	0.861	D	0.005	NO
11.	Lake Ave/Walnut St	AM	0.638	B	0.726	C	0.733	C	0.007	NO
		PM	0.758	C	0.872	D	0.876	D	0.004	NO
12.	Lake Ave/Colorado Blvd	AM	0.708	C	0.810	D	0.817	D	0.007	NO
		PM	0.833	D	0.943	E	0.950	E	0.007	NO
13.	Lake Ave/Green St	AM	0.521	A	0.558	A	0.558	A	0.000	NO
		AM	0.628	B	0.669	B	0.672	B	0.003	NO

** Cumulative traffic conditions include the 1.5% annual ambient growth factor and the planned and pending projects from Table 3.1 in Section 3.0, Environmental Setting.*

Source: Lindscott, law and Greenspan, 2008. See Appendix E for complete traffic study.

TC-1(a) **Prohibited Left-Turns.** Left-turn movements at the northbound and southbound approaches on El Molino Avenue at the Colorado Boulevard Intersection shall be prohibited.

TC-1(b) **Left-turn Pocket Installation on El Molino Avenue at Union Street Intersection.** A left-turn pocket shall be installed at the northbound approach on El Molino Avenue at the Union Street intersection. The northbound and southbound approaches on El Molino Avenue shall be restriped to accommodate the installation of the northbound left-turn pocket. The resultant lane configurations at the northbound approach to the intersection would be one exclusive left-turn lane and one through lane. The traffic signal at the El Molino Avenue/Union Street Intersection shall be modified to provide northbound left-turn phasing.

TC-1(c) **Left-turn Pocket Installation on El Molino Avenue at Green Street Intersection.** The northbound and southbound approaches on El Molino Avenue shall be restriped and a southbound left-turn pocket shall be installed. The re-striping would necessitate reconstruction/modification of the existing catch basin on the northeast corner to accommodate safe movement of vehicles traveling northbound on El Molino Avenue. The resultant lane configurations at the southbound approach to the intersection would be one exclusive left-turn lane and one through lane. The traffic signal at the El Molino Avenue/Green Street intersection shall be modified to provide southbound left-turn phasing.

TC-1(d) **Transportation Demand Management (TDM).** The project shall comply with the City's Trip Reduction ordinance. Upon submittal of a TSM Program for review and approval, the owner/developer shall place a deposit based on the current General Fee Schedule with the Department of Transportation prior to the issuance of a building permit. This deposit is subject to a refund or an additional billing in the event that the deposit amount is not sufficient to cover the cost of the review. The developer shall pay an annual Transportation Demand Management status report review fee based on the current General Fee Schedule, in compliance with the requirements of the Trip Reduction Ordinance.

The TSM program shall encourage a mix of tenants with varying start/stop times to help reduce AM/PM peak-hour traffic. The TSM shall also require the use of marketing materials and website design that directs site visitors to the site via the City's arterials and traffic corridors, instead of using de-emphasized streets like El Molino and Glenarm.

TC-1(e) **Traffic Reduction and Transportation Improvement Fee.** The City's Traffic Reduction and Transportation Improvement Fee (TR-

TIF) program funds key intersection improvements, completes roadway extension projects identified in the Mobility Element, funds improvements to manage traffic on designated multimodal corridors and funds public transit improvements to encourage non-automobile travel in the City. The TR-TIF program is applicable to new industrial, office, retail and residential development. The current fee schedule for the land uses are as follows:

- *Industrial use: $3.20 per square-foot of net new space*
- *Office use: $3.84 per square-foot of net new space*
- *Retail use: $8.89 per square-foot of net new space*
- *Residential use: $2,556.88 per net new residential unit the proposed*

The applicant shall make the required payment based on the fees in affect at the time of payment, prior to the issuance of building permits. It should be noted that as the existing commercial building which would be removed to accommodate the proposed project is currently vacant, existing use trip credits will not be applied in the TR-TIF program fee calculation.

Significance After Mitigation. Implementation Mitigation Measures TC-1 (a-c) would improve the LOS of the El Molino Avenue/Colorado Boulevard intersection to LOS C (0.780) from LOS D (0.822) during the PM peak hour. Implementation of Mitigation Measure TC-1(d) would ensure compliance with the City of Pasadena's Transportation Management Ordinance. Implementation of Mitigation Measure TC-1(e) would ensure that the applicant pay the required Traffic Reduction and Transportation Improvement Fee. Therefore, implementation of Mitigation Measures TC-1 (a-e) would reduce impacts to a less than significant level. Additional analysis of El Molino Avenue Street segments indicates that there are no significant secondary impacts as a result of the turn restrictions.

Impact TC-2 The proposed project would incrementally increase traffic levels along study area roadways. The projected increases ~~are less than~~ exceed the City's adopted thresholds on ~~four of the five~~ six of the ten study area road segments. ~~However, because the projected increase in traffic on one of the five road segments exceeds the City's thresholds, impacts would be Class I, *unavoidably significant*.~~ Impacts to four of the six street segments are Class II, *significant but mitigable*. However, there are two segments of El Molino Avenue for which impacts would be Class I, *unavoidably significant*, because no physical improvements can be made to this de-emphasized street.

The study area street segments were analyzed under existing, cumulative base, and cumulative plus project conditions, much like the intersection analysis. Based on the City of Pasadena requirements, the percentage increase in ADT volumes on study area street roadway segments during the project year that is due to project traffic determines the significance of project impacts. The project ADT volumes are estimated based on the project trip generation shown in

Table 4.5-3. As indicated in the table, the net increase in weekday daily traffic generated by the project is estimated at approximately 1,585 trips.

Table 4.5-7 summarizes traffic impacts to study area roadway segments. Using the threshold criteria established by the City of Pasadena (see Table 4.5-5), the table shows the daily traffic analysis, which determines the street segment impacts by the proposed project on weekdays. As shown in the table, the proposed project is anticipated to increase daily traffic volumes by less than 2.4% on four of the ten analyzed street segments. While this level of increase requires staff review, no physical mitigations are required. However, as shown on Table 4.5-7, the proposed project is anticipated to increase daily traffic volumes between 2.5% and 4.9% on four of the ten studied street segments, including El Molino Avenue north of Walnut Street, El Molino Avenue between Walnut Street and Union Street, El Molino Avenue between Green Street and Cordova Street, and El Molino Avenue between Cordova Street and Del Mar Boulevard.

Table 4.5-7
Street Segment Impact Analysis

Street Segments	Direction	Existing Weekday ADT Volume	Proposed Project		Existing w/Project ADT	Percent ADT Growth
			Total Project Distribution	Project-Generated ADT		
1. El Molino Avenue south of Colorado Boulevard (between Colorado Boulevard and Playhouse Alley)	NB	3,051	60.0% Out	476	3,527	13.5%
	SB	3,477	55.0% In	436	3,913	11.1%
	Subtotal	6,528	--	912	7,440	12.3%
2. Oak Knoll Avenue south of Colorado Boulevard (between Colorado Boulevard and Green Street)	NB	1,555	0.0% --	0	1,555	0.0%
	SB	3,055	0.0% --	0	3,055	0.0%
	Subtotal	4,610	--	0	4,610	0.0%
3. Colorado Boulevard east of Hudson Avenue (between Hudson Avenue and Lake Avenue)	EB	12,911	15.0% Out	119	13,030	0.9%
	WB	12,931	15.0% In	119	13,050	0.9%
	Subtotal	25,842	--	238	26,080	0.9%
4. Green Street east of El Molino Avenue (between El	EB	10,726	25.0% Out	198	10,924	1.8%

Table 4.5-7
Street Segment Impact Analysis

Street Segments	Direction	Existing Weekday ADT Volume	Proposed Project		Existing w/Project ADT	Percent ADT Growth
			Total Project Distribution	Project-Generated ADT		
Molino Avenue and Arcade Alley)						
5. Green Street east of Hudson Avenue (between Hudson Avenue and Lake Avenue)	EB	11,098	25.0% Out	198	11,296	1.8%
6. El Molino Avenue north of Walnut Street	NB	3,702	15.0% Out	119	3,821	3.1%
	SB	3,904	20.0% In	159	4,063	3.9%
	Subtotal	7,606	--	278	7,884	3.5%
7. El Molino Avenue between Walnut Street and Union Street	NB	3,562	20.0% Out	159	3,721	4.3%
	SB	4,057	30.0% In	238	4,295	5.5%
	Subtotal	7,619	--	397	8,016	4.9%
8. El Molino Avenue between Union Street and Colorado Boulevard	NB	4,342	35.0% Out	277	4,619	6.0%
	SB	3,631	35.0% In	277	3,908	7.1%
	Subtotal	7,973	--	554	8,527	6.5%
9. El Molino Avenue between Green Street and Cordova Street	NB	3,304	20.0% In	159	3,463	4.6%
	SB	3,110	15.0% Out	119	3,229	3.7%
	Subtotal	6,414	--	278	6,692	4.2%
10. El Molino Avenue between Cordova Street and Del Mar Boulevard	NB	2,888	15.0% In	119	3,007	4.0%
	SB	2,704	10.0% Out	79	2,783	2.8%
	Subtotal	5,592	--	198	5,790	3.4%

Source: Lindscott, Law and Greenspan, 2008
Lindscott, Law and Greenspan, 2009
See Appendix E for complete traffic study.

As shown in Table 4.5-7, the proposed project is anticipated to increase daily traffic volumes by more than 4.9% on two of the ten street segments, including the segment of El Molino Avenue between Colorado Boulevard and Playhouse Alley and the segment of El Molino Avenue between Union Street and Colorado Boulevard. Because these increases exceed the City's 4.9% ADT Growth threshold, impacts to these two street segments would be significant.

The project site is located on a segment of El Molino Avenue that is within the Central District Specific Plan and Playhouse Subdistrict. The location of the project site is within the urban core of downtown along the Colorado Boulevard corridor and not within the residential areas that lie to the north and south of this corridor. El Molino is de-emphasized along its entire length within the City limits, which is about four miles. The de-emphasis is intended to protect the residential neighborhoods north and south of the urban downtown core. The proposed project would take access from and have a significant impact on the segment of El Molino Avenue that lies between Playhouse Alley and Colorado Boulevard and the segment between Colorado Boulevard and Union Street, which is about 0.13 miles long, or about 3.25% of the entire length of the de-emphasized street. It should be recognized that the unavoidably significant impact to the street segment of El Molino Avenue between Playhouse Alley and Colorado Boulevard is based on a 12.3% increase in traffic volume along the most affected segment, while the threshold for this street segment is a 4.9% increase. Mitigation measures TC-1(a-e) and TC-2 cannot be guaranteed to reduce the traffic on this street segment to below the 4.9% threshold.

Mitigation Measures. Based on the City's street segment significance criteria, the net increase in ADT volumes for El Molino Avenue north of Walnut Street, El Molino Avenue between Walnut Street and Union Street, El Molino Avenue between Green Street and Cordova Street, and El Molino Avenue between Cordova Street and Del Mar Boulevard require soft mitigation measures (e.g., transportation demand management measures). Additionally, the street segments of EI Molino Avenue between Colorado Boulevard and Playhouse Alley and El Molino Avenue between Union Street and Colorado Boulevard require both physical (e.g., roadway improvements, traffic signal upgrades, etc.) and soft mitigation measures ~~(e.g., transportation demand management measures)~~. As such, the following mitigation measure, along with Mitigation Measures TC-1(d-e), is required.

TC-2 Street Segment Mitigation. The following measures are recommended conditions by PASDOT:

- *Contribute funds toward a pedestrian safety study in the vicinity of the project. The plan shall study measures such as mid-block signals, curb extensions, pedestrian countdown signals, enhanced crosswalks etc to improve walking safety and convenience to and from parking structures/businesses in the area.*
- *Provide wayfinding signage between the parking garage and the Pasadena Playhouse, directing patrons to utilize designated crosswalks at Green Street or Colorado Boulevard. The sign program and format is subject to the review and approval of the Planning Division and the Department of Transportation.*
- *Provide pedestrian lighting to and from the project to the nearest transit stops within a quarter mile radius.*
- *Offer unbundled parking option with lease.*

- *Contribute funds to the Pasadena ARTS program.*
- *Provide Metro Corporate Transit Passes to employees of this project site.*

Significance After Mitigation. Implementation of Mitigation Measures TC-2, along with mitigation measures TC-1 (~~a~~d-e) would be expected to reduce project-generated traffic on street segments. ~~Note that implementation of these measure would also fulfill the City's requirement of implementing both physical mitigation (TC-1 (a-c)) and soft mitigation (TC-1 (d-f) and TC-2)~~. However, it cannot be assured that these mitigation measures would reduce the increase in project-traffic along the most affected roadway segments to 4.9% or less, which would eliminate the need for physical improvements (see Table 4.5-5). PasDOT has determined that there are no feasible mitigation measures to reduce the impacts of the project on El Molino Avenue between Colorado Boulevard and Playhouse Alley and on El Molino Avenue between Union Street and Colorado Boulevard to below levels of significance. Therefore, the impact to these street segments as a result of the proposed project would be unavoidably significant, and if the project is entitled, a Statement of Overriding Consideration would be required.

Impact TC-3 The proposed project would provide 522 parking spaces, of which ~~366~~ 367 would be project-only spaces and ~~156~~ 155 would be public spaces to serve the Playhouse District. The proposed parking spaces would meet the City's parking requirements. Therefore, impacts to parking supply would be Class III, *less than significant*.

As discussed in *Setting*, The project site is currently developed with a two-story commercial retail structure totaling approximately 66,000 square feet (SF) with 36 surface parking spaces. The proposed project involves the demolition of existing improvements, excavation for a six-level subterranean garage, and the subsequent construction of an approximately 160,000 SF, five-story commercial office building with 522 parking spaces to be provided in the six subterranean levels, of which ~~366~~ 367 would be project-only spaces and ~~156~~155 would be public spaces to serve the Playhouse District. Vehicular access to the subterranean parking structure would also be from El Molino Avenue. Table 4.5-8 shows the City's parking requirements and proposed parking.

Table 4.5-8 Summary of Parking Requirements

Land Use	City Code Parking Ratio	Proposed	Total Parking Spaces
Office[a]	3 spaces/1,000 sf	145,564 sf	~~437~~ 328
Retail[b]	3 spaces /1,000 sf	14,407 sf	~~43~~ 39
Total Required/Maximum Allowed Parking Spaces			~~360~~ 367
Commercial Off-Street Parking[c]			~~162~~ 155
Total Parking Spaces Provided			**522[d]**

Notes:
[a] Section 17.50.340 D.1(a)of the City of Pasadena Zoning Code states that for office uses the minimum amount of required off-street parking shall be reduced by 25 percent, and this reduction shall be the maximum allowed number of parking spaces.
[b] Section 17.50.340 D.1(b) of the City of Pasadena Zoning Code states that for all other nonresidential uses the minimum amount of required off-street parking shall be reduced by 10 percent, and this reduction shall be the maximum allowed number of parking spaces.
[c] Section 17.50.340 D.2(a) states that off-street commercial parking shall require the granting of a Minor Conditional Use Permit in compliance with Section 17.61.050. The applicant proposed ~~156~~ 155 public spaces~~; however, there are six additional spaces.~~
[d] ~~162~~155 of these spaces are proposed to serve the Playhouse District as public parking spaces

As shown in Table 4.5-8, proposed parking would comply the City's parking requirements, as set forth by Section 17.50.340 of the City of Pasadena Zoning Code. Therefore, no significant impacts to parking supply would occur.

Mitigation Measures. None required.

Significance After Mitigation. The proposed project's impacts to parking supply would be less than significant without mitigation.

Impact TC-4 The proposed project would not generate trips exceeding CMP criteria at CMP locations. Thus, impacts to CMP routes are considered Class III, *less than significant*.

The Congestion Management Program (CMP) was created statewide from the approval of Proposition 111 and has been implemented locally by the Los Angeles County Metropolitan Transportation Authority (LACMTA). The CMP for Los Angeles County requires that the traffic impact of individual development projects of potentially regional significance be analyzed. A specific system of arterial roadways plus all freeways comprise the CMP system. Per CMP Transportation Impact Analysis (TIA) Guidelines, a traffic impact analysis is conducted where:

- *At CMP arterial monitoring intersections, including freeway on-ramps or off-ramps, where the proposed Project will add 50 or more vehicle trips during either AM or PM weekday peak hours.*
- *At CMP mainline freeway-monitoring locations, where the Project will add 150 or more trips, in either direction, during the either the AM or PM weekday peak hours.*

The nearest CMP monitoring intersection is located at Rosemead Boulevard/Foothill Boulevard, and the nearest CMP freeway monitoring location is located at I-210 at Rosemead Boulevard. The proposed project would not add 50 or more trips, during the AM or PM peak hours at the analyzed CMP arterial monitoring intersection, Rosemead Boulevard/Foothill Boulevard, which is the threshold for preparing a traffic impact assessment, as stated in the CMP manual. Therefore, no further review of potential impacts to intersection monitoring locations that are part of the CMP highway system is required.

The CMP TIA guidelines require that freeway monitoring locations must be examined if the proposed project will add 150 or more trips (in either direction) during either the AM or PM weekday peak periods. The proposed project will not add 150 or more trips (in either direction), during either the AM or PM weekday peak hours to the CMP freeway monitoring location, which is the threshold for preparing a traffic impact assessment, as stated in the CMP manual. Therefore, no further review of potential impacts to freeway monitoring locations that are part of the CMP highway system is required.

Mitigation Measures. None required.

Significance After Mitigation. The proposed project's impacts to the regional transportation system would be less than significant on CMP monitoring intersection and the mainline freeway system without mitigation.

Impact TC-5 The proposed project would incrementally increase demand for public transit service. However, it is anticipated that the existing transit system could accommodate the project's increase in demand and impacts would be Class III, *less than significant*.

As required by the *2004 Congestion Management Program* for Los Angeles County, a review has been made of the CMP transit service. As previously discussed, existing transit service is provided in the vicinity of the proposed Playhouse Plaza project. The project trip generation, as shown in Table 4.5-3, was adjusted by values set forth in the CMP (i.e., person trips equal 1.4 times vehicle trips, and transit trips equal 3.5 percent of the total person trips) to estimate transit trip generation. Pursuant to the CMP guidelines, the proposed project is forecast to generate demand for 11 transit trips (10 inbound trips and 1 outbound trip) during the weekday AM peak hour. During the weekday PM peak hour, the proposed project is anticipated to generate demand for 10 transit trips (2 inbound trips and 8 outbound trips). Over a 24-hour period, the proposed project is forecast to generate demand for 78 daily transit trips. The calculations are as follows:

- *AM Peak Hour = 223 x 1.4 x 0.035 = 11 Transit Trips*
- *PM Peak Hour = 214 x 1.4 x 0.035 = 10 Transit Trips*
- *Daily Trips = 1,585 x 1.4 x 0.035 = 78 Transit Trips*

It is anticipated that the existing transit service in the project area would adequately accommodate the project-generated transit trips. Thus, based on the calculated number of generated transit trips, no significant project impacts on existing or future transit services in the project area would occur.

Mitigation Measures. None required.

Significance After Mitigation. The proposed project's impacts to the existing and future public transit system would be less than significant without mitigation.

Impact TC-6 Access to the subterranean parking structure would be provided by a two-way driveway/ramp from El Molino Avenue. This driveway is consistent with City requirements to provide adequate site access; therefore, impacts relating to site access and circulation are considered Class III, *less than significant*.

Vehicular access to the six-level subterranean parking structure would be provided by one driveway located along the east side of EI Molino Avenue, approximately mid-way between Colorado Boulevard and Green Street (see Figure 2-3 in Section 2.0, *Project Description*). The El Molino Avenue driveway would provide access to an internal ramp, which would extend to the subterranean parking levels. This driveway would accommodate access for employees, visitors

and patrons of the proposed project, as well as for motorists accessing the public parking spaces within the site. The driveway would accommodate full access (i.e., both left-turn and right-turn ingress and egress turning movements).

The proposed project, including vehicular ingress and egress to and from the subterranean parking structure, would be constructed to City of Pasadena design standards. The traffic study, contained in Appendix E of this document, did not identify any safety issues with regard to the proposed site access. Therefore, impacts relating to site access and circulation would be less than significant.

Mitigation Measures. None required.

Significance After Mitigation. The proposed project's impacts to site access and circulation would be less than significant without mitigation.

c. Cumulative Impacts. Traffic from related/area projects (projects planned or pending construction or completion) was added to future ambient traffic growth to create the cumulative scenario. Approximately 1,256 dwelling units and 461,687 SF of commercial development are planned or pending within the City. As shown in Tables 4.5-6 and 4.5-7, which summarize the level of service and street segment analysis conducted for proposed project, traffic would incrementally increase with cumulative + project traffic, but with the implementation of mitigation measures set forth in the section, would remain below the respective significance thresholds at all of the analyzed intersections and on ~~four of the five~~ eight of the ten analyzed roadway segments. However, impacts resulting from project-traffic would remain significant and unavoidable at the roadway segment on El Molino Avenue between Colorado Boulevard and Playhouse Alley and on El Molino Avenue between Union Street and Colorado Boulevard, both of which lie within the urban core adjacent the Colorado Boulevard corridor. Because impacts would be unavoidably significant at these roadway segments, when considering cumulative impacts from planned and pending projects within the City, the project's contribution to the overall change would be cumulatively considerable. Mitigation measure TC-1(a-e) and TC-2 would reduce impacts to the extent feasible. However, these mitigation measures cannot be said to reduce traffic increases to 4.9% or below, which is the threshold that requires physical improvements. Therefore, the cumulative impact to these street segments is likewise unavoidably significant.

4.6 WATER SERVICE

4.6.1 Setting

a. Water Supply. Pasadena Water and Power (PWP) is the water supply service provider to City of Pasadena residents and businesses, as well as to a limited number of customers within adjacent unincorporated areas. PWP provides approximately 37,094 acre-feet per year (AFY) of potable water (based on the average PWP total production over the last 10 years). According to the City's 2005 Urban Water Management Plan, Pasadena's water supply is drawn from a variety of sources, including groundwater, local surface water, and imported water. Additional water supplies are also available through short-term water exchanges with neighboring agencies. PWP attempts to maximize its groundwater use each year and then use imported water to meet remaining demand. PWP obtains approximately 40 percent of its annual water supply from groundwater and the remaining 60 percent is purchased from the Metropolitan Water District (MWD). MWD obtains it supply from two sources of imported water: the Colorado River Aqueduct and the State Water Project (PWP 2005).

PWP also diverts surface water runoff from two streams that flow within its service area: up to 25 cubic feet per second from Arroyo Seco, which lies on the northwest side of the City; and up to 8.9 cubic feet per second from Eaton Canyon, which lies in the eastern portion of the City. Although this water can be treated and used directly, PWP currently diverts and spreads the water in spreading basins where it percolates into the ground and recharges the aquifer (PWP 2005).

Groundwater production is obtained from the Raymond Basin, a large aquifer that underlies the City and surrounding region. It has a groundwater production of approximately 30,000 AFY and has potential to store large amounts of imported water for drought purposes (up to 16 times the amount of water consumed by residents living over the Basin).[1] The Raymond Basin is adjudicated and under the judgment the City of Pasadena has the right to 12,807 AFY with additional pumping rights each year based on spreading surface water diversions in the Arroyo Seco and Eaton Canyon. Spreading credits vary from year to year, but on average PWP has received 4,128 AFY in credits since 1994. Thus, on an average year, PWP has the right to pump about 16,935 AFY from the Raymond Basin. PWP is currently operating seven wells with a combined capacity of 15,200 AFY (PWP 2005).

In May of 2008, PWP was made aware that the Raymond Basin Management Board ("Watermaster") is concerned that, in certain areas of the Raymond Basin, groundwater production is greater than net recharge, which has lead to decreases in groundwater levels and increased depth-to-pumping.[2] It was estimated that the safe yield of the Pasadena subarea of the Raymond Basin, the subarea from which Pasadena takes a vast majority of its pumping rights, was approximately 35% less than current decreed rights in that subarea. To protect the storage capacity of the Pasadena subarea, PWP anticipates that the Watermaster may reduce the pumping allocation of every pumper in the Pasadena subarea by 35%. If that should occur,

[1] City of Pasadena, 2005 Urban Water Management Plan, Page 1 December 2005.
[2] 2007 Technical Memorandum: Evaluation of Groundwater Production in the Pasadena Subarea of the Raymond Basin (Stetson Engineers, 2007).

PWP's groundwater pumping rights would be reduced to 5,423 AFY in the subarea, for a total of 9,877 AFY in the Raymond Basin.

In 2007, PWP supplied a total of 38,434 AF, of which 25,100 was from imported water and 12,849 AF was from groundwater with approximately 485 AF from local water exchanges. Water use in PWP's service area is approximately two-thirds residential and one-third commercial/industrial. Total system per capita water use (excluding agricultural water use) averages 170 gallons per day (GPD). There were approximately 36,830 connections in 2007. Since 1990, new connections have been added at a rate of approximately 0.15 percent per year. However, demand for water has remained relatively constant with the implementation of water efficiency improvements.

Current and projected water use within PWP's service area is shown in Table 4.6-1. Table 4.6-1 shows water usage projected for normal years and single dry years from 2010 through 2030.

Table 4.6-1
PWP Service Area Normal and Single Dry Year Supply and Demand (Acre-Feet/Year)

	2010	2015	2020	2025	2030
Normal Year [1]					
Supply	39,957	41,291	42,624	43,959	45,293
Demand	39,957	41,291	42,624	43,959	45,293
Difference	**0**	**0**	**0**	**0**	**0**
Single Dry Year					
Supply	32,318	32,318	32,318	32,318	32,318
Demand	33,963	35,097	36,230	37,365	38,497
Difference	**(1,645)**	**(2,779)**	**(3,912)**	**(5,047)**	**(6,179)**

Source: PWP 2005 UWMP.

[1] *Table 9-2 Projected Normal Year Supply and Demand Comparison. Projected supplies exceed demands; however, PWP will only take the amount of imported water necessary to serve projected demand. Additional water may be purchased by PWP at an increased rate; however PWP plans to get additional water from long term storage*

PWP has contracted with MWD for deliveries under a purchase order arrangement (PWP 2005). Under the contract, MWD charges for water supply under a two-tiered rate structure. PWP has the right to purchase up to 90% of their initial base demand at Tier 1 rates. Initial base demand is calculated as the maximum firm demand for MWD water over a 10-year period since 1989. Tier 1 rates are set by MWD to recover its costs of maintaining a reliable supply. Any amount higher than 90% of base demand is charged at higher Tier 2 rates to encourage efficient utilization of local resources and include MWD's costs for developing additional supplies.

Multiple dry-year supply and demand scenarios for 2010 through 2030 are shown in Table 4.6-2. The City has a long term storage program in the Raymond Basin and banks water within the basin for withdrawl during dry years when supplies are not sufficient to cover demands. Based on the supply and demand comparisons, PWP will have sufficient supply to meet the projected

Table 4.6-2
PWP Service Area Multiple Dry Year Supply and Demand (Acre-Feet/Year)

2011 through 2015	**2011**	**2012**	**2013**	**2014**	**2015**
Supply	40,224	40,491	36,861	31,665	34,294
Demand	40,224	40,491	40,757	34,870	35,097
Difference	0	0	(3,896)	(3,205)	(803)
Pumped from Long Term Storage	0	0	3,896	3,205	803
Long Term Storage Balance	24,221	24,221	20,325	17,120	16,137
Annual Net Deficit	0	0	0	0	0
2016 through 2020	**2016**	**2017**	**2018**	**2019**	**2020**
Supply	41,559	41,826	36,861	31,665	34,294
Demand	41,559	41,826	42,092	36,005	36,232
Difference	0	0	(5,231)	(4,340)	(1,938)
Pumped from Long Term Storage	0	0	5,231	4,340	1,938
Long Term Storage Balance	24,221	24,221	18,990	14,650	12,712
Annual Net Deficit	0	0	0	0	0
2021 through 2025	**2021**	**2022**	**2023**	**2024**	**2025**
Supply	42,891	43,158	36,861	31,665	34,294
Demand	42,891	43,158	43,424	43,691	43,957
Difference	0	0	(6,563)	(5,472)	(3,070)
Pumped from Long Term Storage	0	0	6,563	5,472	3,070
Long Term Storage Balance	24,221	24,221	17,658	12,186	9,116
Annual Net Deficit	0	0	0	0	0
2026 through 2030	**2026**	**2027**	**2028**	**2029**	**2030**
Supply	44,226	44,493	36,861	31,665	34,294
Demand	44,226	44,493	44,759	38,272	38,499
Difference	0	0	(7,898)	(6,607)	(4,205)
Pumped from Long Term Storage	0	0	7,898	6,607)	4,205
Long Term Storage Balance	24,221	24,221	16,323	9,716	5,511
Annual Net Deficit	0	0	0	0	0

Source: 2005 UWMP, Tables 9-5, 9-6, 9-7, and 9-8.

demand over the next twenty-five years (PWP 2005). Its ability to meet demands during a multiple dry year period is based on the storage reserve it maintains in the Raymond Basin. During a time of drought, it can draw on this reserve to supplement its supply. In the previous

comparisons, the scenarios showed that the storage reserve would be drawn down over the course of a three year dry period. In the final multiple year analysis from 2026-2030, the LTS reached 5,511 AF. Thus, although there is enough projected supply and storage available under these scenarios, it is important that PWP take steps to boost its reserves. There are a number of critical actions that PWP is planning to take to provide additional assurance that it will be able to maintain deliveries:

- In the short term, PWP will restore most of the out-of-service wells into production by installing perchlorate treatment systems.

- In the long term, PWP will maintain deliveries through aggressive conservation programs and the implementation of recycled water for irrigation purposes.

- PWP will cooperate with the watershed planning efforts in the Arroyo Seco to develop the plan to increase the capacity of its spreading basins.

The comparisons in Table 4.6-1 and Table 4.6-2 are based on the assumption that MWD is forced to curtail its deliveries during a drought. In reality, MWD has performed its own multiple dry year analysis and has determined that it would be able to maintain deliveries to its member agencies even in the event of a historical multiple dry year period. However, by taking the critical actions above PWP will ensure that it can reliably maintain its own supply in the event that MWD experiences delays in implementing its Integrated Resources Plan (IRP), as well as providing a buffer against uncertainty.

PWP Actions and Programs to Address Water Supply Issues. PWP has many options at hand to address potential water supply issues, arising from either a reduction in its MWD allocations or its ability to pump groundwater from the Pasadena subarea of the Raymond Basin. ~~The most immediate tool available is the declaration of a "water shortage" pursuant to Pasadena Municipal Code (PMC) Chapter 13.10.~~

~~*City of Pasadena Water Shortage Plan I.* In December of 2007, PWP projected a local "water shortage" as defined in PMC § 13.10.020.G. On that basis, the City Council implemented a Water Shortage Plan I. The goal of the Water Shortage Plan I was to reduce total water usage in the City by 10%.[3] The Water Shortage Plan I contains nine voluntary water reduction measures to assist all Pasadena customers with conservation techniques (PMC § 13.10.040).~~

- ~~Refrain from hosing or washing sidewalks, walkways, driveways, parking area or other paved surfaces;~~
- ~~Refrain from cleaning, filling, or maintaining levels in decorative fountains, ponds, lakes, and similar structures unless such structure is equipped with a water recycling system;~~

[3] See minutes of December 17, 2007 City Council meeting, at http://www.cityofpasadena.net/councilagendas/2007%20agendas/Minutes%202007/20071217.pdf; see related staff report at http://www.cityofpasadena.net/councilagendas/2007%20agendas/Dec_17_07/6A.pdf.

- ~~Refrain from serving drinking water, unless at the express request of a customer, in all restaurants, hotels, cafes, cafeterias, or other public places where food is sold, served or offered for sales;~~
- ~~Promptly repair all leaks from indoor and outdoor plumbing fixtures, including but not limited to sprinkler systems;~~
- ~~Refrain from allowing water to run off landscape areas into adjoining streets, sidewalks, parking lots or alleys;~~
- ~~Refrain from allowing water to run off into adjoining streets, sidewalks, parking lots or alleys while washing vehicles;~~
- ~~Refrain from landscape watering more often than once every three days.~~

~~Since declaration of the local water shortage, PWP engaged in an aggressive public education campaign to raise awareness of the Water Shortage Plan I and its conservation techniques. Among other things, PWP engaged in a City-wide marketing campaign to raise awareness of the Plan I techniques; hosted efficient irrigation workshops; joined MWD in offering a new regional incentive program for water efficient devices ("SoCal Water $mart"); and provided a host of links and information options on its website to educate Pasadena residents about other ways to save water. Despite this aggressive public education campaign, as of the summer of 2008 total water usage in the City had not changed appreciably, and the goal of the Water Shortage Plan I was not being met.~~

~~*City of Pasadena Water Shortage Plan II.* The purpose of Water Shortage Plan II is to ensure that water is put to the maximum beneficial use and that water conservation is properly implemented. In the event of a continued water shortage, PWP could recommend to the City Council moving to a Water Shortage Plan II, pursuant to PMC § 13.10.040. At this time, PWP anticipates requesting that the City Council move to a Water Shortage Plan II by early 2009. In that event, the water reduction measures outlined above would become mandatory, and the City could impose penalties on violators. PWP anticipates that implementation of Water Shortage Plan II would result in the 10% reduction the City has been seeking.~~

~~Plan II includes the same measures as Plan I with the addition of the following measures:~~

- ~~No customer of the department shall use or allow the use of water for landscape watering between the hours of 10:00 a.m. and 5:00 p.m.;~~
- ~~No customer of the department shall uses or all the use of water from the department to refill a swimming pool emptied after the commencement of a water shortage period.~~

Throughout the end of 2008 and early 2009, PWP has taken the following steps to update its approach to water supply issues:

Comprehensive Water Conservation Plan (CWCP). On April 13, 2009, the City Council adopted the CWCP.[4] As a long-term goal, the CWCP presupposes an initial target of reducing per-capita potable water consumption 10% by 2015 and 20% by 2020. Whereas PWP's past water conservation programs relied heavily on indoor efficiency, the CWCP reflects an emphasis on:

[4] http://www.cityofpasadena.net/councilagendas/2009%20agendas/Apr_13_09/agendarecap.asp

- Using price signals in rate design to encourage conservation;
- Increased emphasis on outdoor water efficiency; and
- Maximizing efficiencies related to new construction.

The CWCP includes six water conservation approaches that will be pursued simultaneously to meet the City's water conservation targets:

1. Implement Water Conservation Rate Design:
    - Modified block rate structure with higher cost tiers for high water use
    - Develop a budget-based water rate proposal
2. Adopt Sustainable Water Supply Ordinances:
    - Establish a Permanent Water Waste Prohibition Ordinance
    - Modify existing Water Shortage Ordinance
    - Adopt a Water Efficient Landscape Ordinance
    - Evaluate potential effectiveness of a Fixture Replacement on Resale Ordinance, and adopt, if appropriate
    - Review the Gray Water Systems and Storm Water Capture Ordinances and update or modify, as appropriate
    - Adopt appropriate water use limitations and mitigation measures associated with new development
3. Provide Incentives for Use of Water Efficient Technology and Practices:
    - Indoor fixture incentives
    - Irrigation technology incentives
    - Water-efficient landscape and turf replacement incentives
4. Provide Direct Installation and Distribution of Efficient Technologies;
5. Provide Water Use Audits; and
6. Provide Water Use Information, Education, and Outreach:
    - Usage data on bills
    - Appropriate water use standards or guidelines
    - Efficient indoor and outdoor water use practices.[5]

The City has begun the process to increase water rates as envisioned by the CWCP, and which are necessary for covering surcharges imposed by MWD on PWP whenever customers exceed MWD's new allocation targets.[6] The City is in the process of holding the required public hearings.[7]

Water Waste Prohibition and Water Shortage Plan (WWP/WSP) Ordinance. Also on April 13, 2009, the City Council directed the drafting of an ordinance which will replace the City's previously adopted Water Shortage Plan I.[8] The proposed WWP/WSP Ordinance includes a number of permanent water waste prohibitions as well as procedures that would be initiated in the event of a water shortage.

[5] http://www.cityofpasadena.net/councilagendas/2009%20agendas/Apr_13_09/5D1.pdf
[6] http://ww3/waterandpower/YourWater/WaterRates/
[7] http://ww3/waterandpower/YourWater/WaterRates/Public%20Hearing%20Notice%2009.pdf
[8] http://www.cityofpasadena.net/councilagendas/2009%20agendas/Apr_13_09/agendarecap.asp

The proposed ordinance is consistent with the MWD Model Water Waste ordinance and is intended to address the shortcomings identified with the City's current Water Shortage Procedure Ordinance that it will replace. The proposed ordinance includes a number of permanent water waste prohibitions as well as procedures that would be initiated in the event of a water shortage. The proposed permanent water waste prohibitions include:

- Watering with potable water (i.e., drinking water) is prohibited between the hours of 9:00 a.m. and 6:00 p.m. on any day, except by use of a hand-held container, a handheld hose equipped with a water shut-off nozzle or device, or for very short periods of time for the express purpose of adjusting or repairing an irrigation system;
- No watering during periods of rain;
- No excessive water flow or runoff;
- No washing down hard or paved surfaces except were necessary to alleviate safety or sanitary hazards and then only by use of a hand-held bucket or similar container, a hand-held hose equipped with a water shut-off nozzle or device, a low-volume, high-pressure cleaning machine equipped to recycle any water used, or a low volume high-pressure water broom;
- Obligation to fix leaks, breaks or malfunctions when discovered or within seven days of receiving notice from PWP;
- Recirculating water systems are required for fountains and decorative water features;
- Using potable water to wash a vehicle is prohibited, except by use of a hand-held bucket or a hand-held hose equipped with a water shut-off nozzle or device. (This subsection does not apply to any commercial car washing facility);
- Drinking water may be served in restaurants only upon request by a customer;
- Restaurants are required to use water conserving dish wash spray valves;
- Commercial lodging establishments must provide guests option to decline daily linen services;
- Installation of single pass cooling systems is prohibited in buildings requesting new water service;
- Installation of non-recirculating water systems is prohibited in new commercial conveyor car wash and new commercial laundry systems; and
- Effective on July 1, 201 0, commercial conveyor car wash systems must have installed operational recirculating water systems or secured a waiver of this requirement from the City of Pasadena.

The proposed ordinance establishes a penalty schedule for violations, and the penalties are meant to be deterrents rather than sources of funds. The proposed ordinance is anticipated to come before the City Council in late June or early July of 2009.

Other PWP Water Supply Management Projects. Just as MWD has done, PWP has maintained its supply reliability in the face of supply uncertainties in the past, and is actively managing its supplies to ensure the reliability for the future. As a primary example, the City maintains a contract with the City of Glendale for the provision of recycled water, and has the right to 6,000 AFY of recycled water from the Los Angeles/Glendale Water Reclamation Plant. The City has the right to take this allocation at a point of connection in Scholl Canyon, on the northwestern end of Pasadena. Although implementation of the pipe construction project to bring recycled water into Pasadena has been on hold since 1995, the City has already begun the

work necessary to re-start implementation of that project. Funding for the initial planning of this project is currently available. As additional funding can be secured, the City anticipates increasingly offsetting the use of potable water for landscaping with recycled water, thus leaving more potable water for other uses. ~~PWP is also considering other water supply enhancement and storage projects. In addition, the City is looking at ways to strengthen the local regulation of water use through other Pasadena Municipal Code amendments. As one example, the City is awaiting the DWR Office of Water Use and Efficiency's update to the state model water efficient landscape ordinance. DWR anticipates that the model ordinance will be updated in early 2009.[9] By late 2009, and pursuant to the requirements of Government Code Section 65595, the City anticipates updating its ordinances regulating landscaping water use to be at least as stringent as the state model ordinance.~~ Through these efforts, PWP anticipates serving demand in the City as forecast in the City's General Plan and Urban Water Management Plan into the foreseeable future.

Metropolitan Water District (MWD). Future projected annual supplies from MWD during single dry, multiple dry and normal years are shown in Table 4.6-3. MWD supplies range from a high of about 3.3 million acre feet (MAF) to a low of 1.9 MAF acre feet, depending on the year and the scenario. In drought conditions, water supplies may be reduced as a result of reduced precipitation. Since the City receives the majority (approximately 60%) of its water from MWD, an analysis of the reliability of the MWD supply under drought conditions is required. An analysis of single dry year, multiple dry year and average year MWD supply reliability follows.

Table 4.6-3
MWD Supply and Demand (Acre-Feet/Year)

Scenario	2010	2015	2020	2025	2030
Multiple Dry Year					
Supply	2,619 ,000	2,834,000	2,841,000	2,827,000	2,827,000
Demand	2,376,000	2,389,000	2,317,000	2,454,000	2,587,000
Surplus (Supply less Demand)	**243,000**	**445,000**	**524,000**	**373,000**	**240,000**
Single Dry Year					
Supply	3,151,000	3,356,000	3,309,000	3,252,000	3,203,000
Demand	3,320,000	2,196,000	2,229,000	2,358,000	2,487,000
Surplus (Supply less Demand)	**831,000**	**1,160,000**	**1,080,000**	**894,000**	**716,000**
Average Year					
Supply	2,668,000	2,600,000	2,654,000	2,654,000	2,654,000
Demand	2,036,000	1,947,000	1,983,000	2,110,000	2,246,000
Surplus (Supply less Demand)	**632,000**	**653,000**	**671,000**	**544,000**	**408,000**

Source: Metropolitan Water District Regional Urban Water Management Plan, November 2005, Tables II-7, II-8, and II-9.

Demand represents FIRM demand, defined as full service demands (Tier I and Tier II) plus 70% of the Interim Agricultural Water Program.

[9] http://www.owue.water.ca.gov/landscape/ord/updatedOrd.cfm/#schedule

Table 4.6-3 presents the MWD demand and supply capabilities through the year 2030 under average year, single dry year and multiple dry year scenarios. The data shows that demand from MWD customers will be met under the three different scenarios through the year 2030 with surplus. Surplus ranges from a low of 240,000 AFY to 1,160,000 AFY.

Summaries of MWD's individual supplies, along with the challenges facing each supply, are presented in the following sections. These sections also include specific actions that MWD is taking to meet each of the challenges facing its water supplies. Over the past several decades, MWD has demonstrated that it can adapt to continuous change and address uncertainties in supply by developing a diverse portfolio, setting supply targets, monitoring its progress on a regular basis and adapting its strategy to meet its targets.

The Colorado River. MWD diverts water from the Colorado River at Lake Havasu on the California/Arizona border and conveys it across the Mojave Desert via the agency's Colorado River Aqueduct to Lake Mathews near Riverside. From there, MWD pumps the water into its feeder pipeline distribution system for delivery to its member agencies throughout Southern California.

MWD possesses the right to divert water from the Colorado River pursuant to a contract with the U.S. Secretary of the Interior under Section 5 of the federal Boulder Canyon Project Act.[10] The Blueprint Report includes a description of MWD's 550,000 AFY base apportionment water right, along with the Colorado River supply projects that MWD is implementing to maximize the reliability of Colorado River supplies.[11] Following distribution of the Blueprint Report, the Quantification Settlement Agreement ("QSA") and other related agreements were approved on October 10, 2003, related to the supplies of all the California users of the Colorado River, including MWD. Signing of the QSA and related agreements will allow implementation of the Colorado River supply projects identified in the Blueprint Report, as well as other projects. MWD described the QSA and related agreements and their impact on the reliability of MWD's supplies in its 2006 Integrated Water Resources Plan Implementation Report.[12]

According to MWD, it is expected that its fourth priority apportionment of 550,000 AF of Colorado River water will be available every year for the next 20 years.[13] This supply is "expected to be available during all year types, including wet, average, single dry-year, and multiple dry-year weather."[14]

Current challenges facing MWD's Colorado River supply include risk of continued drought in the Colorado River Basin and pending litigation that may threaten implementation of part or all of the QSA. MWD has been aggressively preparing for these two risks to its Colorado River supply for many years.[15] Its responses to these challenges are described in the following paragraphs.

[10] 45 Stat. 1057 (December 21, 1928).
[11] *Blueprint Report*.
[12] Metropolitan Water District of Southern California, *2006 Integrated Water Resources Plan Implementation Report* at 1-2 to 1-10 (October 10, 2006).
[13] *Blueprint Report* at B-6.
[14] *Id*.
[15] *Id*.at 25.

The Colorado River Basin has experienced below-normal runoff for the past eight years. During 2006, Lake Mead was at its lowest level in 41 years.[16] A Draft Environmental Impact Statement on Lower Basin Shortage Guidelines and Coordinated Management Strategies for Lake Powell and Lake Mead, Particularly Under Lower Reservoir Conditions was released by the U.S. Bureau of Reclamation, which operates the Colorado River reservoirs, in February 2007.[17] That study analyzed various alternatives to manage the Colorado River in light of the current extended dry period for enhanced reliability in water allocations for all the users of the Colorado River, including MWD. For example, one of the alternatives would introduce new operating and accounting procedures to address the ability of MWD and others to store water in Lake Mead.[18] Despite the challenges of recent Colorado River Basin hydrology, MWD "does not anticipate adverse water supply impacts resulting from the implementation of [the] shortage guidelines because California's 4.4 million acre-foot apportionment has a higher priority than a portion of Arizona and Nevada's apportionments during shortage conditions."[19]

Programs that will help to implement the QSA and meet Colorado River water supply targets, and that are currently in operation, close to completion or in progress include: the Imperial Irrigation District ("IID") and MWD water conservation and transfer program; the Coachella and All-American Canal lining projects; the IID and San Diego County Water Authority ("SDCWA") water transfer; the Palo Verde Irrigation District land management and crop rotation program; and the Interim Surplus Guidelines adopted by the U.S. Secretary of the Interior.[20] MWD is actively working to implement several of these QSA-related programs. In addition, MWD is participating in the Intentional Created Surplus program to store water in Lake Mead for withdrawal during dry years. During 2006 and 2007, MWD stored 50,000 AF of water in Lake Mead that it had saved under the Palo Verde Irrigation District Land Management and Crop Rotation Program.[21] Collectively, these programs are expected to maintain the reliability of MWD's Colorado River supplies.

MWD's fourth priority apportionment of Colorado River water has been delivered to MWD every year since 1939, in all hydrologic year types.[22] By existing contract, this supply "will continue to be available in perpetuity" due to California's senior rights on the Colorado River.[23] MWD has affirmed that "[t]he historical record for available Colorado River water indicates that Metropolitan's fourth priority supply has been available in every year and can reasonably be expected to be available over the next 20 years."[24] Thus, according to MWD, its Colorado River supply is secure through at least 2025. Pursuant to the analysis in more recent MWD assessments of its water supplies and this analysis, there are no substantial challenges that are currently predicted to arise between 2025 and 2030. Therefore, the same reliability that MWD declared through 2025 is also applicable through at least 2030.

The second challenge to MWD's Colorado River supplies is the pending litigation concerning the QSA and related agreements. That litigation has taken two forms: (1) a series of lawsuits

[16] Metropolitan Water District of Southern California, *2006 Integrated Water Resources Plan Implementation Report* at 12 (October 10, 2006).
[17] *Id.*
[18] *Id.* at 13
[19] *Id.*
[20] *Id. See also* 66 Fed. Reg. 7772-7782 (January 25, 2001).
[21] *Id.*
[22] MWD's 2005 UWMP at A.3-2.
[23] *Id.*
[24] *Id.*

against the lining of the All-American Canal; and (2) a series of lawsuits which challenge the IID/SDCWA transfer. The All-American Canal litigation has been litigated and resolved in favor of the QSA parties, thus increasing the certainty of MWD's Colorado River supplies since the publication of the Blueprint Report.[25]

Several lawsuits against the IID/SDCWA transfer were brought by the County of Imperial, various landowners within IID and environmental advocacy groups, and have been consolidated in Sacramento County Superior Court. In two of those lawsuits, the County of Imperial sued the State Water Resources Control Board ("SWRCB"), IID and SDCWA regarding the legitimacy of the QSA approvals. In November 2004, the Superior Court dismissed those cases with prejudice on the ground that the County had failed to name MWD and the Coachella Valley Water District as necessary and indispensable parties to the actions on a timely basis. Thereafter the County appealed that decision and the Court of Appeal affirmed the dismissal in 2007, which lifted a stay on the other QSA cases.[26] In addition, several demurrers have been filed and sustained in the consolidated cases, reducing the number of causes of action pending in the litigation.[27] As of the date of this document, the water transfer challengers' motions for preliminary injunction have been denied, and thus, the parties are free to implement the provisions of the QSA, as appropriate. The full cases are expected to reach the court for decision during late 2009 or possibly into 2010.

While all significant issues in the QSA litigations have been resolved in favor of MWD and the other QSA parties to date, including the entire All-American Canal case, it is impossible to predict with absolute certainty how the remaining litigation will be resolved. MWD is actively involved in the litigation, however, and plans to defend the QSA fully to prevent any impacts to its Colorado River supplies.

State Water Project. MWD possesses a contract with DWR that entitles it to water from the SWP.[28] MWD's share of the total SWP supply is approximately 46 percent based on its contracted Table A amount of 1,911,500 AFY.[29] This supply is diverted from the Feather River at Lake Oroville, released and conveyed through the Sacramento-San Joaquin River Delta ("Delta"), and rediverted at the Harvey O. Banks Delta Pumping Plant for conveyance through the California Aqueduct to Southern California and MWD. MWD described and analyzed the reliability of its SWP supplies in the Blueprint Report.[30] MWD estimated the availability of SWP supplies "according to the historical record of hydrologic conditions, existing system capabilities, requests of the state water contractors and SWP contract provisions for allocating Table A, Article 21 and other SWP deliveries to each contractor."[31] MWD estimated that in

[25] On April 6, 2007, the U.S. Court of Appeals for the Ninth Circuit dismissed the challenge to the lining of the All-American Canal and lifted the court-imposed injunction that for a period of time halted construction. The ruling allowed IID to commence work on the project to conserve water lost by seepage from the existing earthen canal. *See Consejo de Desarrollo Economico de Mexicali, A.C. v. United States*, 482 F.3d 1157 (2007).
[26] *County of Imperial v. Superior Court*, 152 Cal.App.4th 13 (2007).
[27] October 10, 2007 Order by Judge Candee in *Imperial Irrigation District v. All Persons Interested in Any of the Following Contracts, Imperial County Case No*. ECU01649 (Sacramento County Case No. 04CS00875) filed November 5, 2003.
[28] *See* Contract between the State of California Department of Water Resources and the Metropolitan Water District of Southern California For a Water Supply (November 4, 1960), as amended through Amendment No. 28, available at http://www.swpao.water.ca.gov/wsc/pdfs/MWDSC_O_C.pdf.
[29] Metropolitan Water District of Southern California, *2006 Integrated Water Resources Plan Implementation Report* at 14 (October 10, 2006).
[30] *Blueprint Report*. At 11.
[31] *Id.* at 11.

2025, it will have 794,700 AF available in multiple dry years, 418,000 AF in a single dry year, 1,523,300 AF in an average year and 1,741,000 AF in a wet year.[32]

Following the Blueprint Report, SWP supplies have been challenged through environmental litigation concerning the Delta. In addition, MWD has acknowledged that conveyance of water through the Delta can present challenges for SWP supplies due to water quality and environmental issues that can affect pumping operations. Risks to this supply also include potential levee failure. Actions being taken by DWR and MWD to avoid or mitigate these risks are described below.

Environmental Litigation. Specific threats to the SWP include litigation concerning the Delta. In 2007, two courts ruled that California's major water delivery systems—the SWP and the Central Valley Project ("CVP")—were violating state and federal environmental laws regarding a threatened fish species, the Delta smelt. First, Alameda County Superior Court Judge Roesch concluded that the SWP had failed to obtain a permit required under the California Endangered Species Act ("CESA") that would provide protections for Delta smelt, salmon and steelhead from the effects of water pumping for activities at the Harvey O. Banks Delta Pumping Plant in Tracy, California.[33] Accordingly, Judge Roesch ordered the SWP pumps to be turned off unless appropriate permits were obtained within 60 days. DWR appealed that decision, automatically staying the decision pending the outcome of the appeal. ~~The earliest that a decision from the appellate court is expected would be during in the latter part of 2008.[34]~~ The stay has been extended through July of 2009.[35]

As a practical response to the pending litigation in state and federal courts, DWR shut down the Harvey O. Banks Delta Pumping Plant from May 31 to June 10, 2007 to protect the Delta smelt. DWR resumed pumping on June 10, 2007, and pumping has remained at normal operating levels.

In May 2007, U.S. District Court Judge Oliver Wanger ruled that a federal Endangered Species Act ("ESA") take permit that had been issued to protect Delta smelt at both the SWP pumps and the federal Jones Pumping Plant was not legally sufficient.[36] At issue was a 2005 biological opinion ("BiOp") that was issued by the U.S. Fish and Wildlife Service ("USFWS") pursuant to the ESA, and concluded that current project operations and certain planned future actions would not jeopardize the continued existence of the Delta smelt or adversely modify its critical habitat based on certain actions being taken by the CVP and SWP. The court found that the BiOp was legally inadequate because it did not provide a reasonable degree of certainty that mitigation measures will take place, use the best available science, address climate change or address the impacts of joint project operations on the continued survival of the Delta smelt.[37]

By the time this decision was released, the SWP and CVP water agencies were aware that the incidental take permit was not preventing take of Delta smelt and had requested a new permit.

[32] *Id.* MWD's contract with DWR expires in 2035, at which time MWD has an option to renew under the same basic conditions. MWD's 2005 UWMP at A.3-12.
[33] *Watershed Enforcers v. California Department of Water Resources*, Case No. RG06292124, Order (Alameda County Sup. Ct. March 22, 2007).
[34] *Id.*
[35] http://appellatecases.courtinfo.ca.gov/search/case/dockets.cfm?dist=1&doc_id=676185&doc_no=A117715
[36] *Natural Resources Defense Council v. Kempthorne*, 506 F.Supp.2d 322, 387-388 (E.D.Cal. 2007).
[37] *Id.*

The consultation process with USFWS is expected to result in a new BiOp and take permit in late 2008. On August 31, 2007, Judge Wanger issued an interim oral decision that allowed the SWP and CVP to continue operating under the prior take permit as long as they complied with a USFWS-proposed five-point action matrix, as modified slightly, plus certain increased monitoring plans requested by the plaintiffs and other actions that do not have a water cost.

At the remedy proceeding before Judge Wanger, the Chief of the SWP Operations Planning Branch testified that in an average year, when combined deliveries of the CVP and SWP would be 5.9 million AF, reductions in deliveries due to compliance with the USFWS matrix will range from 820,000 to 2.17 million AF, which represent 14 and 37 percent of baseline deliveries, respectively. In a dry year, when combined deliveries would be 3.2 million AF, reductions will range from 183,000 to 814,000 AF, which represent reductions from baseline deliveries of 6 and 25 percent, respectively.[38] The modifications to the USFWS matrix by Judge Wanger will increase the delivery reductions by an amount that was not modeled by DWR, but it is expected that the actual impacts of Judge Wanger's order may be slightly greater than those figures.

Judge Wanger's order will impact diversions from December 25, 2007 until the new USFWS BiOp is issued in late 2008. However, it should be expected that the USFWS will include similar restrictions in the final BiOp to those that were in its action matrix adopted by Judge Wanger. Thus, the SWP and CVP will likely see long-term reductions in deliveries based on this litigation. Among other results, the decision likely will increase the political pressure for construction of the Peripheral Canal to avoid use of the south Delta pumping plants. In response to this decision and other water supply and quality issues, MWD has reported that "[i]n the short and long term, continued investment in regional and local resources will help ensure and diversify reliable water supplies to meet Southern California's future needs."[39] MWD has embarked on many proactive programs to deal with potential future delivery restrictions, should they occur.

For example, MWD is one of the parties that are drafting the Bay-Delta Conservation Plan ("BDCP") to provide state and federal ESA coverage for the SWP operations. The BDCP allows water contractors, who must comply with the federal and state ESAs, to work cooperatively to attain incidental take coverage via a habitat conservation plan and natural community conservation plan. Development of this plan is now underway under the aegis of the California Resources Agency, and a draft report is due in 2008, with the appropriate permits and completion of an environmental impact statement/impact report expected in late 2009.

MWD is also focusing on voluntary Central Valley storage and transfer programs to bank MWD's SWP water supplies. In its 2006 Integrated Water Resources Plan Implementation Report, MWD reported that "492,000 AF of dry-year yield has been developed in Central Valley storage and transfer programs," and "[p]otential partners and programs have been identified to meet IRP targets."[40] This flexibility will assist MWD in addressing shortages due to drought or court-imposed cutbacks to protect Delta smelt. Further, MWD has employed conjunctive use programs which utilize groundwater basins to store water during wet seasons, which provides

[38] California Department of Water Resources, Comparison of the Water Costs Associated with the Proposed Remedy Acts, Table produced from John Leahigh Supplemental Declaration Filed August 3, 2007 in *Natural Resources Defense Council v. Kempthorne*, 506 F.Supp.2d 322 (E.D.Cal. 2007) [Exhibit R].
[39] Metropolitan Water District of Southern California, Press Release (September 11, 2007).
[40] Metropolitan Water District of Southern California, *2006 Integrated Water Resources Plan Implementation Report* at 18 (2006).

a buffer supply that MWD can extract during dry periods. In 2006, MWD developed groundwater storage capable of providing 135,000 AF of dry year supply.[41] MWD continues to seek additional opportunities in Southern California to expand groundwater conjunctive use storage programs.[42]

In December of 2008, the USFWS issued a revised BiOp.[43] The BiOp is effective immediately and sets guidelines for pumping operations for the State Water Project and federal Central Valley Project to ensure the continued existence of delta smelt and its habitat. At the time, the effect of the BiOp was seen as likely to result in the reduction of water deliveries from the CVP and SWP.

In the face of these new environmental restrictions and California entering the third year of drought, in October of 2008 DWR issued an initial 15 percent allocation to MWD of SWP supplies in 2009.[44] In addition, MWD expects continued reduced deliveries from the Colorado River as that watershed continues to recover from record drought.[45] In February of 2009 the Governor proclaimed a state of emergency and ordered a range of actions to manage the drought crisis.[46]

However, after recent precipitation events in late winter of 2009 which increased snowpack to nearly 90% of normal, in March of 2009 DWR revised its allocations upward, to 20 percent.[47] At the same time, DWR's most-recent snow survey of the winter season indicates snowpack water content statewide is 81 percent of normal, and as a result in April of 2009 DWR increased the 2009 SWP delivery allocation to 30 percent. "DWR's new approval considered several factors, including existing storage in SWP conservation reservoirs, SWP operational constraints, including the conditions of the recent Biological Opinion for Delta smelt, and 2009 contractor demands."[48] While this is an improvement from DWR's March allocation of 20 percent, drought conditions continue and DWR strongly urges continued conservation.[49]

Delta Levees. The state is actively studying the risk of levee failure and potential impacts to SWP supplies and developing a plan to protect the Delta. There are several concurrent processes for resolving these challenges. In the spring of 2006, at the recommendation of CALFED, an interagency effort that includes 23 state and federal agencies that have management or regulatory responsibility for the Delta, DWR began a two-year Delta Risk Management Study ("DRMS") to analyze risks to the levee system. The Stage I analysis includes a discussion of the region's assets, existing problems with the system, the degree of risk that exists and the potential consequences of multiple levee failures. Stage II addresses

[41] *Id* .at 20.
[42] *Id.* at 21.
[43] http://www.fws.gov/sacramento/es/documents/SWP-CVP_OPs_BO_12-15_final_OCR.pdf
[44] http://www.water.ca.gov/swpao/docs/notices/08-07.pdf
[45] http://www.mwdh2o.com/mwdh2o/pages/news/press_releases/2009-02/conservation%20increase.pdf
[46] http://gov.ca.gov/press-release/11556/
[47] http://www.water.ca.gov/swpao/docs/notices/09-04.pdf; see also http://www.water.ca.gov/news/newsreleases/2009/031809allocation20.doc
[48] http://www.water.ca.gov/swpao/docs/notices/09-06.pdf
[49] http://www.water.ca.gov/news/newsreleases/2009/041509allocationam.doc

levee risk reductions. The DRMS reports are a part of the Delta Vision Report, which was finalized for submission to the State Legislature and Governor in January 2008 [50].

Following completion of the Delta Vision Report, the panel established by Governor Schwarzenegger will begin studying long-term strategic solutions for the conflicts in the Delta. That process, which started taking place during 2008, is a strategic planning stage that assesses alterative implementing measures and management practices to implement the Delta Vision recommendations. The final recommendations will include modifications to existing land uses and services in the Delta, and will assess governance, funding mechanisms, water resource uses and ecosystem management practices. The Delta Vision Committee will publish a public review draft of its Delta Strategic Plan by October 31, 2008[51] and submit the final plan to the Governor and Legislature by December 31, 2008. In response to concerns over the integrity of the levee system, the state significantly increased the budget for levee repairs in 2006, and a $5.4 billion natural resources bond was approved by voters in November 2006 (Proposition 84), which assigns additional funds for flood control in the Delta and to plan for future water supplies.

The Delta Vision Committee completed its Implementation Report in December of 2008, and recommended to the Governor, based upon its review of the Strategic Plan document, action on a list of near-term actions necessary to achieve Delta sustainability, including priority "fundamental actions."[52] The next steps in the process include drafting of the Bay Delta Conservation Plan EIS/EIR and implementation, all of which are expected to be complete by the end of 2010.[53]

At the state, regional and local levels, numerous water decision-makers are actively addressing the threats facing the Delta. A review of MWD's resource development programs demonstrates that although SWP supplies are facing challenges and may become more expensive based on the cost of ultimately adopted solutions, MWD's adaptive planning framework, which includes conservation, in-region surface water storage, groundwater storage programs and local water production within the MWD service area, will allow MWD to adapt to changing conditions and ensure a reliable, diverse water supply to its members agencies that supply water to municipal customers. MWD has spent the past decade increasing the capacity of its reservoirs, and its overall water reserve is several times larger than it was during the 1991-1992 drought. Further, actions that are being taken by the CALFED process and the state should enhance reliability of the SWP supplies in the future. Both MWD and state agencies are aware of changing conditions that may impact the SWP and are planning accordingly to ensure a safe, reliable supply of SWP water.

[50] http://www.water.ca.gov/floodmgmt/dsmo/sab/drmsp/docs/AB1200_report.pdf
[51] The Fourth Staff Draft Strategic Plan was released on September 12, 2008. http://www.deltavision.ca.gov/StrategicPlanningDocumentsandComments.shtml Public comment on this draft will be taken at the September, 2008 meeting of the Delta Vision Blue Ribbon Task Force. http://deltavision.ca.gov/

[52] http://deltavision.ca.gov/DV_Committee/Jan2009/08-1231_Delta_Vision_Committee_Implementation_Report.pdf
[53] http://deltavision.ca.gov/TimelineAndGlossary/DV_BRTF_ArticulationTimeline_07-17-08.pdf

Additional Actions to Mitigate Supply Risks. In addition to the actions described in the previous sections that seek to avoid or mitigate risks facing the Colorado River or SWP individually, MWD also has several programs that address its overall supply reliability. Several of those programs are described below.

Water Surplus and Drought Management Plan ("WSDM"). In 1999, MWD incorporated the water shortage contingency analysis that is required as part of any urban water management plan into a separate, more detailed plan, called the WSDM.[54] That plan provides policy guidance to manage MWD's supplies and achieve the goals laid out in the agency's Integrated Resources Plan. The WSDM also "identifies the expected sequence of resource management actions that [MWD] will execute during surpluses and shortages to minimize the probability of severe shortages and eliminate the possibility of extreme shortages and shortages allocations."[55] MWD's ten-year WSDM categorizes its ability to deliver water to its customers by distinguishing between surpluses, shortages, severe shortages and extreme shortages.[56] The WSDM's integration of management actions taken during times of surplus and shortages reflects MWD's belief that these actions are interrelated.

For example, MWD's regional storage facilities, such as Lake Skinner, Lake Mathews and Diamond Valley Lake, along with storage capacity available to MWD in Castaic Lake and Lake Perris, provide MWD with flexibility in managing its supplies.[57] MWD's storage supplies and existing management practices allow MWD to mitigate shortages without having to impact retail municipal and industrial demands, except in severe or extreme shortages.[58] MWD's 2005 UWMP shows its expected ability to meet demands in single dry years by water supply source. For example, in 2010 MWD expects to have 831,000 AF in potential reserve and replenishment supplies, primarily through in-basin storage.[59] In 2030, MWD estimates that it will have 716,000 AF in potential reserve and replenishment supplies.[60] Anytime MWD withdraws from storage to meet demands, it is considered to be in a shortage stage.[61] MWD has spent decades building up its storage reserves and groundwater management programs in order to prepare for a variety of shortage conditions. "Each [shortage] stage is associated with specific resource management actions designed to (1) avoid an Extreme Shortage to the maximum extent possible and (2) minimize adverse impacts to retail customers if an Extreme Shortage occurs."[62] MWD notes that the "overriding goal of the WSDM Plan is to never reach Shortage Stage 7, an Extreme Shortage."[63]

In an actual shortage, MWD will take one or more of the following actions: (1) draw on storage out of reservoirs; (2) draw on out-of-region storage in the Semitropic and Arvin-Edison groundwater banks; (3) reduce or suspend long-term seasonal and groundwater replenishment deliveries; (4) draw on groundwater storage programs; (5) draw on SWP terminal reservoir storage; (6) reduce Interruptible Agricultural Water Program ("IAWP") deliveries; (7) call on

[54] *See* Cal. Water Code § 10632; Metropolitan Water District of Southern California, *Water Surplus and Drought Management Plan*, Report No. 1150 at 1 (August 1999).
[55] MWD 2005 UWMP. at II-15.
[56] *Id*. at II-16.
[57] WSDM Plan at 20.
[58] *Id.*
[59] MWD 2005 UWMP at III_
[60] *Id*.
[61] *Id*.at II-16.
[62] *Id*.
[63] *Id*. at II-17.

water transfer options contracts; (8) purchase additional water; and (9) reduce imported supplies to its members agencies by an allocation method.[64] MWD clarifies that this list is not in any particular order, "although it is clear that the last action [taken] will be the curtailment of firm deliveries to the member agencies."[65] If MWD were obligated to curtail firm deliveries, it would enforce these shortage allocations using rate surcharges. For example, if deliveries exceed 102 percent of a customer's allotment, the customer will be assessed a surcharge.[66] MWD's actions in 2007 are instructive in demonstrating how the WSDM Plan is implemented in practice.

Prior to the start of calendar year 2007, MWD estimated that water demands would exceed annual supplies (not including stored water) by approximately 300,000 AF.[67] In response, MWD took the following actions: (1) called for water stored in its Central Valley storage programs; (2) initiated replenishment cuts and notified participating agencies with in-basin groundwater storage programs; (3) embarked on a public outreach and media conservation campaign; and (4) announced reductions in IAWP agricultural supplies.[68]

Regarding reductions in agricultural water deliveries, before MWD imposes any restrictions on the PWP's Tier 1 water, it will reduce deliveries of discounted agricultural supplies. In 1994, MWD established the IAWP to deliver surplus water for irrigation purposes at a reduced rate that is more affordable for certain sectors of the agricultural industry.[69] In exchange for the discounted rate, the MWD General Manager has the authority to reduce IAWP deliveries up to 30 percent before it imposes mandatory allocations to municipal and industrial retail customers under its WSDM.[70]

Due to dry conditions and the pending Delta smelt litigation in 2007 that may affect MWD's supplies, MWD will implement the water shortage actions which it outlined in its WSDM, which include a 30 percent reduction in IAWP deliveries. On October 9, 2007, MWD's Board of Directors announced that it will reduce IAWP deliveries over a 12-month calendar year beginning in January 2008.[71] At this time, MWD has stated that it will not reduce water purchased by its member agencies at the full service rate.[72] PWP's supplies are currently secure as it purchases non-discounted non-interruptible supplies from MWD.

MWD has implemented a strategic approach for 2008 regarding its WSDM Plan. Besides exercising interruptions to the IAWP, MWD's major strategies are as follows:

- Continue conservation campaign;
- Maximize recovery of water from Central Valley storage and banking programs;
- Purchase additional supplies to augment existing supplies; and

[64] WSDM Plan at 23.
[65] *Id*.
[66] MWD 2005 UWMP at II-16 to II-17.
[67] Metropolitan Water District of Southern California, *Water Surplus and Drought Management Plan Board Report* (June 21, 2007). Figure did not include the risk of the SWP supply being restricted to protect Delta smelt, which in fact occurred.
[68] *Id*. at 4.
[69] Metropolitan Water District of Southern California, Administrative Code § 4900 *et seq*.
[70] *Id.* at § 4905.
[71] Metropolitan Water District of Southern California, Board of Directors Agenda Item 8-4 at 1 (October 9, 2007)
[72] *Id.* at Attachment 2 at 3

- Develop and implement a shortage allocation plan.[73]

MWD is presently developing a long-term Drought Allocation Plan that may include reductions of full service deliveries.[74] MWD has used several of these types of initiatives in the past, e.g., during the droughts of 1977-78 and 1989-92, which allowed the agency to meet the needs of its member agencies.[75] Past experience demonstrates that MWD has always provided its members agencies with sufficient supplies in the face of variable weather conditions, new environmental and water quality regulations, and evolving political and legal challenges.[76]

Integrated Resources Plan. MWD first adopted its Integrated Resources Plan ("IRP") in 1996. The most updated IRP, which was adopted in 2004, discussed local water supply initiatives—e.g., local groundwater conjunctive use programs—and established a buffer supply to mitigate against the risks associated with implementation of local and imported water supply programs.[77] The 2004 IRP noted that future water supply reliability depends not only upon actions by MWD to secure reliable imported supplies, but also further development of local projects by local agencies.

On October 10, 2006, MWD released its 2006 Integrated Water Resources Plan Implementation Report ("2006 Implementation Report") to report on progress toward implementing the targets from the 2004 IRP Update. The 2006 Implementation Report included a summary of each of MWD's water resource development categories: (1) conservation; (2) local resources; (3) Colorado River Aqueduct; (4) SWP supplies; (5) Central Valley storage and transfer programs; (6) in-region groundwater conjunctive use storage; and (7) in-region surface water storage. This recent report concluded that "while changes occur in all resource areas, Metropolitan is able to maintain supply reliability through its diversified water resources portfolio."[78]

MWD supported this conclusion by providing detailed updates for each of its resource categories, restating dry-year IRP targets and examining current considerations, changed conditions, implementation strategies and identified programs, implementation challenges and cost information. A brief summary of each of MWD's water resource development categories (other than the Colorado River and SWP supplies, which were discussed in detail in previous sections of this WSA) is provided below:

- Conservation*:* In 2006, MWD invested $10.6 million in conservation programs and initiatives, including executing a 10-year residential master conservation funding agreement with member agencies, encouraging the use of high-efficiency toilets, strengthening outdoor conservation programs and introducing new Industrial Process Improvement programs. In 2005-2006, MWD programs conserved approximately 762,000 AF, which was an increase of approximately 30,000 AF over the previous fiscal year. MWD's 2010 target for conservation savings is 865,000 AF.[79]

[73] Metropolitan Water District of Southern California, *Water Surplus and Drought Management Plan Board Report* (June 21, 2007).
[74] *Id*.
[75] MWD 2005 UWMP at 3-4.
[76] For example, MWD successfully dealt with disruptions to supply caused by the 2004 Jones Tract flooding and operational constraints such as the rehabilitation of the Colorado River Aqueduct in 2003. *See* MWD 2005 UWMP at II-15.
[77] Metropolitan Water District of Southern California, *Integrated Resources Plan Update* (2004).
[78] Metropolitan Water District of Southern California, *2006 Integrated Water Resources Implementation Report* at 1 (2006).
[79] *Id.* at 5-6.

- Local Resources—Recycling, Groundwater Recovery and Seawater Desalination*:* MWD has invested $213 million with its member agencies to develop local resource programs. MWD contributed approximately $24.5 million toward the production of 127,000 AF of local resource production supplies in 2006, which is an increase of 16,000 AF from 2005. MWD's 2010 target for regional water recycling and groundwater recovery is 410,000 AF. Further, three desalination project agreements have been signed.[80]

- Central Valley Storage and Transfer Programs*:* MWD has developed significant water storage and transfer program partnerships in the Central Valley and has witnessed increased cooperation with DWR and federal agencies to facilitate water transfers. MWD continues to pursue transfers with Central Valley parties and has worked to improve existing storage programs with existing SWP storage partners.[81] For 2008, MWD is currently seeking to acquire up to 250,000 AF by temporary transfer from the Central Valley.

- In-Region Groundwater Storage*:* The 2006 Implementation Report identified that components of MWD's in-region groundwater storage program may not meet its 2010 dry-yield target of 275,000 AF. As of October 2006, groundwater storage had been developed to provide about 135,000 AF.[82] In response, MWD conducted a groundwater basin assessment to explore other groundwater storage opportunities. MWD's recent Groundwater Basin Assessment Study provided new information to focus on meeting this goal.[83] MWD will continue to develop new strategies for groundwater storage.[84]

MWD's 2007 Implementation Report demonstrates that the agency has continued to react aggressively to address challenges facing water resources.[85] By amending existing strategies, MWD has made significant progress in most resource areas toward meeting the IRP targets. For example, in fiscal year 2006-2007, MWD saved approximately 812,000 AF through conservation efforts and is expected to meet its 2010 target.[86] Local resource production is expected to exceed the 2010 target of 426,000 AF based on current production and expansion of existing programs.[87] Existing supplies in Central Valley storage programs are also expected to exceed the 2010 target of 300,000 AF.[88] While in-region groundwater storage programs are currently falling short of MWD's 2010 IRP target, MWD is actively working to find new ways to meet this goal, and the success of other programs, such as Central Valley storage, can avoid any negative impacts from failure to meet this single goal.[89] For example, MWD has already exceeded its 2010 IRP target for dry-year surface water storage.[90] While SWP supplies are not projected to meet the 2010 or longer-term targets, MWD is actively seeking to resolve the risks associated with that supply.[91]

[80] *Id.* at 7-8.
[81] *Id.* at 19.
[82] *Id.* at 20.
[83] *Id.* at I-6.
[84] *Id.* at 22.
[85] Metropolitan Water District of Southern California, *2007 Integrated Water Resources Implementation Report* (2007).
[86] *Id.* at 1-5.
[87] *Id*.
[88] *Id.* at 1-6
[89] *Id*.
[90] *Id.* at 1-7
[91] *Id*.

MWD is in the process of updating the 2004 IRP for release in 2009.[92] The updated IRP will address existing and new challenges, such as the Delta smelt litigation and climate change.[93] As can be seen by these ongoing studies, MWD is continually updating its plans to meet ever-changing challenges to its water supplies.

Five-Year Supply Plan. A Five-Year Supply Plan is being prepared to identify the specific resource and conservation actions that would be implemented over the next five years to manage water deliveries under continued drought conditions and court ordered restrictions.[94] Since April 2008, staff has been working with the member agencies through a series of meetings and workshops to develop and implement the Five-Year Supply Plan.[95] The Plan was initiated in response to a number of extraordinary events, including regulatory actions that reduced water supplies from the State Water Project (SWP) to protect Delta smelt, as well as a record-dry hydrology that will result in about 1.1 million acre-feet of withdrawals from Metropolitan storage from January 2007 through December 2008.[96]

The Five-Year Supply Plan includes a number of various programs to enhance supplies through conservation, Colorado River transactions, near term Delta actions, SWP transactions, groundwater recovery, and local resource enhancement programs (see Appendix F).[97] There are numerous specific projects and transactions that have been identified as potential resource options for the next five years. These programs are anticipated to result in an additional 519,000 AFY to 1,255,500 AFY in 2009,[98] with additional increases beyond 2009 as some improvements would require more than one year to bring online.

Summary of MWD Water Supply Reliability. MWD has engaged in significant water supply projection and planning efforts. As noted above, those efforts have included the water demands of the City's service area as projected in the 2005 UWMP in their projections. In its 2003 Blueprint Report and 2005 Regional Urban Water Management Plan, MWD has consistently found that its existing water supplies, when managed according to its water resource plans, such as the WSDM and IRP, are and will be 100 percent reliable for at least a 20-year planning period. Since publication of those reports, MWD has continued to implement its water supply programs, as reported in its 2006 and 2007 Implementation Reports, the latter of which was published on October 9, 2007. Although water supply conditions are always subject to uncertainties, MWD has maintained its supply reliability in the face of such uncertainties in the past, and is actively managing its supplies to ensure the same 100 percent reliability for the future.

Climate Change. Uncertainty remains with respect to the overall impact of global climate change on future water supplies in California. Studies have found that, "Considerable uncertainty about precise impacts of climate change on California hydrology and water

[92] http://www.mwdh2o.com/mwdh2o/pages/yourwater/irp/index.html
[93] *Id.* at 1-3
[94] Metropolitan Water District of Southern California. *Status Update on Five-Year Supply* August 18, 2008 at 1
[95] Id.
[96] Id.
[97] Id. at 3-5.
[98] Id. at 8.

resources will remain until we have more precise and consistent information about how precipitation patterns, timing, and intensity will change." [99]

The California Department of Water Resources report on climate change and effects on the State Water Project (SWP), the Central Valley Project, and the Sacramento-San Joaquin Delta concludes that "[c]climate change will likely have a significant effect on California's future water resources . . . [and] future water demand." It also reports that "much uncertainty about future water demand [remains], especially [for] those aspects of future demand that will be directly affected by climate change and warming[100]. While climate change is expected to continue through at least the end of this century, the magnitude and, in some cases, the nature of future changes is uncertain" [101].

This uncertainty serves to complicate the analysis of future water demand, especially where the relationship between climate change and its potential effect on water demand is not well understood[102]. DWR adds that "[i]t is unlikely that this level of uncertainty will diminish significantly in the foreseeable future." Still, changes in water supply are expected to occur, and many regional studies have shown that large changes in the reliability of water yields from reservoirs could result from only small changes in inflows [103].

4.6.2 Impact Analysis

a. Methodology and Significance Thresholds. There would be a significant impact if the PWP could not supply water for the proposed project. In accordance with the State CEQA Guidelines, a project would result in a significant impact if it would:

- *Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted);*
- *Require or result in the construction of new water treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects;*
- *Fail to have sufficient water supplies available to serve the project from existing entitlements and resources, or if new or expanding entitlements are needed.*

In addition, the City has two water conservation goals related to the Urban Environmental Accords and the Governor's 20% by 2020 reduction. The City actively seeks to reduce potable water consumption by 10% by the year 2015 and to further decrease consumption by an additional 5% by the year 2020 consistent with the Governor's 20% by 2020 reduction. Therefore, a project is required to conserve a minimum of 20% on potable water to be considered less than significant.

[99] Kiparsky and Gleick. *Climate Change and California Water Resources: A Survey and Summary of the Literature. California Energy Commission Report 500-04-073* (2003)
[100] California Department of Water Resources. *Progress on Incorporating Climate Change into Management of California's Water Resources.* July 2006.
[101] *Id.*
[102] *Id.*
[103] Id. also Cayan, Dettinger, and Knowles. *Trends in snowfall versus rainfall in the western US. Journal of Climate.* (2006); and Cayan et al. *Mapping New Terrain--Climate Change and America's West. Report of the Consortium for Integrated Climate Research in Western Mountains.* (2006)

b. Project Impacts and Mitigation Measures.

Impact W-1 The proposed project would generate increased demand for water. The PWP would be able to supply the projected demand based on existing entitlements provided the proposed project incorporates conservation. Impacts to water supply are considered Class II, *significant but mitigable.*

The proposed project would involve development of up to 159,971 square feet (sf), including 145,564 sf of office use with 14,407 sf of ground floor retail uses. Project water demand is shown in Table 4.6-4.

Table 4.6-4
Estimated Project Water Demand

Use	Quantity (square feet)	Demand Factor [1]	Demand Gallons/Day	Demand Acre Feet/ Year [2]
Proposed Office	145,564	0.14	20,379	22.8
Proposed Commercial	14,407	0.10	1,441	1.6
Subtotal	159,871	n/a	21,820	24.4
Existing Commercial [3]	66,000	0.10	6,600	7.4
		Total	**14,680**	**16.4**

[1] City of Pasadena Generation Rates Spreadsheet, derived from Orange County Sanitation District Rates

[2] One Acre-Foot = 325,851.429 gallons

[3] The existing commercial building is vacant; however, a new tenant could occupy the building without any discretionary action, which would result in about 6,600 gallons/day water demand

Taking into account the existing 66,000 square foot retail building, the proposed project would result in a net increase in demand of 16.4 AFY. These 16.4 AFY represent standard water consumption rates absent water conservation techniques. As indicated in the discussions earlier in this section, water supplies face challenges from drought, climate change, and pumping restrictions. Both MWD and the City include conservation as a portion of the future strategy to ensure that water supplies are maximized, while consumer demand is minimized. Future supplies are adequate to meet demands through a 20-year planning horizon with implementation of conservation and groundwater recharge programs both locally and regionally.

Mitigation Measures. The City requires that projects conserve at least 20% on potable water to be considered less than significant. The following mitigation measure is required. The Water Efficiency Credit shall become a mitigation measure to ensure that onsite consumption is reduced by 20%.

W-1 **LEED Water Efficiency Credit 3.1** Employ strategies that in aggregate use 20% less water than the water use baseline calculated for the building (not including irrigation) after meeting the Energy Policy Act of 1992 fixture performance requirements. Calculations are based on estimated occupant usage and shall include only the following fixtures (as applicable to the building): water closets, urinals, lavatory faucets, showers and kitchen sinks.

Significance After Mitigation. Implementation of mitigation measures W-1 would result in a 20% reduction of water usage over normal baseline usage. This measure would achieve project consistency with the City's goal of increasing water conservation by 20% by 2020. The project could further reduce water consumption by incorporating LEED Water Efficiency Credit 3.2, which would further reduce on-site water consumption by an additional 10%, which would achieve an overall conservation rate of 30%. LEED Water Efficiency Credit 3.2 is also recommended as a priority design feature under the Greenhouse Gas Discussion near the end of Section 4.2 Air Quality. However, the project's impact to water service would be less than significant with implementation of mitigation measure W-1.

c. Cumulative Impacts. The proposed development, in conjunction planned and pending development, including 1,256 residences and 461,687 square feet of commercial development (see Table 3-1 in Section 3.0 *Environmental Setting*) would create additional demand for water. However, as indicated earlier in this section and in tables 4.6-1 though 4.6-3, water supplies are adequate over a 20-year planning horizon in single dry year, multiple dry year and average years to serve projected development increases. It is noted that there may be periods when local and regional plans to curtail water usage are implemented to offset reduced supplies during shortage periods. However, these conservation programs in addition to plans and policies at the regional and local level, in addition to development of additional diversified supplies are part of the evolving strategy to continue meeting increasing water demands in the future. Provided that all new developments implement conservation, cumulative impacts to water service would be less than significant.

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5.0 OTHER CEQA REQUIRED DISCUSSIONS

5.1 POPULATION AND ECONOMIC GROWTH

The proposed project involves the demolition of the existing two-story commercial retail structure, excavation for a six-level subterranean garage, and the subsequent construction of a 160,000 square foot five-story commercial office building with 522 subterranean spaces. On the ground floor, the building would have 14,407 SF of retail use while the remainder of the building would contain 145,564 SF of office use. The proposed project does provide for an increase in jobs associated with both the retail and office component. This has the potential to result in indirect growth to the City by luring employees to the area. The 2004 Land Use and Mobility Elements, Zoning Code Revisions, and Central District Specific Plan FEIR states that about 2 jobs are generated per 1,000 square feet of non-residential development. Therefore, based on a 160,000 square foot non-residential building, about 320 jobs would be generated. The development intensification is consistent with plans for the Central District, which is intended to accommodate 9,946 new jobs between 2004 and 2015 (The 2004 Land Use and Mobility Elements, Zoning Code Revisions, and Central District Specific Plan FEIR).

For financial, retail, office, personal services, eating/drinking and manufacturing about 5.60% of employees will move to Pasadena after finding work in Pasadena (1991, Secondary Impacts of New Non-Residential Development on Pasadena's Existing Child Care Spaces and Affordable Housing). Thus, based on the provision of 320 new jobs, about 18 people would relocate to the City. The generation of 320 new jobs and generation of demand for 18 additional residential units is consistent with the vision for the Central District, the Land Use Element and the General Plan which envisions 2,750 new residential units and 1.25 million square feet of non-residential development within the Central District between 2004 and 2015.

The City has experienced an increase in housing units in the Playhouse District with the recent approvals of the Archstone Pasadena project, the Lake-Walnut and the Trio mixed use developments, Pasadena Gateway Villas, Madison Walk condominiums, Oak Knoll condominiums, and Walnut Place apartments. The proposed mixed-use commercial development is intended to provide additional quality employment opportunities for a community that is striving for a balance of employment and housing within the dense urban core. Though there is not a guarantee that employment opportunities would be utilized by local residents, the provision of additional quality employment opportunities within the Central District is considered advantageous to the overall long-term vitality of the City. Because of this, population and economic growth inducing impacts are less than significant.

5.2 REMOVAL OF OBSTACLES TO GROWTH

The project site is located within a highly urbanized area that is well-served by existing infrastructure. No improvements to water, sewer and drainage infrastructure would be required to accommodate the proposed project, other than that which may be required for site development intensification. No new roads would be required. Because the project constitutes redevelopment within an urbanized area, and does not require the extension of new infrastructure through undeveloped areas, project implementation would not remove an obstacle to growth.

5.3 IRREVERSIBLE ENVIRONMENTAL EFFECTS

Section 15126.2(c) of the CEQA Guidelines requires a discussion of any significant irreversible environmental changes that the proposed project would cause. Specifically, Section 15126.2(c) states:

> Uses of nonrenewable resources during the initial and continued phases of the project may be irreversible since a large commitment of such resources makes removal or nonuse thereafter unlikely. Primary impacts, and particularly, secondary impacts (such as highway improvement which provides access to a previously inaccessible area) generally commit future generations to similar uses. Also, irreversible damage can result from environmental accidents associated with the project. Irretrievable commitments of resources should be evaluated to assure that such current consumption is justified. Section 15126.2(c).

The construction and implementation of the proposed project will require the use of energy and building materials, some of which are non-renewable. Manpower would also be committed for the construction of buildings and public facilities necessary to support the new development. Once construction is complete, long term use of the site as retail and commercial offices would require energy resources in the form of natural gas and electricity. Consumption of these resources would occur with any development in the region and are not unique to the proposed plan. The addition of new retail and commercial development to the Playhouse District would irreversibly increase local demand for non-renewable energy resources such as petroleum and natural gas. However, the increasingly efficient building fixtures (LEED certified) for the proposed project and more efficient automobile engines are expected to offset the demand to some degree.

The additional vehicle trips associated with the proposed project would increase regional air pollutant emissions, which would incrementally contribute to the degradation of air quality. Mitigation measures recommended in Section 4.2, *Air Quality*, including ROG, ozone precursor, and dust control measures, would reduce the air pollutant emissions associated with buildout to below SCAQMD significance thresholds. Moreover, the proposed project will involve at a minimum silver LEED certification, which will offset future operating effects as well as the effects associated with construction of the proposed project.

Implementation of the proposed project would increase traffic on area roadways. A significant impact would occur on El Molino Avenue between Colorado Boulevard and Playhouse Alley due to traffic increases in excess of the threshold which requires physical mitigation. Moreover, because El Molino is a de-emphasized street, no physical mitigation can be implemented. The project does include soft mitigation such as payment of fees and pedestrian improvements; however, the proposed project would have a Class I, unavoidably significant impact on the segment of El Molino between Colorado Boulevard and Green Street, thereby requiring a Statement of Overriding Considerations.

5.4 ISSUES FOUND LESS THAN SIGNIFICANT

The initial study for the project is contained in Appendix A. The initial study found that the project would have a less than significant impact in the following issue areas.

- Agricultural Resources
- Biological resources
- Energy
- Population and Housing
- Recreation
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Mineral Resources
- Public Services
- Utilities and Service Systems

The Initial Study further found that for the issue area of cultural resources, the proposed project would have a less than significant impact with implementation of City required standard mitigation for the protection of as-yet undiscovered archaeological and paleontological resources. Therefore, these standard City required mitigation measures are carried over into the Mitigation Monitoring and Reporting Program for the project as CUL-1 and CUL-2, and would reduce the potential for adverse effects to these resources to a level that is less than significant (refer to pages 11-12 of the initial study for the entire discussion).

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6.0 ALTERNATIVES

As required by Section 15126.6 of the *CEQA Guidelines,* this EIR examines a range of reasonable alternatives to the proposed project. Included in this analysis are ~~four~~ five alternatives that involve different development configurations on the site in addition to the CEQA-required "no project" alternative. The alternatives are listed below:

- *No Project Alternative*
- *Offsite Parking Alternative*
- *Dual Access Alternative*
- *100% FAR Alternative*
- *80% Reduced Project Alternative*
- *Height Averaging Alternative*

The offsite parking alternative, the dual access alternative, the 100% FAR alternative, and the reduced project alternative are all intended to explore elimination of the Class I impact caused by the increase in traffic volume on the segments of El Molino Avenue between Colorado Boulevard and Playhouse Alley and between Union Street and Colorado Boulevard. El Molino Avenue is classified as a de-emphasized street in the City's General Plan Mobility Element, meaning that street improvements are not permitted to allow for additional travel capacity. The Height Averaging Alternative was added in response to comments received during the public review period. Each of the various alternatives is described below along with the relative impact analysis. The impact analysis for each alternative is limited to the impacts that would be reduced by the respective alternative as compared with the proposed project. This assumes all other aspects are consistent with the proposed project and any impacts not discussed below are not altered. This section also evaluates the feasibility of similar development at alternative locations and, as required by CEQA, includes a discussion of the "environmentally superior alternative" among those studied. Table 6.1 summarizes the characteristics of the alternatives.

Table 6-1 shows the different characteristics of the proposed project in addition to each of the other alternatives. Figure 6-1 shows the locations of the off-site parking structures.

Table 6-1
Characteristics of the Proposed Project and Alternatives

Scenario	Office (SF)	Retail (SF)	On-site Parking spaces		Off-site Parking spaces		Levels Below Grade	stories
			Project	Public	Project	Public		
Proposed Project	145,564	14,407	367~~6~~	155~~6~~	0	0	6	5
1 – No Project	none	66,000	36	0	0	0	0	2
2 – Off-site Parking	145,564	14,407	304	96	62	60	4.5	5
3 - Dual Access	145,564	14,407	367~~6~~	155~~6~~	0	0	6	5
4 -100% Floor Area Ratio	130,721	14,407	333	155~~6~~	0	0	5.5	5
5 - 80% Reduced Project	31,471	none	71	0	0	0	1	1
6 – Height Averaging	145,564	14,407	367	155	0	0	6	6

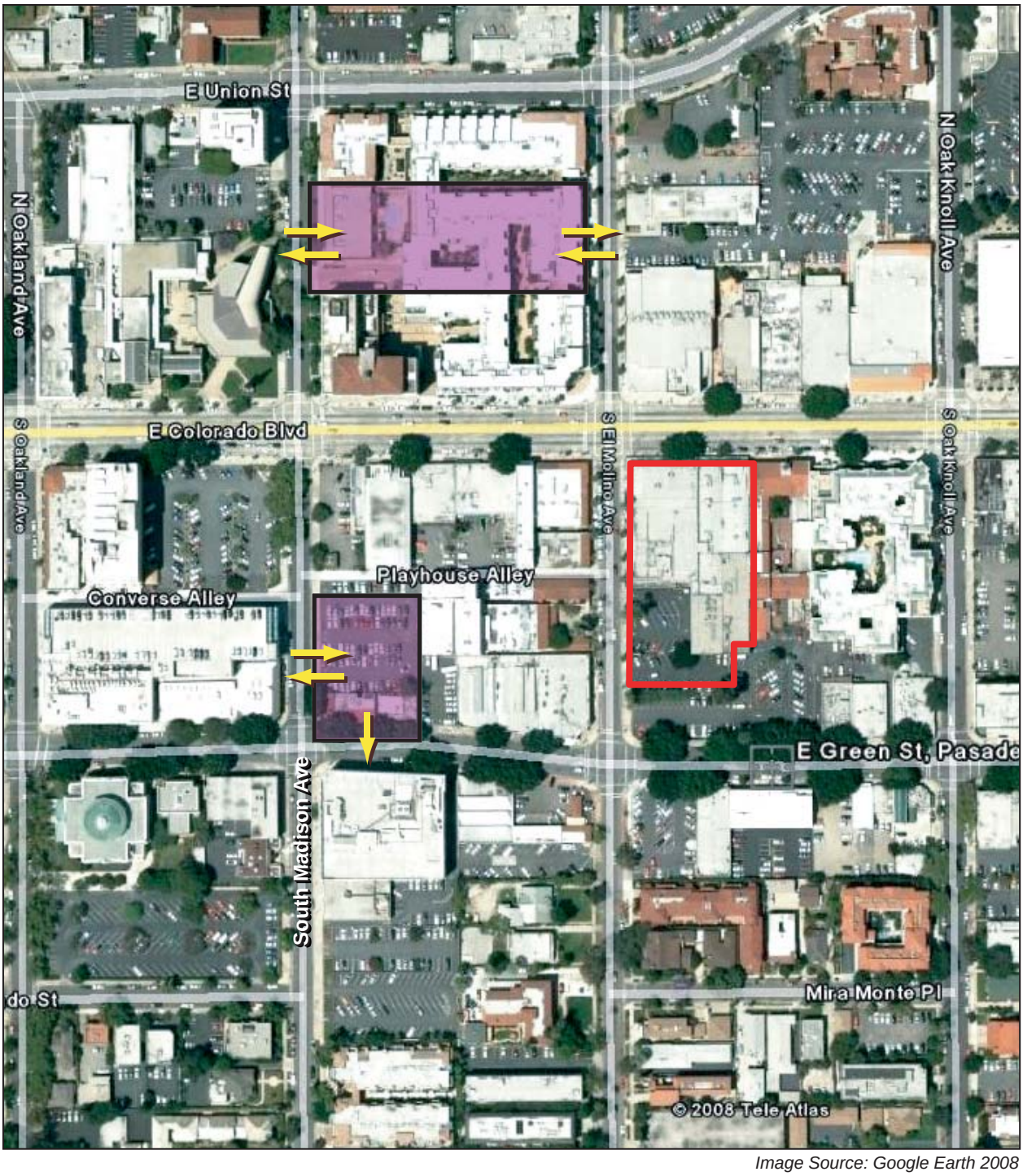


Image Source: Google Earth 2008

Project Boundary

Alternative Parking Site

Site Access

N

0 120 240

Scale in Feet

Alternative Parking Sites

Figure 6-1

6.1 NO PROJECT ALTERNATIVE

6.1.1 Description

This alternative assumes that the proposed project would not be developed and that the two-story commercial retail building would not be demolished. Thus the existing building would be preserved along with the 36 surface parking spaces and 28 trees. In addition, the visual character of the Playhouse District would remain in its current state.

6.1.2 Impact Analysis

Because this alternative would not involve a change in land use, no change in environmental conditions would occur. However, it should be emphasized that the existing building is currently unoccupied. Based on the size of the building (66,000 square feet) and the previous furniture store retail use [Institute of Transportation Engineers (ITE) Code 890], lease of the existing building for a furniture store would create 330 ADT, which exceeds the 4.9% traffic increase on El Molino Avenue by 19 ADT. A different more generic specialty retail use (ITE Code 814) would create about 2,900 ADT, which is 1.8 times the amount of traffic the proposed project would generate. Therefore, the no-project alternative would not necessarily eliminate the Class I unavoidably significant traffic impact due to traffic in excess of 4.9% on the segments of El Molino Avenue between Colorado Boulevard and Playhouse Alley and between Union Street and Colorado Boulevard. Other impacts pertaining to aesthetics, construction generated air quality emissions, noise, and geology and water would be reduced or eliminated.

6.2 OFFSITE PARKING ALTERNATIVE

6.2.1 Description

This alternative would consist of the same project characteristics as the proposed project with 14,407 SF ground floor retail space and 145,564 SF of office space on four additional floors. However, this alternative includes two options for off-site parking that would divert some traffic from El Molino Avenue (see Figure 6-1). The size of the on-site subterranean parking structure would be 4.5 levels to accommodate 400 on-site spaces rather than 522 with six levels like the proposed project. The additional parking spaces (122) would be available off-site at one of two locations: either at the Madison Structure located on South Madison Avenue along Playhouse Alley or at 621 East Colorado Boulevard between Madison Avenue and El Molino Avenue (see Figure 6-1). Neither of these alternatives would involve additional construction at off-site locations.

6.2.2 Impact Analysis

Because the offsite parking alternative's project characteristics would be similar to the proposed project with the exception of parking, significant impacts would be similar to those impacts that result from the proposed project. Like the proposed project this alternative would also involve the demolition of the current structure and site grading and excavation in order to construct the 159,971 SF building and the necessary parking structure (400 total on-site parking spaces). Excavation would be reduced by about 20-25%. This alternative would have the same

impacts as the proposed project with respect to all issue areas except for temporary air quality effects and traffic effects because the development intensity is the same and the only difference would be traffic distribution patterns. The environmental effects of the project for each issue area are discussed below.

a. Aesthetics. The effects of this alternative would be the same as the proposed project because the above ground structure would be the same as the proposed project. The change in the depth of the subterranean structure would not eliminate or add any additional significant effects. Mitigation measure AES-3 would still apply to reduce the potential for adverse effects from glare.

b. Air Quality. Air quality impacts are expected to be similar to the proposed project, although slightly less as a result of the decrease in the size of the subterranean parking structure. Like the proposed project, air pollutant emissions generated by construction of the alternative project would not exceed SCAQMD thresholds for NO_x, CO, SO_2, or PM_{10} or $PM_{2.5}$ but could potentially exceed SCAQMD thresholds for ROG as a result of architectural coatings. However, this alternative would be expected to follow similar mitigation measures as the proposed project to reduce ROG and fugitive dust emissions. Operational emissions would be about the same as the proposed project as both would contribute the same amount of traffic to the surrounding roadways and both would involve development of the same amount and types of uses.

c. Noise & Vibration. This alternative would have about the same impacts as the proposed project with respect to the potential for construction noise and vibration and operational noise. It is noted that the vehicular generated noise patterns would be slightly different as compared with the proposed project because the alternative parking sites are both one block away from the project site. However, since project and cumulative noise levels were below FICON thresholds, this alternative would not generate any increases that would exceed those thresholds either. Mitigation measure N-3 for rooftop parapets would apply the same as for the proposed project.

d. Geology. This alternatives impact would be about the same as the proposed project, though the depth of the excavation would be decreased by about 15 feet. Mitigation measure GEO-2 would still apply requiring adherence to geotechnical recommendations and the excavation plan. No additional adverse effects would be created and this alternative would not eliminate the need for any mitigation measures.

e. Traffic and Circulation. This alternative was fully analyzed in the traffic report that was prepared for the proposed project (referred to as Alternatives 3 & 4 in that study, which is included in Appendix E of this EIR). Both off-site parking locations would result in a significant impact at the Colorado Boulevard/El Molino Avenue intersection and would require implementation of mitigation measures TC-1(a-e), which would fully mitigate the impact at this intersection, the same as with the proposed project. Moreover, both of these off-site parking locations would result in a significant impact on the street segments of El Molino Avenue north of Walnut Street, El Molino Avenue between Walnut Street and Union Street, between Green Street and Cordova Street, between Cordova Street and Del Mar Boulevard, between Colorado Boulevard and Playhouse Alley, and between Union Street and Colorado Boulevard, the same as with the proposed project. Mitigation measures TC-1(a-e) and TC-2 would also apply;

however, the impact to the street segments of El Molino Avenue between Colorado Boulevard and Playhouse Alley and between Union Street and Colorado Boulevard would not be reduced to a less than significant level. Therefore, the impacts associated with this alternative would be Class I, *unavoidably significant*, the same as with the proposed project.

f. Water Service. This alternative would create the same demand for water as would the proposed project. The impact would be the same as the proposed project, Class II, significant but mitigable, with inclusion of mitigation measure W-1.

6.3 DUAL ACCESS ALTERNATIVE

6.3.1 Description

This alternative would consist of the same project characteristics as the proposed project with 14,407 SF ground floor retail space and 145,564 SF of office space on four additional floors. However, this alternative includes two options for on-site vehicle access that would divert some traffic from El Molino Avenue to Green Street. The size of the on-site subterranean parking structure would be six levels the same as with the proposed project.

6.3.2 Impact Analysis

Because the dual access alternative's project characteristics would be similar to the proposed project with the exception of access, significant impacts would be similar to those impacts that result from the proposed project. Like the proposed project, this alternative would also involve the demolition of the current structure and site grading and excavation in order to construct the 159,971 SF building and the necessary parking structure (522 total on-site parking spaces). This alternative would have the same impacts as the proposed project with respect to all issue areas except for traffic effects because the development intensity is the same and the only difference would be traffic distribution patterns. The environmental effects of the project for each issue area are discussed below.

a. Aesthetics. The effects of this alternative would be the same as the proposed project because the above ground structure would be the same as the proposed project. Mitigation measure AES-3 would still apply to reduce the potential for adverse effects from glare.

b. Air Quality. Air quality impacts are expected to be the same as the proposed project. Like the proposed project, air pollutant emissions generated by construction of the alternative project would not exceed SCAQMD thresholds for NO_x, CO, SO_2, or PM_{10} or $PM_{2.5}$ but could potentially exceed SCAQMD thresholds for ROG as a result of architectural coatings. However, this alternative would be expected to follow similar mitigation measures as the proposed project to reduce ROG and fugitive dust emissions. Operational emissions would be the same as the proposed project.

c. Noise & Vibration. This alternative would have the same impacts as the proposed project with respect to the potential for construction noise and vibration and operational noise. Mitigation measure N-3 for rooftop parapets would apply the same as for the proposed project.

d. Geology. This alternatives impact would be about the same as the proposed project. Mitigation measure GEO-2 would still apply requiring adherence to geotechnical recommendations and the excavation plan. No additional adverse effects would be created and this alternative would not eliminate the need for any mitigation measures.

e. Traffic and Circulation. This alternative was fully analyzed in the traffic report that was prepared for the proposed project (referred to as Alternative 2 in that study, which is included in Appendix E of this EIR). The dual access alternative would result in a significant impact (2.4% to 4.9% increase in ADT) at the Colorado Boulevard/El Molino Avenue intersection and at the street segments of El Molino Avenue north of Walnut Street, between Walnut Street and Union Street, between Green Street and Cordova Street, and between Cordova Street and Del Mar Boulevard; and would require implementation of mitigation measures TC-1(a-e), which would fully mitigate the impact at the intersection and street segments, the same as with the proposed project.

This alternative would additionally result in a significant impact on the street segments between Colorado Boulevard and Playhouse Alley and between Union Street and Colorado Boulevard, the same as with the proposed project. Mitigation measure TC-2 would apply; however, the impact to these street segments would not be reduced to less than significant. Therefore, the impacts associated with this alternative would be Class I, *unavoidably significant*, the same as with the proposed project.

f. Water Service. This alternative would create the same demand for water as would the proposed project. The impact would be the same as the proposed project, Class II, significant but mitigable, with inclusion of mitigation measure W-1.

6.4 100% FLOOR AREA RATIO (FAR) ALTERNATIVE

6.4.1 Description

This alternative assumes a 10% FAR reduction from the proposed project. The proposed project's FAR is 110% consisting of a 159,971 SF structure on a 57,762 SF lot. A 100% FAR would reduce the building size to 145,128 SF, approximately 14,843 SF less than the proposed project. Like the proposed project this alternative would consist of 14,407 SF of retail use on the ground floor. However, due to the reduction in the overall size, the alternative would reduce the amount office space from 145,564 SF to 130,721 SF on the upper four floors.

6.4.2 Impact Analysis

This alternative would have similar impacts to the proposed project as it would consist of ground floor retail with commercial office space on the four additional floors. However, due to the reduction in FAR, this alternative would have proportionately fewer impacts than the proposed project. Like the proposed project this alternative would also involve the demolition of the current structure and site grading and excavation in order to construct the 145,128 SF building and the necessary subterranean parking structure . This alternatives environmental effects are discussed below.

a. Aesthetics. The aesthetic impacts associated with this project would be about the same as the proposed project, though the building would be about 10% smaller than the proposed project. Mitigation measure AES-3 would still apply to reduce the potential for adverse effects from glare.

b. Air Quality. Air quality impacts are expected to be the same as the proposed project. Like the proposed project, air pollutant emissions generated by construction of the alternative project would not exceed SCAQMD thresholds for NO_x, CO, SO_2, or PM_{10} or $PM_{2.5}$ but could potentially exceed SCAQMD thresholds for ROG as a result of architectural coatings. However, this alternative would be expected to follow similar mitigation measures as the proposed project to reduce ROG and fugitive dust emissions. Operational emissions would be about 10% less than the proposed project with respect to stationary emissions from natural gas consumption and mobile emissions from vehicle trips (also reduced by about 10%).

c. Noise & Vibration. This alternative would have the same impacts as the proposed project with respect to the potential for construction noise and vibration and operational noise. Mitigation measure N-3 for rooftop parapets would apply the same as for the proposed project.

d. Geology. This alternatives impact would be about the same as the proposed project, though the subterranean excavation would be slightly reduced as this alternative. Mitigation measure GEO-2 would still apply requiring adherence to geotechnical recommendations and the excavation plan. No additional adverse effects would be created and this alternative would not eliminate the need for any mitigation measures.

e. **Traffic and Circulation**. This alternative would generate about 10% less traffic. However, the decrease in traffic volume is not significant enough to eliminate the significant but mitigable impacts at the Colorado Boulevard/El Molino intersection and at the street segments of El Molino north of Walnut Street, between Walnut Street and Union Street, between Green Street and Cordova Street, and between Cordova Street and Del Mar Boulevard. ~~and~~ Mitigation measure TC-1(a-e) would still be required. Additionally, the street segment impacts on El Molino Avenue between Colorado Boulevard and ~~El Molino Avenue~~ Green Street and between Union Street and Colorado Boulevard would still occur. Mitigation measure TC-2 would be necessary, but the impacts would remain Class I, unavoidably significant, the same as with the proposed project.

f. Water Service. This alternative would create about 10% less demand for water as compared with the proposed project. The impact would be the same as the proposed project, Class II, significant but mitigable, with inclusion of mitigation measure W-1.

6.5 80% REDUCED PROJECT ALTERNATIVE

6.5.1 Description

This alternative would involve reducing the overall square footage of the development from 159, 971 SF to 31,471 SF. Similar to the proposed project, this alternative would incorporate office space with retail space on the ground floor. However, the size of the project would be reduced by 80%. Such a large reduction in size would eliminate the number of floors from five

to one. This alternative takes into consideration a 10% transit credit as well as the 25% TOD parking restriction. It is also worth noting that this project alternative (31,471 SF) would be about half the size of the existing structure (66,000 SF) but would need to incorporate additional parking in order to satisfy City standards.

6.5.2 Impact Analysis

Because the reduced project would considerably decrease the overall size of the project, significant impacts would be less than those impacts that result from the proposed project. Like the proposed project this alternative would also involve the demolition of the current structure and site grading and excavation in order to construct the 31,471 SF building and the necessary parking. This alternatives environmental effects are discussed below.

a. Aesthetics. The visual character of the Playhouse District would be altered with construction of a new building; however, the building would only be one story and the scale of the building would be smaller than both the current building and the proposed project. This alternative, depending on the design would also be subject to mitigation measure AES-3 to reduce the potential for glare. This alternative is not likely to reduce any impacts or create any impacts since the analysis indicates the proposed project would not have significant effects with implementation of AES-3 for glare.

b. Air Quality. Since the project size is reduced from 159, 971 to 31,471 SF, impacts to air quality are expected to be fewer. Like the proposed project, air pollutant emissions generated by construction of the reduced project alternative would not exceed SCAQMD thresholds for NO_x, CO, SO_2, or PM_{10} or $PM_{2.5}$ but could potentially exceed SCAQMD thresholds for ROG as a result of architectural coatings. However, this alternative would be only one story in size and an 80%overall reduction in square footage. Thus any potential ROG emission impacts would be fewer than the proposed project. Operational emissions would also be fewer than the proposed project as a result of the reduced size. Though it is noted that construction mitigation for fugitive dust would still be required.

c. Noise and Vibration. This alternative would not create nor eliminate any significant impacts with respect to noise and vibration, though it is noted that mitigation measure N-3 would still be required for rooftop parapets to reduce operational noise. Moreover, it is also noted that construction duration would be shortened due to the 80% reduction in project size.

d. Geology and Soils. This alternative would reduce the need for subsurface excavation, as it is likely the 31,471 SF building and required 71 parking spaces could be accommodated on the 57,762 SF lot. Nevertheless mitigation measure GEO-2 would still be necessary to ensure that the potential for adverse effects from settlement and corrosivity is reduced to a level that is less than significant.

e. **Traffic and Circulation**. This alternative would eliminate the unavoidably significant impacts due to traffic volume increase on El Molino Avenue between Colorado Boulevard and Playhouse Alley and between Union Street and Colorado Boulevard. The reduced project would only contribute 315 trips along El Molino Avenue. This increase in trips is less than 4.9% of the total existing (2007) ADT count along El Molino Avenue (6,432 vehicles) and thus the project would not be required to complete physical mitigation measures. The reduction in

project size would also reduce project-generated traffic at the El Molino Avenue/Colorado Boulevard intersection and at the street segments of El Molino north of Walnut Street, between Walnut Street and Union Street, between Green Street and Cordova Street, between Cordova Street and Del Mar Boulevard. ~~and eliminate the need for~~ Mitigation at the El Molino Avenue/Colorado Boulevard intersection would not be required for this alternative.

Taking into consideration the 25% TOD parking restriction, the maximum number of on-site parking spaces would be 71 spaces based on the Pasadena Zoning Code requirement of 3 spaces per 1000 SF of office. This would reduce the number of parking spaces by 451 spaces on-site or roughly 86%.

f. Water Service. This alternative would create less demand for water as compared with the proposed project since this alternative would be about 80% smaller than the proposed project. The impact would be the same as the proposed project, Class II, significant but mitigable, with inclusion of mitigation measure W-1.

6.6 HEIGHT AVERAGING ALTERNATIVE

6.6.1 Description

This alternative assumes the project would be constructed with the same square footage and uses, but shifts the project massing such that the building tapers or steps down as it transitions from Zone 1 to Zone 3 (see Figure 6-2) through height averaging per Municipal Code §17.30.050. Under this alternative, 30% of the proposed fifth floor area would be relocated to create a sixth floor on the northern most portion of the property adjacent Colorado Boulevard (see Figure 6-2). The maximum building height would be 88 feet at the top of the sixth floor, 76 feet at the top of the fifth floor, 63 feet at the top of the fourth floor, 50 feet at the top of the third floor, 35 feet at top of the second floor, and about 25 feet at the top of the parking garage canopy. This alternative would require findings by the Design Commission.

6.6.2 Impact Analysis

This alternative would have similar impacts to the proposed project as it would consist of the same amount of use, but the massing would be a little heavier on the northern end of the project adjacent to Colorado Boulevard, where there would be six stories instead of five. The massing in the center of the building would be a little less. This alternatives environmental effects are discussed below.

a. Aesthetics. The aesthetic impacts associated with this alternative would be about the same as the proposed project. None of the impact determinations would change and the project would still have less than significant impacts on the Playhouse landmark structure and the landmark eligible Arcade Lane buildings. This alternative would cast a slightly different shadow as compared with those on Figure 4.1-5 and 4.1-6, however, the shadows would not substantially reduce the existing shadows or create new shadows that would affect another sensitive resource. The lengthened shadows from the partial sixth story would primarily affect Colorado Boulevard or fall onto existing developed buildings. The light and glare impacts would be the same as the proposed project, Class II, significant but mitigable through use of building material specifications.

b. Air Quality. Air quality impacts are expected to be the same as the proposed project. Like the proposed project, air pollutant emissions generated by construction of the alternative project would not exceed SCAQMD thresholds for NO_x, CO, SO_2, or PM_{10} or $PM_{2.5}$ but could potentially exceed SCAQMD thresholds for ROG as a result of architectural coatings. However, this alternative would be expected to follow similar mitigation measures as the proposed project to reduce ROG and fugitive dust emissions. Operational emissions would be about the same as the proposed project, since all of the square footages and uses would remain unchanged.

c. Noise & Vibration. This alternative would have the same impacts as the proposed project with respect to the potential for construction noise and vibration and operational noise. Mitigation measure N-3 for rooftop parapets would apply the same as for the proposed project.

d. Geology. This alternative's impacts would be about the same as the proposed project, since the project only shifts some massing, but retains the same subterranean garage. Mitigation measure GEO-2 would still apply requiring adherence to geotechnical recommendations and the excavation plan. No additional adverse effects would be created and this alternative would not eliminate the need for any mitigation measures.

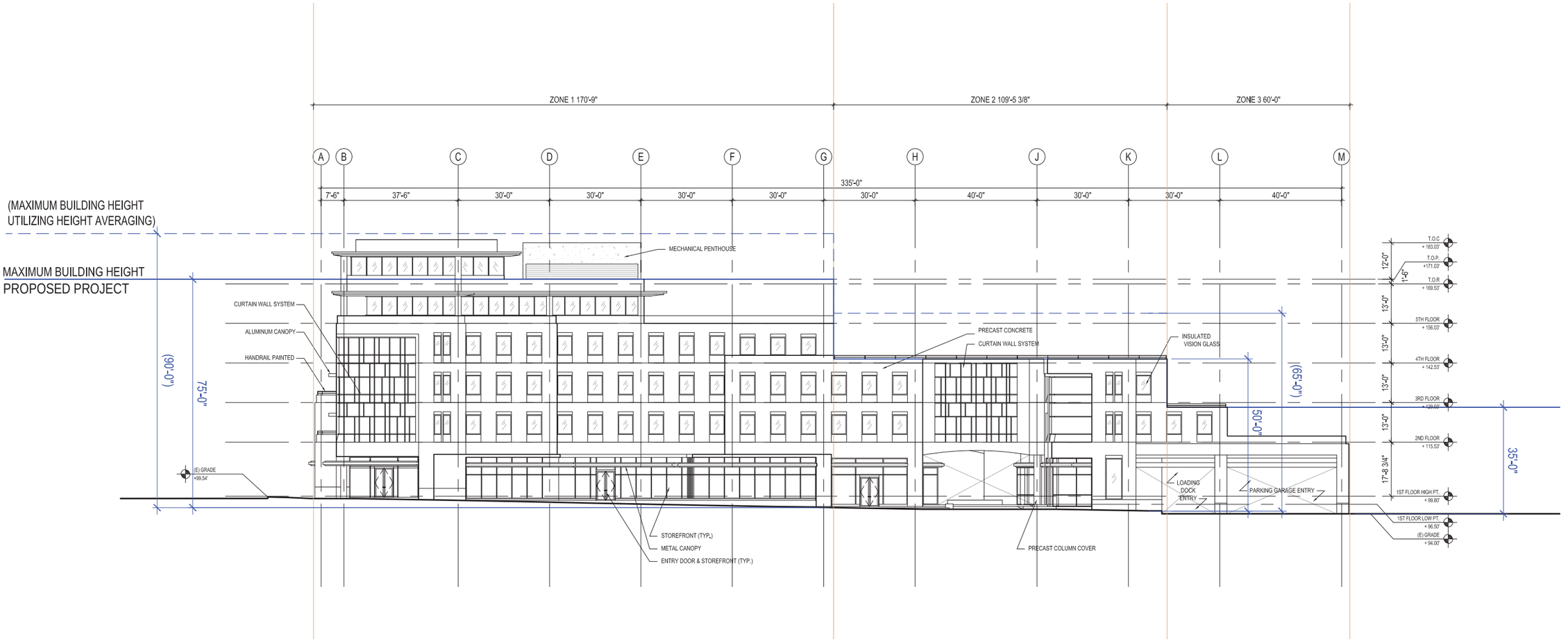
e. Traffic and Circulation. This alternative would generate the same traffic and the same impacts as the proposed project. As with the proposed project, there would be significant but mitigable impacts at the Colorado Boulevard/El Molino intersection and at the street segments of El Molino north of Walnut Street, between Walnut Street and Union Street, between Green Street and Cordova Street, and between Cordova Street and Del Mar Boulevard. Mitigation measure TC-1(a-e) would still be required. Additionally, the street segment impacts on El Molino Avenue between Colorado Boulevard and Green Street and between Union Street and Colorado Boulevard would still occur. Mitigation measure TC-2 would be necessary, but the impacts would remain Class I, unavoidably significant, as with the proposed project.

f. Water Service. This alternative would create the same demand for water as compared with the proposed project. The impact would be the same as the proposed project, Class II, significant but mitigable, with inclusion of mitigation measure W-1.

6.7 ALTERNATIVE SITE ANALYSIS

The California Supreme Court, in *Citizens of Goleta Valley v. Board of Supervisors* (1990), indicates that a discussion of alternative sites is needed if the project "may be feasibly accomplished in a successful manner considering the economic, environmental, social, and technological factors involved" at another site.

As suggested in *Goleta,* several criteria form the basis of whether alternative sites need to be considered in detail. These criteria take the form of the following questions:



Building Elevation with Height Averaging

Drawing Source: Gensler, May 2009.

Height Averaging Alternative

Figure 6-2

1. *Could the size and other characteristics of another site physically accommodate the project?*
2. *Is another site reasonably available for acquisition?*
3. *Is the timing of carrying out development on an alternative site reasonable for the applicant?*
4. *Is the project economically feasible on the alternative site?*
5. *Is the land use designation of the alternative site compatible with the project?*
6. *Does the lead agency have jurisdiction over the alternative site?*
7. *Are there any social, technological, or other factors that may make the alternative site infeasible?*

Other sites located throughout Pasadena could potentially meet some of the criteria outlined in the *Goleta* decision. However, this project is aimed at redeveloping the southeast corner of El Molino Avenue at Colorado Boulevard and the applicant's objective is to create a viable commercial complex in the Playhouse District. The existing 66,000 SF retail structure, if occupied, would generate significant impacts to the street segment of El Molino Avenue between Colorado Boulevard and Playhouse Alley. Moreover, development on another site would not provide the 156 public spaces to serve the Playhouse and Central District. Lastly, it is not feasible for the applicant to exchange the proposed site for another site without financial losses.

6.8 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

As required by CEQA, this section identifies the environmentally superior alternative. The only alternative to reduce the project's unavoidably significant effects on El Molino Avenue between Colorado Boulevard and Playhouse Alley and between Union Street and Colorado Boulevard is Alternative 5, the 80% reduced project alternative. As compared with the vacant baseline condition, even the No-Project Alternative, which allows for continued use of the existing building as a furniture store, would exceed the street segment threshold criteria for El Molino Avenue between Colorado Boulevard and Playhouse Alley and between Union Street and Colorado Boulevard, resulting in a Class I, unavoidably significant impact.

Additionally, this alternative will not fulfill the applicant's objective of creating a feasible, substantial commercial project with all proposed components, including the public plaza, public parking garage, and adequate office space. In addition, this alternative may not achieve the goals of the Central District Specific Plan and the Pasadena Playhouse Sub-district, including the in the D-1 Precinct. None of the other alternatives including either the 100% FAR, off-site parking alternative or dual access alternative would avoid the Class I unavoidably significant impact to the El Molino Avenue street segment between Colorado Boulevard and Playhouse Alley and between Union Street and Colorado Boulevard. Moreover, none of these alternatives appears to be environmentally superior to the proposed project.

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7.1 REFERENCES

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7.2 REPORT PREPARERS

This EIR was prepared by the City of Pasadena Planning Department with the assistance of Rincon Consultants, Inc. Consultant staff involved in the preparation of the EIR are listed below.

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8.0 ADDENDA and ERRATA/ COMMENTS and RESPONSES

8.1 ADDENDA and ERRATA

The changes incorporated into this EIR involve clarifications resulting from comments received from the applicant, staff, and the public.

This section of the Final EIR for the 680 East Colorado Boulevard Commercial Project presents modifications to the Draft EIR text based on comments received and the City's responses, which are included below in Section 8.2. Deletions are noted by ~~strikeout~~ and insertions by underline. Individual typographical corrections are not specifically stated.

Executive Summary

The following introductory language was modified on page ES-1.

> This Final EIR incorporates information from the Draft EIR (circulated from October 16, 2008, through December 10, 2008), the Revised Draft EIR (circulated from April 10, 2009 through May 25, 2009), clarifications that were made in response to both written and oral comments received during either of the public review periods (see Section 8.0 *Addenda Errata/Comments and Responses*), as well as some updates to setting information. To assist the reader in identifying changes, this final EIR includes all of the Draft EIR sections with new information ~~is~~ shown in underline format and deleted information is shown in ~~strikethrough format~~ throughout this document.
>
> This section summarizes the characteristics of the proposed project, alternatives, environmental impacts associated with the proposed project, recommended mitigation measures, and the level of significance of project impacts after mitigation.
>
> ~~A revised Draft EIR was prepared pursuant to California Environmental Quality Act (CEQA) Guidelines § 15088.5. The recirculation requirements and process are discussed in greater detail in Section 1.0, *Introduction*. Pursuant to CEQA Guidelines § 15088.5(c), the Revised Draft EIR included only the sections of the Draft EIR that were changed in response to new information. The following sections of the original Draft EIR are included in the Revised Draft EIR.~~
>
> ~~Section 0.0 Executive Summary~~
> ~~Section 1.0 Introduction~~
> ~~Section 2.0 Project Description~~
> ~~Section 4.5 Traffic~~
> ~~Section 6.0 Alternatives~~

The following language was modified to summarize the updated Alternatives in the Executive Summary on page ES-3.

Alternative 2 –Off-Site Parking Alternative. This alternative explores providing a portion of the proposed parking at two alternative locations. The two distinct off-site locations are both within one block of the project site and would divert a portion of the project generated traffic off of El Molino Avenue ~~between Colorado Boulevard and Playhouse Alley~~, where ~~a~~ significant street segment impacts occur~~s~~.

Alternative 3 – Dual Access. This alternative explores the provision of split access from both Green Street and El Molino Avenue as a method of diverting a portion of the project generated traffic off of El Molino Avenue ~~between Colorado Boulevard and Playhouse Alley~~ where ~~a~~ significant street segment impacts occur~~s~~.

Alternative 5 – 80% Reduced Project. This alternative would involve reducing the overall square footage of the development from 159, 971 SF to 31,471 SF as an office use and is the only alternative that would eliminate the significant and unavoidable street impacts on the segments of El Molino Avenue between Colorado Boulevard and Playhouse Alley and between Union Street and Colorado Boulevard.

Alternative 5 is environmentally superior overall since it would eliminate the Class I unavoidably significant impacts to El Molino Avenue between Colorado Boulevard and Playhouse Alley and between Union Street and Colorado Boulevard. None of the other alternatives, including the No-Project Alternative, would reduce the impact to ~~this~~ these de-emphasized street segments for which physical mitigation measures are not allowed. The Reduced Project Alternative would not provide an economically viable project for the applicant and would not meet the objective of providing a viable commercial project within the Playhouse District.

The following language was modified to summarize the new height averaging alternatives in the Executive Summary on page ES-3 in response to comment 1T.

Alternative 6 – Height Averaging Alternative. This alternative maintains the same square footage and uses of the proposed project (145,564 SF of office use plus 14,407 SF of retail use) but changes the massing of the project to include six stories adjacent Colorado Boulevard. The Height Averaging Alternative shifts the project massing such that the building tapers or steps down as it transitions from Zone 1 to Zone 3 (see Figure 6-2) through height averaging per Municipal Code §17.30.050. Under this alternative, 30% of the proposed fifth floor area would be relocated to create a sixth floor on the northern most portion of the property adjacent Colorado Boulevard (see Figure 6-2). The maximum building height would be 88 feet at the top of the sixth floor, 75 feet at the top of the fifth floor, 63 feet at the top of the fourth floor, 50 feet at the top of the third floor, 35 feet at top of the second floor, and about 25 feet at the top of the parking garage canopy. This alternative would require findings by the Design Commission. This alternative would have all of the same impacts as the proposed project.

The following changes were made in response to comment 3J on page ES-1.

Summary of Project Characteristics

Lot Size	1.3 acres (57,762 square feet)
Total Floor Area	159,971 square feet total • 14,407 SF of retail use • 145,564 SF of office use
Floor Area Ratio *	2.8
Maximum Building Height	75'-0"
Number of Levels Above Grade	5 levels
Number of Levels Below Grade	6 levels
Parking Spaces	522 **

Source: .Gensler. Plan Set, June 2008
** The project site contains separate zones with floor area ratios of 2.0 and 3.0. The floor area ratio presented here is an average based on the total square footage proposed as allowed in each zone and the total area of the site.*
*** ~~156~~ 155 of these spaces are proposed to serve the Playhouse District as public parking spaces*

The following changes were made to Table ES-1 in the Executive Summary on page ES-8.

Impact TC-1 The proposed project would incrementally increase traffic levels at study area intersections. The increased traffic levels would not cause an exceedance of adopted significance criteria at 12 of the 13 intersections. However, project-generated traffic would cause the El Molino Avenue/Colorado Boulevard intersection to operate at an unacceptable level of service during the PM peak hour. Thus, the proposed project's traffic impacts would be Class II, significant but mitigable.	**TC-1(c) Left-turn Pocket Installation on El Molino Avenue at Green Street Intersection.** The northbound and southbound approaches on El Molino Avenue shall be restriped and a southbound left-turn pocket shall be installed. The re-striping would necessitate reconstruction/modification of the existing catch basin on the northeast corner to accommodate safe movement of vehicles traveling northbound on El Molino Avenue. The resultant lane configurations at the southbound approach to the intersection would be one exclusive left-turn lane and one through lane. The traffic signal at the El Molino Avenue/Green Street intersection shall be modified to provide southbound left-turn phasing. **TC-1(d) Transportation Demand Management (TDM).** The project shall comply with the City's Trip Reduction ordinance. Upon submittal of a TSM Program for review and approval, the owner/developer shall place a deposit based on the current General Fee Schedule with the Department of Transportation prior to the issuance of a building permit. This deposit is subject to a refund or an additional billing in the event that the deposit amount is not sufficient to cover the cost of the review. The developer shall pay an annual Transportation Demand Management status report review fee based on the current General Fee Schedule, in compliance with the requirements of the Trip Reduction Ordinance. The TSM program shall encourage a mix of	Less than significant.

	tenants with varying start/stop times to help reduce AM/PM peak-hour traffic. The TSM shall also require the use of marketing materials and website design that directs site visitors to the site via the City's arterials and traffic corridors, instead of using de-emphasized streets like El Molino and Glenarm.	

The following changes were made to Table ES-1 on page ES-9 in response to comments 1K, 1D, 1F, and 1H.

Impact TC-2 The proposed project would incrementally increase traffic levels along study area roadways. The projected increases ~~are less than~~ exceed the City's adopted thresholds on ~~four of the five~~ six of the ten study area road segments. ~~However, because the projected increase in traffic on one of the five road segments exceeds the City's thresholds, impacts would be Class I, *unavoidably significant*.~~ Impacts to four of the six street segments are Class II, *significant but mitigable*. However, there are two segments of El Molino Avenue for which impacts would be Class I, *unavoidably significant,* because no physical improvements can be made to this de-emphasized street.	**TC-2 Street Segment Mitigation.** The following measures are recommended conditions by PASDOT: • *Contribute funds toward a pedestrian safety study in the vicinity of the project. The plan shall study measures such as mid-block signals, curb extensions, pedestrian countdown signals, enhanced crosswalks etc to improve walking safety and convenience to and from parking structures/businesses in the area.* • *Provide wayfinding signage between the parking garage and the Pasadena Playhouse, directing patrons to utilize designated crosswalks at Green Street or Colorado Boulevard. The sign program and format is subject to the review and approval of the Planning Division and the Department of Transportation.* • *Provide pedestrian lighting to and from the project to the nearest transit stops within a quarter mile radius.* • *Offer unbundled parking option with lease.* • *Contribute funds to the Pasadena ARTS program.* • *Provide Metro Corporate Transit Passes to employees of this project site.*	Unavoidably Significant

The following change was made to Table ES-1 on page ES-9 in response to comment 3J.

Impact TC-3 The proposed project would provide 522 parking spaces, of which ~~366~~ 367 would be project-only spaces and ~~156~~ 155 would be public spaces to serve the Playhouse District. The proposed parking spaces would meet the City's parking requirements. Therefore, impacts to parking supply would be Class III, less than significant.	None required.	Less than significant.

The following introductory language was modified in Section 1.0 *Introduction*.

A Draft EIR for the 680 East Colorado Boulevard Commercial Project EIR was circulated for a 45-day public review period of October 16, 2008, through December 1, 2008. In

addition, the public review period was informally extended to December 10, 2008 to receive additional oral comments of the Planning Commission and public. During this time written and oral comments were received and responses to comments were formulated. During consideration of the comments, it was determined that additional analysis of street segments along El Molino Avenue would be undertaken to further evaluate the extent of traffic additions to this de-emphasized street north and south of the project site. The traffic analysis revealed that the impacts identified in the Draft EIR extended further to the north and south along El Molino Avenue. Therefore, though the Draft EIR evaluated the most affected portion of this de-emphasized street, the revised Draft EIR evaluated additional segments. The revised Draft EIR incorporated revisions resulting from the additional street segment analysis as well as some clarifications made in response to comments on the original Draft EIR. The Revised Draft EIR and supporting documents were also available for review over a period of 45 days in accordance with CEQA Guidelines § 15088.5 at the Planning and Development Department Public Counter (located at 175 North Garfield Avenue, Pasadena CA 91109) and on the City's website at http://www.ci.pasadena.ca.us/planning/environmental/PlayhousePlaza/PlayHousePlaza_Home.asp.

The public review period for the Revised Draft EIR extended from April 10, 2009 through May 25, 2009. Written responses were prepared for the written and oral comments received during both public review periods and at the City initiated Public Meetings held between November 2008 and May 2009. Each comment received by the City of Pasadena has been included within the EIR. Responses to all comments have been prepared to address the concerns raised by the commenters and to indicate where and how the EIR addresses environmental issues. Responses to comments are contained in Section 8.0 *Addenda Errata/Comments and Responses.*

During the public review periods, written comments ~~may be~~ were forwarded to:

Lead Agency:	City of Pasadena
Contact Person:	John Steinmeyer, Senior Planner Planning Division
Address:	175 N. Garfield Avenue (Hale Building) Pasadena, California 91101-1704
Phone:	(626) 744-6880
E-mail:	jsteinmeyer@cityofpasadena.net

The Draft EIR and supporting documents ~~are~~ were also available for review at the Planning and Development Department Public Counter located at 175 North Garfield Avenue, Pasadena CA 91109, and on the City's website at http://www.ci.pasadena.ca.us/planning/environmental/PlayhousePlaza/PlayHousePlaza_Home.asp.

Section 2.0 Project Description

Figures 2-3 and 2-4 were updated to reflect the most recent design.

The following clarifications were added to the required project approvals on page 2-19 and page 2-20.

- *Certification of the Final EIR*
- *Statement of Overriding Considerations (SOC) because of the traffic segment impacts on North and South El Molino Avenue that cannot be adequately mitigated*
- *Design Review*
- *Adjustment Permit (AP) for allowable adjustments from the Zoning Code standards*
  - *(a) To exceed FAR in one FAR district*
  - *(b) To Exceed Height in two different height districts*
  - *(c) To provide only two loading spaces (5 are required for 145,000 s.f. office + 15,000 s.f. of retail)*
  - *(d) To not have a 0' building setback on South El Molino Avenue and East Colorado Boulevard*
- *Conditional Use Permit (CUP) for a new construction project exceeding 25,000 s.f.*
- *Minor Conditional Use Permit (MCUP) for a new construction project exceeding 15,000 square feet in the Transit-Oriented District (TOD)*
- *Minor Conditional Use Permit (MCUP) to establish a commercial parking facility (155 commercial public parking spaces for use by Playhouse District)*
- *Central District FAR Increase of 10% (15,983 s.f. for a total of 159,829 s.f.)*
- *Public Art Approval*
- *Tree Removal Permit*
  - *(a) Private Tree Removal to remove one protected specimen tree [Ethrythrina caffra (Coral tree)] from the private property*
  - *(b)Public Street Tree Removal to remove and/or relocate three public street trees (Mexican fan palms) on North El Molino Avenue as approved by the Urban Forestry Advisory Committee on March 2, 2009*
- *Building and Demolition Permits*
- *Any other incidental discretionary approvals needed for the construction and operation of the proposed project.*

Section 4.1 Aesthetics

Figure 4.1-3 was removed from the EIR

The following language was modified on page 4.1-8 and 4.1-9 of the EIR.

~~Figure 4.1-3 is a conceptual rendering of the project as it would be seen from across El Molino Avenue looking northeast, provided by the applicant's architect.~~

The proposed project has been designed in consideration of these two adjacent ~~historic~~ resources.

The following language was modified on page 4.1-13.

Pedestrian Paseo. Directly opposing the entry courtyard to the Pasadena Playhouse, a new ~~pedestrian walkway~~ paseo connects Arcade Lane~~,~~ with Playhouse Plaza and

visually connects with the ~~anchoring~~ Pasadena Playhouse. ~~With proposed enhanced street paving, the paseo is seen as an extension of the Playhouse courtyard.~~ The new 8,600 square foot paseo, which will serve as public open space is lined with retail and courtyard amenities, creating vibrant pedestrian connectivity for the playhouse district. ~~Figure 4.1-3 in this section and~~ Figure 2-8 in Section 2.0 *Project Description* shows a view~~s~~ of the pedestrian plaza looking towards ~~from~~ the Pasadena Playhouse ~~and~~ from the Arcade Lane Building ~~respectively~~.

Section 4.5 Traffic and Circulation

The following changes were made to the introductory language on page 4.5-1 in response to comment 1K.

This section evaluates existing conditions and potential impacts to the local circulation system. The analysis summarizes the findings of a traffic impact analysis prepared by Linscott, Law and Greenspan Engineers, dated July 3, 2008 (See Appendix E) and subsequent analysis prepared by the City of Pasadena Department of Transportation with the assistance of Linscott, Law and Greenspan Engineers, dated March 10, 2009. The traffic analysis evaluated the potential for traffic impacts on the local street system and assessed the adequacy of the proposed site access and parking plan. The July 2008 report reflected analysis of thirteen intersections and five street segments. The subsequent traffic impact report dated March 2009 reflected analysis of five additional street segments in the project vicinity. Traffic volumes were based on traffic count data contained in a previous traffic study prepared for the proposed project, titled *Draft Traffic Impact Study, Mixed-Use Project 680 E. Colorado Boulevard, City of Pasadena, CA,* dated June 8, 2007 and prepared by Willdan. Count data for the supplemental segment analysis was obtained in February 2009.

The following changes were made to the language on page 4.5-4 in response to comment 1K.

The following ten street segment locations were identified for analysis by City of Pasadena staff for inclusion in the ADT analysis:

1. *El Molino Avenue south of Colorado Boulevard (between Colorado Boulevard and Playhouse Alley)*
2. *Oak Knoll Avenue south of Colorado Boulevard (between Colorado Boulevard and Green Street)*
3. *Colorado Boulevard east of Hudson Avenue (between Hudson Avenue and Lake Avenue)*
4. *Green Street east of El Molino Avenue (between El Molino Avenue and Arcade Alley)*
5. *Green Street east of Hudson Avenue (between Hudson Avenue and Lake Avenue)*
6. *El Molino Avenue north of Walnut Street*
7. *El Molino Avenue between Walnut Street and Union Street*
8. *El Molino Avenue between Union Street and Colorado Boulevard*
9. *El Molino Avenue between Green Street and Cordova Street*
10. *El Molino Avenue between Cordova Street and Del Mar Boulevard*

The following street segments were added to Table 4.5-2 on page 4.5-8 in response to comment 1K.

Table 4.5-2
Existing Daily Roadway Volumes

Roadway Segment	Average Daily Traffic Volume
6. El Molino Avenue north of Walnut Street	7,606
7. El Molino Avenue between Walnut Street and Union Street	7,619
8. El Molino Avenue between Union Street and Colorado Boulevard	7,973
9. El Molino Avenue between Green Street and Cordova Street	6,414
10. El Molino Avenue between Cordova Street and Del Mar Boulevard	5,592

The following clarification was made to mitigation measures TC-1(c).

TC-1(c) **Left-turn Pocket Installation on El Molino Avenue at Green Street Intersection.** The northbound and southbound approaches on El Molino Avenue shall be restriped and a southbound left-turn pocket shall be installed. The re-striping would necessitate reconstruction/modification of the existing catch basin on the northeast corner to accommodate safe movement of vehicles traveling northbound on El Molino Avenue. The resultant lane configurations at the southbound approach to the intersection would be one exclusive left-turn lane and one through lane. The traffic signal at the El Molino Avenue/Green Street intersection shall be modified to provide southbound left-turn phasing.

The following change was made to mitigation measure TC-1(d) in response to comment 2H.

TC-1(d) **Transportation Demand Management (TDM).** The project shall comply with the City's Trip Reduction ordinance. Upon submittal of a TSM Program for review and approval, the owner/developer shall place a deposit based on the current General Fee Schedule with the Department of Transportation prior to the issuance of a building permit. This deposit is subject to a refund or an additional billing in the event that the deposit amount is not sufficient to cover the cost of the review. The developer shall pay an annual Transportation Demand Management status report review fee based on the current General Fee Schedule, in compliance with the requirements of the Trip Reduction Ordinance.

The TSM program shall encourage a mix of tenants with varying start/stop times to help reduce AM/PM peak-hour traffic. The

TSM shall also require the use of marketing materials and website design that directs site visitors to the site via the City's arterials and traffic corridors, instead of using de-emphasized streets like El Molino and Glenarm.

The following language clarification was added on page 4.5-23.

Significance After Mitigation. Implementation Mitigation Measures TC-1 (a-c) would improve the LOS of the El Molino Avenue/Colorado Boulevard intersection to LOS C (0.780) from LOS D (0.822) during the PM peak hour. Implementation of Mitigation Measure TC-1(d) would ensure compliance with the City of Pasadena's Transportation Management Ordinance. Implementation of Mitigation Measure TC-1(e) would ensure that the applicant pay the required Traffic Reduction and Transportation Improvement Fee. Therefore, implementation of Mitigation Measures TC-1 (a-e) would reduce impacts to a less than significant level. Additional analysis of El Molino Avenue Street segments indicates that there are no significant secondary impacts as a result of the turn restrictions.

The following changes were made to impact statement TC-2 in response to comment 1K.

Impact TC-2 The proposed project would incrementally increase traffic levels along study area roadways. The projected increases ~~are less than~~ exceed the City's adopted thresholds on ~~four of the five~~ six of the ten study area road segments. ~~However, because the projected increase in traffic on one of the five road segments exceeds the City's thresholds, impacts would be Class I, *unavoidably significant*.~~ Impacts to four of the six street segments are Class II, *significant but mitigable*. However, there are two segments of El Molino Avenue for which impacts would be Class I, *unavoidably significant*, because no physical improvements can be made to this de-emphasized street.

The following impact discussion on page 4.5-24 was modified in response to comment 1K.

Table 4.5-7 summarizes traffic impacts to study area roadway segments. Using the threshold criteria established by the City of Pasadena (see Table 4.5-5), the table shows the daily traffic analysis, which determines the street segment impacts by the proposed project on weekdays. As shown in the table, the proposed project is anticipated to increase daily traffic volumes by less than 2.4% on four of the ten analyzed street segments. While this level of increase requires staff review, no physical mitigations are required. However, as shown on Table 4.5-7, the proposed project is anticipated to increase daily traffic volumes between 2.5% and 4.9% on four of the ten studied street segments, including El Molino Avenue north of Walnut Street, El Molino Avenue between Walnut Street and Union Street, El Molino Avenue between Green Street and Cordova Street, and El Molino Avenue between Cordova Street and Del Mar Boulevard.

The following street segments were added to Table 4.5-7 on page 4.5-25 in response to comment 1K.

Table 4.5-7
Street Segment Impact Analysis

Street Segments	Direction	Existing Weekday ADT Volume	Proposed Project		Existing w/Project ADT	Percent ADT Growth
			Total Project Distribution	Project-Generated ADT		
6. El Molino Avenue north of Walnut Street	NB	3,702	15.0% Out	119	3,821	3.1%
	SB	3,904	20.0% In	159	4,063	3.9%
	Subtotal	7,606	--	278	7,884	3.5%
7. El Molino Avenue between Walnut Street and Union Street	NB	3,562	20.0% Out	159	3,721	4.3%
	SB	4,057	30.0% In	238	4,295	5.5%
	Subtotal	7,619	--	397	8,016	4.9%
8. El Molino Avenue between Union Street and Colorado Boulevard	NB	4,342	35.0% Out	277	4,619	6.0%
	SB	3,631	35.0% In	277	3,908	7.1%
	Subtotal	7,973	--	554	8,527	6.5%
9. El Molino Avenue between Green Street and Cordova Street	NB	3,304	20.0% In	159	3,463	4.6%
	SB	3,110	15.0% Out	119	3,229	3.7%
	Subtotal	6,414	--	278	6,692	4.2%
10. El Molino Avenue between Cordova Street and Del Mar Boulevard	NB	2,888	15.0% In	119	3,007	4.0%
	SB	2,704	10.0% Out	79	2,783	2.8%
	Subtotal	5,592	--	198	5,790	3.4%

Source: Lindscott, Law and Greenspan, 2008
Lindscott, Law and Greenspan, 2009
See Appendix E for complete traffic study.

The following discussions were modified on pages 4.5-26 and 4.5-27 in response to the expanded traffic report (March 10, 2009).

As shown in Table 4.5-7, the proposed project is anticipated to increase daily traffic volumes by more than 4.9% on two of the ten street segments, including the segment of El Molino Avenue between Colorado Boulevard and Playhouse Alley and the segment of El Molino Avenue between Union Street and Colorado Boulevard. Because these

increases exceed the City's 4.9% ADT Growth threshold, impacts to these two street segments would be significant.

Mitigation Measures. Based on the City's street segment significance criteria, the net increase in ADT volumes for El Molino Avenue north of Walnut Street, El Molino Avenue between Walnut Street and Union Street, El Molino Avenue between Green Street and Cordova Street, and El Molino Avenue between Cordova Street and Del Mar Boulevard require soft mitigation measures (e.g., transportation demand management measures). Additionally, the street segments of EI Molino Avenue between Colorado Boulevard and Playhouse Alley and El Molino Avenue between Union Street and Colorado Boulevard require both physical (e.g., roadway improvements, traffic signal upgrades, etc.) and soft mitigation measures ~~(e.g., transportation demand management measures)~~. As such, the following mitigation measure, along with Mitigation Measures TC-1(d-e), is required.

TC-2 Street Segment Mitigation. The following measures are recommended conditions by PASDOT:

- *Contribute funds toward a pedestrian safety study in the vicinity of the project. The plan shall study measures such as mid-block signals, curb extensions, pedestrian countdown signals, enhanced crosswalks etc to improve walking safety and convenience to and from parking structures/businesses in the area.*
- *Provide wayfinding signage between the parking garage and the Pasadena Playhouse, directing patrons to utilize designated crosswalks at Green Street or Colorado Boulevard. The sign program and format is subject to the review and approval of the Planning Division and the Department of Transportation.*
- *Provide pedestrian lighting to and from the project to the nearest transit stops within a quarter mile radius.*
- *Offer unbundled parking option with lease.*
- *Contribute funds to the Pasadena ARTS program.*
- *Provide Metro Corporate Transit Passes to employees of this project site.*

Significance After Mitigation. Implementation of Mitigation Measures TC-2, along with mitigation measures TC-1 (~~a~~d-e) would be expected to reduce project-generated traffic on street segments. ~~Note that implementation of these measure would also fulfill the City's requirement of implementing both physical mitigation (TC-1 (a-c)) and soft mitigation (TC-1 (d-f) and TC-2)~~. However, it cannot be assured that these mitigation measures would reduce the increase in project-traffic along the most affected roadway segments to 4.9% or less, which would eliminate the need for physical improvements (see Table 4.5-5). PasDOT has determined that there are no feasible mitigation measures to reduce the impacts of the project on El Molino Avenue between Colorado Boulevard and Playhouse Alley and on El Molino Avenue between Union Street and Colorado Boulevard to below levels of significance. Therefore, the impact to these street segments as a result of the proposed project would be unavoidably significant, and if the project is entitled, a Statement of Overriding Consideration would be required.

The following changes were made to Impact TC-3 on page 4.5-25 in response to comment 3J.

Impact TC-3 The proposed project would provide 522 parking spaces, of which ~~366~~ 367 would be project-only spaces and ~~156~~ 155 would be public spaces to serve the Playhouse District. The proposed parking spaces would meet the City's parking requirements. Therefore, impacts to parking supply would be Class III, *less than significant*.

As discussed in *Setting*, The project site is currently developed with a two-story commercial retail structure totaling approximately 66,000 square feet (SF) with 36 surface parking spaces. The proposed project involves the demolition of existing improvements, excavation for a six-level subterranean garage, and the subsequent construction of an approximately 160,000 SF, five-story commercial office building with 522 parking spaces to be provided in the six subterranean levels, of which ~~366~~ 367 would be project-only spaces and ~~156~~155 would be public spaces to serve the Playhouse District. Vehicular access to the subterranean parking structure would also be from El Molino Avenue. Table 4.5-8 shows the City's parking requirements and the proposed parking spaces.

The following changes were made to Table 4.5-8 on page 4.5-27 in response to comment 3J.

Table 4.5-8
Summary of Parking Requirements

Land Use	City Code Parking Ratio	Proposed	Total Parking Spaces
Office[a]	3 spaces/1,000 sf	145,564 sf	~~437~~ 328
Retail[b]	3 spaces /1,000 sf	14,407 sf	~~43~~ 39
Total Required/Maximum Allowed Parking Spaces			~~360~~ 367
Commercial Off-Street Parking[c]			~~162~~ 155
Total Parking Spaces Provided			**522[d]**

Notes:
[a] Section 17.50.340 D.1(a)of the City of Pasadena Zoning Code states that for office uses the minimum amount of required off-street parking shall be reduced by 25 percent, and this reduction shall be the maximum allowed number of parking spaces.
[b] Section 17.50.340 D.1(b) of the City of Pasadena Zoning Code states that for all other nonresidential uses the minimum amount of required off-street parking shall be reduced by 10 percent, and this reduction shall be the maximum allowed number of parking spaces.
[c] Section 17.50.340 D.2(a) states that off-street commercial parking shall require the granting of a Minor Conditional Use Permit in compliance with Section 17.61.050. The applicant proposed ~~156~~ 155 public spaces~~; however, there are six additional spaces.~~
[d] ~~162~~155 of these spaces are proposed to serve the Playhouse District as public parking spaces

The following changes were made to the cumulative traffic discussion on page 4.5-30 in response to the expanded traffic report (March 10, 2009).

As shown in Tables 4.5-6 and 4.5-7, which summarize the level of service and street segment analysis conducted for proposed project, traffic would incrementally increase with cumulative + project traffic, but with the implementation of mitigation measures set forth in the section, would remain below the respective significance thresholds at all of the analyzed intersections and on ~~four of the five~~ eight of the ten analyzed roadway segments. However, impacts resulting from project-traffic would remain significant and unavoidable at the roadway segment on El Molino Avenue between Colorado Boulevard and Playhouse Alley and on El Molino Avenue between Union Street and Colorado Boulevard, both of which lie within the urban core adjacent the Colorado Boulevard corridor. Because impacts would be unavoidably significant at these roadway segments, when considering cumulative impacts from planned and pending projects within the City, the project's contribution to the overall change would be cumulatively considerable. Mitigation measure TC-1(a-e) and TC-2 would reduce impacts to the extent feasible. However, these mitigation measures cannot be said to reduce traffic increases to 4.9% or below, which is the threshold that requires physical improvements. Therefore, the cumulative impact to these street segments is likewise unavoidably significant.

Section 4.6 Water Service

The following update to setting information was made starting on page 4.6-4.

PWP Actions and Programs to Address Water Supply Issues. PWP has many options at hand to address potential water supply issues, arising from either a reduction in its MWD allocations or its ability to pump groundwater from the Pasadena subarea of the Raymond Basin. ~~The most immediate tool available is the declaration of a "water shortage" pursuant to Pasadena Municipal Code (PMC) Chapter 13.10.~~

~~*City of Pasadena Water Shortage Plan I.* In December of 2007, PWP projected a local "water shortage" as defined in PMC § 13.10.020.G. On that basis, the City Council implemented a Water Shortage Plan I. The goal of the Water Shortage Plan I was to reduce total water usage in the City by 10%.[1] The Water Shortage Plan I contains nine voluntary water reduction measures to assist all Pasadena customers with conservation techniques (PMC § 13.10.040).~~

- ~~Refrain from hosing or washing sidewalks, walkways, driveways, parking area or other paved surfaces;~~
- ~~Refrain from cleaning, filling, or maintaining levels in decorative fountains, ponds, lakes, and similar structures unless such structure is equipped with a water recycling system;~~
- ~~Refrain from serving drinking water, unless at the express request of a customer, in all restaurants, hotels, cafes, cafeterias, or other public places where food is sold, served or offered for sales;~~

[1] See minutes of December 17, 2007 City Council meeting, at http://www.cityofpasadena.net/councilagendas/2007%20agendas/Minutes%202007/20071217.pdf; see related staff report at http://www.cityofpasadena.net/councilagendas/2007%20agendas/Dec_17_07/6A.pdf.

- ~~Promptly repair all leaks from indoor and outdoor plumbing fixtures, including but not limited to sprinkler systems;~~
- ~~Refrain from allowing water to run off landscape areas into adjoining streets, sidewalks, parking lots or alleys;~~
- ~~Refrain from allowing water to run off into adjoining streets, sidewalks, parking lots or alleys while washing vehicles;~~
- ~~Refrain from landscape watering more often than once every three days.~~

~~Since declaration of the local water shortage, PWP engaged in an aggressive public education campaign to raise awareness of the Water Shortage Plan I and its conservation techniques. Among other things, PWP engaged in a City-wide marketing campaign to raise awareness of the Plan I techniques; hosted efficient irrigation workshops; joined MWD in offering a new regional incentive program for water efficient devices ("SoCal Water $mart"); and provided a host of links and information options on its website to educate Pasadena residents about other ways to save water. Despite this aggressive public education campaign, as of the summer of 2008 total water usage in the City had not changed appreciably, and the goal of the Water Shortage Plan I was not being met.~~

~~*City of Pasadena Water Shortage Plan II.* The purpose of Water Shortage Plan II is to ensure that water is put to the maximum beneficial use and that water conservation is properly implemented. In the event of a continued water shortage, PWP could recommend to the City Council moving to a Water Shortage Plan II, pursuant to PMC § 13.10.040. At this time, PWP anticipates requesting that the City Council move to a Water Shortage Plan II by early 2009. In that event, the water reduction measures outlined above would become mandatory, and the City could impose penalties on violators. PWP anticipates that implementation of Water Shortage Plan II would result in the 10% reduction the City has been seeking.~~

~~Plan II includes the same measures as Plan I with the addition of the following measures:~~

- ~~No customer of the department shall use or allow the use of water for landscape watering between the hours of 10:00 a.m. and 5:00 p.m.;~~
- ~~No customer of the department shall uses or all the use of water from the department to refill a swimming pool emptied after the commencement of a water shortage period.~~

Throughout the end of 2008 and early 2009, PWP has taken the following steps to update its approach to water supply issues:

Comprehensive Water Conservation Plan (CWCP). On April 13, 2009, the City Council adopted the CWCP.[2] As a long-term goal, the CWCP presupposes an initial target of reducing per-capita potable water consumption 10% by 2015 and 20% by 2020. Whereas PWP's past water conservation programs relied heavily on indoor efficiency, the CWCP reflects an emphasis on:

[2] http://www.cityofpasadena.net/councilagendas/2009%20agendas/Apr_13_09/agendarecap.asp

- Using price signals in rate design to encourage conservation;
- Increased emphasis on outdoor water efficiency; and
- Maximizing efficiencies related to new construction.

The CWCP includes six water conservation approaches that will be pursued simultaneously to meet the City's water conservation targets:

1. Implement Water Conservation Rate Design:
    - Modified block rate structure with higher cost tiers for high water use
    - Develop a budget-based water rate proposal
2. Adopt Sustainable Water Supply Ordinances:
    - Establish a Permanent Water Waste Prohibition Ordinance
    - Modify existing Water Shortage Ordinance
    - Adopt a Water Efficient Landscape Ordinance
    - Evaluate potential effectiveness of a Fixture Replacement on Resale Ordinance, and adopt, if appropriate
    - Review the Gray Water Systems and Storm Water Capture Ordinances and update or modify, as appropriate
    - Adopt appropriate water use limitations and mitigation measures associated with new development
3. Provide Incentives for Use of Water Efficient Technology and Practices:
    - Indoor fixture incentives
    - Irrigation technology incentives
    - Water-efficient landscape and turf replacement incentives
4. Provide Direct Installation and Distribution of Efficient Technologies;
5. Provide Water Use Audits; and
6. Provide Water Use Information, Education, and Outreach:
    - Usage data on bills
    - Appropriate water use standards or guidelines
    - Efficient indoor and outdoor water use practices.[3]

The City has begun the process to increase water rates as envisioned by the CWCP, and which are necessary for covering surcharges imposed by MWD on PWP whenever customers exceed MWD's new allocation targets.[4] The City is in the process of holding the required public hearings.[5]

Water Waste Prohibition and Water Shortage Plan (WWP/WSP) Ordinance. Also on April 13, 2009, the City Council directed the drafting of an ordinance which will replace the City's previously adopted Water Shortage Plan I.[6] The proposed WWP/WSP Ordinance includes a number of permanent water waste prohibitions as well as procedures that would be initiated in the event of a water shortage.

[3] http://www.cityofpasadena.net/councilagendas/2009%20agendas/Apr_13_09/5D1.pdf
[4] http://ww3/waterandpower/YourWater/WaterRates/
[5] http://ww3/waterandpower/YourWater/WaterRates/Public%20Hearing%20Notice%2009.pdf
[6] http://www.cityofpasadena.net/councilagendas/2009%20agendas/Apr_13_09/agendarecap.asp

The proposed ordinance is consistent with the MWD Model Water Waste ordinance and is intended to address the shortcomings identified with the City's current Water Shortage Procedure Ordinance that it will replace. The proposed ordinance includes a number of permanent water waste prohibitions as well as procedures that would be initiated in the event of a water shortage. The proposed permanent water waste prohibitions include:

- Watering with potable water (i.e., drinking water) is prohibited between the hours of 9:00 a.m. and 6:00 p.m. on any day, except by use of a hand-held container, a handheld hose equipped with a water shut-off nozzle or device, or for very short periods of time for the express purpose of adjusting or repairing an irrigation system;
- No watering during periods of rain;
- No excessive water flow or runoff;
- No washing down hard or paved surfaces except were necessary to alleviate safety or sanitary hazards and then only by use of a hand-held bucket or similar container, a hand-held hose equipped with a water shut-off nozzle or device, a low-volume, high-pressure cleaning machine equipped to recycle any water used, or a low volume high-pressure water broom;
- Obligation to fix leaks, breaks or malfunctions when discovered or within seven days of receiving notice from PWP;
- Recirculating water systems are required for fountains and decorative water features;
- Using potable water to wash a vehicle is prohibited, except by use of a hand-held bucket or a hand-held hose equipped with a water shut-off nozzle or device. (This subsection does not apply to any commercial car washing facility);
- Drinking water may be served in restaurants only upon request by a customer;
- Restaurants are required to use water conserving dish wash spray valves;
- Commercial lodging establishments must provide guests option to decline daily linen services;
- Installation of single pass cooling systems is prohibited in buildings requesting new water service;
- Installation of non-recirculating water systems is prohibited in new commercial conveyor car wash and new commercial laundry systems; and
- Effective on July 1, 201 0, commercial conveyor car wash systems must have installed operational recirculating water systems or secured a waiver of this requirement from the City of Pasadena.

The proposed ordinance establishes a penalty schedule for violations, and the penalties are meant to be deterrents rather than sources of funds. The proposed ordinance is anticipated to come before the City Council in late June or early July of 2009.

The following update to setting information was made on page 4.6-8.

As additional funding can be secured, the City anticipates increasingly offsetting the use of potable water for landscaping with recycled water, thus leaving more potable water for other uses. ~~PWP is also considering other water supply enhancement and~~

~~storage projects. In addition, the City is looking at ways to strengthen the local regulation of water use through other Pasadena Municipal Code amendments. As one example, the City is awaiting the DWR Office of Water Use and Efficiency's update to the state model water efficient landscape ordinance. DWR anticipates that the model ordinance will be updated in early 2009.[7] By late 2009, and pursuant to the requirements of Government Code Section 65595, the City anticipates updating its ordinances regulating landscaping water use to be at least as stringent as the state model ordinance.~~ Through these efforts, PWP anticipates serving demand in the City as forecast in the City's General Plan and Urban Water Management Plan into the foreseeable future.

The following update to setting information was made on page 4.6-11.

The full cases are expected to reach the court for decision during late 2009 or possibly into 2010.

The following update was made to setting information on page 4.6-12.

~~The earliest that a decision from the appellate court is expected would be during in the latter part of 2008.[8]~~ The stay has been extended through July of 2009.[9]

The following update to setting information was made on page 4.6-14.

In December of 2008, the USFWS issued a revised BiOp.[10] The BiOp is effective immediately and sets guidelines for pumping operations for the State Water Project and federal Central Valley Project to ensure the continued existence of delta smelt and its habitat. At the time, the effect of the BiOp was seen as likely to result in the reduction of water deliveries from the CVP and SWP.

In the face of these new environmental restrictions and California entering the third year of drought, in October of 2008 DWR issued an initial 15 percent allocation to MWD of SWP supplies in 2009.[11] In addition, MWD expects continued reduced deliveries from the Colorado River as that watershed continues to recover from record drought.[12] In February of 2009 the Governor proclaimed a state of emergency and ordered a range of actions to manage the drought crisis.[13]

However, after recent precipitation events in late winter of 2009 which increased snowpack to nearly 90% of normal, in March of 2009 DWR revised its allocations upward, to 20 percent.[14] At the same time, DWR's most-recent snow survey of the winter season indicates snowpack water content statewide is 81 percent of normal, and

[7] http://www.owue.water.ca.gov/landscape/ord/updatedOrd.cfm/#schedule
[8] *Id.*
[9] http://appellatecases.courtinfo.ca.gov/search/case/dockets.cfm?dist=1&doc_id=676185&doc_no=A117715
[10] http://www.fws.gov/sacramento/es/documents/SWP-CVP_OPs_BO_12-15_final_OCR.pdf
[11] http://www.water.ca.gov/swpao/docs/notices/08-07.pdf
[12] http://www.mwdh2o.com/mwdh2o/pages/news/press_releases/2009-02/conservation%20increase.pdf
[13] http://gov.ca.gov/press-release/11556/
[14] http://www.water.ca.gov/swpao/docs/notices/09-04.pdf; see also http://www.water.ca.gov/news/newsreleases/2009/031809allocation20.doc

as a result in April of 2009 DWR increased the 2009 SWP delivery allocation to 30 percent. "DWR's new approval considered several factors, including existing storage in SWP conservation reservoirs, SWP operational constraints, including the conditions of the recent Biological Opinion for Delta smelt, and 2009 contractor demands."[15] While this is an improvement from DWR's March allocation of 20 percent, drought conditions continue and DWR strongly urges continued conservation.[16]

Section 6.0 Alternatives

The following language was modified on page 6-1 in response to the expanded traffic report (March 10, 2009) and to address the inclusion of a new alternative that evaluates height averaging alternative.

- *Height Averaging Alternative*

The offsite parking alternative, the dual access alternative, the 100% FAR alternative, and the reduced project alternative are all intended to explore elimination of the Class I impact caused by the increase in traffic volume on the segments of El Molino Avenue between Colorado Boulevard and Playhouse Alley and between Union Street and Colorado Boulevard. El Molino Avenue is classified as a de-emphasized street in the City's General Plan Mobility Element, meaning that street improvements are not permitted to allow for additional travel capacity. The Height Averaging Alternative was added in response to comments received during the public review period. Each of the various alternatives is described below along with the relative impact analysis.

Table 6-1
Characteristics of the Proposed Project and Alternatives

Scenario	Office (SF)	Retail (SF)	On-site Parking spaces		Off-site Parking spaces		Levels Below Grade	stories
			Project	Public	Project	Public		
Proposed Project	145,564	14,407	367~~6~~	155~~6~~	0	0	6	5
1 – No Project	none	66,000	36	0	0	0	0	2
2 – Off-site Parking	145,564	14,407	304	96	62	60	4.5	5
3 - Dual Access	145,564	14,407	367~~6~~	155~~6~~	0	0	6	5
4 -100% Floor Area Ratio	130,721	14,407	333	155~~6~~	0	0	5.5	5
5 - 80% Reduced Project	31,471	none	71	0	0	0	1	1
6 – Height Averaging	145,564	14,407	367	155	0	0	6	6

The following language was added on page 6-3 in response to the expanded traffic report (March 10, 2009).

[15] http://www.water.ca.gov/swpao/docs/notices/09-06.pdf
[16] http://www.water.ca.gov/news/newsreleases/2009/041509allocationam.doc

Therefore, the no-project alternative would not necessarily eliminate the Class I unavoidably significant traffic impact due to traffic in excess of 4.9% on the segments of El Molino Avenue between Colorado Boulevard and Playhouse Alley and between Union Street and Colorado Boulevard.

The following language was added on page 6-4 and page 6-5 in response to the expanded traffic report (March 10, 2009).

Moreover, both of these off-site parking locations would result in a significant impact on the street segments of El Molino Avenue north of Walnut Street, El Molino Avenue between Walnut Street and Union Street, between Green Street and Cordova Street, between Cordova Street and Del Mar Boulevard, between Colorado Boulevard and Playhouse Alley, and between Union Street and Colorado Boulevard, the same as with the proposed project. Mitigation measures TC-1(a-e) and TC-2 would also apply; however, the impact to the street segments of El Molino Avenue between Colorado Boulevard and Playhouse Alley and between Union Street and Colorado Boulevard would not be reduced to a less than significant level.

The following language was added on page 6-6 in response to the expanded traffic report (March 10, 2009).

The dual access alternative would result in a significant impact (2.4% to 4.9% increase in ADT) at the Colorado Boulevard/El Molino Avenue intersection and at the street segments of El Molino Avenue north of Walnut Street, between Walnut Street and Union Street, between Green Street and Cordova Street, and between Cordova Street and Del Mar Boulevard; and would require implementation of mitigation measures TC-1(a-e), which would fully mitigate the impact at the intersection and street segments, the same as with the proposed project.

This alternative would additionally result in a significant impact on the street segments between Colorado Boulevard and Playhouse Alley and between Union Street and Colorado Boulevard, the same as with the proposed project. Mitigation measure TC-2 would apply; however, the impact to these street segments would not be reduced to less than significant. Therefore, the impacts associated with this alternative would be Class I, *unavoidably significant*, the same as with the proposed project.

The following language was modified on page 6-7 in response to the expanded traffic report (March 10, 2009).

However, the decrease in traffic volume is not significant enough to eliminate the significant but mitigable impacts at the Colorado Boulevard/El Molino intersection and at the street segments of El Molino north of Walnut Street, between Walnut Street and Union Street, between Green Street and Cordova Street, and between Cordova Street and Del Mar Boulevard. ~~and~~ Mitigation measure TC-1(a-e) would still be required. Additionally, the street segment impacts on El Molino Avenue between Colorado Boulevard and ~~El Molino Avenue~~ Green Street and between Union Street and Colorado Boulevard would still occur.

The following language was modified on page 6-9 in response to the expanded traffic report (March 10, 2009).

> The reduction in project size would also reduce project-generated traffic at the El Molino Avenue/Colorado Boulevard intersection and at the street segments of El Molino north of Walnut Street, between Walnut Street and Union Street, between Green Street and Cordova Street, between Cordova Street and Del Mar Boulevard. ~~and eliminate the need for~~ Mitigation at the El Molino Avenue/Colorado Boulevard intersection would not be required for this alternative.

The following language (new alternative) was added in response to comment 1T.

6.6 HEIGHT AVERAGING ALTERNATIVE

6.6.1Description

This alternative assumes the project would be constructed with the same square footage and uses, but shifts the project massing such that the building tapers or steps down as it transitions from Zone 1 to Zone 3 (see Figure 6-2) through height averaging per Municipal Code §17.30.050. Under this alternative, 30% of the proposed fifth floor area would be relocated to create a sixth floor on the northern most portion of the property adjacent Colorado Boulevard (see Figure 6-2). The maximum building height would be 88 feet at the top of the sixth floor, 75 feet at the top of the fifth floor, 63 feet at the top of the fourth floor, 50 feet at the top of the third floor, 35 feet at top of the second floor, and about 25 feet at the top of the parking garage canopy. This alternative would require findings by the Design Commission.

6.6.2Impact Analysis

This alternative would have similar impacts to the proposed project as it would consist of the same amount of use, but the massing would be a little heavier on the northern end of the project adjacent to Colorado Boulevard, where there would be six stories instead of five. The massing in the center of the building would be a little less. This alternatives environmental effects are discussed below.

a. Aesthetics. The aesthetic impacts associated with this alternative would be about the same as the proposed project. None of the impact determinations would change and the project would still have less than significant impacts on the Playhouse landmark structure and the landmark eligible Arcade Lane buildings. This alternative would cast a slightly different shadow as compared with those on Figure 4.1-5 and 4.1-6, however, the shadows would not substantially reduce the existing shadows or create new shadows that would affect another sensitive resource. The lengthened shadows from the partial sixth story would primarily affect Colorado Boulevard or fall onto existing developed buildings. The light and glare impacts would be the same as the proposed project, Class II, significant but mitigable through use of building material specifications.

b. Air Quality. Air quality impacts are expected to be the same as the proposed project. Like the proposed project, air pollutant emissions generated by construction of the alternative project would not exceed SCAQMD thresholds for NO_x, CO, SO_2, or PM_{10} or $PM_{2.5}$ but could potentially exceed SCAQMD thresholds for ROG as a result of architectural coatings. However, this alternative would be expected to follow similar mitigation measures as the proposed project to reduce ROG and fugitive dust emissions. Operational emissions would be about the same as the proposed project, since all of the square footages and uses would remain unchanged.

c. Noise & Vibration. This alternative would have the same impacts as the proposed project with respect to the potential for construction noise and vibration and operational noise. Mitigation measure N-3 for rooftop parapets would apply the same as for the proposed project.

d. Geology. This alternative's impacts would be about the same as the proposed project, since the project only shifts some massing, but retains the same subterranean garage. Mitigation measure GEO-2 would still apply requiring adherence to geotechnical recommendations and the excavation plan. No additional adverse effects would be created and this alternative would not eliminate the need for any mitigation measures.

e. **Transportation and Traffic**. This alternative would generate the same traffic and the same impacts as the proposed project. The same as with the proposed project, there would be significant but mitigable impacts at the Colorado Boulevard/El Molino intersection and at the street segments of El Molino north of Walnut Street, between Walnut Street and Union Street, between Green Street and Cordova Street, and between Cordova Street and Del Mar Boulevard. Mitigation measure TC-1(a-e) would still be required. Additionally, the street segment impacts on El Molino Avenue between Colorado Boulevard and Green Street and between Union Street and Colorado Boulevard would still occur. Mitigation measure TC-2 would be necessary, but the impacts would remain Class I, unavoidably significant, the same as with the proposed project.

f. Water Service. This alternative would create the same demand for water as compared with the proposed project. The impact would be the same as the proposed project, Class II, significant but mitigable, with inclusion of mitigation measure W-1.

Figure 6-2 on page 6-11 was added to show the El Molino elevation of the Height Averaging Alternative (please refer to page 6-11).

The following discussion on page 6-13 was modified in response to the expanded traffic study (March 10, 2009).

As required by CEQA, this section identifies the environmentally superior alternative. The only alternative to reduce the project's unavoidably significant effects on El Molino Avenue between Colorado Boulevard and Playhouse Alley and between Union Street and Colorado Boulevard is Alternative 5, the 80% reduced project alternative. As compared with the vacant baseline condition, even the No-Project Alternative, which

allows for continued use of the existing building as a furniture store, would exceed the street segment threshold criteria for El Molino Avenue between Colorado Boulevard and Playhouse Alley and between Union Street and Colorado Boulevard, resulting in a Class I, unavoidably significant impact.

Additionally, this alternative will not fulfill the applicant's objective of creating a feasible, substantial commercial project with all proposed components, including the public plaza, public parking garage, and adequate office space. In addition, this alternative may not achieve the goals of the Central District Specific Plan and the Pasadena Playhouse Sub-district, including the in the D-1 Precinct. None of the other alternatives including either the 100% FAR, off-site parking alternative or dual access alternative would avoid the Class I unavoidably significant impact to the El Molino Avenue street segment between Colorado Boulevard and Playhouse Alley and between Union Street and Colorado Boulevard. Moreover, none of these alternatives appears to be environmentally superior to the proposed project.

8.2 COMMENTS and RESPONSES

CEQA Guidelines Section 15088 requires that the lead agency evaluate public comments on environmental issues included in a Draft EIR and prepare written responses to those comments. Pursuant to CEQA Guidelines Section 15088(b), "The written responses shall describe the disposition of significant environmental issues raised (e.g., revisions to the proposed project to mitigate anticipated impacts or objections). In particular, the major environmental issues raised when the lead agency's positions is at variance with recommendations and objections raised in the comments must be addressed in detail giving reasons why specific comments and suggestions were not accepted." The Guidelines call for responses that contain a "good faith, reasoned analysis" with statements supported by factual information. Some of the comments raised, however, are more general in context, stating opinion either in favor of or opposition to the proposed project, or are comments more specific to design considerations than environmental impacts. In such cases, the comment is noted for the record and will be forwarded to the decision makers for their consideration, along with all of the comments.

This section of the Final EIR for the 680 East Colorado Boulevard Project EIR contains all of the written comments received during the 45-day public review periods. The first public review period extended from October 16, 2008, through December 1, 2008, but was informally extended to December 10, 2008 to receive additional oral comments of the Planning Commission and public. The second public review period extended from April 10, 2009 through May 25, 2009. Written comments were also prepared for the summary of oral comments heard at City initiated Public Meetings held between November 2008 and May 2009. Each comment received by the City of Pasadena has been included within this report. Responses to all comments have been prepared to address the concerns raised by the commenters and to indicate where and how the EIR addresses environmental issues. Changes that were made to the EIR in response to comments are outlined in the beginning of this section under Addenda Errata.

This document constitutes the Final EIR to be presented to the City of Pasadena Planning Commission and City Council for certification prior to decisions on acceptance and approval of the 680 East Colorado Boulevard Commercial Project. Specific comments contained within any

particular written letter have been numbered in order to provide a reference to it in the response. Each letter is presented first, with the responses following.

The following General Responses have been prepared to address common themes in the letters submitted by commenters.

General Response 1 - Traffic Additions on a De-Emphasized Street Segment

One common theme presented verbally and contained within written letters suggests that the project would add traffic onto a de-emphasized street. The project site is located on a segment of El Molino Avenue that is within the Central District Specific Plan and Playhouse Subdistrict. The location of the project site is within the urban core of downtown along the Colorado Boulevard corridor and not within the lower density (e.g.) single family and/or multifamily residential areas that lie to the north and south of the project site. El Molino is de-emphasized along its entire length within the City limits, which is about four miles. The de-emphasis is intended to protect the residential neighborhoods north and south of the urban downtown core as described in Section 4.1.3.1 of the Mobility Element of the General Plan.

The proposed project would take access from and have a significant impact on the segment of El Molino Avenue that lies between Playhouse Alley and Colorado Boulevard. The significant street segment impact would likewise extend to the street segment of El Molino Avenue

between Colorado Boulevard and Union Street. These two segments are about 0.13 miles long, or about 3% of the entire length of the four mile long de-emphasized street. It should be recognized that the unavoidably significant impact to the street segment of El Molino Avenue between Playhouse Alley and Colorado Boulevard is based on a 12.3% increase in traffic volume, while the threshold for this street segment is 4.9%. The traffic increase on the segment between Colorado Boulevard and Union Street is 6.5%, while the threshold is 4.9%. Mitigation measures TC-1(d-e) and TC-2 cannot be guaranteed to reduce the traffic on these street segments to at or below the 4.9% threshold.

Section 4.1.3.1 of the Mobility Element of the General Plan states:

> "*The Council established, as City policy, that traffic growth would be limited on selected streets in order to protect residential neighborhoods. Traffic management initiatives are underway to direct the increase in traffic to multimodal corridors and to enforce traffic restrictions on streets. No capital or operational transportation improvements to increase traffic will be made on the de-emphasized streets.*"

In addition, Policy 3.11 of the Mobility Element states:

> "*Recognize designated de-emphasized streets as routes where efforts will be made to limit increases in travel. Measures that would increase traffic in these streets will not be planned or implemented*".

The mitigation measures included in EIR Section 4.5, *Traffic and Circulation,* for intersection impacts and street segment impacts would serve to reduce congestion without providing physical improvements to the de-emphasized segments. Turn restrictions are a passive mitigation that would be implemented at the Colorado Boulevard intersection to maintain flow conditions on the de-emphasized street segment, without physically modifying the street segment. Moreover, the dedicated turn lanes provided at the Union Street intersection and Green Street intersection would encourage vehicles to turn onto both Union Street and Green Street from El Molino rather than proceeding straight through on El Molino Avenue into neighborhood areas. Therefore, the mitigation measures would serve to direct traffic through this downtown corridor of El Molino Avenue between Union Street and Green Street, further encouraging east-west diversion at Union Street and Green Streets, which are still within the urban core and would not serve to increase traffic in residential areas to the north and south of this urban core. Moreover, as discussed in Section 6.0, *Alternatives*, even the No-project Alternative with activation of the currently developed furniture store would result in an unavoidably significant impact to the segment of El Molino Avenue between Playhouse Alley and Colorado Boulevard as compared with the vacant baseline condition. The only alternative that would eliminate this impact is an 80% reduced project, which likely would not be economically feasible and which would not achieve the project objectives.

<u>General Response 2 – The Project Size and Use is not Appropriate for this Location</u>

Several commenters stated opinions that the proposed project is too large for the site and is not the best use for the site, likely in part because the site is also located on El Molino Avenue, which is de-emphasized. Though this comment is about the project and not about the Draft EIR analysis, based on the guidance provided by the Central District Specific Plan, the proposed

project appears to be generally consistent with the vision for this area, as further indicated below.

The proposed project would provide development in accordance with the concept for the Playhouse sub-district of the Central District Specific Plan. Development according to the sub-district concepts is envisioned pursuant to the following guidance Central District Specific Plan Guidance.

> *Objective: The objective of this sub-district is to provide for a vibrant, mixed-use environment focused on Colorado Boulevard and the Playhouse that functions as a cultural and arts center for the community.* (Page 112 Central District Specific Plan)

The project site is located in the D-1 precinct of the Pasadena Playhouse sub-district. The D-1 character is envisioned as follows:

> *D-1* ***Playhouse North/Colorado Boulevard:*** *Colorado Boulevard through the Pasadena Playhouse Sub-district is marked by concentrations of commercial activity and periodic landmark structures, such as the Sanwa Bank building. However, the lack of continuity should be remedied through more intense, mixed use development; orientation to the street is critical. Connections to areas north are compromised by the relatively disjointed development patterns of Union Street, where there are a number of surface parking lots. This also makes for a rather unattractive streetscape leading up to the Civic Center; infill development is recommended.* (Page 112 Central District Specific Plan)

The proposed project would provide a pedestrian and street-oriented development facing Colorado Boulevard with pedestrian linkages and would provide infill development. The Pasadena Playhouse Linkage Concept (page 113 of the Central District Specific Plan) identifies El Molino Avenue as a "*Primary Pedestrian Connection*" having "*Streetscape Priority.*" The proposed project would enhance the pedestrian experience along El Molino due to the paseo and pedestrian linkages to the Arcade Lane building.

The intersection of El Molino Avenue and Colorado Boulevard is identified as a "*Secondary Focal Intersection*" (page 113 of the Central District Specific Plan). The proposed project would involve construction of a LEED certified building, appropriately scaled and designed for a focal point intersection as shown on Figure 4.1-4. Moreover, as envisioned for "Pasadena's Main Street," the following guidance is provided.

> *"The physical orientation, massing and form of buildings along Colorado Boulevard will mark its preeminence and stature as Pasadena's "Main Street." As the central spine of the Sub-district, Colorado Boulevard should also communicate the unique cultural and arts identity of this particular area. An important measure will be to improve retail continuity along the street as well as* ***introduce new upper*** *story residential and* ***office*** *(bold added for emphasis) development in support of retail activity…"* (page 114 of the Central District Specific Plan)

As discussed in Section 5.0, the City has experienced an increase in housing units in the Playhouse District with the recent approvals of the Archstone Pasadena project, the Lake-Walnut and the Trio mixed use developments, Pasadena Gateway Villas, Madison Walk condominiums, Oak Knoll condominiums, and Walnut Place apartments. The proposed commercial development is intended to provide additional quality employment opportunities for a community that is striving for a balance of employment and housing within the dense urban core.

Within the Central District Specific Plan, Sub-district Map 4 identifies the existing parking lot as a "*Principal Outdoor Space*" and "*important pedestrian crossings*" are identified at Green Street and Union Street, which would receive dedicated turn lanes and signal phasing under mitigation measures TC-1(b) and TC-1(c). The turn signal phasing would ensure that vehicular conflicts with pedestrians are minimized at these "*important pedestrian crossings*." The principal outdoor space would be carried over into the new project as a paseo, physically maintaining and enhancing the existing midblock pedestrian passages as indicated on Subdistrict Map 4: Pasadena Playhouse Linkage Concept.

Moreover, as discussed in the EIR on page 2-6, the project is located within the Central District, where 10% Floor Area Ratio increases are allowed by code if the project meets certain criteria and if the following findings can be made pursuant to §17.30.050(C).

a. The additional floor area allows development that would otherwise be economically infeasible;
b. The additional floor area will not be injurious to adjacent properties or uses, or detrimental to environmental quality, quality of life, or the health, safety, and welfare of the public;
c. The additional floor area will promote superior design solutions and allow for public amenities that enhance the property and its surroundings; and
d. The additional floor area is consistent with the objectives and policies of the Central District Specific Plan and the General Plan.

The EIR analyzes all feasible mitigation measures that could be imposed on the project to mitigate impacts. Outside of the CEQA and mitigation measure context, the Commission may also impose additional conditions of approval per §17.30.050(C)(3), including specification for additional architectural design, additional public amenities or additional traffic demand management measures. Project benefits to support the finding are documented on page 2-6 in Section 2.0, *Project Description*. As discussed in Section 4.1, *Aesthetics*, building heights range from one to 10 stories along Colorado Boulevard, while most structures in the immediate project vicinity are one to three stories in height, with some exceptions such as churches and the Playhouse Tower. Several taller buildings are nearby on Colorado Boulevard, including the five-story Trio Apartments on the opposite corner from the project site and the nine-story (including the mezzanine floor) Bank of the West building. The maximum allowable height for the project site is 75 feet, or up to 90 feet using height averaging (see new Alternative 6 in Section 6.0 *Alternatives*). However, the project site is composed of three different height zones. The allowable heights are summarized in the following table.

Allowable Building Height

Zone	Allowed	Proposed
ZONE 1(FAR 3.0)	75' (90')	75'
ZONE 2 (FAR 2.0)	50' (60')	75'
ZONE 3 (FAR 2.0)	35'	0'

Source: 17.30.030

It is noted that the project site is particularly challenging in that it fronts Colorado Boulevard, which is the City's "Main Street" envisioned for buildings of the grandest scale within the Central District Specific Plan, as well as limited by adjacency to El Molino Avenue, which is a de-emphasized street pursuant to the Mobility Element. Decisionmakers will need to weigh the objectives of these two guidance documents and determine whether the site should be developed in accordance with similar development along Colorado Boulevard and in accordance with visions of the Central District Specific Plan, or whether restriction of traffic on this one 0.13 mile long segment of El Molino Avenue within the downtown urban core adjacent the Colorado Boulevard corridor should be prioritized as influencing the "Main Street" development due to the potential for traffic to affect residential neighborhoods outside of the developed downtown core. In the event that decisionmakers evaluate the project benefits and find that the project benefits outweigh the project's adverse effects due to exceedance of the 4.9% threshold at two locations on El Molino Avenue, a statement of overriding considerations would need to be made.

RESPONSE 1 TO VERBAL COMMENTS AT PUBLIC MEETINGS

COMMENTER: Various members of the public and commissioners at the following public meetings.

Commission	Date
Transportation Advisory Commission Meeting	11/6/2008
Design Commission Meeting	11/24/2008
Planning Commission Meeting	12/10/08

COMMENTS

A. Parking – Is the project overparked?

B. The project could adversely affect historic resources.

C. Vibration from excavation could adversely affect nearby buildings.

D. Effects of mid-block pedestrian crossing on pedestrian and vehicular circulation.

E. No new traffic on El Molino south of Green Street.

F. Traffic effects on pedestrian circulation.

G. Level of Service methodology and suggestion for separate retail trip generation evaluation.

H. Expression of project support, requests traffic mitigation improvements be implemented prior to construction, requests the El Molino frontage be enhanced by the 1996 Streetscapes and Walkways design, requests a comprehensive sign program, and asks the feasibility of access via Green Street.

I. The commenter prefers a plaza to a paseo for the project design.

J. Commenter prefers tapering massing and considers the project's amenities of value to the Playhouse.

K. The traffic analysis should include intersections to the north and south within residential areas.

L. Commenter requests that the project's public parking spaces be evaluated with trip generation.

M. The commenter requests analysis of 50% and 75% reduced project alternatives.

N. Consider converting El Molino Avenue between Union Street and Green Street to one way as a mitigation measure.

O. Consider an alternative that moves the parking garage entrance to Colorado Boulevard.

P. Consider closing El Molino Avenue from Green Street to Colorado Boulevard, or closing residential portions to through traffic.

Q. The EIR should address pedestrian conflicts, including effects of design on pedestrian safety and encouraging people to J-walk.

R. The General Plan says do not add traffic to El Molino Avenue.

S. What about the dual access alternative that diverts traffic to Green Street.

T. Add a height averaging alternative to the EIR that shows how the massing would change if this procedure were used to increase the massing at Colorado Boulevard and decrease the massing opposite the Playhouse.

RESPONSES

Response 1A

Several commenters questioned whether the project area would be "overparked" and suggested alternatives such as reduced parking, shared parking between day office use and evening public use, and use of nearby underutilized parking spaces.

The proposed project complies with the City's parking requirements (§17.46 and §17.50.340 of the City of Pasadena Zoning Code) and the parking standards for transit-oriented development. Table 4.5-8 in the *Traffic and Circulation* section of the Draft EIR contains a summary of parking requirements and demonstrates the project's compliance with the City's parking requirements. A portion of the proposed project involves the development of public parking spaces that would be available to the Playhouse District. The Playhouse District contains a shortage of parking spaces, as identified in the 2005 Pasadena Playhouse Parking Study (December 19, 2005 Agenda Report from City Manager to City Council). The proposed project could close the gap on the shortage of public spaces in the Playhouse District and therefore is not considered to be "overparked." The request to reduce or eliminate public spaces is noted for consideration, but would have no bearing on traffic impacts as analyzed pursuant to the City's methodology. Moreover, no other significant physical environmental effects would be avoided by reducing the provision of public spaces.

Response 1B

Several commenters are concerned that the size and scale of the proposed project could adversely affect nearby structures including historic buildings such as the Pasadena Playhouse and the landmark eligible Arcade building. The applicant is requesting an Adjustment Permit to exceed allowable height and floor area, respectively, because the site is located in multiple FAR and height districts. The applicant also requests a 10% floor area ratio increase, which is an additional discretionary entitlement allowed by the Zoning Code. The Draft EIR includes an alternative that would not include the 10% floor area increase; and an 80% reduction alternative that would not result in an unavoidably significant (requiring a Statement of Overriding Considerations) impact on traffic.

The potential for adverse aesthetic impacts on adjacent landmark eligible structures was explored in the EIR under Impact AES-1 in Section 4.1, *Aesthetics*. The impact was determined to be less than significant in part because the project has been preliminarily designed in consideration of these resources, and in part because the City already has a process for evaluation and design compatibility determinations. The evaluation of the project's consideration for adjacent historic resources is discussed on page 4.1-9 of the Draft EIR, and includes the following text.

> *The project incorporates a paseo, linking El Molino Avenue with the Arcade Lane buildings. This pedestrian corridor would provide for future pedestrian line-of-sight between the historic Playhouse and the Arcade. The paseo would help to physically and visually link the two structures. The proposed project would be physically and visually set back from the Pasadena Playhouse by El Molino Avenue.*

In addition to these aspects of the project that have been designed in consideration of historic resources, the Playhouse District Design Guidelines acknowledge a "unique design eclecticism" that includes "contemporary design" in the district and could accommodate differing architectural themes where appropriate. Thus, the proposed architectural design is consistent with the vision for development in the Playhouse District.

Consistent with State CEQA Guidelines Section 15124, the EIR sets forth enough detail about the development envelope on the site to fully evaluate its potential environmental effects. CEQA does not require design level details in an EIR. In any event, indirect aesthetic impacts on adjacent historic landmarks and landmark-eligible structures due to potential incompatibility of design and scale were further discussed under Impact AES-2 in light of the City's standard evaluation practice. The City's Design Review process, consisting of Concept and Final Design Review by the Design Commission at a noticed public hearing, has consistently been used to address aesthetic issues in the Central District and citywide. There are other buildings (directly across the street and adjacent to the subject site, new and old) that equal or exceed the height of the proposed project. Therefore, the height and mass of the proposed building appears to be generally compatible with existing development in the vicinity, and that is what was analyzed in the EIR. The proposal includes open spaces, setbacks, and step-backs that provide flexibility for the Design Commission to alter the design of the building. To depart from the City's policy that Design Review can be used to address detailed design issues would be highly unusual, requiring such detail at this stage would affect the design review process by the Design Commission, and would not shed further light on the potentially significant environmental effects of the building that could be mitigated at this stage. The proposal does not seem extraordinary enough to warrant such a departure from City practice.

The Design Commission also functions in the capacity of the Historic Preservation Commission in the Central District. In Design Review, the Commission will review the project for compliance with the City's historic preservation ordinance. The applicant does not propose the demolition or substantial alteration of any existing historic structure or other historic resource. The project site is adjacent to, not located in, the Playhouse National Register Historic District (N.R.H.D). The adjacent two-story arcade building to the east is not a designated resource, nor is it included in the N.R.H.D. The Draft EIR includes a shadow analysis of the project, which concludes that the project would not create any substantial, long-lasting shadows on the Pasadena Playhouse Courtyard located west of the site, across the street. The Playhouse complex of buildings includes the two, large, plain, rectangular masses of approximately 65 feet in height. The proposal does not seem extraordinary to warrant further historic preservation analysis on adjacent properties. All potential impacts on existing historic resources in the vicinity can be resolved in Design Review.

Response 1C

Concern was expressed regarding the project's excavation and vibration, which could potentially affect historic resources.

As discussed under Impact N-1 in Section 4.3, *Noise and Vibration,* project construction would not have the potential to cause groundborne vibrations on and adjacent to the site due to the use of vibratory equipment as indicated in the shoring plan (see Appendix D). Construction

procedures include drilling and backfilling of soldier piles to reduce groundborne vibrations. The drilling process generally does not cause noticeable vibration. Additionally, the Building Department and City Engineer would review the shoring and basement construction plans to ensure that the structures on adjacent properties would not be adversely affected. Implementation of the construction measures indicated in the shoring plan (Appendix D) would reduce the potential for adverse impacts related to vibrations to local historic buildings to a less than significant level.

Response 1D

Commenters state that if a mid-block pedestrian crossing zone is created on El Molino Avenue, its potential impacts on vehicular and pedestrian traffic should be analyzed.

The project description in the Draft EIR does not describe physical crosswalk improvements as being a part of this project, and none of the currently proposed project approvals would give the applicant the necessary authority to construct the crosswalk. The Draft EIR only analyzes the proposed construction and improvements on the project site.

The following condition of approval will be included as recommended by the City Department of Public Works.

> 4. *Any public right-of-way improvements that are not required as conditions of approval of this application and are proposed by the developer in the future shall be reviewed by the required City departments for compliance with all required engineering and safety standards under a separate application. Such improvements may include sidewalk and street enhancements on El Molino Avenue (including the establishment of a mid-block pedestrian crossing zone). The review of such improvements may require additional traffic, pedestrian, and engineering studies at the cost of the applicant. In addition, any physical improvements related to the proposal will require funding by the applicant.*

If a mid-block crossing zone is proposed in the future, it would require scrutiny pursuant to the City's standard procedures for evaluating and reviewing street enhancements. It should be emphasized that the absence of a cross walk does not present any particular environmental hazard. There are two existing cross walks at either end of the block. The Green Street crosswalk is located about 150 feet to the south of the proposed paseo, while the Colorado Boulevard crosswalk is located about 210 feet north of the proposed paseo. Under current conditions, existing Playhouse patrons park offsite, perhaps at locations that are one or more blocks away and walk to the site, potentially utilizing multiple crosswalks. It is acknowledged that it would be more convenient to walk directly across from the project site garage to the Playhouse if a crosswalk were constructed in the future. However, there is no evidence to support that the absence of a crosswalk between the proposed project and the Playhouse presents a significant physical environmental impact under CEQA.

Nevertheless, existing mitigation measure TC-2 will be modified to include a wayfinding component as shown in underline below.

TC-2 **Street Segment Mitigation.** The following measures are recommended conditions by PASDOT:

- *Contribute funds toward a pedestrian safety study in the vicinity of the project. The plan shall study measures such as mid-block signals, curb extensions, pedestrian countdown signals, enhanced crosswalks etc to improve walking safety and convenience to and from parking structures/businesses in the area.*
- *Provide wayfinding signage between the parking garage and the Pasadena Playhouse, directing patrons to utilize designated crosswalks at Green Street or Colorado Boulevard. The sign program and format is subject to the review and approval of the Planning Division and the Department of Transportation.*
- *Provide pedestrian lighting to and from the project to the nearest transit stops within a quarter mile radius.*
- *Offer unbundled parking option with lease.*
- *Contribute funds to the Pasadena ARTS program.*
- *Provide Metro Corporate Transit Passes to employees of this project site.*

Response 1E

The commenter states an opinion that no new traffic is allowed on El Molino south of Green Street. Please refer to General Response 1.

Response 1F

The commenter is concerned about the effect traffic increases may have on pedestrian circulation. Pedestrian circulation is addressed in mitigation measure TC-2 through contribution of funds towards a pedestrian safety study in the vicinity of the project and provision of pedestrian lighting to and from the project to the nearest transit stops. As discussed above under response 1D, mitigation measure TC-2 has also been expanded to include wayfinding signage between the Playhouse and the parking garage. Please also see Response 2C for additional discussion of the effects of project access on pedestrian and bicycle circulation.

Response 1G

The commenter asks how traffic Level of Service "A" is measured and suggests calling out the retail trip generation separately. As discussed in the Draft EIR on page 4.5-4, "Level of Service" (LOS) A through F are used to rate roadway operations, with LOS A indicating very good operating conditions and LOS F indicating poor conditions (more complete definitions of level of service are contained in Appendix E for reference). LOS A through LOS C are generally considered acceptable, while LOS D through LOS F indicate poor conditions.

Separate retail trip generation was considered; however, since the ground floor commercial space and uses were in flux during the analysis due to refinement of the paseo design, and because the retail portion of the project composes only 9% of the overall project, there was no need to evaluate the retail separately. By definition ITE code 710 General Office accounts for

multiple tenants including "*tenant services such as …… service retail facilities*" [see footnote (c) of Table 4.5-3 in Section 4.5 *Traffic*].

Response 1H

The commenter states that the Pasadena Playhouse Board of Directors supports the project, requests traffic mitigation improvements be implemented prior to construction, requests the El Molino frontage be enhanced by the 1996 Streetscapes and Walkways design, requests a comprehensive sign program, and asks the feasibility of access via Green Street.

Traffic mitigation improvements would be implemented as a condition of occupancy such that no new tenants would be allowed to occupy the building until traffic mitigation improvements were completed. The El Molino frontage would be consistent with applicable provisions of the 1996 Streetscapes and Walkways Design. With respect to the comprehensive sign program, mitigation measure TC-2 has been modified to include a wayfinding sign program component between the Playhouse and the project's parking garage to guide patrons to designated crosswalks (see Response 1D).

The feasibility of providing access on Green Street was explored and evaluated in the EIR under Alternative 3, whereby the project would take access from both Green Street and El Molino Avenue. However, the Green Street access would not reduce the environmental impacts to below a less than significant level. Moreover, it has been determined that no access is feasible given that the property is owned by another party not willing to provide access. Please refer to additional discussion of infeasibility in Response 3M.

Response 1I

The commenter states he would like to see the design modified from a paseo to a plaza, would prefer the building color to be other than yellow, and would prefer it if the project were a hotel.

The commenter does not speak to the Draft EIR, but rather comments on the proposed project. The commenter's suggestions are noted for consideration by decisionmakers. The project requires design review by the City's Design Commission in accordance with 17.61.030. In the design review process, all exterior design features of the project (e.g., site plan, massing, modulation, colors, materials, finishes, paving, landscaping, etc.) would be reviewed at noticed public meetings.

Response 1J

The commenter would like the building design to include tapering massing and also notes pedestrian connections and parking are valued by the Pasadena Playhouse. The commenter does not speak to the Draft EIR, but rather comments on the proposed project. The commenter's suggestions are noted for consideration by decisionmakers. The project requires design review by the City's Design Commission in accordance with 17.61.030. In the design review process, all exterior design features of the project (e.g., site plan, massing, modulation, colors, materials, finishes, paving, landscaping, etc.) would be reviewed at noticed public meetings. In addition, Section 6.0 *Alternatives* has been revised to include a sixth alternative that evaluates a height averaging design that features heights which taper from Colorado Boulevard

southward towards Green Street. The height averaging alternative has all of the same impacts of the project, but features a slightly different profile as viewed from adjacent and nearby properties.

Response 1K

The commenter states an opinion that the traffic analysis is inadequate and should be expanded to include neighborhoods to the north and south to ensure no impacts will result in nearby residential neighborhoods.

The traffic study was completed in accordance with the City's "*Transportation Impact Review Current Practice and Guidelines*" and included the most affected intersections and street segments in the vicinity. However, in response to this and other similar comments, the traffic analysis was expanded to include five additional street segments as follows.

6. *El Molino Avenue north of Walnut Street*
7. *El Molino Avenue between Walnut Street and Union Street*
8. *El Molino Avenue between Union Street and Colorado Boulevard*
9. *El Molino Avenue between Green Street and Cordova Street*
10. *El Molino Avenue between Cordova Street and Del Mar Boulevard*

The traffic analysis revealed similar traffic impacts on these other street segments of El Molino Avenue. The new analysis does not change the conclusions of the EIR; however, it does clarify the extent of the traffic impacts along El Molino Avenue. In accordance with CEQA Guidelines § 15088.5 a revised Draft EIR was recirculated for public review. Existing mitigation measures would reduce impacts to levels that are less than significant for four of the six significantly affected intersections. However, due to an exceedance of the4.9% traffic increase along two street segments for which no physical mitigation can be implemented, the impact remains Class I *unavoidably significant*. These are the previously identified segment of El Molino Avenue between Playhouse Alley and Colorado Boulevard, as well as the segment of El Molino Avenue between Colorado Boulevard and Union Street.

As discussed in the Revised Draft EIR, implementation of Mitigation Measures TC-2, along with mitigation measures TC-1 (d-e) would be expected to reduce project-generated traffic on street segments. However, it cannot be assured that these mitigation measures would reduce the increase in project-traffic along the most affected roadway segments to 4.9% or less, which would eliminate the need for physical improvements (see Table 4.5-5 in Section 4.5 *Traffic and Circulation*). PasDOT has determined that there are no feasible mitigation measures to reduce the impacts of the project on El Molino Avenue between Colorado Boulevard and Playhouse Alley and on El Molino Avenue between Union Street and Colorado Boulevard to below levels of significance. Therefore, the impact to these street segments as a result of the proposed project would be unavoidably significant, and if the project is entitled, a Statement of Overriding Consideration would be required.

Response 1L

The commenter requests that the public parking be analyzed for trip generation within the traffic study.

This comment is noted; however, the City has consistently determined that general public parking spaces (a parking use by itself) in an existing commercial district do not generate new trips in the vicinity, as such trips already exist as a result of the existence of the surrounding commercial uses. The demand for parking comes from building floor area. As long as the public parking facility has adequate ingress/egress and meets all PasDOT and Public Works standards, it would not create traffic impacts.

Response 1M

The commenter states the Final EIR should include additional project alternatives such as a 50% reduction and 75% reduction in project size and alternative uses.

The purpose behind the required analysis of alternatives in CEQA is to avoid or substantially lessen any of the significant effects of a project while still achieving most of the basic project objectives. Thus, alternatives analyses that comply with CEQA are not an exploratory method to test the effects of different sizes of projects, but instead are defined in a more methodical manner in relation to the adverse environmental effects of the proposed project. With the information gathered from such an analysis, a lead agency may choose to adopt the proposed project, or any variation thereof that fits within the parameters of what was analyzed in the CEQA document.

In accordance with CEQA and State CEQA Guidelines Section 15126.6, the Draft EIR includes several alternatives, which were chosen because they would be most likely to reduce the significant impact to the street segment of El Molino Avenue between Playhouse Alley and Colorado Boulevard, including a "no project" alternative. CEQA requires a range of reasonable alternatives be considered and that alternatives address clearly identified potential impacts. Because the alternatives analysis indicates that the project size required to avoid adversely affecting the segment of El Molino Avenue between Colorado Boulevard and Playhouse Alley is an 80% reduction, the 50% and 75% reductions suggested by the commenter would not achieve any additional environmental benefit as compared with the alternatives that have already been analyzed. If there is a desire from a planning perspective to analyze other various increments, that can be done outside of the CEQA context since the EIR has disclosed the level of alternative which would avoid the potentially significant effect. Therefore, these two additional alternatives will not be added to the Final EIR.

Response 1N

The commenter states that the EIR should consider converting El Molino Avenue between Union Street and Green Street to a northbound one way as a mitigation measure.

Mitigation measures are intended to reduce the significant effects of project impacts. The impact that needs to be reduced is the traffic increase along the segments of El Molino Avenue, which are located between Playhouse Alley and Union Street. Changing the street to convey northbound one-way traffic between Green Street and Union Street would not reduce the volume of project generated traffic that would access the site from El Molino Avenue, and thus would not reduce the impact. Therefore, this is not a mitigation measure that could be used to mitigate the project's significant impacts. Moreover, this one-way configuration could have

other secondary impacts, including diverting southbound traffic to other nearby north-south streets in the vicinity as well as encouraging traffic to come up from the residential neighborhood from the south. Lastly, this measure could conflict with the Mobility Element directive that indicates "*no transportation or operational improvements to increase traffic capacity will be implemented*" (page 77 of the Mobility Element of the General Plan).

The Department of Transportation has indicated that conversion of El Molino Avenue to a one-way street could be studied as part of the Mobility Element Update, if it were determined to be a potential solution to a larger problem in the area.

Response 1O

The commenter requests consideration of an alternative that moves the parking garage entrance to Colorado Boulevard.

Location of the project garage entrance on Colorado Boulevard was considered but was dismissed because of the high volume of vehicles, pedestrians and ARTS buses that utilize this designated multimodal corridor. Curb cuts along Colorado Boulevard at the location of the project site would need to be sited about 140 feet from the intersection of Colorado Boulevard and El Molino Avenue to accommodate the 36-foot wide garage entry. There is potential for vehicular queuing on Colorado Boulevard if vehicles seeking to enter the garage are delayed by passing pedestrians, whose presence is encouraged along Colorado Boulevard. By definition, the multimodal corridor is intended to encourage multiple modes of transportation including not only vehicles, but also pedestrians, buses and bicycles.

The project is located within the Central District, and the Central District Specific Plan (CDSP). Public Realm Design Guideline SE 2 directs to minimize pedestrian conflicts. The CDSP also recommends the following for the Street Environment (SE).

SE 2.1 *Minimize the number of drive approaches along a block to reduce conflicts between pedestrians and automobiles.*

SE 2.2 *Consolidate and place drive approaches near mid-block when necessary; alley access should be provided for service and parking if feasible.*

The proposed project consolidates three existing driveways on El Molino Avenue. Under the proposed project, two of these drives would be eliminated and the southern-most driveway would be designed to accommodate two lanes and a loading area. Figure 2-2 in Section 2.0 *Project Description* shows an aerial with the three existing driveways, while Figure 2-3 shows the driveway that is proposed with the new project. Please see additional discussion of driveways and pedestrian circulation under Response 2C.

The proposed project consolidates the driveways on El Molino Avenue and avoids curb cuts on Colorado Boulevard. The proposed project locates the driveway in the vicinity of the existing driveways. Alley access is not available for the project site, and placing the driveway midblock was prioritized below creation of the plaza opposite the playhouse to visually link the structures to the Arcade Building on the east.

Response 1P

Consider closing El Molino Avenue from Green Street to Colorado Boulevard, or closing residential portions to through traffic.

El Molino Avenue is classified as a Minor Arterial in the Mobility Element. Minor Arterials are generally not considered for closure due to the volumes of traffic that these streets carry. Other reasons for keeping the street open include providing access for other businesses and residents and secondary impacts to nearby streets that receive diverted traffic. Moreover, as previously discussed the segment impacts occur north of Green Street between Playhouse Alley and Union Street. Therefore, even if El Molino Avenue was closed south of Green Street, the significant unavoidable segment impacts to El Molino Avenue between Playhouse Alley and Union Street would not be avoided. The Department of Transportation has an on-going program of protecting neighborhoods from intrusion of thru traffic. Additional measures to protect the residential portions of El Molino could be studied as a part of the mobility element update and NTMP.

Response 1Q.

The EIR should address pedestrian conflicts, including effects of design on pedestrian safety and encouraging people to J-walk. Please refer to response1D and response 2C.

Response 1R.

The General Plan says do not add traffic to El Molino Avenue. Please refer to General Response 1.

Response 1S.

What about the dual access alternative that diverts traffic to Green Street.

The dual access alternative was evaluated in Section 6.0 *Alternatives* and was fully analyzed in the traffic report that was prepared for the proposed project (referred to as Alternative 2 in that study, which is included in Appendix E of this EIR). The dual access alternative would result in a significant impact (2.4% to 4.9% increase in ADT) at the Colorado Boulevard/El Molino Avenue intersection and at the street segments of El Molino Avenue north of Walnut Street, between Walnut Street and Union Street, between Green Street and Cordova Street, and between Cordova Street and Del Mar Boulevard; and would require implementation of mitigation measures TC-1(a-e), which would fully mitigate the impact at the intersection and street segments, the same as with the proposed project.

The dual access alternative would additionally result in a significant impact on the street segments between Colorado Boulevard and Playhouse Alley and between Union Street and Colorado Boulevard, the same as with the proposed project. Mitigation measure TC-2 would apply; however, the impact to these street segments would not be reduced to less than significant. Therefore, the impacts associated with this alternative would be Class I, *unavoidably significant*, the same as with the proposed project.

Please see Response 3M for additional discussion of the infeasibility of this alternative due to a lack of site access at Green Street.

Response 1T.

The commenter requests analysis of a height averaging alternative in the EIR. A height averaging alternative was added to Section 6.0 *Alternatives* and is reiterated at the beginning of this section under subsection 8.1 *Addenda Errata*. The height averaging alternative would change the massing of the proposed project but would maintain the same square footage and uses. The height averaging alternative would not eliminate any significant impacts of the project and would have all of the same impacts as the proposed project. It would be neither superior nor inferior to the proposed project under CEQA. Design Review would likewise be required for this alternative, as it is standard for City projects. Design review would evaluate whether the height averaging alternative offers any additional substantial design merits as compared with the proposed project including how the design fits into the context of the adjacent historic and eligible historic resources.

Additional discussion regarding the size and scale of the project in the context of the Central District Specific Plan is contained under General Response 2.

Letter 2

TRANSPORTATION ADVISORY COMMISSION

December 3, 2008

Via E-Mail & Hand Delivery
Mr. John Steinmeyer
City of Pasadena
Department of Planning and Development
175 North Garfield Avenue
Pasadena, California 91101-1704

Re: 680 East Colorado Blvd. Commercial Project Draft Environmental Impact Report

Dear Mr. Steinmeyer:

At its meeting of November 6, 2008, the Transportation Advisory Commission ("TAC") reviewed the Draft Environmental Impact Report ("Draft EIR") for the IDS Playhouse Plaza/680 East Colorado Blvd. Commercial Project ("the Project"). The purpose of this letter is to summarize TAC's comments and recommendations regarding the Draft EIR.

In general, TAC is in favor of a well-designed project at the proposed site that would increase the success of the Pasadena Playhouse and its environs. TAC also supports an expanded pedestrian network in the Pasadena Playhouse Sub-district of the Central District Specific Plan area that might result from the Project's proposed plaza and walkable linkages to Arcade Lane and the Playhouse Courtyard, which is also consistent with the general findings of the Playhouse District Association's "Downtown Pasadena Walkabout Report" (November 2008). TAC also recognizes that the increase in proposed public parking spaces adjacent to the Playhouse is an opportunity, especially for seniors who are most likely to benefit from close, convenient spaces. However, the Project as proposed raises concerns that should be addressed more fully in the Final EIR. A

Project Characteristics: (§ 2.5)

According to the DEIR, the Project proposes an 8,600 square foot east-to-west pedestrian corridor between the Pasadena Playhouse and the Arcade Building but does not discuss a proposed mid-block pedestrian crosswalk along El Molino Avenue. The 8,600 square foot paseo is proposed to "serve as public open space and provides for future pedestrian line-of-sight between the historic Pasadena Playhouse and the Arcade Building...." In consideration of this amenity, the Project applicant is requesting a 10% Central District Floor Area increase because of the proposed set aside of publicly accessible open space (which would meet the "unique factor" intent to support granting of the increase). Furthermore, in this Section of the DEIR, only a "line-of-sight" or "view corridor" between the Project and the Playhouse is mentioned, although Section 4.1 (Aesthetics) states "The paseo would help to physically and visually link the two structures." To achieve the direct physical connection between the two properties, the Project proposes "enhanced street paving" so that "the paseo is seen as an extension of the Playhouse courtyard"(p. 4.1 – 13). Fig. 2-3, "Site Plan," shows a proposed, mid-block pedestrian crosswalk installed on El Molino Avenue to link physically the Project site and the Playhouse property. Figure 4.1-3, "Architect's Rendering of Project as Seen from Across El Molino Avenue," also provides a clearer visualization of a potential mid-block crosswalk. B

Therefore, TAC recommends Section 2.5 of the Final EIR include a more complete description of the project that includes the proposed mid-block pedestrian crosswalk along El Molino Avenue.

Traffic and Circulation (§ 4.5) C

The DEIR states that Section 4.5 "evaluates existing conditions and potential impacts to the local circulation system." However, only impacts on vehicular traffic circulation are addressed. The Final EIR should address impacts on all aspects of circulation, including pedestrian and bicycle.

A. Impact Analysis/Methodology (§ 4.5.2a.)

While the project would increase net new average daily trips ("ADTs") by 1,585 trips, TAC recognizes this is less by about half of the 2,900 ADTs that would be generated if the Project were specialty retail uses instead of mostly office uses. Nonetheless, the Project will generate negative mobility impacts from traffic and parking. Furthermore, Table 4.5-3, "Project Trip Generation Estimates," provides an analysis based on the square footage of the Project and the proposed onsite uses. However, it is unclear how general uses for the Playhouse Sub-district have been factored into the estimates. The Project is providing 162 spaces for public use for access to any of the offsite uses in the D

vicinity, including and especially the Pasadena Playhouse. The Final EIR needs to address this discrepancy and/or provide revised traffic generation estimates. D

According to the City's Mobility Element, El Molino Avenue, which borders the Project, is classified in its entirety as a *de-emphasized* street. This classification is intended to limit future street improvements that would increase traffic on El Molino Avenue "to protect the residential character of neighborhoods abutting the street throughout the City."(p.3-2). Therefore, TAC recommends the DEIR provide a better explanation of why segments further south along El Molino Avenue were not studied and/or increase the number of street segments studied along El Molino Avenue south of the Project for the Final EIR. E

Furthermore, since Project traffic to and from the 210 freeway would be increased and 210 intersections are currently operating at level of service D, TAC recommends that impacts on these segments and intersections also be studied for the Final EIR. F

B. Project-Related Traffic Impacts and Mitigation Measures (§ 4.5.2b.)

The DEIR shows that the Project would incrementally increase traffic levels at the studied intersections, resulting in a Class II, significant but mitigable impact (TC-1). To do so, the DEIR proposed five (5) related mitigation measure: TC-1 (a) through (e). G

TAC questions the impact on the circulation system in general with respect to measure TC-1 (a), which would prohibit northbound and southbound left-turns along El Molino at the Colorado Blvd. intersection. A greater discussion and explanation for the recommendation should be included in the Final EIR, specifically how these facilities would not contribute to capacity enhancement restrictions on a de-emphasized street. Furthermore, TAC recommends that mitigation TC-1 (d), Transportation Demand Management, which would require compliance with the City's Trip Reduction Ordinance be expanded to require a mix of tenants with varying start/stop times to help reduce AM/PM peak-hour traffic. Tenants (and the Project as a whole) should also be required to use marketing materials and their websites to direct visitors to the site via the City's arterials and traffic corridors, instead of using de-emphasized streets, such as El Molino and Glenarm. Closing the street to through-traffic during peak hours should also be studied and considered as a possible mitigation. H I

TAC recognizes that the Project as proposed would result in an unavoidable and unmitigable, significant Class I impact (TC-2) with respect to traffic level of service (LOS) at El Molino Avenue and Colorado Blvd. TAC supports the Pasadena Department of Transportation's ("PasDOT") recommended mitigation measures (p. 4.5-25), except as noted in Item C. below. TAC further recommends that funds be contributed to control cut-through traffic. These measures in themselves, however, are insufficient for mitigating the TC-2 impact to a less than significant level. Unless the Project were redesigned, a finding of consistency with the General Plan (specifically, the Mobility Element) could not be made for Project approval. Therefore, TAC recommends the City J

give further attention to mitigating potential traffic impacts on El Molino Avenue by undertaking the following:

1. Studying in greater depth ingress/egress into the Project parking garage in terms of vehicle cueing and related traffic delays, as well as potential conflicts with pedestrians, especially those crossing El Molino mid-block during events and periods of high parking demand;
2. Proactively working with the applicant to explore Project ingress/egress from Green Street or Colorado Blvd. only, eliminating the El Molino driveway;
3. Studying designating El Molino as a southbound, one-way street from Walnut to California to function as a two-way couplet with northbound Hudson; and
4. Adding an additional mitigation measure, requiring the Project applicant to support (by contributing to the funding or urging the City to install) traffic calming measures such as speed humps in single-family residential areas south of the Project along El Molino.

J

C. Pedestrian and Bicycle Circulation Concerns

Given the importance of increasing walkability in Pasadena's Playhouse Sub-district and the Central District in general, the Final EIR should address in more depth impacts on pedestrian as well as bicycle circulation.

Among the four (4) required findings for granting the 10% increase in FAR discussed in Section 2 of the DEIR, the Planning Commission must find:

> b. The additional floor area will not be injurious to adjacent properties or uses, or detrimental to environmental quality, quality of life, or the health, safety, and welfare of the public; (p. 2-6)

K

Because the increase in FAR is requested to offset the proposed public space, in order to make this finding the City should study further the potential safety hazards of a mid-block crossing—proposed as a necessary part of the public space--to both pedestrians and motorists. It should be noted in the Final EIR that the Project as proposed even <u>without installation</u> of a mid-block crosswalk has nonetheless the potential of increasing mid-block pedestrian crossings.

L

With respect to the pedestrian crosswalk and the potential for pedestrians to cross mid-block as a result of this Project, the City should also complete a revised analysis that incorporates the potential impact on traffic. TAC recommends that several scenarios be analyzed:

1. Installation mid-block on El Molino Avenue of a crosswalk at grade or raised with enhanced paving and appropriate cautionary signage, lighting, or signalization (similar to the signalization for the crosswalk on Lake Avenue in front of Macy's);

M

2. During events scheduled at the Pasadena Playhouse, partial closing of El Molino Avenue between Colorado Blvd. and south of the proposed crosswalk, with vehicle access to the Project's parking from Green Street only; and
3. Permanent closure of El Molino between Colorado Blvd. and south of the crosswalk, with vehicle access to the Project's parking from Green Street only.

Furthermore, the Final EIR should address potential pedestrian-vehicle conflicts as a result of the Project parking driveway as proposed. It should also include an analysis of the effects of increased pedestrian traffic on vehicle circulation, especially at the two intersections along El Molino Avenue at Green and Colorado. Although PasDOT has recommended a pedestrian study as a mitigation measure for Street Segment Impacts, TC-2 (p. 4.5 – 25) TAC recommends that a comprehensive study be conducted prior to Project approval and the findings reported in the Final EIR. M

In conjunction with this, TAC recommends further analysis of potential negative impacts of installing left-turn pockets at Union and Green Streets along El Molino, TC-1 (b) and TC-1 (c), on pedestrian and bicycle circulation resulting from increased vehicle movement through crosswalks at those locations. N

D. Parking Concerns

While the DEIR analyzes proposed parking in terms of the Project's proposed land use and the City's respective parking requirements, it neglects the cumulative effect of additional parking spaces in the Central District. The Project proposes to increase onsite parking from thirty-six (36) current spaces to 522 spaces. Although Table 4.5-8, "Summary of Parking Requirements," shows the total number of parking spaces required for the Project as 360--the maximum allowable by Code--a total of 522 is being proposed to include 162 onsite public parking spaces. The Final DEIR should provide greater discussion of the rationale for providing excess parking. Specifically, it should explain in further detail why additional public parking is being proposed when it would seem that the public use demand would be heaviest on evenings and weekends, the proposed office use heaviest during the daytime and weekdays--a situation that would seem to lend itself to shared parking and reduction in the total number of proposed spaces actually needed. O

The Final EIR also needs to discuss guarantees to ensure the excess spaces for public parking will be made available at all times for the public at large (e.g. project conditions of approval requiring a separate underground entrance and ticketing system). Additionally, the Final EIR should include discussion of potential sites for providing 162 public parking sites at other offsite, proximate locations. P

Finally, the amount of destination-based parking spaces (as opposed to shared "park once and walk" spaces) being proposed for this Project, their cost to the applicant in terms of building and maintaining six floors of underground parking as well as making the project as a whole viable, and the effect in terms of traffic congestion of providing a single driveway for ingress and egress on a de-emphasized street brings to light the need for Playhouse Sub-district-wide solutions. TAC is therefore recommending that the City Q

conduct a sub-district-wide parking study. This should assess the number of all available spaces, when they are being used on a 24-hour basis, and the opportunities for shared parking arrangements among the biggest providers in the sub-district (e.g. the Project, Target, Trio, the new medical office project). TAC is also recommending that the revision of the General Plan Mobility Element emphasize efficient, City-wide parking measures and work to reduce unutilized and underutilized parking spaces. Q

On behalf of our fellow Commissioners, we thank the City for giving TAC the opportunity to review and comment on the Draft EIR. TAC looks forward to reviewing the Final EIR and the responses to its comments.

Respectfully submitted,

JULIANNA DELGADO
Chair

JENNIFER HIGGINBOTHAM
Vice-Chair

cc: Mayor and City Council
Planning Commission

JAD:120108

Letter 2

COMMENTER: Juliana Delgado and Jennifer Higginbotham, Transportation Advisory Commission

DATE: December 3, 2008

Response 2A

The commenter states the Transportation Advisory Commission (TAC) is in favor of a project that supports an expanded pedestrian network such as the public space and walking link between Arcade Lane and the Playhouse, and sees an increase in parking spaces near the Playhouse as a means for convenient access for seniors. The commenter suggests that there are other items of concern which are expressed in the following comments.

These comments are noted for consideration by decision makers. The comment regarding a preference for particular project features, such as the walking link, do not make such features part of the proposed project, and thus are not analyzed in the EIR. Please see response 1D for additional discussion regarding a mid-block crosswalk. Issues of concern to the TAC are addressed below.

Response 2B

The commenter states the project proposes an 8,600 square foot east-to-west pedestrian corridor between the Playhouse and the Arcade Building but does not discuss a proposed mid-block pedestrian crosswalk along El Molino Avenue. TAC recommends Section 2.5 of the Final EIR include a more complete description of the project that includes the proposed mid-block pedestrian crosswalk along El Molino Avenue.

The issue of the mid-block pedestrian crosswalk is discussed above and under Response 1D.

Response 2C

The commenter notes that the Draft EIR states that Section 4.5 "evaluates existing conditions and potential impacts to the local circulation system." The commenter states only impacts on vehicular traffic circulation are addressed and that the Final EIR should address impacts to other areas of circulation including pedestrian and bicycle modes.

The proposed project was analyzed in a manner consistent with other projects in the City and according to CEQA thresholds or as superseded by locally adopted thresholds. There are no established thresholds of significance for the pedestrian and bicycle circulation and there is no precedent requiring analysis. Nevertheless, one might be concerned if the proposed project were to either create a new hazard to bicycles and pedestrians such as a new curb cut or cross traffic at a bicycle lane, or impede an existing access.

The proposed project involves redevelopment of an existing developed site and would not impede existing bicycle and pedestrian circulation. The project would likewise not introduce a new hazard to bicycles or pedestrians since the proposed project would take access similar to

the existing access along El Molino Avenue where there are three existing driveways on the property. Under the proposed project, two of these drives would be eliminated and the southern-most driveway would be designed to accommodate two lanes and a loading area. Figure 2-2 in Section 2.0 *Project Description* shows an aerial with the three existing driveways, while Figure 2-3 shows the driveway that is proposed with the new project. Under the proposed project, two lanes would accommodate traffic into and out of the subterranean garage, while one lane would accommodate truck loading. The proposed lanes are positioned in about the same location as the southernmost existing driveway. In addition, El Molino is not designated in the Mobility Element as a part of the Bikeways Network (Figure 8) and does not contain a bike lane. Please also see Response 1F for additional discussion of pedestrian circulation.

Response 2D

The commenter states the project would increase net new average daily trips ("ADTs") by 1,585 trips and opines this is less than about half of the 2,900 ADTs that would be generated if the project were specialty retail instead of mostly office uses. The commenter states it is unclear how the general uses for the Playhouse sub-district have been factored into the estimates and the Final EIR needs to address this discrepancy and/or provide revised traffic generation estimates that include the 162 public parking spaces that would be constructed with the proposed project.

Please see the discussion above regarding the City's policy on traffic analysis of parking spaces under Response 1L and parking supply under Response 1A.

Response 2E

The commenter states the City's Mobility Element classifies El Molino Avenue as a de-emphasized street, which is intended to limit future street improvements that would increase traffic on El Molino Avenue "to protect the residential character of neighborhoods abutting the street throughout the City." The commenter recommends that the Draft EIR provide a better explanation of why segments further south along El Molino Avenue were not studied and the need to increase the number of street segments studied along El Molino Avenue south of the project for the Final EIR.

This comment is addressed above under Response 1K.

Response 2F

The commenter opines traffic generated by the project to and from the 210 freeway would be increased and 210 intersections are currently operating at a level of service D. The commenter states impacts on these segments and intersections should also be studied in the Final EIR.

The project's effects on the Lake Street intersections with Corson Street and Maple Street, which provide access to the 210 freeway, were analyzed in the traffic study and EIR. The eastbound (EB) 210 intersection and ramp was intersection #9 and the westbound (WB) 210 intersection and ramp was #10 as indicated in Table 4.5-1. Table 4.5-1 shows the existing peak hour level of

service (LOS) at both of these intersections as LOS D, except during the AM peak hour on the EB 210 Corson Street ramp which currently operates at LOS B.

Figures 4.5-5 and 4.5-6 show project traffic distribution during the AM and PM peak hour for both of these intersections, and project traffic added to each intersection is summarized below.

Summary of Project Traffic Effects to the 210 Freeway

Intersection [a]	Project Traffic Added (vph)		Significant impact? [d]
	AM Peak Hour [b]	PM Peak Hour [c]	
9. Lake Avenue Maple-Street/I-210 Freeway WB Ramp	41	17	No
10. Lake Avenue-Corson Street/I-210 Freeway EB Ramp	25	41	No

Source: Section 4.5 Traffic and Circulation, vph = vehicles per hour during the peak hour period, the per hour traffic would be less during off-peak periods.
[a] Table 4.5-1
[b] Figure 4.5-5
[c] Figure 4.5-6
[d] Table 4.5-6

During the AM peak hour the proposed project would add 41 vehicles to the WB 210 and 25 vehicles to the EB 210 Freeway. During the PM peak hour, the proposed project would add about 17vehicles to the WB 210 Freeway and 41 vehicles to the EB 210 Freeway. As shown in Table 4.5-6 of the Draft EIR, even under cumulative conditions, project-added traffic would result in volume to capacity (V/C) changes of 0.001 to 0.005. Project-added traffic would result in an LOS decrease at the WB 210 onramp intersection at Maple Street from D to E; however, because the V/C increase of 0.005 does not exceed the threshold of 0.03 (Table 4.5-4), no significant impact occurs. Moreover, since project traffic decreases with increasing distance from the site, there is even less potential for project-generated significant impacts further from the site on the 210 Freeway.

Response 2G

The commenter questions the impact to the circulation system in general with respect to measure TC-1(a), which would prohibit northbound and southbound left-turns along El Molino at the Colorado Blvd. intersection. The commenter suggests further discussion including how these facilities would not contribute to capacity enhancement restrictions on a de-emphasized street to be included in the Final EIR.

This topic is discussed under General Response 1 and also under Response 1E.

Response 2H

The commenter opines mitigation measure TC-1(d), which would require compliance with the City's Trip Reduction Ordinance, should be expanded to require a mix of tenants with varying

start/stop times to help reduce AM/PM peak-hour traffic. The commenter also opines that tenants (and the project as a whole) should be required to use marketing materials and their websites to direct visitors to the site via the City's arterials and traffic corridors, instead of using de-emphasized streets like El Molino and Glenarm.

Mitigation Measure TC-1(d) will be expanded in response to this comment, within the qualifier that the City is without the legal authority to go quite as far as the commenter suggested. New text is shown in underline format.

TC-1(d) **Transportation Demand Management (TDM).** The project shall comply with the City's Trip Reduction ordinance. Upon submittal of a TSM Program for review and approval, the owner/developer shall place a deposit based on the current General Fee Schedule with the Department of Transportation prior to the issuance of a building permit. This deposit is subject to a refund or an additional billing in the event that the deposit amount is not sufficient to cover the cost of the review. The developer shall pay an annual Transportation Demand Management status report review fee based on the current General Fee Schedule, in compliance with the requirements of the Trip Reduction Ordinance.

The TSM program shall encourage a mix of tenants with varying start/stop times to help reduce AM/PM peak-hour traffic. The TSM shall also require the use of marketing materials and website design that directs site visitors to the site via the City's arterials and traffic corridors, instead of using de-emphasized streets like El Molino and Glenarm.

Response 2I

The commenter suggests closing El Molino to through-traffic during peak hours should be studied and considered as possible mitigation. Since the subsequent analysis of residential intersections revealed no significant impacts to segments other than the segments between Playhouse Alley and Union Street, closure of other portions of the street would not offset the project's impact. Moreover, closure of the affected portion of the street to through traffic would divert existing traffic to adjacent north south streets, potentially causing other significant secondary impacts. Please see additional discussion regarding this project's effect on El Molino Avenue under General Response 1.

Response 2J

The commenter mistakenly identifies an unavoidably significant impact at the intersection of Colorado Boulevard and El Molino Avenue. The commenter correctly identifies the unavoidably significant impact at Impact T-2 however, which is the street segment between Colorado Boulevard and Playhouse Alley. The commenter expresses support for mitigation measure TC-2 except as indicated below in comments 2K through 2N.

These comments are noted for consideration, but it should be emphasized that the unavoidably significant impact to the street segment of El Molino Avenue between Playhouse Alley and Colorado Boulevard only occurs because the project added traffic is 12.3%, while the threshold for this street segment is a 4.9% increase in ADT. Likewise, the unavoidably significant impact to the segment of El Molino Avenue between Colorado Boulevard and Union Street only occurs because the project added traffic is 6.5%, which exceeds the threshold of 4.9%. These are exceedances of a threshold that is intended to reduce traffic increases within residential neighborhoods along El Molino Avenue throughout the entire City. These exceedances do not necessarily correspond to a decrease in a performance standard like LOS or ICU along these street segments. Moreover, no additional unmitigable intersection impacts were identified. Please also see General Response 1.

Response 2K

The commenter states the Final EIR should address in more depth the impacts to pedestrian and bicycle circulation. Please refer to Response 2C for a discussion regarding pedestrian and bicycle impacts.

Response 2L

The commenter states the City should further study the potential safety hazards of a mid-block crossing to both pedestrians and motorists. The commenter notes that the project as proposed even without installation of a mid-block crosswalk has the potential of increasing mid-block pedestrian crossings. This topic is discussed under Response 1D and Response 2C.

Response 2M

The commenter suggests the City complete a revised analysis incorporating the potential impact of a mid-block crosswalk on traffic. The commenter recommends analyzing potential scenarios and the potential for potential pedestrian-vehicle conflicts. Please see Response 1D and 2C.

Response 2N

The commenter recommends further analysis of potential negative impacts resulting from installing left-turn pockets at Union and Green Streets along El Molino and further analysis of TC-1(b) and TC-1(c) to pedestrian and bicycle circulation resulting from increased vehicle movement through crosswalks at those locations.

Mitigation measures TC-1(b) and TC-1(c) were designed to lessen impacts related to traffic intersection congestion on El Molino at Union Street and Green Street. The mitigation measures TC-1(b) and TC-1(c) both require signal turn phasing such that left turning vehicles would have an uninterrupted right of way, which would minimize conflicts to pedestrians and bicyclists. The turn mitigation would require upgrades and software improvements to existing signal equipment, including dedicated turn-arrow signal heads that would minimize conflicts between crosswalk patrons and turning motorists. Impacts that relate to pedestrians and bicycle circulation that would be considered significant under CEQA include the following: conflicts with adopted policies, plans, or programs supporting alternative transportation; and increased

hazard due to design features. The proposed project would not conflict with adopted alternative transportation plans and would not increase hazards due to design features. The Commission may impose additional applicable conditions of approval on the proposed project.

Response 2O

The commenter states that the Draft EIR neglects to analyze the cumulative effect of additional parking spaces in the Central District. The commenter states the Final EIR should provide a discussion of the rationale for providing 522 parking spaces when the project requires 360 and include the possibility of devising a shared parking plan between public and office use. Please refer to the discussion on this issue under Response 1A.

Response 2P

The commenter states the Final EIR should guarantee that the excess public parking spaces be available at all times for the public at large. The commenter also states the Final EIR should include a discussion of potential alternative sites for providing 162 public parking sites. The public parking spaces would be conditioned for public use only as a part of the Development Agreement. The Draft EIR evaluated two off-site parking alternatives. These were analyzed in the Traffic Study that was conducted for the project (see Appendix E) and were evaluated as project alternatives in Section 6.0, *Alternatives*. Since the public spaces do not add any traffic to the quantification of the unavoidably significant impact, providing these spaces off-site would not serve to quantifiably reduce any project specific impacts. It should also be noted that the public spaces are proposed at 155 rather than the 162 originally characterized in the DEIR.

Response 2Q

The commenter states the City should conduct a sub-district wide parking study to assess the number of available spaces, when spaces are used on a 24-hour basis, and the opportunities for shared parking arrangements among the biggest providers in the sub-district. The commenter also recommends the revision of the General Plan Mobility Element emphasizing citywide parking measures to reduce unutilized and underutilized parking spaces. These comments do not pertain to the adequacy or content of the Draft EIR, but rather pertain to the scope and design of the project and whether provision of public spaces is necessary. Please refer to Response 1A for additional discussion regarding the provision of public parking spaces.

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December 9, 2008

Letter 3

John Steinmeyer, Senior Planner
CITY OF PASADENA
Planning Division
Hale Building
175 North Garfield Avenue
Pasadena, California 91101-1704

Re: 680 East Colorado Boulevard - Draft Environmental Impact Report

Dear Mr. Steinmeyer:

We write you on behalf of IDS Real Estate Group and the California State Teachers Retirement System ("CalSTRS"), the Applicant for the project located at 680 East Colorado Boulevard, Pasadena, California (the "Project"). This letter will set forth our comments regarding the Draft Environmental Impact Report ("DEIR") on the Project. A

Preliminarily, we believe that the DEIR fully complies with the California Environmental Quality Act ("CEQA"), and includes all of the content and analysis required of an environmental impact report. Although our letter provides specific comments and suggests minor corrections regarding the DEIR, our comments and suggested corrections do not involve any material defect in the DEIR that would render it legally inadequate or require changes to the DEIR that will require public recirculation.

To the extent that any comment or correction set forth in this letter is applicable to multiple references throughout the DEIR, the comment or correction is intended to apply equally to all such references throughout the DEIR.

1. Section 2.5, Project Characteristics.

While the DEIR states that under Section 17.30.050(C) of the Pasadena Municipal Code the floor area ratio ("FAR") within the Central District Specific Plan may be increased by up to 10%, the DEIR then merely recites the intent of the Code in allowing sufficient flexibility to facilitate development where unique factors are involved, such as facilitating the preservation of historic structures or the setting aside of publicly accessible outdoor space, and then describes the findings B

required to approve an increase in the FAR. The DEIR fails to describe the relationship between the unique factors involved with the Project and the actual findings required to approve the increase in the FAR. We believe the Project has been thoughtfully designed in order to allow the City to make the required findings for increasing the maximum parcel FAR. Those findings and the unique factors applicable to the site are as follows:

a. The additional floor area allows development that would otherwise be economically infeasible.

The high cost of land in the Central District area—caused in part by the significant demand over many years for residential projects—makes it exceedingly unlikely that any private development would be financially able to create a sizeable amount of additional public parking or develop meaningful public walkways, paseos and open space. The proposed increase in the FAR allows this project to provide much needed underground public parking in the Playhouse District; create a large (over 8,900 square feet) public courtyard, pedestrian walkway and paseo connecting The Playhouse to The Arcade; and offer significant open space on the west side of the building along El Molino Avenue.

b. The additional floor area will not be injurious to adjacent properties or uses, or detrimental to the public welfare.

B

The Project is a mixed-use project in the Central Business District, involving offices over pedestrian-oriented, ground-floor uses. Such uses are customary, economically in demand, and legally permitted in the area. The Project will not exceed the height limit along Colorado Boulevard of 75 feet, even though some of the surrounding buildings are much taller. The parking would be located underground, with access to the site from El Molino Avenue. The Project will create many desirable public amenities, such as public parking, public walkways and paseos, and open space to satisfy many recent demands by citizens in the area. Importantly, the design of the Project has been carefully crafted so as to enhance the image of adjacent properties and the Playhouse District. The architectural expression compliments the traditional context of the Playhouse and the Arcade, the massing strategy incorporates setbacks from all boundary property lines, and the material quality will be appropriately high quality. Lighting, glare, and shadows will all be properly mitigated.

c. The additional floor area will promote superior design solutions and allow public amenities that enhance the property and its surroundings.

The increase in the FAR will allow the Project to include a significant public pedestrian walkway, connecting The Playhouse with The Arcade (and hopefully create a much needed mid-block cross walk on El Molino), large open space paseo, and much needed additional public parking in an underground structure. These public amenities will enhance and highlight the existing historic resources on both sides of the site. The creation of new pedestrian walkways will bring these historic resources to the forefront of the Playhouse District by providing connections between The Arcade to the east and The Playhouse to the west. The improvements along El Molino Avenue will ease the access to The Playhouse for its patrons and create a venue to allow the

expansion of the cultural programming being offered by The Playhouse and the Playhouse District Association. The creation of underground public parking is in response to the high demand for daytime parking within the core of the District, and for evening and weekend parking, as described in the Playhouse Parking Study prepared by Meyer, Mohaddes Associates, adopted by the City Council in December 2005.

In addition, the increase in floor area promotes superior design solutions. Please refer to Section 4.1, Aesthetics, of the DEIR, with respect to the excellent discussion regarding the Project's architectural strategy, massing strategy, architectural expression, and material quality.

d. The additional floor area is consistent with the objectives and policies of the Central District Specific Plan and the General Plan.

The Project is consistent with the General Plan in that it targets development in the Playhouse District, creating an exciting urban core, with diverse cultural and entertainment opportunities (Objective 1). The Project offers publicly accessible urban open spaces, including courtyards, passage ways and plazas (Policy 2.3). The proposal recognizes and facilitates the preservation of Pasadena's character and scale by integrating a new moderate-sized building in an area surrounded by historic structures (Objective 5). The Project promotes the preservation of historically and architecturally significant buildings by connecting The Playhouse and The Arcade by the creation of walkways and paseos, and provides ample public parking (Objective 6). And, the Project develops additional open space through the creation of paseos and plazas (Objective 9).

B

The Project is consistent with the Central District Specific Plan and the Playhouse District, which is intended to provide for a vibrant, mixed-use environment that encompasses cultural arts activities, centered on Colorado Boulevard and The Playhouse. The Project creates office uses above ground-floor, pedestrian-oriented uses, causes a pedestrian walkway to be created connecting The Playhouse with The Arcade, and develops a significant open space paseo of approximately 8,900 square feet on the west side of the building, all of which are publicly accessible.

The Project recognizes the need for new office space in the Central District, while harmonizing the integration of the new structure between two historically significant buildings. Importantly, the amenities of the Project will directly benefit the historic resources in the area, especially The Playhouse and The Arcade.

The Project is consistent with the Playhouse District Streetscape, Alleys and Walkways Plan, adopted by the City Council in November 1996, in that it creates new pedestrian connections, bringing the historic resources of the area to the front door of the District by causing connections with Colorado Boulevard.

The Playhouse Parking Study, adopted by the City Council in December 2005, highlighted the significant need for additional public parking in the Playhouse District. This Project satisfies many of those needs in an underground structure accessed off of El Molino Avenue. This

much needed parking capability will allow the District substantial cultural and entertainment opportunities to come to fruition. B

2. Section 3.2, Project Site Setting.

While the DEIR recites that building heights in the vicinity range from one-to-ten stories, it fails to observe that adjacent to The Arcade building on the east side is the recently completed Archstone Project, which is a mixed-use of residential apartments over ground-floor commercial, with five stories, approaching 75 feet in height, and overall massing and scale that is somewhat similar to the proposed Project. C

3. Section 4.2, Air Quality.

We note that with the passage of Senate Bill 97 last year, greenhouse gas emissions have become a valid subject of analysis under CEQA. The Governor's Office of Planning and Research ("OPR") has been charged with the task of creating a set of guidelines on the analysis and mitigation of greenhouse gas emissions during the CEQA process. OPR is required to submit those guidelines to the Resources Agency by July 1, 2009, and the guidelines must be adopted by January 1, 2010. In addition, the California Air Resources Board staff in June presented to the Board its AB 32 Draft Scoping Plan for review. AB 32 requires the Board to create a plan outlining ways of reducing greenhouse gas emissions in the state. We agree with the DEIR that there is currently no agreement among experts, or guidance at the state level, regarding the level at which an individual project on greenhouse gas emissions may be considered significant. D

4. Section 4.5, Traffic and Circulation.

There is a perception among some in the Playhouse District that there already exists excess traffic on El Molino Avenue. The DEIR recites that because the projected increase in future traffic at the intersection of El Molino Avenue/Colorado Boulevard and the street segment on El Molino Avenue between Colorado Boulevard and Playhouse Alley, caused by cumulative conditions and the Project, exceeds the City's percentage threshold, impacts would be deemed significant, and with respect to the street segment, unavoidably significant. Respectfully, we disagree. E

a. Because the former Homestead House furniture store at the site has been closed for many months and was closed during the period of time that the Traffic Study was conducted, the site is given zero credit in the Traffic Study for generating traffic. This zero credit ignores the fact that the former businesses at the site over many decades have clearly generated meaningful traffic flow. Most importantly for the purposes of environmental review, such a zero baseline means that any activity of any kind whatsoever at the site will generate statistically a significant increase in traffic. F

b. The existing level of service study (2008) on the intersection of El Molino Avenue/Colorado Boulevard shows an "A" rating in the morning peak hours and a "B" rating in the afternoon peak hours – both reflecting very good operating conditions. The public perception of too G

much existing traffic on this street is statistically incorrect. Even the Year 2010 Future Conditions Levels of Service calculations show that with existing, cumulative, and project traffic, the intersections will maintain an "A" rating in the morning peak hours and, with mitigation measures, will achieve a "C" rating in the afternoon peak hours. As the DEIR recites, LOS A through LOS C are generally considered acceptable levels of service. G

c. Cumulative traffic condition assessments assume a 1.5% ambient traffic growth – notwithstanding the clear and present decrease in traffic caused by recent high fuel prices and the deepening economic recession. The cumulative traffic condition assessments further assume completion and occupancy of all 23 so-called related projects in the area – even though many of these projects have already or soon will be stopped because of bad economic conditions. Clearly, the cumulative traffic condition assessments are a very conservative analysis of future conditions and are predicated on a worse case scenario. H

d. Pasadena is one of only two cities anywhere in California that analyzes traffic impacts on "street segments." All other cities look only at traffic impacts at intersections. As discussed above, the traffic analysis here shows no unavoidably significant impacts on Pasadena intersections as a result of the Project. This is a very important finding and one that everyone can easily understand. The street segment analysis, conversely, shows an increase on the El Molino street segment between Colorado Boulevard and Playhouse Alley, of greater than 7.5% , which is the percentage that the City has established as significant. Unlike an A through F rating for intersection analysis that lay people can understand and appreciate, it is far from clear what an increase of over 7.5% means in the real world for residents or commuters. Because the site for traffic study purposes was given no credit whatsoever for any existing traffic, and because all of the traffic from this Project must access the site from El Molino, it is not surprising that the Project will exceed the threshold of a 7.5% increase in traffic on a street segment. In this type of situation, typically the City and the developer would then look at ways to mitigate the impact to a level of less than significant. Here, however, that is not possible. The City has also designated El Molino as a "de-emphasized" street, meaning that no physical changes such as street widening may be made to the street to increase traffic capacity. Thus, the developer here is prevented from taking reasonable and customary measures to reduce traffic impacts. I

e. Most tellingly, because of the City's reliance on relatively small percentage changes to determine environmental significance on street segments, in order to eliminate a significant impact due to traffic volume increases on El Molino Avenue, the Project would need to be reduced by 80% from about 160,000 square feet to 31,471 square feet. Stated differently, given the City's percentage thresholds, the Project would need to be approximately one-half of the size of the existing improvements on the property in order to achieve a less than significance rating for traffic purposes. Again, the intersection analysis shows no unavoidably significant impacts. Only the street segment analysis shows an unavoidable significant impact. Essentially, because of the rather unique Pasadena rules, only in Pasadena and one other city would this Project be deemed to have created an unavoidable significant environmental impact.

5. Table 4.5-8 Summary of Parking Requirements. We note that there appear to be some inaccuracies between the Summary of Parking Requirements as set forth in Table 4.5-8 and the J

Executive Summary at the beginning of the DEIR. The Executive Summary shows office parking spaces – 366, and public parking spaces – 156, for a total of 522. Table 4.5-8 shows office parking spaces – 328, retail parking spaces – 32, and public parking spaces – 162, for a total of 522. The actual parking space allocations are as follows: office parking spaces – 328, retail parking spaces – 39, and public parking spaces – 155, for a total of 522. We ask that you make these corrections throughout the DEIR as appropriate. J

6. Section 4.6, Water Service.

We compliment the City of Pasadena and the preparers of the DEIR on their most comprehensive discussion of water service within the City's service area. The Applicant is fully committed to working closely with the City to significantly reduce water consumption at the Project. K

7. Section 5.1, Population and Economic Growth.

The DEIR recites that the proposed Project will likely generate about 320 new jobs and that "the provision of additional quality employment opportunities within the Central District is considered advantageous to the overall long-term vitality of the City." We fully agree. We call to your attention the perception and reality that the Playhouse District has lagged behind other business and cultural areas of the City during the growth of the 1990's and the first part of the 21st Century. As our national, regional and local economies enter into a period of much slower growth and deepening recession, we have already observed businesses in the area reducing their work force, moving to lower cost offices, and even closing and shuttering retail establishments along Colorado Boulevard. We believe that the Project will be an important component in jump-starting the renaissance of the Playhouse District. By way of example only, employees of offices in the Project will frequent on a daily basis restaurants and retail establishments throughout the District during their breaks and lunch hours, and provide much needed revenue to such well-known establishments in the area as Vroman's Bookstore and El Portal Restaurant. In addition, a ground-floor restaurant at the site will cause additional people to visit the area during the evening hours. Perhaps most important, the significantly enhanced public parking that is part of the Project will allow ease of access that should generate many more visitors to the area, especially at night and on weekends, encourage people to walk throughout the area, and patronize the retail establishments and entertainment venues. We observe that the addition of meaningful public parking has had a tremendously positive impact on the success of businesses in the Old Pasadena area, the Third Street Promenade in Santa Monica, and State Street in Santa Barbara. L

8. Section 6.3, Dual Access Alternative.

The dual access alternative would allow vehicular access to the site from both El Molino Avenue and Green Street. Unfortunately, the current site does not have legal access to Green Street. The developer has had many discussions with the owners of the property along Green Street in the hope of creating such access. To date, those discussions have not been successful and the prospect of future access to Green Street is improbable. M

9. Section 6.4, 100% Floor Area Ratio Alternative.

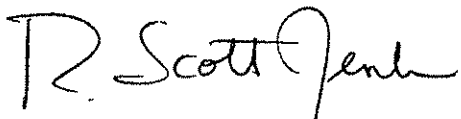
This alternative assumes a 10% FAR reduction from the proposed Project, reducing the amount of office space from about 145,000 square feet to roughly 130,000 square feet on the upper four floors. Given the extensive cost of providing underground public parking in this Project, the paseo connecting the two historic properties, the large public open space of 8,900 square feet, and a unique building design with quality material to be compatible with nearby buildings. If this alternative were to be adopted, the developer has already determined that the economic returns provided thereby would not warrant proceeding with the same and the Project as so revised would not be built. We understand that the City has retained an independent consultant to do an economic analysis showing that it would not be economically feasible to develop the Project as currently planned without the 10% FAR increase. N

10. Section 6.7, Environmentally Superior Alternative.

The DEIR highlights that the only alternative to reduce the Project's unavoidably significant effect on El Molino Avenue between Colorado Boulevard and Playhouse Alley is to reduce the Project size by 80%. Not surprisingly, this alternative does not fulfill any of the original project goals of creating a feasible, substantial commercial project, with a public plaza, paseo, public parking, and adequate office space. Interestingly, this alternative would create downsized improvements that would be one-half the size of the improvements currently on the site. O

IDS Real Estate Group appreciates the effort and concern shown by the City Staff and consultants in preparing the DEIR. The comments and corrections set forth in this letter are intended to improve the document and correct the record where necessary. As indicated, none of our comments or corrections should be interpreted as evidence that the DEIR is not legally adequate under CEQA. Thank you for considering our thoughts.

Very truly yours,



R. Scott Jenkins
of HAHN & HAHN LLP

RSJ:jam
cc: Mr. David Saeta
Mr. Richard Bruckner
Mr. Robert Montano
Theresa E. Fuentes, Esq.

RSJ\99999.99999\290336.3

Letter 3

COMMENTER: R. Scott Jenkins, Hahn & Hahn LLP

DATE: December 9, 2008

Response 3A

The commenter states that they are writing on behalf of IDS Real Estate Group and the California Teachers Retirement System (CalSTRS), the Applicant for the proposed project. The commenter opines that the Draft EIR fully complies with the CEQA, and includes all of the content and analysis required of an environmental impact report. This comment is noted for the record, but no response is necessary.

Response 3B

The commenter states an opinion that the DEIR does describe the relationship between the unique factors involved with the proposed project and the actual findings required to approve the increase in FAR. The commenter asserts that the additional floor area: 1) allows development that would otherwise be economically infeasible; 2) will not be injurious to adjacent properties or uses, or detrimental to the public welfare; 3) will promote superior design solutions and allow public amenities that enhance the property and its surroundings; and, 4) is consistent with the objectives and policies of the Central District Specific Plan and the General Plan.

This comment is noted and the above comment corresponds to the findings that would be required to approve the 10% Floor Area Ratio increase. These findings are discussed on page 2-6 of the Draft EIR. Please refer to additional discussion under General Response 2.

Response 3C

The commenter states an opinion that the DEIR does not observe that adjacent to the Arcade building on the east side is the recently completed Archstone Project, a mixed use development that approaches 75 feet in height, and is similar in overall massing to the proposed project. The Archstone Residential project is described on page 4.1-1; however, it is acknowledged that no description of the building as approaching 75 feet tall was made. This distinction is noted for the record. Please see additional discussion on this topic under General Response 2.

Response 3D

The commenter states that they agree with the Draft EIR that there is currently no agreement among experts, or guidance at the state level, regarding the level at which an individual project on greenhouse gas emissions may be considered significant. The commenter refers to text on page 4.2-16 in Section 4.2 *Air Quality* where there is a discussion on greenhouse gas significance. These comments are noted for the record.

Response 3E

The commenter states that they disagree that traffic impacts are deemed significant at the El Molino Avenue and Colorado Boulevard intersection and unavoidably significant on the street segment of El Molino Avenue between Colorado Boulevard and Playhouse Alley.

Street segments and intersections analyzed in the traffic analysis were identified by the City and the project trip generation forecast was submitted for review and acceptance by PasDOT staff. The traffic analysis follows the requirements of the City of Pasadena Department of Transportation which has established threshold criteria for determining whether or not project related traffic may have a significant impact at local intersections and upon local street segments.

Impacts related to the increase in traffic at study area intersections as a result of the proposed project would be less than significant at 12 of the 13 study area intersections. However, the project's contribution to the increase in V/C at the intersection of El Molino Avenue and Colorado Boulevard would exceed the City's impact threshold criteria. Therefore, the proposed project would create a potentially significant impact at this intersection. Mitigation measures TC-1(a-e) are required to reduce impacts at the intersection of El Molino Avenue/Colorado Boulevard to a less than significant level.

Based on the City of Pasadena requirements, the percentage increase in ADT volumes on study area street roadway segments during the project year that is due to project traffic determines the significance of project impacts. The proposed project is anticipated to increase daily traffic volumes by less than 2.4% on four of the five analyzed street segments. While this level of increase requires staff review, no physical mitigations are required. However, as shown in Table 4.5-7, the proposed project is anticipated to increase daily traffic volumes by 11.1% to 13.5% on the segment of El Molino Avenue between Colorado Boulevard and Playhouse Alley. Because this increase exceeds the City's 4.9% threshold, impacts to the street segment would be potentially significant. The City of Pasadena Department of Transportation has determined that there are no feasible soft mitigation measures to reduce the impacts of the project on El Molino Street to below levels of significance. Therefore, the impact to this street segment as a result of the proposed project would be unavoidably significant and if the project is expected to be entitled, a Statement of Overriding Consideration would be required.

Response 3F

The commenter states that the former Homestead House furniture store that existed on the site has been closed for many months including at the time the Traffic Study was conducted. As a result, the site was given a "zero credit" in the Traffic Study for generating traffic. The commenter opines that this "zero credit" does not take into account the fact that the site generated a meaningful traffic flow prior to the furniture store closing and therefore, a zero baseline means that any activity on the site will generate a statistically significant increase in traffic.

These comments are noted for consideration. Section 6.0, *Alternatives*, acknowledges that even the No Project Alternative, assuming a furniture store use, would generate an unavoidably

significant traffic increase to this segment of El Molino Avenue between Playhouse Alley and Colorado Boulevard.

Response 3G

The commenter opines that the public perception that there is too much existing traffic at the intersection of El Molino Avenue and Colorado Boulevard is statistically incorrect since LOS A through LOS C are generally considered acceptable levels of service. The commenter further quotes from the traffic section of the Draft EIR regarding LOS and indicates that after mitigation the intersection would operate at LOS C during the PM peak hour period which is considered acceptable. These are accurate comments on the LOS at the intersection of El Molino Avenue and Colorado Boulevard as determined in the traffic study and Draft EIR.

Response 3H

The commenter opines that the cumulative traffic condition assessments in the traffic analysis are very conservative of future conditions and are predicted on a worst case scenario. The commenter also opines that with recent high fuel prices and the deepening economic recession, there is a clear and present decrease in traffic.

The commenter's opinions are noted for consideration. The traffic analysis was conducted in accordance with City practices and consistent with other projects. Please refer to Response 3E.

Response 3I

The commenter opines that because the City's traffic thresholds analyze traffic impacts on "street segments" rather than just intersections, only in Pasadena and in one other California city would this project be deemed to have created an unavoidable significant environmental impact. The commenter also opines that the developer is prevented from taking reasonable and customary measures to reduce traffic impacts because El Molino Boulevard is a "de-emphasized" street. These comments are noted for consideration but the comments do not pertain to the adequacy of the Draft EIR. The project was analyzed pursuant to adopted thresholds.

Response 3J

The commenter states that the Draft EIR contains some inaccuracies between the Summary of Parking Requirements as set forth in Table 4.5-8 and Table ES-1 in the Executive Summary. In particular the Executive Summary states that the proposed project includes 366 office parking spaces and 156 public parking spaces, for a total of 522. Table 4.5-8 shows 328 office parking spaces, 32 retail parking spaces, and 162 public parking spaces, for a total of 522. The commenter states that the actual parking allocations are as follows: office parking spaces – 328, retail parking spaces – 39, and public parking spaces – 155, for a total of 522.

In response to these comments, the following changes have been made.

Executive Summary page ES-1 has been revised as follows:

Summary of Project Characteristics

Lot Size	1.3 acres (57,762 square feet)
Total Floor Area	159,971 square feet total • 14,407 SF of retail use • 145,564 SF of office use
Floor Area Ratio *	2.8
Maximum Building Height	75'-0"
Number of Levels Above Grade	5 levels
Number of Levels Below Grade	6 levels
Parking Spaces	522 **

Source: .Gensler. Plan Set, June 2008
** The project site contains separate zones with floor area ratios of 2.0 and 3.0. The floor area ratio presented here is an average based on the total square footage proposed as allowed in each zone and the total area of the site.*
*** ~~156~~ 155 of these spaces are proposed to serve the Playhouse District as public parking spaces*

Table ES-1 on page ES-9 has been revised as follows.

Impact TC-3 The proposed project would provide 522 parking spaces, of which ~~366~~ 367 would be project-only spaces and ~~156~~ 155 would be public spaces to serve the Playhouse District. The proposed parking spaces would meet the City's parking requirements. Therefore, impacts to parking supply would be Class III, less than significant.	None required.	Less than significant.

Impact TC-3 on page 4.5-25 and Table 4.5-8 on page 4.5-26 have been revised as follows:

Impact TC-3 The proposed project would provide 522 parking spaces, of which ~~366~~ 367 would be project-only spaces and ~~156~~ 155 would be public spaces to serve the Playhouse District. The proposed parking spaces would meet the City's parking requirements. Therefore, impacts to parking supply would be Class III, *less than significant*.

As discussed in *Setting*, The project site is currently developed with a two-story commercial retail structure totaling approximately 66,000 square feet (SF) with 36 surface parking spaces. The proposed project involves the demolition of existing improvements, excavation for a six-level subterranean garage, and the subsequent construction of an approximately 160,000 SF, five-story commercial office building with 522 parking spaces to be provided in the six subterranean levels, of which ~~366~~ 367 would be project-only spaces and ~~156~~155 would be public spaces to serve the Playhouse District. Vehicular access to the subterranean parking structure would also be from El Molino Avenue. Table 4.5-8 shows the City's parking requirements and the proposed parking spaces.

Table 4.5-8
Summary of Parking Requirements

Land Use	City Code Parking Ratio	Proposed	Total Parking Spaces
Office[a]	3 spaces/1,000 sf	145,564 sf	~~437~~ 328
Retail[b]	3 spaces /1,000 sf	14,407 sf	~~43~~ 39
Total Required/Maximum Allowed Parking Spaces			~~360~~ 367
Commercial Off-Street Parking[c]			~~162~~ 155
Total Parking Spaces Provided			**522**[d]

Notes:
[a] Section 17.50.340 D.1(a)of the City of Pasadena Zoning Code states that for office uses the minimum amount of required off-street parking shall be reduced by 25 percent, and this reduction shall be the maximum allowed number of parking spaces.
[b] Section 17.50.340 D.1(b) of the City of Pasadena Zoning Code states that for all other nonresidential uses the minimum amount of required off-street parking shall be reduced by 10 percent, and this reduction shall be the maximum allowed number of parking spaces.
[c] Section 17.50.340 D.2(a) states that off-street commercial parking shall require the granting of a Minor Conditional Use Permit in compliance with Section 17.61.050. The applicant proposed ~~156~~ 155 public spaces~~; however, there are six additional spaces.~~
[d] ~~162~~155 of these spaces are proposed to serve the Playhouse District as public parking spaces

Response 3K

The commenter compliments the City and the preparers of the Draft EIR on the comprehensive discussion of water service within the City's service area. The commenter also states that the Applicant is committed to working closely with the City to significantly reduce water consumption at the project site. These comments are noted for consideration.

Response 3L

The commenter agrees with DEIR Section 5.1, *Population and Economic Growth*, that the proposed project will generate 320 new jobs and that "additional employment opportunities within the Central District is considered advantageous to the overall long-term vitality of the City". The commenter opines that the proposed project would contribute to the "renaissance of the Playhouse District" by attracting additional visitors to the area that would patronize local businesses, by adding new employees providing revenue to neighboring businesses, and by adding public parking to the area that would encourage more visitors to the area that would patronize the retail establishments and entertainment venues in the district. These comments are noted for consideration.

Response 3M

The commenter states that the "Dual Access" alternative is infeasible because the current site does not have legal access to Green Street. In addition, the commenter states that the developer has had many discussions with the owners of the property along Green Street in the hope of

creating an access that would allow vehicular access to the site from both El Molino Avenue and Green Street. However, the commenter states that those discussions have not been successful and that future access is improbable.

At the time the alternative was undertaken, dual access was considered potentially viable. However, these comments are noted for consideration. It is noted that §15126.6(c) states that *"among the factors that may be used to eliminate alternatives from detailed consideration in an EIR are:(i) failure to meet most of the basic project objectives, (ii) infeasibility, or (iii) inability to avoid significant environmental impacts"*. Therefore, because the Green Street access is no longer considered feasible, it could be eliminated from consideration.

Response 3N

The commenter opines that the "100% Floor Area" alternative is infeasible because the economic returns would not warrant proceeding and the project would not be built. The commenter states that the City has retained an independent consultant to do an economic analysis showing that it would not be economically feasible to develop the project as currently planned without the 10% FAR increase. It is noted that §15126.6(c) states that *"among the factors that may be used to eliminate alternatives from detailed consideration in an EIR are:(i) failure to meet most of the basic project objectives, (ii) infeasibility, or (iii) inability to avoid significant environmental impacts"*. The City has evaluated this economic analysis and concurs. Therefore, because the 100% project is not considered economically feasible, it could be eliminated from consideration pursuant to CEQA.

Response 3O

The commenter states that the "80% Reduced Project" alternative is infeasible because it does not fulfill any of the original project goals of creating a feasible, substantial commercial project, with a public plaza, paseo, public parking, and adequate office space. The commenter also states that this alternative would be one-half the size of the improvements currently on the site.

As noted above, §15126.6(c) states that *"among the factors that may be used to eliminate alternatives from detailed consideration in an EIR are:(i) failure to meet most of the basic project objectives, (ii) infeasibility, or (iii) inability to avoid significant environmental impacts"*. Since even a 10% reduction in floor area would be economically infeasible, it likewise follows that an 80% reduction in floor area would be economically infeasible. Nevertheless, the alternative was included because it is the only scenario that would eliminate the unavoidably significant impact to the street segment of El Molino Avenue between Playhouse Alley and Colorado Boulevard. Therefore, because the 80% reduced project is not considered economically feasible, it could be eliminated from consideration.

COUNTY OF LOS ANGELES

DEPARTMENT OF PUBLIC WORKS

"To Enrich Lives Through Effective and Caring Service"

GAIL FARBER, Director

900 SOUTH FREMONT AVENUE
ALHAMBRA, CALIFORNIA 91803-1331
Telephone: (626) 458-5100
http://dpw.lacounty.gov

ADDRESS ALL CORRESPONDENCE TO:
P.O. BOX 1460
ALHAMBRA, CALIFORNIA 91802-1460

Letter 4

IN REPLY PLEASE
REFER TO FILE: LD-1

December 9, 2008

Mr. John Steinmeyer, Senior Planner
City of Pasadena Department of Planning and Development
175 North Garfield Avenue
Pasadena, CA 91109

Dear Mr. Steinmeyer:

NOTICE OF AVAILABILITY OF
DRAFT ENVIRONMENTAL IMPACT REPORT
PLAYHOUSE PLAZA OFFICE BUILDING
CITY OF PASADENA

Thank you for the opportunity to review the Notice of Availability of the Draft Environmental Impact Report for the subject project. The project proposes the demolition of an existing one-story building and parking lot, excavation for a six-level subterranean parking garage with 522 spaces, and the construction of a five-story commercial building.

The following comments are for your consideration and relate to the environmental document only:

A

Hazardous Waste

- The existing Hazardous Waste Management infrastructure in this County is inadequate to handle the hazardous waste currently being generated. The proposed project may generate hazardous waste, which could adversely impact existing Hazardous Waste Management infrastructure. This issue should be addressed and mitigation measures provided. Mitigation measures may include, but are not limited to, providing educational materials on the proper management and disposal of hazardous waste. The project proponent may contact the County of Los Angeles Department of Public Works for available educational materials by calling 1(888) CLEAN LA.

FOR LAND USE PERMIT

Storage Space for Recyclables

The California Solid Waste Reuse and Recycling Access Act of 1991, as amended, requires each development project to provide an adequate storage area for collection and removal of recyclable materials. The environmental document should include/discuss standards to provide adequate recyclable storage areas for collection/storage of recyclable and green waste materials for this project. B

If you have any questions regarding the review of this document, please contact Mr. Corey Mayne at Extension 3524.

If you have any other questions or require additional information, please contact Mr. Toan Duong at (626) 458-4945.

Very truly yours,

GAIL FARBER
Director of Public Works

for DENNIS HUNTER, PLS PE
Assistant Deputy Director
Land Development Division

MA:ca
P:\ldpub\CEQA\CDM\ Playhouse Plaza Office Building Project-City of Pasadena-NOA/DEIR.doc

Letter 4

COMMENTER: Gail Farber, County of Los Angeles Department of Public Works

DATE: December 9, 2008

Response 4A

The commenter states that the County of Los Angeles' Hazardous Waste Management infrastructure is inadequate to handle the hazardous waste currently being generated. The commenter further states that the proposed project may generate hazardous waste, which could adversely affect existing Hazardous Waste Management infrastructure and that this issue should be addressed in the EIR.

Hazardous waste generated by the proposed project has been addressed within the Initial Study (see Appendix A). As discussed on page 17 of the Initial Study, the proposed project includes development of retail and office uses and would not involve hazardous emissions or the handling of hazardous materials, substances, or waste. Further analysis in the EIR is not warranted.

Response 4B

The commenter states the California Solid Waste Reuse and Recycling Access Act of 1991 requires each development project to provide an adequate storage area for collection and removal of recyclable materials. The commenter opines that the EIR should discuss standards to provide adequate recyclable storage areas for collection/storage of recyclable and green waste materials for this project.

Adequate recyclable storage areas for the proposed project have been addressed within the Initial Study (Appendix A). As discussed on page 35 of the Initial Study, the proposed project will be subject to Chapter 8.62 of the Municipal Code, which is the construction demolition and waste management ordinance. Pursuant to this ordinance, the proposed project will be required to divert a minimum of 50% of the construction and demolition debris from the project. Additionally, because the project would be a LEED certified project, the proposed project will be required to comply with LEED Materials and Resources Prerequisite 1: Storage and Collection of Recyclables. This measure requires the project to "provide an easily accessible area that serves the entire building and is dedicated to the collection and storage of non-hazardous materials for recycling, including (at a minimum) paper, corrugated cardboard, glass, plastics, and metals." Further analysis in the EIR is not warranted.

Metropolitan Transportation Authority
One Gateway Plaza
Los Angeles, CA 90012-2952
213.922.2000 Tel
metro.net

Metro

November 25, 2008

Letter 5

Mr. John Steinmeyer
Senior Planner
175 N. Garfield Avenue
Pasadena, CA 91101

Dear Mr. Steinmeyer:

Los Angeles County Metropolitan Transportation Authority (Metro) is in receipt of the Draft EIR for the Playhouse Plaza Office Building project. This letter conveys recommendations concerning issues that are germane to Metro's statutory responsibilities in relation to the proposed project. A

The Traffic Impact Analysis prepared for the Draft EIR satisfies the traffic and transit requirements of the proposed project. However, the following issue should be addressed for the Final EIR:

> Multiple transit corridors with Metro bus service could be impacted by the project. Metro Bus Operations Control Special Events Coordinator should be contacted at 213-922-4632 regarding construction activities that may impact Metro bus lines. Other Municipal Bus Service Operators including Foothill Transit may also be impacted and therefore should be included in construction outreach efforts. B

Metro looks forward to reviewing the Final EIR. If you have any questions regarding this response, please call me at 213-922-6908 or by email at chapmans@metro.net. Please send the Final EIR to the following address:

Metro CEQA Review Coordination
One Gateway Plaza MS 99-23-2
Los Angeles, CA 90012-2952
Attn: Susan Chapman

Sincerely,

Susan Chapman
Program Manager, Long Range Planning

Letter 5

COMMENTER: Susan Chapman, Los Angeles County Metropolitan Transportation Authority (Metro)

DATE: November 25, 2008

Response 5A

The commenter states that the Traffic Impact Analysis for the Draft EIR satisfies the traffic and transit requirements. This comment is noted for the record.

Response 5B

The commenter states that multiple transit corridors, including Metro bus service and Foothill Transit, could be adversely affected by the project's construction and that Metro should be contacted prior to construction activities.

The proposed project site is located on the southeast corner of the intersection of Colorado Boulevard and El Molino Avenue. It is acknowledged that the Los Angeles County Metropolitan Transportation Authority (Metro) and Foothill Transit provide service along Colorado Boulevard. The closest stops are located on the southwest corner of El Molino Avenue and Colorado Boulevard and at the end of the block on the southwest corner of Oak Knoll Avenue and Colorado Boulevard (City of Pasadena ARTS Routes and Stops Maps, Effective 2008). Therefore, the project site is not located in front of a bus stop and no adverse impacts to transit service would be anticipated as a result of construction activities.

PLAYHOUSE DISTRICT ASSOCIATION

Culture, Commerce and Community in the Heart of Pasadena

Letter 6

November 20, 2008

Mr. Michael Beck
City Manager
City of Pasadena
100 North Garfield Avenue
Pasadena, CA 91109

Subject: 680 E Colorado Boulevard

Dear Mr. Beck:

The Playhouse District Association Board of Directors voted to support the project at 680 East Colorado Boulevard at the meeting of November 19, 2008. This action was made after several months of review and consideration of the analysis in the project EIR. In addition to the Playhouse District Association's endorsement for Playhouse Plaza project and we urge the continued refinement of project with the following: A

1. Provision of traffic improvements in advance of project construction, with traffic signal synchronization as needed; B

2. Decorative paving at the proposed crosswalk and intersection of Colorado and El Molino, consistent with the 1996 Playhouse District Streetscape and Alleyways Plan; C

3. Provision of a comprehensive project signage program, including signage for the public parking component. D

The Playhouse District Association also encourages further exploration of access to the project via a Green Street easement. E

Please feel free to contact me or Erlinda Romo, Executive Director if you have any additional questions or to further discuss the proposed project.

Sincerely,

Paul Jacoy
President

cc: Mayor Bill Bogaard
John Steinmeyer, Senior Planner, Planning Division
Playhouse District Association Board of Directors

48 North El Molino Avenue, Suite 103B, Pasadena, California 91101 • 626/744-0340 • FAX 626/744-0347

Letter 6

COMMENTER: Paul Jacoy, Playhouse District Association

DATE: November 20, 2008

Response 6A

The commenter states that the Playhouse District Association Board of Directors voted to support the project at the meeting of November 19, 2008. This comment is noted for consideration.

Response 6B

The commenter opines that prior to construction, traffic improvements including signal synchronization is recommended. Please refer to Response 1H. Traffic mitigation would be required for completion as a condition of and prior to occupancy.

Response 6C

The commenter states that decorative paving at the proposed crosswalk and intersection of Colorado Boulevard and El Molino Avenue should be consistent with the 1996 Playhouse District Streetscape and Alleyways Plan.

This comment is noted for consideration. However, the proposed Draft EIR project description does not include development of a crosswalk. Please refer to Response 1D. The project description in the Draft EIR does not describe physical crosswalk improvements and only analyzes the proposed construction and improvements on the project site. This concept has not been reviewed by the property owners, business persons, or residents in the project vicinity.

Response 6D

The commenter requests provision of a comprehensive signage program, including for the public parking component. This comment is not a comment on the Draft EIR, but is noted for consideration.

Response 6E

The commenter opines that access to the project site via a Green Street easement should be further explored.

As described in Section 6.0, *Alternatives*, the "Dual Access" alternative would consist of the same project characteristics as the proposed project with 14,407 SF ground floor retail space and 145,564 SF of office space on four additional floors. However, this alternative includes two options for on-site vehicle access that would divert some traffic from El Molino Avenue to Green Street. Impacts for the "Dual Access" alternative are analyzed within Section 6.0, *Alternatives*. Please refer to Response 3M.

PASADENA PLAYHOUSE

LEADING THE WAY IN LA THEATRE

December 5, 2008

Letter 7

Mr. Michael Beck
City Manager
City Hall-2nd Floor
100 North Garfield Avenue
Pasadena, CA 91109

Dear Mr. Beck,

I am writing with regard to a development project that has been proposed by IDS Real Estate Group for the southeast corner of Colorado Blvd. and El Molino.

This project, if it happens, would be right across the street from our theatre and would represent a significant new neighbor. Given these factors, I want to express our support as well as our utmost appreciation for the thorough and forthright work IDS has done to address the needs and concerns of the Pasadena Playhouse. A

From the very beginning, when what we all think of as the "Biggar's Building" was purchased by IDS, David Saeta and David Mgrublian have been solicitous of our input and responsive to our requests in their design. They have worked closely with our management and artistic leadership to design a building that enhances our neighborhood, complements the theatre going experience, and adds important amenities, such as parking and new shops and restaurants, for our patrons.

IDS was willing to meet with our board both in one-on-one meetings and in a special session we held this past summer. We appreciate that both the partners within IDS are long-time supporters of arts and education in this community and that they really care about the welfare of Pasadena. B

Today's theatre goers want convenient parking, dining and shopping options that they can walk to both before and after plays. The proposed project offers that and, in our view, creates an enhanced environment for our ongoing efforts to bring theatre patrons to this area and to preserve this historic treasure for future generations. This is especially true when you consider that the current environment directly in front of the playhouse is non-active and contains only a dilapidated building and a small parking lot.

For these reasons, and for what it is worth, the Pasadena Playhouse appreciates the positive change represented by the proposed project.

Thank you for your consideration of these thoughts and for your service to our City.

Sincerely,

Michele Engemann

Michele Engemann
Board Chair

39 South El Molino Avenue, Pasadena, CA 91101
Administration: 626-792-8672 • **Fax:** 626-792-7343 • **Box Office:** 626-356-7529 • www.PasadenaPlayhouse.org

Letter 7

COMMENTER: Michele Engemann, Pasadena Playhouse

DATE: December 5, 2008

Response 7A

The commenter is the Board Chair for the Pasadena Playhouse. The commenter states that the Board supports the project and appreciates the work of the applicant to address the needs and concerns of the Pasadena Playhouse. This comment is noted for consideration but does not pertain to the Draft EIR analyis.

Response 7B

The commenter opines that the building design enhances the neighborhood, complements the theatre going experience, and adds important amenities, such as parking and new shops and restaurants, for patrons of the Playhouse. This comment is noted for consideration but does not pertain to the Draft EIR analysis.

651 South Saint John Avenue
Pasadena, California 91105 2913
Telephone 626 441 6333
Facsimile 626 441 2917
www.pasadenaheritage.org

PASADENA HERITAGE

Letter 8

December 10, 2008

Chairman and Members of the
Planning Commission
City of Pasadena
100 North Garfield Avenue
Pasadena, California 91109

RE: 680 East Colorado Boulevard DEIR Comments

Dear Chair Johnson and Planning Commissioners:

Pasadena Heritage wishes to submit the following comments on the DEIR for the proposed project at 680 East Colorado Boulevard.

Aesthetics (Section 4.1)
The evaluation of the aesthetic impacts of this project is contradictory and its conclusions are wrong. This massive new building will certainly have aesthetic impacts on the adjacent historic structures – the Arcade, the Pasadena Playhouse, and the one-story historic buildings on West side of El Molino and on Green Street. Although the discussion in this section refers to the possible impacts of a much taller and more massive building on this site, it concludes that Design Review can solve those issues and render impacts insignificant. The Design Commission will not be able to change the scale of this project, which is primary concern. Aesthetic impacts should be clearly identified and, unless the project is modified and the scale is reduced, the impacts are impossible to mitigate to a level of insignificance. This section should be revised to clearly state that there will be impacts on adjacent historic properties. Design review may be able to mitigate them somewhat, but will not reduce the impacts to a level of insignificance. A

Nose & Vibration (Section 4.3)
It appears from the project description and drawings that excavation would take place immediately adjacent to the historic Arcade Lane building. We did not find any information relating to the potential impacts of excavation next to 90-year-old building walls and foundations. More information needs to be incuded about risks to the adjacent building and how it will be protected during construction. B

Traffic and Circulation (Section 4.5)
The traffic analysis appears to be adequate and identifies the impacts which are significant. Since historic resources are negatively impacted by excessive traffic, this is a concern from a preservation perspective as well as a general circulation perspective. El Molino is a VERY narrow street. The Pasadena Playhouse and other historic buildings are located immediately across the street from the project and its driveway, and many more older residential buildings are located along El Molino Avenue to the south.
The traffic impacts are unacceptable and cannot be mitigated. The number of cars/trips could be reduced by reducing the overall size of the project and by reducing the number of parking spaces. We don't find an analysis of parking in the section. Where is that information? C

Parking
The project proposes a total of 522 parking spaces (366 for the project and 156 public spaces) per the discussion of alternatives (page 6-1). Why are so many public parking spaces included? We've been told D

Pasadena Heritage Oral History Project
major funding provided by a bequest from Lucille W. Holling

that the Playhouse District needs additional public parking to serve retail and office uses, as well as for the Playhouse, itself. How much parking is needed during the day vs. evening and weekend needs? Why isn't shared parking being considered as part of the parking plan? If one assumes that building underground parking constitutes a significant cost to the project, couldn't the scale of the project and the traffic impacts be reduced if the parking were reduced? D

Alternatives

The Alternatives do not provide a range of options for study. Two of the alternatives include the same amount of square footage as the proposed project. The 100% FAR alternative shows a small reduction in the square footage and a very small reduction in parking. The last alternative shows the project reduced by 80%! The conclusion is that none of the alternatives are environmentally preferable? Certainly the 80% reduced project is environmentally preferable! Even the 100% FAR alternative is preferable if impacts are reduced, even minimally. What is really needed, however, is an alternative that is somewhat smaller than the proposal and includes perhaps 50 public parking spaces and a shared parking plan. What would the project look like without the proposed density bonus?? The building would reduced in scale, with more design flexibility, less cost, and less traffic impact. Why wasn't that logical alternative studied? E

Conclusion:

The proposed project is too big and too tall for the site, especially given the scale of neighboring historic buildings. The impacts are unacceptable, especially given that a density bonus is being proposed and excess parking is being included. The impacts on aesthetics should be defined as unmitigated for the proposed project. The study of alternatives is seriously deficient, and more analysis is needed before the EIR can be considered complete. F

Thank you for this opportunity to comment.

Sincerely,

Susan N. Mossman
Executive Director

Letter 8

COMMENTER: Susan N. Mossman, Pasadena Heritage

DATE: December 10, 2008

Response 8A

The commenter states that the scale and massing of the proposed project will have aesthetic impacts on the adjacent historic structures. Pursuant to analysis within the EIR in Section 4.1 Aesthetics, and Impact Statement AES-1 the proposed project would not have a significant impact on surrounding historic and landmark eligible status structures. Please see Response 1B and General Response 2. Moreover, as discussed under General Response 2, the proposed project appears to be consistent with the intent for development under the Central District Specific Plan. Please refer to General Response 2 and Response 3O for a discussion of the conflict between directives of the Mobility Element for de-emphasis of El Molino Avenue, and directives of the Central District Specific Plan for development of the Colorado Boulevard corridor.

Response 8B

The commenter states the project appears to require excavation right next to the historic Arcade Lane Building and asserts that the Draft EIR does not address the potential for adverse impacts to the building during construction. Please refer to Response 1C.

Response 8C

The commenter opines that the number of cars/trips could be reduced by reducing the overall size of the project and by reducing the number of parking spaces. In addition, an analysis of parking is not found in the traffic section.

Please refer to responses 1A, 3N, and 3O for responses regarding the feasibility of project size reduction and provision of public parking spaces.

Response 8D

The commenter questions whether the project is overparked. Please see Response 1A.

Response 8E

The commenter opines that the alternatives analysis does not provide a range of alternatives for study. The commenter opines that a smaller project alternative that contains approximately 50 public parking spaces and a shared parking plan is needed for analysis.

The purpose behind the required analysis of alternatives in CEQA is to avoid or substantially lessen any of the significant effects of a project while still achieving most of the basic project objectives. Thus, alternatives analyses that comply with CEQA are not an exploratory method to test the effects of different sizes of projects, but instead are defined in a more methodical

manner in relation to the adverse environmental effects of the proposed project. With the information gathered from such an analysis, a lead agency may choose to adopt the proposed project, or any variation thereof that fits within the parameters of what was analyzed in the CEQA document. Refer to Responses 3N and 3O for a discussion of the feasibility of the project size and Response 1M for a discussion regarding selection and analysis of alternatives. Please refer to Response 1A for a discussion regarding the provision of public parking spaces and traffic generation associated with public spaces.

Response 8F

The commenter opines that the project is too large for the site, especially when considering the scale of adjacent historic resources. Please refer to General Response 2 and Response 1B.

Letter 9

DATE: DECEMBER 10, 2008

TO: CHAIR GARY JOHNSTON AND PLANNING COMMISSIONERS
CITY OF PASADENA PLANNING COMMISSION

FROM: MARSHA V. ROOD, FAICP
216 S. MADISON AVENUE, #302
PASADENA, CA 91101

SUBJECT: COMMENTS ON DRAFT ENVIRONMENTAL IMPACT REPORT FOR 680 EAST COLORADO BLVD., PASADENA, CA

I AM MARSHA ROOD, A RESIDENT OF THE CENTRAL DISTRICT, JUST ONE BLOCK SOUTH OF THE PLAYHOUSE DISTRICT. I AM ALSO A MEMBER OF *OPEN SPACE NOW* AND *COALITION FOR A COMMON VISION.*

I HAVE THE FOLLOWING COMMENTS REGARDING THE DRAFT EIR FOR PROPOSED OFFICE BUILDING AT 680 EAST COLORADO BOULEVARD: A

1. AESTHETICS

BECAUSE THIS BUILDING SITE IS IN THE PLAYHOUSE DISTRICT THAT IS LISTED IN THE *NATIONAL REGISTER OF HISTORIC PLACES,* THE BUILDING'S DESIGN AND ITS IMPACTS ARE PARTICULARLY IMPORTANT TO NOT ONLY THE CITY AND THE DISTRICT, BUT ALSO TO THE NATION'S

HISTORIC RESOURCES. THE PROPOSED BUILDING IS SUBSTANTIALLY LARGER THAN THE EXISTING SURROUNDING BUILDINGS, MANY OF WHICH ARE SIGNIFICANT CONTRIBUTORS TO THE DISTRICT. THEREFORE, THE BUILDING HAS THE POTENTIAL TO ADVERSELY AFFECT THE VISUAL CHARACTER OF THE SURROUNDING BUILDINGS IN THE DISTRICT. THE *CENTRAL DISTRICT SPECIFIC PLAN* STATES: A

AND HAS THE CHARACTER OF A SUBURBAN OFFICE BUILDING PLAZA

- "*NEW DEVELOPMENT SHOULD BUILD UPON THE CHARACTER ESTABLISHED BY SIGNIFICANT AND NOTEWORTHY BUILDING IN THE SUB-DISTRICT, AND PRESENT A LEVEL OF DESIGN EXCELLENCE AND CREATIVITY APPROPRIATE TO AN ARTS-ORIENT DISTRICT. THIS NOTION ALSO EMPHASIZES THE PRESERVATION AND REHABILITATION HISTORICALLY AND CULTURALLY SIGNIFICANT BUILDINGS." (P. 115)* A

- *"DEMAND A HIGH LEVEL OF DESIGN EXCELLENCE THAT IS APPROPRIATE TO AN ARTS-ORIENTED DISTRICT; VARIETY WITHIN THE CONTEXT OF A STREET-ORIENTED DEVELOPMENT PATTERN IS ENCOURAGED." (P. 175)*

- *"RESPECT THE SCALE, MASSING AND ARTICULATION OF ADJACENT HISTORIC BUILDINGS; MASSING SHOULD NOT OVERWHELM OR DIMINISH HISTORIC STRUCTURES."(P. 175)*

IN FACT, THE SCALE AND MASSING OF THE PROPOSED BUILDING OVERWHELM TWO OF THE MOST IMPORTANT HISTORIC BUILDINGS IN THE PLAYHOUSE DISTRICT - ON THE WEST, THE PLAYHOUSE ITSELF, THE STATE THEATER OF CALIFORNIA, AND THE EAST, THE ARCADE BUILDING. A

THESE IMPACTS MUST BE MORE THOROUGHLY ANALYZED BY AN HISTORIC RESOURCES SPECIALIST AND BE INCLUDED IN THE FINAL EIR.

2. <u>TRANSPORTATION AND TRAFFIC</u>

a. AS A DAILY WALKER IN AND AROUND THE PLAYHOUSE DISTRICT FOR NEARLY NINE YEARS, I QUESTION THE EXISTING OR BASE LINE *LEVEL OF SERVICE* CONDITIONS FOR PEAK HOUR TRAFFIC AS SHOWN IN THE DRAFT EIR (P. 4.5-5). THE BASE LINE LEVELS ARE IMPORTANT FOR DETERMINING TRAFFIC IMPACTS. SPECIFICALLY, A *LEVEL OF SERVICE A* AT PEAK ~~HOUSE~~ HOURS FOR EL MOLINO AND B

COLORADO, EL MOLINO AND GREEN AND EL MOLINO AND DEL MAR ARE SIMPLY NOT REALISTIC. B

b. THE DEVELOPER IS REQUESTING A 10% INCREASE IN FLOOR AREA RATIO (FAR) THAT IS NOT WARRANTED BECAUSE IT CONTRIBUTES TO THE UNAVOIDABLY SIGNIFICANT TRAFFIC IMPACTS OF THE PROJECT AT EL MOLINO AND COLORADO FROM LEVEL OF SERVICE *C* IN 2010 TO LEVEL OF SERVICE *D,* AND THE INCREASE ON ROADWAY TRAFFIC IN THE IMMEDIATE AREA. C

c. IN ORDER TO DETERMINE "WORSE CASE" FOR AN ENVIRONMENTAL IMPACT PERSPECTIVE, THE RETAIL SQUARE FOOTAGE IN THE PROPOSED PROJECT MUST BE TREATED SEPARATELY FROM THE OFFICE SPACE AND BE ANALYZED AS A RESTAURANT USE, THE MOST INTENSIVE USE IN TERMS OF TRAFFIC, PARKING AND POTENTIAL VALET SERVICES. THE IMPACT OF NEARLY 15,000 SQ. FT. OF RESTAURANT SPACE AT 100% CORNER OF EL MOLINO AND COLORADO HAS THE POTENTIAL FOR CREATING A SEVERE TRAFFIC IMPACT. THE *DRAFT EIR* COMBINES THE 145,564 SQ. FT. OF OFFICE WITH THE 14,407 SQ. FT. OF D

RETAIL USE TO DETERMINE TRAFFIC IMPACTS BASED ON THE CURRENT ITE TRIP GENERATION MANUAL THAT WAS DEVELOPED ON A SUBURBAN LAND USE MODEL.

d. THE IMPACT OF THE ADDITIONAL 156 PUBLIC PARKING SPACES PROPOSED BY THE DEVELOPER SHOULD BE FULLY ANALYZED IN TERMS OF THE TRAFFIC IMPACTS ON THE El MOLINO AVENUE SEGMENT BETWEEN COLORADO AND GREEN, AND LEVEL OF SERVICE IMPACTS ON INTERSECTIONS IN THE DISTRICT, PARTICULARLY COLORADO BLVD. AND EL MOLINO AVENUE, AND EL MOLINO AVENUE AND GREEN STREET. IT APPEARS THAT THE *DRAFT EIR* ANALYZES TRAFFIC IMPACTS BASED UPON THE SQUARE FOOTAGE OF THE PROPOSED BUILDING ONLY. THESE ADDITIONAL SPACES, WHICH REPRESENT ABOUT 30% OF THE PARKING SPACES PROVIDED, HAVE THE POTENTIAL FOR BEING UTILIZED FOR ENTITLING ADDITIONAL DEVELOPMENT IN THE PLAYHOUSE DISTRICT USING THE "PARKING ZONING CREDIT" PROGRAM. D

e. THE INCREASED TRAFFIC ON THE ROADWAYS AND AT INTERSECTIONS MUST BE ANALYZED IN TERMS OF ITS IMPACTS ON PEDESTRIAN MOVEMENT IN E

THE PLAYHOUSE DISTRICT. PEDESTRIAN MOVEMENT IS A KEY OBJECTIVE OF THE GENERAL PLAN THAT STATES "DOWNTOWN WILL BE A SAFE, CONVENIENT AND COMFORTABLE PLACE TO WALK, A PLACE WHERE WALKING IS THE MODE OF CHOICE FOR SORT TRIPS." E

3. ALTERNATIVE USE SUCH AS RESIDENTIAL OR HOTEL WAS NOT ANALYZED FOR EIR PURPOSES. AT 1200 PER UNIT, 120 UNITS WOULD A REASONABLE NUMBER TO WORK WITH FOR THIS PURPOSE. I THINK IT WOULD BE IMPORTANT, BASED ON THAT USE, WHAT THE REDUCTION WOULD BE TO ELIMINATE SIGNIFICANT IMPACTS. MY UNDERSTANDING IS THAT OFFICE SPACE GENERATES ABOUT THREE TIMES AS MUCH TRAFFIC ON A SQUARE FOOT BASIS AS RESIDENTIAL. F

Letter 9

COMMENTER: Marsha V. Rood

DATE: December 10, 2008

Response 9A

The commenter opines that the proposed project's scale and massing has the potential to adversely affect the visual character of the area by overwhelming the two historic buildings (the Playhouse and the Arcade building) in the Playhouse District. Please refer to General Response 2, Response 1B and Response 8A.

Response 9B

The commenter questions the existing Level of Service (LOS) conditions for peak hour traffic listed in Table 4.5-1 (page 4.5-5 in Section 4.5, *Traffic and Circulation*). More specifically, the commenter states an opinion that the LOS for El Molino Avenue and Colorado Boulevard, El Molino Avenue and Green Street, and El Molino Avenue and Del Mar Boulevard are unrealistic.

As discussed on page 4.5-5 the Intersection Capacity Utilization (ICU) method of intersection analysis, per the City of Pasadena's requirements for analyzing intersection conditions was used to determine the intersection volume-to-capacity (V/C) ratio and corresponding LOS for each study intersection. Please also refer to responses 1G and 3G.

Response 9C

The commenter opines that the developer's request for a 10% increase in floor area ratio (FAR) is not justified because it contributes to the unavoidably significant traffic impacts at El Molino Avenue and Colorado Boulevard, and the increase on roadway traffic in the immediate area. As discussed in Section 4.5, *Traffic*, the proposed project would have a significant and unavoidable impact on two street segments on El Molino Avenue. As discussed in Section 6.0 *Alternatives*, traffic impacts to two street segments would be unavoidably significant if the FAR of the proposed project was 100% or if the FAR was 110%. Moreover, the unavoidably significant traffic impacts would only be eliminated if the project were reduced by 80% as discussed in Section 6.0 *Alternatives*. Please refer to General Response 1 and 2 and responses 3N and 3O for additional responses pertaining to this topic.

Response 9D

The commenter opines that the additional "public parking" spaces and separate restaurant space should be fully analyzed for potential increases to traffic in the Playhouse District. No specific restaurant is proposed, rather the ground floor commercial uses include restaurant as a potential tenant serving use. Please refer to responses 1A and 1G.

Response 9E

The commenter opines that the increased traffic on the roadways and intersection must be analyzed for impacts on pedestrian movement in the Playhouse District. Pedestrian circulation is addressed in mitigation measure TC-2 listed above (refer to Response 2F). Please also refer to similar discussions in responses 1D, 1F and 2C.

Response 9F

The commenter states that an alternative use such as residential or a hotel was not analyzed within the EIR. The commenter opines that residential use would generate less traffic than office space.

These comments are noted for consideration, though as discussed in Section 5.0 of the Draft EIR and in General Response 2, the City has experienced an increase in housing units in the Playhouse District with the recent approvals of the Archstone Pasadena project, the Lake-Walnut and the Trio mixed use developments, Pasadena Gateway Villas, Madison Walk condominiums, Oak Knoll condominiums, and Walnut Place apartments. The proposed commercial development is intended to provide additional quality employment opportunities for a community that is striving for a balance of employment and housing within the dense urban core.

It is noted that a 160,000 square foot hotel, assuming 175 rooms, would generate about 1,430 average weekday trips according to ITE Land Use 310. The proposed project would generate about 1,585 average daily trips. Therefore, a hotel use, assuming 175 rooms would generate about 90% of the trips that are associated with the proposed project. Based on previous analysis of the alternatives, a hotel use would not eliminate the impact to the street segment of El Molino Avenue between Colorado Boulevard and Playhouse Alley. To eliminate the street segment impact, a hotel use would need to supply only about 38 rooms, and a residential development would be about 63 dwelling units.

Letter 10

City of Pasadena Draft Environmental Impact Report for 680 East Colorado Boulevard October, 2008

Questions submitted for responses to be included in the final certification of the EIR
Kenneth McCormick, 790 Fairfield Circle, Pasadena, California 91106
December 10, 2008

1) Please detail the proposed location of the 156 "public parking" spaces in the Project (i.e. which of the six levels of underground parking) and under what method the City is securing public rights – easement, dedication, or some other means. Will tenants or visitors to the building be allowed to use these spaces, or will all direct usage of the tenants of and visitors to the building be contained within the dedicated 366 "private" parking spaces? A

2) Please explain in detail the methodology and assumptions under which the traffic impact of the 156 "public parking" spaces has been excluded from the DEIR. If the assumption is that the Project's garage will draw cars already parking in the district, from on-street stalls or public parking lots, please describe the City's public parking strategy to effect this outcome. Will meters be added to the streets, for example, and will the pricing for the two surface public lots in the immediate vicinity be increased to be more than what the developer is anticipating charging for his public spaces? B

3) Because of the materiality of the exclusion relative to the entire Project, please provide a traffic analysis of the Project's impacted intersections for each scenario as though the 156 "public parking" spaces generated new trips to and from the Project.

4) City representatives and footnotes have referenced two prior traffic studies done for this same Project by traffic engineers other than the traffic consultant whose study appears in the DEIR. Please include these actual studies in the DEIR. C

5) A 2003 traffic study for the City which studied many of these same intersections reported higher volumes for some of these intersections in 2003 than reported for the 2008 base case on this Project (see attached), notwithstanding significant new developments in the area since 2003 (Trio, Archstone). For example: SB thru evening peak traffic at El Molino and Colorado dropped from 243 in 2003 to 167 in 2008; NB thru peak dropped from 182 to 140. SB thru evening peak traffic at El Molino and Union was reported as 301 in 2003 but dropped to 252 five years later; NB dropped from 224 to 217. Eastbound evening peak at Green and El Molino dropped from 1548 to 1095 during the five years. Please account for the apparent discrepancies. D

6) The mitigation for the decline in the capacity ratio of El Molino Avenue and Colorado Boulevard (to a D level) has been described variously as a set of dedicated left-hand turn lanes on El Molino at Union Street, Colorado Boulevard and Green Street, as well as synchronization of signals along Union and Green to allow for more E

north-south flow. Please describe and document the specific mitigation plan and its impact on surrounding traffic flows. E

7) The DEIR states on page 95 of the LL&G study that the project trips "from all four scenarios are expected to significantly impact El Molino Street, a de-emphasized street, by increasing the traffic between 10.4% and 12.3%. F

   Please clarify whether this segment impact is a total daily trip volume increase or whether it relates to the increase on the segments at peak hours. If the former, please provide the percentage increase on the segments at peak hours as well.

FINAL TRAFFIC IMPACT STUDY
UNION VILLAGE PROJECT
CITY OF PASADENA, CALIFORNIA

Prepared for:

Kenneth McCormick
790 Fairfield Circle
Pasadena, California 91106

Prepared by:

Linscott, Law & Greenspan, Engineers
234 East Colorado Boulevard, Suite 400
Pasadena, California 91101
Phone: 626.796.2322
Fax: 626.792.0941
Email: pasadena@llgengineers.com

October 9, 2003
1-033324-1

Prepared under the Supervision of:

David S. Shender, P.E.
Principal

Letter 10

COMMENTER: Kenneth McCormick

DATE: December 10, 2008

Response 10A

The commenter asks where the proposed "public parking" spaces will be located, who will be allowed use these "public parking" spaces, and under what method the City will be securing public rights. In addition, will tenants and visitors of the building be allowed to use the "public parking" spaces, or will they be contained within the dedicated "private parking" spaces. Public parking spaces would be available to the general public. Details requested by the commenter have not yet been developed, but would be conditioned as a part of the development agreement. Please refer to Response 2P for additional discussion regarding the provision of public spaces.

Response 10B

The commenter asks the methodology and assumptions under which the 156 "public parking" spaces have been excluded from the traffic impact analysis. In addition, the commenter states that traffic analysis should account for generated new trips associated with the 156 "public parking" spaces. The City determined that general public parking spaces in an existing commercial district do not generate new trips in the parking area vicinity because such trips already exist. Please refer to Response 1A. Also please note that the number of public parking spaces proposed is 155.

Response 10C

The commenter requests that prior traffic studies referenced in the Draft EIR be included in the EIR. The Draft EIR evaluates traffic impacts based on the Linscott Law and Greenspan Study that was approved by the City's Department of Transportation. That study incorporates count data from a previous study. The count data is included in the technical appendix to the traffic report, which is included in its entirety in Appendix E. Appendix E includes the traffic study and count data on which the findings of the EIR are based as approved by the City's Department of Transportation.

Response 10D

The commenter states that a 2003 traffic study for the City reported higher volumes for some of the same intersection analyzed in the Draft EIR. The commenter asks to account for the discrepancy between the 2003 traffic study (Final Traffic Impact Study-Union Village Project) and the 2008 study by Linscott, Law and Greenspan Engineers, dated July 3, 2008 (See Appendix E).

As described in Section 4.5, *Traffic and Circulation*, traffic volumes utilized in the traffic impact analysis prepared by Linscott, Law and Greenspan Engineers (See Appendix E) were based on traffic count data contained in a previous traffic study prepared for the proposed project, titled

Draft Traffic Impact Study, Mixed-Use Project 680 E. Colorado Boulevard, City of Pasadena, CA, dated June 8, 2007 and prepared by Willdan. Manual traffic counts for the area intersections were performed in April 2007. Higher volumes in 2003 could have been the result of a variety or combination of other factors such as slightly different traffic patterns, lower transit, pedestrian and bicycle use in the area, and less infill residential development within the area.

Response 10E

The commenter requests a description of how mitigation measures TC-1(a-e) will work and how they will affect traffic operations at the Union Street and Green Street intersections with El Molino Avenue. Mitigation Measure TC-1 (a-e) is described and documented within Section 4.5, *Traffic and Circulation* and is repeated in the Executive Summary table. These mitigation measures would improve traffic flow at the Colorado Boulevard/El Molino Avenue intersection by diverting left turns from Colorado Boulevard, which is the "Main Street" corridor as described in the Central District Specific Plan, to the next closest intersections north and south, which are Union Street and Green Street. Dedicated striped left turn lanes and signal phasing will facilitate smooth flowing traffic at these intersections. Also, please see General Response 1 and Response 2N.

Response 10F

The commenter asks whether increases in traffic described on page 95 of Appendix E (Traffic Study) refers to a total daily trip volume increase or whether it relates to the increase on the segments at peak hours.

Section 11.4 on Page 95 of the Traffic Study provides a summary of street segment improvement measures. A street segment is deemed significantly impacted based on an increase in the projected average daily traffic (ADT) volumes. The increase described on page 95 refers to ADT traffic volumes.

STATE OF CALIFORNIA

GOVERNOR'S OFFICE *of* PLANNING AND RESEARCH

STATE CLEARINGHOUSE AND PLANNING UNIT

ARNOLD SCHWARZENEGGER
GOVERNOR

CYNTHIA BRYANT
DIRECTOR

December 2, 2008

Letter 11

John Steinmeyer
City of Pasadena Planning Division
175 N. Garfield Ave., Hale Building
Pasadena, CA 91101-1704

Subject: 680 East Colorado Boulevard Commercial Project
SCH#: 2007071020

Dear John Steinmeyer:

The State Clearinghouse submitted the above named Draft EIR to selected state agencies for review. The review period closed on December 1, 2008, and no state agencies submitted comments by that date. This letter acknowledges that you have complied with the State Clearinghouse review requirements for draft environmental documents, pursuant to the California Environmental Quality Act.

Please call the State Clearinghouse at (916) 445-0613 if you have any questions regarding the environmental review process. If you have a question about the above-named project, please refer to the ten-digit State Clearinghouse number when contacting this office.

Sincerely,

Terry Roberts

Terry Roberts
Director, State Clearinghouse

1400 10th Street P.O. Box 3044 Sacramento, California 95812-3044
(916) 445-0613 FAX (916) 323-3018 www.opr.ca.gov

Document Details Report
State Clearinghouse Data Base

SCH# 2007071020
Project Title 680 East Colorado Boulevard Commercial Project
Lead Agency Pasadena, City of

Type EIR Draft EIR

Description The proposed project involves the demolition of existing improvements, excavation for a five-level subterranean garage, and the subsequent construction of a 160,000 square foot five-story commercial office building with 522 subterranean spaces. The building would have ground floor retail/commercial and restaurant uses, and four stories of office space above. Delivery parking is situated at the southern edge of the building with vehicular access from El Molino exclusively. Alternatively, access may be routed to El Molino and Green Street. Under the restaurant, retail/office scenario, the project would include 111 excess parking spaces that would serve the existing playhouse located across El Molino to the west.

Lead Agency Contact

Name John Steinmeyer
Agency City of Pasadena Planning Division
Phone (626) 744-6880 **Fax**
email
Address 175 N. Garfield Ave., Hale Building
City Pasadena **State** CA **Zip** 91101-1704

Project Location

County Los Angeles
City
Region
Lat / Long 34° 08' 44.56" N / 118° 08' 11.87" W
Cross Streets El Molino and Colorado Boulevard
Parcel No. 5764-037-030 & 5764-037-021
Township **Range** **Section** **Base**

Proximity to:

Highways 110, 134, 210
Airports
Railways Metro Gold Line
Waterways
Schools McKinley
Land Use Existing 66,000sf. retail furnitiure store with 36 surface parking spaces. The site has a general plan land use designation of Central District Specific Plan and a zoning designation of CD-4, Pasadena Playhouse Subdistrict.

Project Issues Aesthetic/Visual; Air Quality; Cumulative Effects; Geologic/Seismic; Growth Inducing; Noise; Other Issues; Population/Housing Balance; Traffic/Circulation; Water Supply

Reviewing Agencies Resources Agency; Department of Fish and Game, Region 5; Office of Historic Preservation; Department of Parks and Recreation; Department of Water Resources; California Highway Patrol; Caltrans, District 7; Regional Water Quality Control Board, Region 4; Native American Heritage Commission; Public Utilities Commission

Date Received 10/16/2008 **Start of Review** 10/16/2008 **End of Review** 12/01/2008

Note: Blanks in data fields result from insufficient information provided by lead agency.

Letter 11

COMMENTER: Terry Roberts, State Clearinghouse

DATE: December 9, 2008

Response 11

The commenter states that the 680 East Colorado Boulevard Commercial Project DEIR was submitted to select State agencies for review and that the review period closed on December 1, 2008. No state agencies commented on the DEIR during that period. The comment letter acknowledges that the City of Pasadena has complied with State Clearinghouse review requirements for Draft environmental documents pursuant to the California Environmental Quality Act. No response is necessary.

651 South Saint John Avenue
Pasadena, California 91105 2913
Telephone 626 441 6333
Facsimile 626 441 2917

PASADENA HERITAGE

Letter 12

May 12, 2009

Chairman and Members of the
Planning Commission
City of Pasadena
100 North Garfield Avenue
Pasadena, California 91109

RE: 680 East Colorado Boulevard Revised DEIR Comments

Dear Chair and Members of the Planning Commission:

We have reviewed the Revised Draft Environmental Impact Report for 680 East Colorado Boulevard Commercial Project. The revisions are clearly focused on the significant traffic impacts and additional traffic information is provided. Since the traffic impacts were identified in the earlier draft as the most challenging, we understand and support the need to provide more detailed information. However, we are very disappointed that other issues and requests were not considered in preparing the Revised Draft EIR. A

In our letter of December 10 (attached), Pasadena Heritage also identified other serious concerns which do not appear to be addressed in the revised draft. Those are:

Historic Resources and Aesthetics
The proposed project is of a size and scale that is incompatible with historic resources immediately adjacent and across the street from the site. The dramatic difference in size and height impacts negatively on these historic buildings and these impacts are not mitigated by design considerations. We believe that the Revised Draft should have included clear language describing the conditions that would be created by this project and acknowledging this negative impact. Project alternatives and/or, if possible, additional mitigation that might help lessen the impacts should have been presented. B

Alternatives
Pasadena Heritage requested that a broader range of alternatives be studied in the EIR. It does not appear that the Revised Draft includes any additional alternatives. Project alternatives at 50%, 60% or 75% of the proposed project size should be studied in order to explore what project parameters might result in reducing impacts to a level of insignificance. C

Shared Parking/Public Parking
In our verbal comments before the Planning Commission in December, we also asked for further study of shared parking. We did not find shared parking information included in the Revised Draft document. Because a large part of the costly underground parking proposed is indicated as public parking, and because public parking needs for the Pasadena Playhouse as well as dining and some shopping in the district would take place during evening and weekend hours, it seems only logical that there should be a significant number of parking spaces that could be shared. If less parking were included in the project, project costs would be significantly reduced, and the project could thus be smaller while still feasible. We again point out that public parking in other places in the Playhouse District does not seem to be fully utilized and asked that public parking capacity and utilization be studied currently. We find no additional information about public parking usage in the Playhouse District in the revised draft. D

Therefore, we find that the Revised Draft EIR is incomplete and inadequate and cannot serve as the basis for any decision making on the proposed project. D

Thank you for considering our comments and for entering them into the record for this review process.

Sincerely,

Terri Geis, Ph.D.
Director of Preservation

Letter 12

COMMENTER: Terri Geiss, PhD, Pasadena Heritage

DATE: December 9, 2008

Response 12A

The commenter states that they've reviewed the revised Draft Environmental Impact Report for the 680 East Colorado Boulevard Commercial Project and does not see responses to comments that Pasadena Heritage previously submitted.

As discussed in Section 1.0 *Introduction*, the Revised Draft EIR focused on the significant new impacts that were identified in the expanded traffic study that was prepared in response to comments on the original Draft EIR. CEQA Guidelines §15088.5(f)(2) allows the Lead Agency to respond to the comments on the original Draft EIR in the final EIR, which is how this document is structured. Previously submitted Pasadena Heritage comments are included as Letter 8 and addressed in Response 8A through 8F.

Response 12B

The commenter asserts that the project is of a size and scale that is incompatible with historic resources adjacent to and across the street from the site. Please refer to response 8A.

Response 12C

The commenter requests analysis of additional alternatives including a 50%, 60%, and 75% of the proposed project size. Please see Response 8E and 1M.

Response 12D

The commenter requests analysis of shared parking and further indicates that the project would be a predominantly daytime use, which would free up the majority of office use parking spaces for Playhouse events in the evenings or on weekends. The proposed project includes 522 parking spaces, of which 367 are required for the office use and 155 are public spaces. Both the public parking spaces and the private office parking spaces (during non-working hours) could be used to satisfy demand by the playhouse (seats 670 - http://www.pasadenaplayhouse.org/seating_chart.htm) and other Playhouse District uses. Please see related responses 8D and 1A.

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Appendix A

Responses to the Notice of Preparation
Initial Study

STATE OF CALIFORNIA
GOVERNOR'S OFFICE *of* PLANNING AND RESEARCH
STATE CLEARINGHOUSE AND PLANNING UNIT

ARNOLD SCHWARZENEGGER
GOVERNOR

CYNTHIA BRYANT
DIRECTOR

Notice of Preparation

July 6, 2007

To: Reviewing Agencies

Re: 680 East Colorado Boulevard Commercial Project
SCH# 2007071020

Attached for your review and comment is the Notice of Preparation (NOP) for the 680 East Colorado Boulevard Commercial Project draft Environmental Impact Report (EIR).

Responsible agencies must transmit their comments on the scope and content of the NOP, focusing on specific information related to their own statutory responsibility, within 30 days of receipt of the NOP from the Lead Agency. This is a courtesy notice provided by the State Clearinghouse with a reminder for you to comment in a timely manner. We encourage other agencies to also respond to this notice and express their concerns early in the environmental review process.

Please direct your comments to:

Robet Montano
City of Pasadena
100 N. Garfield Avenue, Room S116
Pasadena, CA 91109

with a copy to the State Clearinghouse in the Office of Planning and Research. Please refer to the SCH number noted above in all correspondence concerning this project.

If you have any questions about the environmental document review process, please call the State Clearinghouse at (916) 445-0613.

Sincerely,

Scott Morgan
Project Analyst, State Clearinghouse

Attachments
cc: Lead Agency

Document Details Report
State Clearinghouse Data Base

SCH# 2007071020
Project Title 680 East Colorado Boulevard Commercial Project
Lead Agency Pasadena, City of

Type NOP Notice of Preparation

Description The proposed project involves the demolition of existing improvements, excavation for a five-level subterranean garage, and the subsequent construction of a 160,000 square foot five-story commercial office building with 522 subterranean spaces. The building would have ground floor retail/commercial and restaurant uses, and four stories of office space above. Delivery parking is situated at the southern edge of the building with vehicular access from El Molino exclusively. Alternatively, access may be routed to El Molino and Green Street. Under the restaurant, retail/office scenario, the project would include 111 excess parking spaces that would serve the existing playhouse located across El Molino to the west.

Lead Agency Contact

Name Robet Montano
Agency City of Pasadena
Phone (626) 744-4773 **Fax** 626 744-3773
email rmontano@cityofpasadena.net
Address 100 N. Garfield Avenue, Room S116
City Pasadena **State** CA **Zip** 91109

Project Location

County Los Angeles
City
Region
Cross Streets El Molino and Colorado Boulevard
Parcel No.
Township **Range** **Section** **Base**

Proximity to:

Highways
Airports
Railways
Waterways
Schools
Land Use

Project Issues

Reviewing Agencies Resources Agency; Department of Conservation; Office of Historic Preservation; Department of Parks and Recreation; Department of Water Resources; Department of Fish and Game, Region 5; Native American Heritage Commission; California Highway Patrol; Caltrans, District 7; Integrated Waste Management Board; Regional Water Quality Control Board, Region 4

Date Received 07/06/2007 **Start of Review** 07/06/2007 **End of Review** 08/06/2007

Note: Blanks in data fields result from insufficient information provided by lead agency.

County: Los Angeles SCH#

Resources Agency

- [■] Resources Agency — Nadell Gayou
- [ ] Dept. of Boating & Waterways — David Johnson
- [ ] California Coastal Commission — Elizabeth A. Fuchs
- [ ] Colorado River Board — Gerald R. Zimmerman
- [▨] Dept. of Conservation — Sharon Howell
- [ ] California Energy Commission — Paul Richins
- [ ] Dept. of Forestry & Fire Protection — Allen Robertson
- [▨] Office of Historic Preservation — Wayne Donaldson
- [■] Dept of Parks & Recreation — Environmental Stewardship Section
- [ ] Reclamation Board — DeeDee Jones
- [ ] S.F. Bay Conservation & Dev't. Comm. — Steve McAdam
- [▨] Dept. of Water Resources — Resources Agency, Nadell Gayou
- [ ] _____ Conservancy

Fish and Game

- [ ] Depart. of Fish & Game — Scott Flint, Environmental Services Division
- [ ] Fish & Game Region 1 — Donald Koch
- [ ] Fish & Game Region 1E — Laurie Harnsberger
- [ ] Fish & Game Region 2 — Banky Curtis
- [ ] Fish & Game Region 3 — Robert Floerke
- [ ] Fish & Game Region 4 — Julie Vance
- [■] Fish & Game Region 5 — Don Chadwick, Habitat Conservation Program
- [ ] Fish & Game Region 6 — Gabrina Gatchel, Habitat Conservation Program
- [ ] Fish & Game Region 6 I/M — Gabrina Gatchel, Inyo/Mono, Habitat Conservation Program
- [ ] Dept. of Fish & Game M — George Isaac, Marine Region

Other Departments

- [ ] Food & Agriculture — Steve Shaffer, Dept. of Food and Agriculture
- [ ] Depart. of General Services — Public School Construction
- [ ] Dept. of General Services — Robert Sleppy, Environmental Services Section
- [ ] Dept. of Health Services — Veronica Malloy, Dept. of Health/Drinking Water

Independent Commissions,Boards

- [ ] Delta Protection Commission — Debby Eddy
- [ ] Office of Emergency Services — Dennis Castrillo
- [ ] Governor's Office of Planning & Research — State Clearinghouse
- [■] Native American Heritage Comm. — Debbie Treadway
- [ ] Public Utilities Commission — Ken Lewis
- [ ] Santa Monica Bay Restoration — Guangyu Wang
- [ ] State Lands Commission — Jean Sarino
- [ ] Tahoe Regional Planning Agency (TRPA) — Cherry Jacques

Business, Trans & Housing

- [ ] Caltrans - Division of Aeronautics — Sandy Hesnard
- [ ] Caltrans - Planning — Terri Pencovic
- [▨] California Highway Patrol — Shirley Kelly, Office of Special Projects
- [ ] Housing & Community Development — Lisa Nichols, Housing Policy Division

Dept. of Transportation

- [ ] Caltrans, District 1 — Rex Jackman
- [ ] Caltrans, District 2 — Marcelino Gonzalez
- [ ] Caltrans, District 3 — Jeff Pulverman
- [ ] Caltrans, District 4 — Tim Sable
- [ ] Caltrans, District 5 — David Murray
- [ ] Caltrans, District 6 — Marc Birnbaum
- [■] Caltrans, District 7 — Cheryl J. Powell
- [ ] Caltrans, District 8 — Dan Kopulsky
- [ ] Caltrans, District 9 — Gayle Rosander
- [ ] Caltrans, District 10 — Tom Dumas
- [ ] Caltrans, District 11 — Mario Orso
- [ ] Caltrans, District 12 — Bob Joseph

Cal EPA

Air Resources Board

- [ ] Airport Projects — Jim Lerner
  - [ ] Transportation Projects — Ravi Ramalingam
  - [ ] Industrial Projects — Mike Tollstrup
- [▨] California Integrated Waste Management Board — Sue O'Leary
- [ ] State Water Resources Control Board — Regional Programs Unit, Division of Financial Assistance
- [ ] State Water Resources Control Board — Student Intern, 401 Water Quality Certification Unit, Division of Water Quality
- [ ] State Water Resouces Control Board — Steven Herrera, Division of Water Rights
- [ ] Dept. of Toxic Substances Control — CEQA Tracking Center
- [ ] Department of Pesticide Regulation

Regional Water Quality Control Board (RWQCB)

- [ ] RWQCB 1 — Cathleen Hudson, North Coast Region (1)
- [ ] RWQCB 2 — Environmental Document Coordinator, San Francisco Bay Region (2)
- [ ] RWQCB 3 — Central Coast Region (3)
- [▨] RWQCB 4 — Teresa Rodgers, Los Angeles Region (4)
- [ ] RWQCB 5S — Central Valley Region (5)
  - [ ] RWQCB 5F — Central Valley Region (5), Fresno Branch Office
  - [ ] RWQCB 5R — Central Valley Region (5), Redding Branch Office
- [ ] RWQCB 6 — Lahontan Region (6)
  - [ ] RWQCB 6V — Lahontan Region (6), Victorville Branch Office
- [ ] RWQCB 7 — Colorado River Basin Region (7)
- [ ] RWQCB 8 — Santa Ana Region (8)
- [ ] RWQCB 9 — San Diego Region (9)

- [ ] Other _____

Last Updated on 05/16/07

07/16/2008 09:50 (FAX) P.004/017

COUNTY OF LOS ANGELES

DEPARTMENT OF PUBLIC WORKS

"To Enrich Lives Through Effective and Caring Service"

900 SOUTH FREMONT AVENUE
ALHAMBRA, CALIFORNIA 91803-1331
Telephone: (626) 458-5100
http://dpw.lacounty.gov

DONALD L. WOLFE, Director

ADDRESS ALL CORRESPONDENCE TO:
P.O. BOX 1460
ALHAMBRA, CALIFORNIA 91802-1460

IN REPLY PLEASE REFER TO FILE: LD-0

August 8, 2007

Mr. Robert Montano
Business District Coordinator
City of Pasadena
100 North Garfield Avenue, Room S116
Pasadena, CA 91109

Dear Mr. Montano:

NOTICE OF PREPARATION FOR A DRAFT ENVIRONMENTAL IMPACT REPORT
680 EAST COLORADO BOULEVARD COMMERCIAL PROJECT
CITY OF PASADENA

Thank you for the opportunity to review the notice of preparation for the above Draft Environmental Impact Report (DEIR). We offer the following comments for your consideration.

Solid Waste

Solid waste generated in Los Angeles County currently exceeds the available permitted daily landfill capacity. The proposed retail, commercial, and office space at 680 East Colorado Boulevard in Pasadena will, over the life of the project, increase the generation of solid waste and negatively impact the solid waste management infrastructure. Therefore, the proposed environmental document should identify what measures will be implemented to mitigate the impact. Mitigation measures may include the development of infrastructure in the project to facilitate recycling and should provide adequate space for the storage of said materials.

When it is ready, please send two copies of the DEIR to:

Mr. Conal McNamara, AICP
County of Los Angeles
Department of Public Works
Land Development Division
P.O. Box 1460
Alhambra, CA 91802-1460

If the DEIR is available electronically or on-line, please forward it or the link to Mr. McNamara at cmcnamara@dpw.lacounty.gov.

If you have any questions, please contact Mr. McNamara at (626) 458-4948.

Very truly yours,

DONALD L. WOLFE
Director of Public Works

for DENNIS HUNTER
Assistant Deputy Director
Land Development Division

CDM:ca
P:\LDPUB\CEQA\CDM\Pasadena680E.ColoradoNOP.doc

South Coast
Air Quality Management District
21865 Copley Drive, Diamond Bar, CA 91765-4182
(909) 396-2000 • www.aqmd.gov

July 13, 2007

Mr. Robert Montano
Business District Coordinator
City of Pasadena
100 N. Garfield Ave., Rm. S116
Pasadena, CA 91109

Dear Mr. Montano:

Notice of Preparation of a Draft Environmental Impact Report (Draft EIR) for the 680 East Colorado Boulevard Commercial Project

The South Coast Air Quality Management District (SCAQMD) appreciates the opportunity to comment on the above-mentioned document. The SCAQMD's comments are recommendations regarding the analysis of potential air quality impacts from the proposed project that should be included in the draft environmental impact report (EIR). Please send the SCAQMD a copy of the Draft EIR upon its completion. **In addition, please send with the draft EIR all appendices or technical documents related to the air quality analysis and electronic versions of all air quality modeling and health risk assessment files. Without all files and supporting air quality documentation, the SCAQMD will be unable to complete its review of the air quality analysis in a timely manner. Any delays in providing all supporting air quality documentation will require additional time for review beyond the end of the comment period.**

Air Quality Analysis

The SCAQMD adopted its California Environmental Quality Act (CEQA) Air Quality Handbook in 1993 to assist other public agencies with the preparation of air quality analyses. The SCAQMD recommends that the Lead Agency use this Handbook as guidance when preparing its air quality analysis. Copies of the Handbook are available from the SCAQMD's Subscription Services Department by calling (909) 396-3720. Alternatively, the lead agency may wish to consider using the California Air Resources Board (CARB) approved URBEMIS 2002 Model. This model is available on the SCAQMD Website at: www.aqmd.gov/ceqa/models.html.

The Lead Agency should identify any potential adverse air quality impacts that could occur from all phases of the project and all air pollutant sources related to the project. Air quality impacts from both construction (including demolition, if any) and operations should be calculated. Construction-related air quality impacts typically include, but are not limited to, emissions from the use of heavy-duty equipment from grading, earth-loading/unloading, paving, architectural coatings, off-road mobile sources (e.g., heavy-duty construction equipment) and on-road mobile sources (e.g., construction worker vehicle trips, material transport trips). Operation-related air quality impacts may include, but are not limited to, emissions from stationary sources (e.g., boilers), area sources (e.g., solvents and coatings), and vehicular trips (e.g., on- and off-road tailpipe emissions and entrained dust). Air quality impacts from indirect sources, that is, sources that generate or attract vehicular trips should be included in the analysis.

The SCAQMD has developed a methodology for calculating PM2.5 emissions from construction and operational activities and processes. In connection with developing PM2.5 calculation methodologies, the SCAQMD has also developed both regional and localized significance thresholds. The SCAQMD requests that the lead agency quantify PM2.5 emissions and compare the results to the recommended PM2.5 significance thresholds. Guidance for calculating PM2.5 emissions and PM2.5 significance thresholds can be found at the following internet address: http://www.aqmd.gov/ceqa/handbook/PM2_5/PM2_5.html.

In addition to analyzing regional air quality impacts the SCAQMD recommends calculating localized air quality impacts and comparing the results to localized significance thresholds (LSTs). LST's can be used in addition to the recommended regional significance thresholds as a second indication of air quality impacts when preparing a CEQA document. Therefore, when preparing the air quality analysis for the proposed project, it is recommended that the lead agency perform a localized significance analysis by either using the LSTs developed by the SCAQMD or performing dispersion modeling as necessary. Guidance for performing a localized air quality analysis can be found at http://www.aqmd.gov/ceqa/handbook/LST/LST.html.

It is recommended that lead agencies for projects generating or attracting vehicular trips, especially heavy-duty diesel-fueled vehicles, perform a mobile source health risk assessment. Guidance for performing a mobile source health risk assessment ("Health Risk Assessment Guidance for Analyzing Cancer Risk from Mobile Source Diesel Idling Emissions for CEQA Air Quality Analysis") can be found on the SCAQMD's CEQA web pages at the following internet address: http://www.aqmd.gov/ceqa/handbook/mobile_toxic/mobile_toxic.html. An analysis of all toxic air contaminant impacts due to the decommissioning or use of equipment potentially generating such air pollutants should also be included.

Mitigation Measures

In the event that the project generates significant adverse air quality impacts, CEQA requires that all feasible mitigation measures that go beyond what is required by law be utilized during project construction and operation to minimize or eliminate significant adverse air quality impacts. To assist the Lead Agency with identifying possible mitigation measures for the project, please refer to Chapter 11 of the SCAQMD CEQA Air Quality Handbook for sample air quality mitigation measures. Additional mitigation measures can be found on the SCAQMD's CEQA web pages at the following internet address: www.aqmd.gov/ceqa/handbook/mitigation/MM_intro.html Additionally, SCAQMD's Rule 403 – Fugitive Dust, and the Implementation Handbook contain numerous measures for controlling construction-related emissions that should be considered for use as CEQA mitigation if not otherwise required. Other measures to reduce air quality impacts from land use projects can be found in the SCAQMD's Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning. This document can be found at the following internet address: http://www.aqmd.gov/prdas/aqguide/aqguide.html. In addition, guidance on sitting incompatible land uses can be found in the California Air Resources Board's Air Quality and Land Use Handbook: A Community Perspective, which can be found at the following internet address: http://www.arb.ca.gov/ch/handbook.pdf. Pursuant to state CEQA Guidelines §15126.4 (a)(1)(D), any impacts resulting from mitigation measures must also be discussed.

Data Sources

SCAQMD rules and relevant air quality reports and data are available by calling the SCAQMD's Public Information Center at (909) 396-2039. Much of the information available through the Public Information Center is also available via the SCAQMD's World Wide Web Homepage (http://www.aqmd.gov).

The SCAQMD is willing to work with the Lead Agency to ensure that project-related emissions are accurately identified, categorized, and evaluated. Please call Charles Blankson, Ph.D., Air Quality Specialist, CEQA Section, at (909) 396-3304 if you have any questions regarding this letter.

Sincerely,

Steve Smith

Steve Smith, Ph.D.
Program Supervisor, CEQA Section
Planning, Rule Development and Area Sources

SS:CB:LI
LAC070705-07AK
Control Number

WATER RECLAMATION
SOLID WASTE MANAGEMENT

COUNTY SANITATION DISTRICTS
OF LOS ANGELES COUNTY

1955 Workman Mill Road, Whittier, CA 90601-1400
Mailing Address: P.O. Box 4998, Whittier, CA 90607-4998
Telephone: (562) 699-7411, FAX: (562) 699-5422
www.lacsd.org

STEPHEN R. MAGUIN
Chief Engineer and General Manager

July 12, 2007

File No: 16-00.04-00

Mr. Robert Montano
Business District Coordinator
100 North Garfield Avenue, Room S116
Pasadena, CA 91109

Dear Mr. Montano:

680 East Colorado Boulevard Commercial Project

The County Sanitation Districts of Los Angeles County (Districts) received a Notice of Preparation of a Draft Environmental Impact Report for the subject project on July 5, 2007. The proposed development is located within the jurisdictional boundaries of District No. 16. We offer the following comments regarding sewerage service:

1. The wastewater flow originating from the proposed project will discharge to a local sewer line, which is not maintained by the Districts, for conveyance to the Districts' Chapel Avenue Trunk Sewer, Section 2, located in Los Robles Avenue south of Old Mill Road. This 15-inch diameter trunk sewer has a design capacity of 8.1 million gallons per day (mgd) and conveyed a peak flow of 0.5 mgd when last measured in 2006.

2. The wastewater generated by the proposed project will be treated at the Whittier Narrows Water Reclamation Plant (WRP) located near the City of South El Monte, which has a design capacity of 15 mgd and currently processes an average flow of 8.5 mgd, or the Los Coyotes WRP located in the City of Cerritos, which has a design capacity of 37.5 mgd and currently processes an average flow of 22.6 mgd.

3. The expected average wastewater flow from the project site is 36,000 gallons per day. For a copy of the Districts' average wastewater generation factors, go to www.lacsd.org, Information Center, Wastewater Services, Obtain Will Serve Letter, and click on the appropriate link on page 2.

4. The Districts are authorized by the California Health and Safety Code to charge a fee for the privilege of connecting (directly or indirectly) to the Districts' Sewerage System or increasing the strength or quantity of wastewater attributable to a particular parcel or operation already connected. This connection fee is a capital facilities fee that is imposed in an amount sufficient to construct an incremental expansion of the Sewerage System to accommodate the proposed project. Payment of a connection fee will be required before a permit to connect to the sewer is issued. For a copy of the Connection Fee Information Sheet, go to www.lacsd.org, Information Center, Wastewater Services, Obtain Will Serve Letter, and click on the appropriate link on page

2. For more specific information regarding the connection fee application procedure and fees, please contact the Connection Fee Counter at extension 2727.

5. In order for the Districts to conform to the requirements of the Federal Clean Air Act (CAA), the design capacities of the Districts' wastewater treatment facilities are based on the regional growth forecast adopted by the Southern California Association of Governments (SCAG). Specific policies included in the development of the SCAG regional growth forecast are incorporated into clean air plans, which are prepared by the South Coast and Antelope Valley Air Quality Management Districts in order to improve air quality in the South Coast and Mojave Desert Air Basins as mandated by the CAA. All expansions of Districts' facilities must be sized and service phased in a manner that will be consistent with the SCAG regional growth forecast for the counties of Los Angeles, Orange, San Bernardino, Riverside, Ventura, and Imperial. The available capacity of the Districts' treatment facilities will, therefore, be limited to levels associated with the approved growth identified by SCAG. As such, this letter does not constitute a guarantee of wastewater service, but is to advise you that the Districts intend to provide this service up to the levels that are legally permitted and to inform you of the currently existing capacity and any proposed expansion of the Districts' facilities.

If you have any questions, please contact the undersigned at (562) 908-4288, extension 2717.

Very truly yours,

Stephen R. Maguin

Ruth I. Frazen
Engineering Technician
Facilities Planning Department

RIF:rf

STATE OF CALIFORNIA Arnold Schwarzenegger, Governor

NATIVE AMERICAN HERITAGE COMMISSION
915 CAPITOL MALL, ROOM 364
SACRAMENTO, CA 95814
(916) 653-6251
Fax (916) 657-5390
www.nahc.ca.gov
ds_nahc@pacbell.net

July 24, 2007

Mr. Robert Montano
City of Pasadena
100 N. Garfield Avenue, Room S116
Pasadena, CA 91109

Re: SCH# 2007071121; CEQA Notice of Preparation (NOP) draft Environmental Impact Report (DEIR) for the 680 East Colorado Boulevard Commercial Project; City of Pasadena; Los Angeles County, California

Dear Mr. Montano:

Thank you for the opportunity to comment on the above-referenced document. The California Environmental Quality Act (CEQA) requires that any project that causes a substantial adverse change in the significance of an historical resource, that includes archeological resources, is a 'significant effect' requiring the preparation of an Environmental Impact Report (EIR per CEQA guidelines § 15064.5(b)(c). In order to comply with this provision, the lead agency is required to assess whether the project will have an adverse impact on these resources within the 'area of potential effect (APE),' and if so, to mitigate that effect. To adequately assess the project-related impacts on historical resources, the Commission recommends the following action:

√ Contact the appropriate California Historic Resources Information Center (CHRIS). Contact information for the 'Information Center' nearest you is available from the State Office of Historic Preservation in Sacramento (916/653-7278). The record search will determine:

- If a part or the entire (APE) has been previously surveyed for cultural resources.
- If any known cultural resources have already been recorded in or adjacent to the APE.
- If the probability is low, moderate, or high that cultural resources are located in the APE.
- If a survey is required to determine whether previously unrecorded cultural resources are present.

√ If an archaeological inventory survey is required, the final stage is the preparation of a professional report detailing the findings and recommendations of the records search and field survey.

- The final report containing site forms, site significance, and mitigation measurers should be submitted immediately to the planning department. All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum, and not be made available for pubic disclosure.
- The final written report should be submitted within 3 months after work has been completed to the appropriate regional archaeological Information Center.

√ Contact the Native American Heritage Commission (NAHC) for:

* A Sacred Lands File (SLF) search of the project area and information on tribal contacts in the project vicinity who may have information on cultural resources in or near the APE. Please provide us site identification as follows: USGS 7.5-minute quadrangle citation with name, township, range and section. This will assist us with the SLF.

- Also, we recommend that you contact the Native American contacts on the attached list to get their input on the effect of potential project (e.g. APE) impact.

√ Lack of surface evidence of archeological resources does not preclude their subsurface existence.

- Lead agencies should include in their mitigation plan provisions for the identification and evaluation of accidentally discovered archeological resources, per California Environmental Quality Act (CEQA) §15064.5 (f). In areas of identified archaeological sensitivity, a certified archaeologist and a culturally affiliated Native American, with knowledge in cultural resources, should monitor all ground-disturbing activities.
- Lead agencies should include in their mitigation plan provisions for the disposition of recovered artifacts, in consultation with culturally affiliated Native Americans.

√ Lead agencies should include provisions for discovery of Native American human remains or unmarked cemeteries in their mitigation plans.

* CEQA Guidelines, Section 15064.5(d) requires the lead agency to work with the Native Americans identified by this Commission if the initial Study identifies the presence or likely presence of Native American human remains within the APE. CEQA Guidelines provide for agreements with Native American, identified by the NAHC, to assure the appropriate and dignified treatment of Native American human remains and any associated grave liens.

√ Health and Safety Code §7050.5, Public Resources Code §5097.98 and Sec. §15064.5 (d) of the CEQA Guidelines mandate procedures to be followed in the event of an accidental discovery of any human remains in a location other than a dedicated cemetery.

√ Lead agencies should consider avoidance, as defined in § 15370 of the CEQA Guidelines, when significant cultural resources are discovered during the course of project planning.

Please feel free to contact me at (916) 653-6251 if you have any questions.

Sincerely,

Dave Singleton
Program Analyst

Cc: State Clearinghouse

Attachment: List of Native American Contacts

Native American Contacts
Los Angeles County
July 24, 2007

LA City/County Native American Indian Comm
Ron Andrade, Director
3175 West 6th Street, Rm. 403
Los Angeles , CA 90020
(213) 351-5324
(213) 386-3995 FAX

Gabrielino/Tongva Council / Gabrielino Tongva Nation
Sam Dunlap, Tribal Secretary
761 Terminal Street; Bldg 1, 2nd floor Gabrielino Tongva
Los Angeles , CA 90021
office @tongvatribe.net
(213) 489-5001 - Officer
(909) 262-9351 - cell
(213) 489-5002 Fax

Ti'At Society
Cindi Alvitre
6602 Zelzah Avenue Gabrielino
Reseda , CA 91335
calvitre@yahoo.com
(714) 504-2468 Cell

Gabrielino Band of Mission Indians of CA
Ms. Susan Frank
PO Box 3021 Gabrielino
Beaumont , CA 92223
(951) 897-2536 Phone/Fax

Tongva Ancestral Territorial Tribal Nation
John Tommy Rosas, Tribal Adminstrator
4712 Admiralty Way, Suite 172 Gabrielino Tongva
Marina Del Rey , CA 90292
310-570-6567

Gabrielino Tongva Indians of California Tribal Council
Robert Dorame, Tribal Chair/Cultural Resources
5450 Slauson, Ave, Suite 151 PMB Gabrielino Tongva
Culver City , CA 90230
gtongva@verizon.net
562-761-6417 - voice
562-920-9449 - fax

Gabrieleno/Tongva Tribal Council
Anthony Morales, Chairperson
PO Box 693 Gabrielino Tongva
San Gabriel , CA 91778
ChiefRBwife@aol.com
(626) 286-1632
(626) 286-1758 - Home
(626) 286-1262 Fax

Gabrielino Tongva Indians of California Tribal Council
Mercedes Dorame, Tribal Administrator
20990 Las Flores Mesa Drive Gabrielino Tongva
Malibu , CA 90265
Pluto05@hotmail.com

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native American with regard to cultural resources for the proposed SCH#2007071020; CEQA Notice of Preparation (NOP); draft Environmental Impact Report (DEIR) for the 680 East Colorado Boulevard Commercial Project; Citry of Pasadena; Los Angeles County, California.

DEPARTMENT OF TRANSPORTATION
DISTRICT 7, REGIONAL PLANNING
IGR/CEQA BRANCH
100 SO. MAIN ST.
LOS ANGELES, CA 90012
PHONE (213) 897-6536
FAX (213) 897-1337
E-Mail:NersesYerjanian@dot.ca.gov

Flex your power!
Be energy efficient!

Mr. Robert Montano
Planning Department
City of Pasadena
100 N. Garfield Ave., Room S116
Pasadena, CA. 91109

IGR/CEQA# 070712/NY
NOP/ 160,000 SF Commercial Office Bldg.
SCH#2007071020
LA/210/26.33

July 16, 2007

Dear Mr. Montano:

Thank you for including the California Department of Transportation (Caltrans) in the environmental review process for the 160,000 SF Commercial Office Bldg. In Pasadna.

Based on the information received, and to assist us in our efforts to completely evaluate and assess the impacts of this project on the State transportation system, a traffic study in advance of the DEIR should be prepared to analyze the following information:

Please reference the Department's **Traffic Impact Study Guideline** on the Internet at http://www.dot.ca.gov/hq/traffops/developserv/operationalsystems/reports/tisguide.pdf

Mr. Montano July 16, 2007

1. Presentations of assumptions and methods used to develop trip generation, trip distribution, choice of travel mode, and assignments of trips to State Route 210.

2. Consistency of project travel modeling with other regional and local modeling forecasts and with travel data. The IGR/CEQA office may use indices to check results. Differences or inconsistencies must be thoroughly explained.

3. Analysis of ADT, AM, and PM peak-hour volumes for both existing and future conditions in the affected area. This should include freeways, interchanges, and intersections, and all HOV facilities. Interchange Level of Service should be specified (HCM2000 method requested). Utilization of transit lines and vehicles, and of all facilities, should be realistically estimated. Future conditions would include build-out of all projects (see next item) and any plan-horizon years.

4. Inclusion of all appropriate traffic volumes. Analysis should include traffic from the project, cumulative traffic generated from all specific approved developments in the area, and traffic growth other than from the project and developments. That is, include: existing + project + other projects + other growth.

5. Discussion of mitigation measures appropriate to alleviate anticipated traffic impacts. These mitigation discussions should include, but not be limited to, the following:
   - description of transportation infrastructure improvements
   - financial costs, funding sources and financing
   - sequence and scheduling considerations
   - implementation responsibilities, controls and monitoring

   Any mitigation involving transit, HOV, or TDM must be rigorously justified and its effects conservatively estimated. Improvements involving dedication of land or physical construction may be favorably considered.

6. Specification of developer's percent share of the cost, as well as a plan of realistic mitigation measures under the control of the developer. The following ratio should be estimated: Additional traffic volume due to project implementation is divided by the total increase in the traffic volume (see Appendix "B" of the Guidelines). That ratio would be the project equitable share responsibility.

   We note for purposes of determining project share of costs, the number of trips from the project on each traveling segment or element is estimated in the context of forecasted traffic volumes which include build-out of all approved and not yet approved projects, and other sources of growth. Analytical methods such as select-zone travel forecast modeling might be used.

   The Department as a commenting agency under CEQA has jurisdiction superceding that of MTA in identifying the freeway analysis needed for this project. Caltrans is responsible for obtaining measures that will off-set project vehicle trip generation that

Mr. Montano July 16, 2007

worsens Caltrans facilities and hence, it does not adhere to the CMP guide of 150 or more vehicle trips added before freeway analysis is needed. MTA's Congestion Management Program in acknowledging the Department's role, stipulates that Caltrans must be consulted to identify specific locations to be analyzed on the State Highway System. Therefore State Route(s) mentioned in item #1 and it's facilities must be analyzed per the Department's **Traffic Impact Study Guidelines.**

We look forward to reviewing the DEIR. We expect to receive a copy from the State Clearinghouse. However, to expedite the review process, you may send two copies in advance to the undersigned at the following address:

Cheryl J. Powell
IGR/CEQA Branch Chief
Caltrans District 07
Regional Transportation Planning Office
100 S. Main St., Los Angeles, CA 90012

If you have any questions regarding this response, please call the Project Engineer/Coordinator Mr. Yerjanian at (213) 897-6536 and refer to IGR/CEQA # 070712/NY.

Sincerely,

For Cheryl J. Powell
IGR/CEQA Branch Chief
Regional Transportation Planning

San Marino

Planning & Building Department

July 16, 2007

City of Pasadena
117 E. Colorado Boulevard
Pasadena, CA 91105
Attn: Robert Montano

RE: Notice of Preparation of an Environmental Impact Report (EIR) for the property known as 680 East Colorado Boulevard, Commercial Project

Dear Mr. Montano;

Thank you for providing the San Marino Planning and Building Department staff with the Notice of Preparation of an EIR for the property known as 680 East Colorado Boulevard, Commercial Project.

Following review of the documents, the San Marino Planning and Building Department has no comment or opinion on the proposed project.

Should you have any questions, comments or concerns please do not hesitate to contact me at (626) 300 – 0713.

Sincerely,

ALDO CERVANTES
Associate Planner

CITY OF PASADENA
PLANNING DIVISION
HALE BUILDING
175 NORTH GARFIELD AVENUE
PASADENA, CA 91101-1704

INITIAL STUDY

In accordance with the Environmental Policy Guidelines of the City of Pasadena, this analysis, the associated "Master Application Form," and/or Environmental Assessment Form (EAF) and supporting data constitute the Initial Study for the subject project. This Initial Study provides the assessment for a determination whether the project may have a significant effect on the environment.

SECTION I – PROJECT INFORMATION

1. Project Title: 680 East Colorado Boulevard Commercial Project EIR

2. Lead Agency Name and Address: City of Pasadena, 175 N. Garfield Avenue, Pasadena, CA 91101-1704

3. Contact Person and Phone Number: John Steinmeyer, 626-744-4009

4. Project Location: 680 East Colorado Boulevard, Pasadena, CA 91101

5. Project Sponsor's Name and Address: IDS Real Estate Group
   515 S. Figueroa Street, 16th Floor
   Los Angeles, CA 91105

6. General Plan Designation: Central District SP (Specific Plan)

7. Zoning: CD-4 (Pasadena Playhouse District)

8. Description of the Project: The project site is situated at the southeast corner of El Molino and Colorado Boulevard in the Pasadena Playhouse sub-district of the Central District Specific Plan Area. The project site is currently developed with a two-story commercial retail structure totaling approximately 66,000 square feet (SF) with 36 surface parking spaces. The proposed project involves the demolition of existing improvements, excavation for a six-level subterranean garage, and the subsequent construction of a 160,000 SF, five-story commercial office building with 522 subterranean spaces. The applicant proposes to construct 14,407 SF of retail use and 145,564 SF of office use. The project is proposing to take access from El Molino exclusively, or from both El Molino and Green Street. The project will be constructed with techniques consistent with Leadership in Energy and Environmental Design (LEED) certification pursuant to the requirements of Municipal Code 14.90.040. The LEED program is designed to assign credits for environmentally-friendly design features and construction practices, so that projects may have less impact on the environment than standard construction would.

9. Surrounding Land Uses and Setting: The property is located within an urban area of the City of Pasadena and is surrounded by commercial, historic and residential land uses. To the west across El Molino is the historic Pasadena Playhouse, to the north across Colorado are commercial and

residential uses, to the east is the Arcade Building followed by residential uses, and to the south are commercial and residential uses.

10. Other public agencies whose approval is required (e.g. permits, financing approval, or participation agreement): None.

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

X	Aesthetics	**X**	Geology and Soils		Population and Housing
	Agricultural Resources		Hazards and Hazardous Materials		Public Services
X	Air Quality		Hydrology and Water Quality		Recreation
	Biological Resources	**X**	Land Use and Planning	**X**	Transportation/Traffic
X	Cultural Resources		Mineral Resources		Utilities and Service Systems
	Energy	**X**	Noise	**X**	Mandatory Findings of Significance

DETERMINATION: (to be completed by the Lead Agency)

On the basis of this initial evaluation:

I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.	
I find that, although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because the mitigation measures described on an attached sheet have been added to the project. A MITIGATED NEGATIVE DECLARATION will be prepared.	
I find that the proposed MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.	**X**
I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment., but at least effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards , and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.	
I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.	

_____ _____

Prepared By/Date Reviewed By/Date

_____ _____

Printed Name Printed Name

Negative Declaration/Mitigated Negative Declaration adopted on: _____

Adoption attested to by: _____

Printed name/Signature Date

EVALUATION OF ENVIRONMENTAL IMPACTS:

1) A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).

2) All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.

3) Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact' is appropriate if there is substantial evidence that an effect is significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.

4) "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Unless Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less than Significant Impact." The Lead Agency must describe the mitigation measures and briefly explain how they reduce the effect to a less than significant level (mitigation measures from Section 20, "Earlier Analysis," may be cross-referenced).

5) Earlier analysis may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. See CEQA Guidelines Section 15063(c)(3)(D). Earlier analyses are discussed in Section 20 at the end of the checklist.

   a) Earlier Analysis Used. Identify and state where they are available for review.

   b) Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.

   c) Mitigation Measures. For effects that are "less than Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier documents and the extent to which address site-specific conditions for the project.

6) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

7) Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.

8) The explanation of each issue should identify:

   a) The significance criteria or threshold, if any, used to evaluate each question; and

   b) The mitigation measure identified, if any, to reduce the impact to less than significant

Potentially Significant Impact	Significant Unless Mitigation is Incorporated	Less Than Significant Impact	No Impact

SECTION II - ENVIRONMENTAL CHECKLIST FORM

1. BACKGROUND.

Date checklist submitted: 6/5/2007
Department requiring checklist: Planning & Development
Case Manager: Robert Montano

2. ENVIRONMENTAL IMPACTS. (explanation of all answers is required)**:**

Potentially Significant Impact	Significant Unless Mitigation is Incorporated	Less Than Significant Impact	No Impact

3. AESTHETICS. Would the project:

a. *Have a substantial adverse effect on a scenic vista?*

☐ ☐ ☒ ☐

WHY? The project site is in an urbanized area and on one of the City's main commercial streets. In this setting, new infill construction built within the height limits of the code would not be expected to adversely affect scenic views. In accordance with section 17.61.030 of the City's Zoning Code, the design of this project would be reviewed by the Design Commission. This regulatory procedure provides the City with an additional layer of review for aesthetics, and an opportunity to incorporate additional conditions to increase the aesthetic value of the project. As such, impacts to scenic vistas would be **less than significant** and further analysis in an EIR is not warranted.

b. *Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?*

☒ ☐ ☐ ☐

WHY? The only designated state scenic highway in the City of Pasadena is the Angeles Crest Highway (State Highway 2), which is located north of Arroyo Seco Canyon in the extreme northwest portion of the City. The project site is not within the viewshed of the Angeles Crest Highway, and not along any scenic roadway corridors identified in the City's General Plan documents. In addition, the proposed project would not result in the destruction of any landmark-eligible trees, stand of trees, rock outcropping or natural feature recognized as having significant aesthetic value.

The project is proposed fronting Colorado Boulevard. The proposed project involves development of a new 75-foot tall structure to replace the existing 2-story structure. The project site is adjacent to the Arcade Building (eastern site boundary), which is eligible for protection as a historic resource and is located across El Molino Avenue, opposite the Pasadena Playhouse, which is a designated historic resource. The proposed project would not directly affect existing historic resources, nor would it directly affect historic resources that are eligible for listing. The proposed project has been designed in consideration of these two adjacent historic resources. The project incorporates a setback of 29 feet on the east adjacent the Arcade Building for a depth of 40 feet from the Colorado frontage, opening to 49 feet for the remaining depth of the building to promote pedestrian movement between the two structures and to provide physical separation

between the buildings. The eastern pedestrian corridor is linked to a plaza on the southern end of the proposed building that provides for future pedestrian line-of-sight between the Historic Playhouse and the Historic Arcade. In addition, a subterranean setback of 13 feet from the Arcade Building has been incorporated for the entrance to the underground garage, while the remainder of the subterranean garage is set back about 50 feet from the Arcade Building. The setbacks are intended to preserve the integrity of the Arcade Building and the pedestrian corridors are intended to physically and visually link the two structures.

The project's indirect aesthetic effect on these adjacent historical resources is considered **potentially significant** and will be further discussed in the Aesthetics Section of the EIR. The proposed project would not substantially damage scenic resources. See additional discussion regarding the aesthetic impact with respect to the character of the area under item c. below.

c. *Substantially degrade the existing visual character or quality of the site and its surroundings?*

☒ ☐ ☐ ☐

WHY? The project site is situated at the southeast corner of El Molino and Colorado Boulevard in the Pasadena Playhouse sub-district of the Central District Specific Plan Area. The existing on-site 66,000 square foot 2 story commercial retail building would be demolished to accommodate the proposed 5 story 160,000 square foot office/commercial retail building. The project site is located within the Pasadena Playhouse Historic District, which contains properties listed on the National Register for Historic Places, as well as those which are eligible to be listed. Therefore, since the proposed structure would be substantially larger than the existing on-site building, the visual character or quality of the project site and surroundings has the potential to be adversely affected by project development. Impacts associated with alteration of the existing visual character of the project site would be **potentially significant** and further analysis of visual impacts will be undertaken in an EIR.

d. *Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?*

☒ ☐ ☐ ☐

WHY? Buildout of the proposed project would create new sources of light and glare, due largely to the increased height and scale of development. Although development would be expected to comply with City lighting standards, lighting and glare could create **potentially significant** impacts to adjacent land uses. The issue of light and glare will be further analyzed in an EIR.

4. AGRICULTURAL RESOURCES. In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. Would the project:

a. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

☐ ☐ ☐ ☒

Potentially Significant Impact	Significant Unless Mitigation is Incorporated	Less Than Significant Impact	No Impact

WHY? The City of Pasadena is a developed urban area surrounded by hillsides to the north and northwest. The western portion of the City contains the Arroyo Seco, which runs from north to south through the City. The City is comprised of commercial recreation, park, natural and open space. The City contains no prime farmland, unique farmland, or farmland of statewide importance, as shown on maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency. Therefore, the proposed project would have **no impact** to farmland. Further discussion in an EIR is not warranted.

b. Conflict with existing zoning for agricultural use, or a Williamson Act contract?

☐ ☐ ☐ ☒

WHY? The City of Pasadena has no land zoned for agricultural use other than commercial nurseries being allowed by right in the CG (General Commercial) and IG (General Industrial) zones and conditionally in the CO (Office Commercial), CL (Limited Commercial), OS (Open Space) and PS (Public-Semi Public) Zoning Districts. Therefore, the proposed project would not conflict with existing zoning laws for agricultural use or a Williamson Act contract. **No impact** would occur. Further discussion in an EIR is not warranted.

c. *Involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?*

☐ ☐ ☐ ☒

WHY? There is no farmland in the City of Pasadena; therefore the proposed project would not result in the conversion of farmland to a non-agricultural use. **No impact** would occur. Further discussion in an EIR is not warranted.

5. AIR QUALITY. Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:

a. Conflict with or obstruct implementation of the applicable air quality plan?

☒ ☐ ☐ ☐

WHY? The City of Pasadena is within the South Coast Air Basin (SCAB), which is bounded by the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east, and the Pacific Ocean to the south and west. The air quality in the SCAB is managed by the South Coast Air Quality Management District (SCAQMD).

The SCAB has a history of recorded air quality violations and is an area where both state and federal ambient air quality standards are exceeded. Because of the violations of the California Ambient Air Quality Standards (CAAQS), the California Clean Air Act requires triennial preparation of an Air Quality Management Plan (AQMP). The AQMP analyzes air quality on a regional level and identifies region-wide attenuation methods to achieve the air quality standards. These region-wide attenuation methods include regulations for stationary-source polluters; facilitation of new transportation technologies, such as low-emission vehicles; and capital improvements, such as park-and-ride facilities and public transit improvements.

The most recently adopted plan is the 2003 AQMP, adopted on August 1, 2003. This plan is the South Coast Air Basin's portion of the State Implementation Plan (SIP). This plan is designed to achieve the 5 % annual reduction goal of the California Clean Air Act.

The SCAQMD understands that southern California is growing. As such, the AQMP accommodates population growth and transportation projections based on the predictions made by the Southern California Association of Governments (SCAG). Thus, projects that are consistent with employment and population forecasts are consistent with the AQMD.

In addition to the region-wide AQMP, the City of Pasadena participates in a sub-regional air quality plan – the West San Gabriel Valley Air Quality Plan. This plan, prepared in 1992, is intended to be a guide for the 16 participating cities, and identifies methods of improving air quality while accommodating expected growth.

The proposed project will be further evaluated for consistency with the AQMP. The issue is considered **potentially significant** and will be further discussed in an EIR.

b. Violate any air quality standard or contribute to an existing or projected air quality violation?

☒ ☐ ☐ ☐

WHY? Due to its geographical location and the prevailing off shore daytime winds, Pasadena receives smog from downtown Los Angeles and other areas in the Los Angeles basin. The prevailing winds, from the southwest, carry smog from wide areas of Los Angeles and adjacent cities, to the San Fernando Valley and to Pasadena in the San Gabriel Valley where it is trapped against the foothills. For these reasons the potential for adverse air quality in Pasadena is high.

The City of Pasadena is within the South Coast Air Basin (SCAB). This basin is a non-attainment area for Ozone (O_3), Fine Particulate Matter ($PM_{2.5}$), and Respirable Particulate Matter (PM_{10}). The SCAQMD has developed significance thresholds that correspond to the air quality standards for the SCAB. Buildout of the proposed project would generate temporary construction emissions and long-term emissions primarily associated with increased vehicle trips and energy consumption. These emissions could exceed SCAQMD thresholds. As a result, impacts to air quality associated with temporary and long-term emissions would be **potentially significant**. This issue will be analyzed further in an EIR.

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

☒ ☐ ☐ ☐

WHY? As discussed in Section 5.b, the proposed project has the potential to generate emissions that exceed thresholds set forth by the SCAQMD. As a result, the proposed project could also contribute to a cumulatively considerable net increase in one or more criteria pollutants for which the region is in non-attainment under federal or state standards. Therefore, cumulative impacts to air quality associated with project-generated emissions would be **potentially significant**. This issue will be analyzed further in an EIR.

	Potentially Significant Impact	Significant Unless Mitigation is Incorporated	Less Than Significant Impact	No Impact

d. Expose sensitive receptors to substantial pollutant concentrations?

☒ ☐ ☐ ☐

WHY? The proposed project is not considered a sensitive use. However, the residential uses located to the north, east and south of the project site are considered sensitive receptors. Upon completion of the proposed project, the office, commercial and retail components would not generate toxic air pollutants. However, residences in the project vicinity could be exposed to substantial temporary pollutant concentrations during project construction. In addition, asbestos-containing materials and lead-based paint could be present in the existing structure. Impacts would be **potentially significant** and this issue will be further analyzed in an EIR.

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

☐ ☐ ☒ ☐

WHY? The proposed project would result in construction of a 160,000 square foot commercial mixed use development in the Central District of Pasadena. The project would involve restaurant, retail, and office uses. These types of uses are not shown on the 1993 SCAQMD's CEQA Air Quality Handbook Figure 5-5 "Land Uses Associated with Odor Complaints." In addition, these uses are not typically associated with offensive odors. Therefore, the proposed project is not likely to generate objectionable odors that would affect a substantial number of people and the impact is **less than significant**. Further analysis in the EIR is not warranted.

6. BIOLOGICAL RESOURCES. Would the project:

a. *Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?*

☐ ☐ ☐ ☒

WHY? The project site is in a developed urban area. There are no known unique, rare or endangered plants or animal species or habitats on or near the site. Therefore, **no impact** would occur with respect to this issue and further analysis in an EIR is not warranted.

b. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

☐ ☐ ☐ ☒

WHY? The proposed project is located within the Central District of Pasadena. The project site is entirely developed with structures, paving and concrete, except for some trees located in isolated planters or within the street frontages. The Central District is entirely urbanized, therefore, **no impact** would occur with respect to this issue and further analysis in an EIR is not warranted.

	Potentially Significant Impact	Significant Unless Mitigation is Incorporated	Less Than Significant Impact	No Impact

c. Have a substantial adverse effect of federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

☐ ☐ ☐ ☒

WHY? Drainage courses with definable bed and bank and their adjacent wetlands are "waters of the United States" and fall under the jurisdiction of the U.S. Army Corps of Engineers (USACE) in accordance with Section 404 of the Clean Water Act. Jurisdictional wetlands, as defined by the USACE are lands that, during normal conditions, possess hydric soils, are dominated by wetland vegetation, and are inundated with water for a portion of the growing season.

The project site is located in a developed urban area and does not include any drainage courses, inundated areas, wetland vegetation, or hydric soils, and thus does not include USACE jurisdictional drainages or wetlands. Therefore, the proposed project would have no impact to federally protected wetlands as defined by Section 404 of the Clean Water Act. Further analysis in an EIR is not warranted.

d. Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

☐ ☐ ☐ ☒

WHY? The project site is located in a developed urban area. The proposed project would not involve the dispersal of wildlife nor would the project result in a barrier to migration or movement. Therefore, the project would have **no impact** to wildlife movement. Further analysis in an EIR is not warranted.

e. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

☐ ☐ ☐ ☒

WHY? The only local ordinance protecting biological resources in the City of Pasadena is Ordinance No. 6896 "City Trees and Tree Protection Ordinance". The project site contains 28 trees, none of which are landmark or native trees. The applicant has submitted the Application for a Public Tree Removal Request for the removal of 19 trees. Application approval and compliance with the City's tree protection ordinance would result in **no impact** to local policies and ordinances protecting biological resources. Further analysis in an EIR is not warranted.

f. Conflict with the provisions of an adopted Habitat Conservation Plan (HCP), Natural Community Conservation Plan (NCCP), or other approved local, regional, or state habitat conservation plan?

☐ ☐ ☐ ☒

WHY? Currently, there are no adopted Habitat Conservation or Natural Community Conservation Plans within the City of Pasadena. There are also no approved local, regional or state habitat conservation plans in Pasadena. Therefore, **no impact** would occur with respect to this issue and further analysis in an EIR is not warranted.

Potentially Significant Impact	Significant Unless Mitigation is Incorporated	Less Than Significant Impact	No Impact

7. CULTURAL RESOURCES. Would the project:

a. *Cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines Section 15064.5?*

☐ ☐ ☒ ☐

WHY? According to the City of Pasadena 2004 General Plan FEIR, the project site lies just outside of the Pasadena Playhouse Historic District, one of nine districts in Pasadena listed on the National Register of Historic Places. Across El Molino Avenue on the western edge of the project site is the Pasadena Playhouse, a designated City Landmark. Adjacent the eastern boundary of the project site is the Arcade Building, which is eligible for designation as a local land mark (City of Pasadena 2004 General Plan FEIR). The project site is located in an area that was subject to an intensive level Historic Resources Survey, but the existing building and site was not identified as a historic resource (Personal Communication, Kevin Johnson, 2007).

The proposed project has been designed in consideration of the two adjacent historic resources. A Paseo on the southern end of the proposed building provides for future pedestrian line-of-sight between the Historic Playhouse and the potentially historic Arcade. The proposed project would be subject to Design Review as overseen by the Design Commission. The Design Commission would consider the proposed project within the context of existing historic resources and within the larger context of the Pasadena Playhouse Subdistrict of the Central District Specific Plan Area. The project would be subject to review and approval of the Design Commission. Impacts would be **less than significant** with respect to causing a substantial adverse change in the significance of a historic resource. Further analysis in an EIR is not warranted; however, as discussed under Section 3, Aesthetics, Items b and c, the aesthetic impacts of the project will be evaluated in the context of the surrounding environment. This analysis will occur in the Aesthetics section of the EIR.

b. *Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?*

☐ ☒ ☐ ☐

WHY? The project site is developed with structures dating to 1945 and was first developed in 1916 (Los Angeles County Office of the Assessor). In this type of urban redevelopment environment, there is little potential to disturb significant intact archaeological resources, as the project site and surrounding area has already undergone substantial disturbance. Nevertheless, the proposed project would include excavation for six levels of subterranean parking, which corresponds to a depth of roughly 50 feet. Because the existing structure does not contain subterranean parking, it is reasonable to conclude that the proposed project will involve excavation in previously undisturbed soils. Therefore, there is potential to disturb as-yet undiscovered archaeological materials. This impact is **significant unless mitigation is incorporated**. The following mitigation measure will be carried over into the EIR mitigation monitoring and reporting program (MMRP) to assure that there are no adverse effects to archaeological resources as a result of project development.

CUL-1 **Archaeological Resources.** If archaeological resources are encountered during project construction, all construction activities in the vicinity of the find shall halt until an archaeologist certified by the Society

of Professional Archaeologists examines the site, identifies the archaeological significance of the find, and recommends a course-of-action. Construction shall not resume until the site archaeologist states in writing that the proposed construction activities will not significantly damage archaeological resources.

Mitigation measure CUL-1 would assure that an archaeologist is consulted if archaeological resources are discovered and that a course of action is recommended by the archaeologist that would result in no significant effects to the resources. Therefore, Inclusion of mitigation CUL-1 would mitigate the potential for adverse effects to cultural resources to a level that is less than significant. This mitigation measure will be carried into the EIR MMRP, but no additional discussion of archaeological resources will be included in the EIR. No residual impact would occur.

c. *Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?*

☐ ☒ ☐ ☐

WHY? The project site lies on the valley floor in an urbanized portion of the City of Pasadena. This portion of the City does not contain any unique geologic features and is not known or expected to contain paleontological resources. Nevertheless, because the proposed project would involve excavation to a depth of about 50 feet in previously undisturbed soils, mitigation is required and will be carried over into the EIR mitigation monitoring and reporting program (MMRP). The following mitigation measure will be included in the MMRP.

CUL-2 Paleontological Resources. If paleontological resources are encountered during project construction, all construction activities in the vicinity of the find shall halt until a paleontologist meeting the satisfaction of the Natural History Museum of Los Angles County identifies the paleontological significance of the find, and recommends a course of action. Construction shall not resume until the site paleontologist states in writing that the proposed construction activities will not significantly damage paleontological resources.

Mitigation measure CUL-2 would assure that a paleontologist is consulted if paleontological resources are discovered and that a course of action is recommended by a paleontologist that would result in no significant effects to the resources. Therefore, Inclusion of mitigation CUL-2 would mitigate the potential for adverse effects to cultural resources to a level that is less than significant. This mitigation measure will be carried into the EIR MMRP, but no additional discussion of paleontological resources will be included in the EIR. No residual impact would occur.

d. Disturb any human remains, including those interred outside of formal ceremonies?

☐ ☐ ☒ ☐

WHY? There are no known human remains on the site. The project site is not part of a formal cemetery and is not known to have been used for disposal of historic or prehistoric human remains. Thus, human remains are not expected to be encountered during construction of the proposed project. In the unlikely event that human remains are encountered during project construction, State Health and Safety Code Section 7050.5 requires the project to halt until the County Coroner has made the necessary findings as to the origin and disposition of the remains pursuant to Public Resources Code Section 5097.98. Compliance

with these regulations would ensure the proposed project would result in a **less than significant impact** to unknown human remains. Further analysis in an EIR is not warranted.

8. ENERGY. Would the proposal:

a. Conflict with adopted energy conservation plans?

☐ ☐ ☒ ☐

WHY? The project does not conflict with the 1983 adopted Energy Element of the General Plan. The proposed intensity of the project is within the intensity allowed by the Zoning Code and envisioned in the City's approved General Plan. Further, the project would comply with the energy standards in the California Energy Code, Part 6 of the California Building Standards Code (Title 24). Measures to meet these performance standards may include high-efficiency Heating Ventilation and Air Conditioning (HVAC) and hot water storage tank equipment, lighting conservation features, higher than required rated insulation and double-glazed windows. In addition, the proposed project would be in compliance with Leadership in Energy and Environmental Design (LEED) certification pursuant to the requirements of Municipal Code 14.90.040. The LEED program is designed to assign credits for environmentally-friendly design features and construction practices, so that projects have less impact on the environment than standard construction would. Compliance with these regulations would ensure the proposed project would not conflict with adopted energy conservation plans. Impacts would be **less than significant impact** and further analysis in an EIR is not warranted.

b. Use non-renewable resources in a wasteful and inefficient manner?

☐ ☐ ☒ ☐

Why? The proposed project would not create a high enough demand for energy to require development of new energy sources. Construction of the project would result in a temporary consumption of oil-based energy products. However, the additional amount of resources used would not cause a significant reduction in available supplies.

The long-term impact from increased energy use by this project is not significant in relationship to the number of customers currently served by the electrical and gas utility companies. Supplies are available from existing mains, lines and substations in the area. Operation of the proposed project would increase the consumption of natural gas (net increase of 8,519 cubic feet/day above existing use). However, this consumption would be lessened by adherence to the performance standards of California Energy Code, Part 6 of the California Building Standards Code Title 24 and through compliance with LEED certification requirements. This project would result in the increased consumption of an estimated 10,414 net kilowatt-hours of electrical energy per day as compared with the existing use. Impacts related to this increased consumption would be less than significant by meeting the above referenced energy standards. Measures to meet these performance standards may include high efficiency Heating Ventilation and Air Conditioning (HVAC) and hot water storage tank equipment, lighting conservation features, higher than required rated insulation and double-glazed windows. The energy conservation measures would be prepared by the developer and shown on a building plan(s). Plans would be submitted to the Water and Power Department and Building Official for review and approval prior to the issuance of a building permit. Installation of energy-saving features would be inspected by a Building Inspector prior to issuance of a Certificate of Occupancy.

This project would result in an increase of approximately 15,362 gallons per day in water consumption above the existing use. However, this impact would be mitigated during drought periods through adherence

to the Water Shortage Procedures Ordinance, which restricts water consumption to 90% of expected consumption during each billing period. Installation of plumbing would be inspected by a Building Inspector prior to issuance of a Certificate of Occupancy.

Impacts related to non-renewable resources would be **less than significant** through compliance with the aforementioned standard requirements. Further analysis in an EIR is not warranted.

9. GEOLOGY AND SOILS. Would the project:

a. Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:

i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?

☐ ☐ ☒ ☐

WHY? According to the 2002 adopted Safety Element of the City of Pasadena's General Plan, the San Andreas Fault is a "master" active fault and controls seismic hazard in Southern California. This fault is located approximately 21 miles north of Pasadena.

The County of Los Angeles and the City of Pasadena are both affected by Alquist-Priolo Earthquake Fault Zones. Pasadena is in four USGS Quadrants, the Los Angeles, and the Mt. Wilson quadrants were mapped for earthquake fault zones under the Alquist-Priolo Act in 1977. The Pasadena and Condor Peak USGS Quadrangles have not yet been mapped per the Alquist-Priolo Act.

These Alquist-Priolo maps show only one Fault Zone in or adjacent to the City of Pasadena, the Raymond (Hill) Fault Alquist-Priolo Earthquake Fault Zone. This fault is located primarily south of City limits, however, the southernmost portions of the City lie within the fault's mapped Fault Zone.

The 2002 Safety Element of the City's General Plan identifies the following three additional zones of potential fault rupture in the City:

- The Eagle Rock Fault Hazard Management Zone, which traverses the southwestern portion of the City;
- The Sierra Madre Fault Hazard Management Zone, which includes the Tujunga Fault, the North Sawpit Fault, and the South Branch of the San Gabriel Fault. This Fault Zone is primarily north of the City, and only the very northeast portion of the City and portions of the Upper Arroyo lie within the mapped fault zone.
- A Possible Active Strand of the Sierra Madre Fault, which appears to join a continuation of the Sycamore Canyon Fault. This fault area traverses the northern portion of the City as is identified as a Fault Hazard Management Zone for Critical Facilities Only.

The project site is not within any of these potential fault rupture zones, and the geotechnical report that was prepared for the site did not identify surface rupture as a hazard (Mactec, 2006). Therefore, the impact with respect to surface hazard is **less than significant**. No additional analysis in the EIR is warranted.

ii. Strong seismic ground shaking?

☒ ☐ ☐ ☐

Potentially Significant Impact	Significant Unless Mitigation is Incorporated	Less Than Significant Impact	No Impact

WHY? Since the City of Pasadena is within a larger area traversed by active fault systems, such as the San Andreas and Newport-Inglewood Faults, any major earthquake along these systems would cause seismic ground shaking in Pasadena. Much of the City is on sandy, stony or gravelly loam formed on the alluvial fan adjacent to the San Gabriel Mountains. This soil is more porous and loosely compacted than bedrock, and thus subject to greater impacts from seismic ground shaking than bedrock. The project involves construction of a five story office building with six levels of subterranean parking. The potential for groundshaking and secondary seismic and soil stability hazards will be further evaluated in the EIR. This is a **potentially significant impact**.

iii. Seismic-related ground failure, including liquefaction as delineated on the most recent Seismic Hazards Zones Map issued by the State Geologist for the area or based on other substantial evidence of known areas of liquefaction?

☐ ☐ ☒ ☐

WHY? According to the 2002 adopted Safety Element of the City's General Plan the project site is underlain by alluvial material from the San Gabriel Mountains. Liquefaction, which is also commonly observed during earthquakes, is a phenomenon where saturated sands lose their strength during an earthquake and become fluid-like and mobile. As a result, the ground may undergo large permanent displacements that can damage underground utilities and well-built surface structures. The type of displacement of major concern associated with liquefaction is lateral spreading because it involves displacement of large blocks of ground down gentle slopes or towards stream channels. Liquefaction occurs in saturated sands, thus groundwater or a water source in combination with sandy soils is necessary for liquefaction.

The geotechnical investigation revealed that groundwater lies deeper than 70 feet (Mactec, 2006). The proposed project would involve excavation to a depth of about 60 feet. Therefore, the project site is not subject to liquefaction or lateral spreading. Moreover, the project site is not delineated as within a liquefaction hazard zone (Mactec 2006). The project would have a **less than significant** effect with respect to liquefaction.

iv. Landslides as delineated on the most recent Seismic Hazards Zones Map issued by the State Geologist for the area or based on other substantial evidence of known areas of landslides?

☐ ☐ ☐ ☒

WHY? The project site is level and urbanized and is not located in the vicinity of any slopes. The project site is located about two miles east of the San Rafael Hills and about four miles west of the San Gabriel Mountains. The project site is not delineated as within a landslide hazard area on the Seismic Hazard Zones Map. The project site is not susceptible to landslide hazards. Therefore, there would be **no impact** with respect to landslide hazards.

b. Result in substantial soil erosion or the loss of topsoil?

☐ ☒ ☐ ☐

WHY? Construction of the project will require 63,000 cubic yards of cut, which is planned for export, to construct the six-level subterranean garage. The proposed project would involve construction in an urbanized environment and the earthwork will be confined by the building site envelope and depth of the

excavation. Nevertheless, because the site soils will be moved around and exposed to wind and water during construction, there is potential for soil erosion. The issue could be mitigated through watering of exposed soil to reduce airborne transport, in addition to tarping export trucks, and general site maintenance such as street sweeping. The potential for soil erosion and loss of topsoil is **significant unless mitigation is incorporated** and the issue will be further explored and discussed in the EIR.

Upon completion, the project site will be entirely urbanized, with exposed soil limited to planter locations. Therefore, the potential for future long-term erosion is less than significant.

c. *Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?*

☐ ☒ ☐ ☐

WHY? The proposed project involves the construction of a six-level subterranean garage. The geotechnical report (Mactec, 2006) indicates that the site is not located within a liquefaction hazard zone and that groundwater was not encountered above 70 feet. Additionally, since lateral spreading is a form of liquefaction, and the necessary saturated conditions are not present in the underlying site soils, the potential for adverse effects from liquefaction and lateral spreading would be **less than significant**. The site is flat and is not in the vicinity of slopes, therefore, the potential for landslide hazards are **less than significant**.

The geotechnical report did identify the potential for onsite soils to be subject to collapse during construction due to the loose sandy texture of the soils. The geotechnical report includes recommendations for shoring and anchoring that would mitigate these adverse effects to a level that is less than significant. Additionally, the soils could be subject to settlement of ½ inch, but additional analysis is required once the final plans are completed to assess settlement based on the bearing load of the structural components. The potential hazards from subsidence and collapse are **significant unless mitigation is incorporated** and will be discussed in the EIR.

d. *Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?*

☐ ☒ ☐ ☐

WHY? According to the 2002 adopted Safety Element of the City's General Plan the project site is underlain by alluvial material from the San Gabriel Mountains. This soil consists primarily of sand and gravel and is in the low to moderate range for expansion potential. This preliminary determination was confirmed in the geotechnical report that was prepared for the site (Mactec, 2006). However, there are some layers of expansive material that are recommended for removal. In addition, the geotechnical report did identify that onsite soils are moderately corrosive to iron, which likewise has implications regarding risks to life and property. The geotechnical report contains recommendations that would reduce the potential for adverse effects to a level that is less than significant. The impact with respect to expansiveness and corrosivity of the soils is **significant unless mitigation is incorporated**. This issue will be further discussed in the EIR.

e. *Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?*

☐ ☐ ☐ ☒

Potentially Significant Impact	Significant Unless Mitigation is Incorporated	Less Than Significant Impact	No Impact

WHY? The proposed project would be required to connect to the existing sewer system. Therefore, soil suitability for septic tanks or alternative wastewater disposal systems is not applicable in this case, and the proposed project would have **no impact** with regards to this issue. Further analysis in an EIR is not warranted.

10. HAZARDS AND HAZARDOUS MATERIALS. Would the project:

a. Create a significant hazard to the public or the environment through the routine transport, use or disposal of hazardous materials?

☐ ☐ ☒ ☐

WHY? The proposed project includes development of retail and office uses. The proposed project does not involve the use or storage of hazardous substances other than the small amounts of pesticides, fertilizers and cleaning agents required for normal maintenance of structures and landscaping. The project must adhere to applicable zoning and fire regulations regarding the use and storage of any hazardous substances. Furthermore, the existing structure is a commercial retail business and there is no evidence that the site has been used for underground storage of hazardous materials. Therefore impacts related to the routine transport, use or disposal of hazardous materials would be **less than significant.** Further analysis in an EIR is not warranted.

b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

☐ ☐ ☐ ☒

WHY? The proposed project includes development of retail and office uses. The project does not involve hazardous materials. Therefore, no significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions, which could release hazardous material, would occur. **No impact** would occur. Further discussion in an EIR is not warranted.

c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

☐ ☐ ☒ ☐

WHY? The project site is located approximately 0.4 miles north of McKinley School (Pasadena Unified School District, 2007). The proposed project would not involve hazardous emissions or the handling of hazardous materials, substances, or waste. Therefore, hazardous material related impacts to schools would be **less than significant**. Further discussion in an EIR is not warranted.

d. Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

☐ ☐ ☐ ☒

WHY? The project site is not located on the State of California Hazardous Waste and Substances Sites List of sites published by California Environmental Protection Agency (CAL/EPA). The site does not contain any

known hazardous materials (Enviromapper, 2007). The site was formerly used for commercial retail, which is not a land use associated with hazardous materials. The site is not known or anticipated to have been contaminated with hazardous materials and no hazardous material storage facilities are known to exist onsite. Therefore, **no impact** related to existing onsite contamination would occur and further analysis in an EIR is not warranted.

e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?

☐ ☐ ☐ ☒

WHY? The project site is not within an airport land use plan or within two miles of a public airport or public use airport. The nearest public use airport is the Bob Hope Airport in Burbank, which is operated by a Joint Powers Authority with representatives from the Cities of Burbank, Glendale and Pasadena. Bob Hope Airport is 15 miles northwest of the project site. Therefore, the proposed project would not result in a safety hazard for people residing or working in the vicinity of an airport and would have **no impact** with regard to this issue. Further discussion in an EIR is not warranted.

f. For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?

☐ ☐ ☐ ☒

WHY? The project site is not within the vicinity of a private airstrip. Therefore, the proposed project would not result in a safety hazard for people residing or working in the vicinity of a private airstrip and would have **no impact** with regard to this issue. Further discussion in an EIR is not warranted.

g. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

☐ ☐ ☒ ☐

WHY? The City of Pasadena maintains a citywide emergency response plan, which goes into effect at the onset of a major disaster (e.g., a major earthquake). The Pasadena Fire Department maintains the disaster plan. In case of a disaster, the Fire Department is responsible for implementing the plan, and the Pasadena Police Department devises evacuation routes based on the specific circumstance of the emergency. The City has pre-planned evacuation routes for dam inundation areas associated with Devil's Gate Dam, Eaton Wash, and the Jones Reservoir.

The construction and operation of the proposed project would not place any permanent or temporary physical barriers on any existing public streets. To ensure compliance with zoning, building and fire codes, the applicant would be required to submit appropriate plans for plan review prior to the issuance of a building permit. Adherence to these requirements ensures that the project would have a **less than significant impact** on emergency response and evacuation plans. Further discussion in an EIR is not warranted.

	Potentially Significant Impact	Significant Unless Mitigation is Incorporated	Less Than Significant Impact	No Impact

h. Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

☐ ☐ ☒ ☐

WHY? As shown on Plate P-2 of the 2002 Safety Element, the project site is not in an area of moderate or very high fire hazard. In addition, the project site is surrounded by urban development and not adjacent to any wildland. Therefore, the proposed project would not expose people or structures to a significant risk of loss, injury or death involving wildland fires. Impacts associated with wildland fires would be **less than significant** and further discussion in an EIR is not warranted.

11. HYDROLOGY AND WATER QUALITY. Would the project:

a. Violate any water quality standards or waste discharge requirements?

☐ ☐ ☒ ☐

WHY? Section 303 of the federal Clean Water Act requires states to develop water quality standards to protect the beneficial uses of receiving waters. In accordance with California's Porter/Cologne Act, the Regional Water Quality Control Boards (RWQCBs) of the State Water Resources Control Board (SWRCB) are required to develop water quality objectives that ensure their region meets the requirements of Section 303 of the Clean Water Act.

Pasadena is within the greater Los Angeles River watershed, and thus, within the jurisdiction of the Los Angeles RWQCB. The Los Angeles RWQCB adopted water quality objectives in its Stormwater Quality Management Plan (SQMP). This SQMP is designed to ensure stormwater achieves compliance with receiving water limitations. Thus, stormwater generated by a development that complies with the SQMP does not exceed the limitations of receiving waters, and thus does not exceed water quality standards.

Compliance with the SQMP is ensured by Section 402 of the Clean Water Act, which is known as the National Pollution Discharge Elimination System (NPDES). Under this section, municipalities are required to obtain permits for the water pollution generated by stormwater in their jurisdiction. These permits are known as Municipal Separate Storm Sewer Systems (MS4) permits. Los Angeles County and 85 incorporated Cities therein, including the City of Pasadena, obtained an MS4 (Permit # 01-182) from the Los Angeles RWQCB, most recently in 2001. Under this MS4, each permitted municipality is required to implement the SQMP.

In accordance with the County-wide MS4 permit, all new developments must comply with the SQMP. In addition, as required by the MS4 permit, the City of Pasadena has adopted a Standard Urban Stormwater Mitigation Plan (SUSMP) ordinance to ensure new developments comply with SQMP. This ordinance requires most new developments to submit a plan to the City that demonstrates how the project would comply with the City's SUSMP.

The project consists of developing a six-level subterranean garage, and a 160,000 square foot, five-story commercial office building with 522 subterranean spaces. The applicant proposes retail, and office uses. None of the proposed uses are point source generators of water pollutants, and thus, no quantifiable water quality standards apply to the project. As an urban development, the proposed project would add typical, urban, nonpoint-source pollutants such as oil and grease, suspended solids, metals, gasoline, pesticides, and pathogens from paved areas to storm water runoff. These pollutants are permitted by the County-wide

MS4 permit, and would not exceed any receiving water limitations. Because the project involves development of more than 100,000 SF of commercial use with parking totaling more than 5,000 SF and more than 25 spaces, the applicant is required to submit and implement a SUSMP compliance plan. Compliance with the MS4 permit and SUSMP would ensure that the proposed project would not violate any water quality standards or waste discharge requirements. The project's effect on water quality standards and waste discharge requirements would be **less than significant**.

b. Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?

☐ ☒ ☐ ☐

WHY? The project would not install any groundwater wells, and would not otherwise directly withdraw any groundwater. In addition, groundwater was not encountered during the geotechnical investigation (Mactec, 2006), though borings extended to 70 feet. The subterranean garage would extend to a depth of about 60 feet. Therefore, the proposed project would not physically interfere with any groundwater supplies.

The proposed project would replace existing impermeable surfaces with new impermeable surfaces as the project would involve replacement of the existing commercial structure and surface parking with a new commercial structure and subsurface parking. The existing site is about 98% impervious: no significant change in surfaces would occur such that groundwater recharge rates would be affected. The impact with respect to groundwater recharge is **less than significant**.

The proposed project's daily water demand would be an estimated 21,962 gallons. The existing 66,000 square foot commercial retail building on the project site has an estimated daily water demand of 6,600 gallons. Therefore, the net increase in water consumption would be 15,362 gallons of water per day. During periods of drought, this project would be required to comply with the City's Water Shortage Procedures Ordinance, which reduces monthly water consumption to 90% of the expected consumption for this type of land use. The proposed project will incorporate water conservation design features that would further offset future demands. The issue is **significant unless mitigation incorporated** due to the increase as compared with existing baseline demand. The issue will be further discussed in the EIR.

c. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner, which would result in substantial erosion or siltation on-or off-site?

☐ ☐ ☒ ☐

WHY? The project site is currently developed with a 66,000 square foot building and surface parking. The project site is level and does not contain any streams, rivers, or other natural drainage features. Development of the site would involve redevelopment to construct a 160,000 square foot mixed use commercial building with six levels of underground parking, but would not substantially alter the drainage pattern of the site or surrounding area.

The drainage of surface water from the project would be controlled by building regulations and directed towards the City's existing streets, storm drains, and catch basins. Prior to the issuance of a building permit, the applicant is required to submit a site drainage plan to the Building Division and the Public Works Department for review and approval. This required approval ensures that the proposed drainage plan

would be appropriately designed and that the proposed runoff would not exceed the capacity of the City's storm drain system. The proposed drainage of the site would not channel runoff on exposed soil, would not direct flows over unvegetated soils, and would not otherwise increase the erosion or siltation potential of the site or any downstream areas. Therefore, impacts associated with erosion or siltation from changes to drainage patterns would be **less than significant**. Further discussion of this impact in an EIR is not warranted.

d. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner, which would result in flooding on- or off-site?

☐ ☐ ☒ ☐

WHY? As discussed above, the proposed project would involve redevelopment of an existing mostly impermeable site. The project site is 57,762 SF and currently contains 1,075 SF of existing landscaping. Thus the project site is currently 98% impervious. Though the proposed project will include some landscaping, landscaping totals are not available at this early stage of development. However, even if the applicant were to convert the existing landscaping to impermeable surface, the project's potential to cause flooding would be eliminated through the required compliance with the City's SUSMP ordinance. This ordinance requires that post-development peak storm water do not exceed pre-development peak storm water runoff rates. Compliance with this SUSMP requirement would be ensured through the City's drainage plan review and approval process.

Since the proposed project would not involve alteration of a watercourse and post-development runoff discharge rates are required to not exceed pre-development rates, the proposed project would not have the potential to alter drainage patterns or increase runoff that would result in flooding. Therefore, impacts related to flooding would be **less than significant** and further discussion in an EIR is not warranted.

e. Create or contribute runoff water, which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?

☐ ☐ ☒ ☐

WHY? The proposed project has the potential to incrementally increase the amount of runoff if the existing 1,075 SF of landscaping is eliminated. However, the SUSMP would require that post development runoff does not exceed existing runoff. Furthermore, the proposed project would be required to capture pollutants generated by vehicles in the parking garage and access area and eliminate them prior to discharge into the stormdrain system. Therefore, the proposed project would neither exceed the capacity of existing or planned stormwater drainage systems and would not provide substantial additional sources of polluted runoff. The project's effect would be **less than significant** and further discussion of this issue in an EIR is not warranted..

f. Otherwise substantially degrade water quality?

☐ ☐ ☒ ☐

WHY? As discussed above, the proposed development would not be a point-source generator of water pollutants. The only long-term water pollutants expected to be generated onsite are typical urban stormwater pollutants such as oil and grease, suspended solids, metals, gasoline, pesticides, and

pathogens from paved areas. Compliance with the City's SUSMP ordinance would ensure these stormwater pollutants would not substantially degrade water quality.

The project, however, also has the potential to generate temporary water pollutants during construction, including sediment, trash, construction materials, and equipment fluids. The County-wide MS4 permit requires construction sites to implement BMPs to reduce the potential for construction-induced water pollutant impacts. These BMPs include methods to prevent contaminated construction site stormwater from entering the drainage system. The MS4 identifies the following minimum requirements for construction sites in Los Angeles County:

1. Sediments generated on the project site shall be retained using adequate Treatment Control or Structural BMPs;
2. Construction-related materials, wastes, spills or residues shall be retained at the project site to avoid discharge to streets, drainage facilities, receiving waters, or adjacent properties by wind or runoff;
3. Non-storm water runoff from equipment and vehicle washing and any other activity shall be contained at the project site; and
4. Erosion from slopes and channels shall be controlled by implementing an effective combination of BMPs (as approved in Regional Board Resolution No. 99-03), such as the limiting of grading scheduled during the wet season; inspecting graded areas during rain events; planting and maintenance of vegetation on slopes; and covering erosion susceptible slopes.

Therefore, with adherence to the required SUSMP ordinance and implementation of required BMPs, the proposed project's impact to water quality would be **less than significant**. Further discussion in an EIR is not warranted.

g. Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or dam inundation area as shown in the City of Pasadena adopted Safety Element of the General Plan or other flood or inundation delineation map?

☐ ☐ ☐ ☒

WHY? The proposed project does not include the development of housing. No portions of the City of Pasadena are within a 100-year floodplain identified by the Federal Emergency Management Agency (FEMA). As shown on FEMA map Community Number 065050, the entire City is in Zone D, for which no floodplain management regulations are required. Therefore, there would be **no impact** and further discussion in the EIR is not warranted.

h. Place within a 100-year flood hazard area structures, which would impede or redirect flood flows?

☐ ☐ ☐ ☒

WHY? No portions of the City of Pasadena are within a 100-year floodplain identified by the Federal Emergency Management Agency (FEMA). As shown on FEMA map Community Number 065050, the entire City is in Zone D, for which no floodplain management regulations are required. Therefore, the proposed project would not place structures within the flow of the 100-year flood. There would be **no impact** and further discussion in an EIR is not warranted.

	Potentially Significant Impact	Significant Unless Mitigation is Incorporated	Less Than Significant Impact	No Impact

i. Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?

☐ ☐ ☐ ☒

WHY? No portions of the City of Pasadena are within a 100-year floodplain identified by the Federal Emergency Management Agency (FEMA). As shown on FEMA map Community Number 065050, the entire City is in Zone D, for which no floodplain management regulations are required. In addition, according to the City's Dam Failure Inundation Map (Plate P-2, of the adopted 2002 Safety Element of the City's General Plan) the project is not located in a dam inundation area. Therefore, the project would not have a significant impact from exposing people or structures to flooding risks, including flooding as a result of the failure of a levee or dam. **No impact** related to flooding would occur and further discussion in an EIR is not warranted.

j. Inundation by seiche, tsunami, or mudflow?

☐ ☐ ☐ ☒

WHY? The project site is not located near enough to any inland bodies of water or the Pacific Ocean to be inundated by either a seiche or tsunami. The project site is located within the Central District Specific Plan area in an urbanized, level, downtown area. The project site is located about two miles east of the San Rafael Hills and about four miles west of the San Gabriel Mountains. Therefore, because the project site is located miles from hillsides that may not even be susceptible to mudflows, the risk of inundation from a mudflow is **less than significant**. No further evaluation regarding tsunami, seiche or mudflow is warranted in the EIR.

12. LAND USE AND PLANNING. Would the project:

a. Physically divide an existing community?

☐ ☐ ☐ ☒

WHY? The project would not physically divide an existing community, as the site is surrounded by similar development on all sides and the project consists of an infill development within a highly urbanized area. **No impact** would result. Further analysis in an EIR is not warranted.

b. Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?

☒ ☐ ☐ ☐

WHY? The General Plan designation for the project site is Central District Specific Plan and it is within the Pasadena Playhouse Sub-district of the Central District Specific Plan Area. The Central District Specific Plan, approved by the City Council on November 8, 2004, contains the recommended heights, setbacks, floor area ratios and residential densities for projects in the Central District. These development standards are implemented by the Zoning Code. The purpose of the Specific Plan is to encourage a diverse mix of land uses designed to create the primary business, financial, retailing and government center of the City. The objective of the Pasadena Playhouse Sub-district of the Central District Specific Plan is to provide for a

vibrant, mixed-use environment focused on Colorado Boulevard and the Playhouse that functions as a cultural and arts center for the community. The proposed mixed-use commercial project furthers this objective, and meets all development standards of the Zoning Code. The proposed project would include 145,564 SF of office use, 14,407 SF of retail space. The retail component is intended to serve and appeal to the pedestrian. These components satisfy requirements of 50% of street frontage for pedestrian oriented uses. The project is consistent with the Central District Specific Plan and the Pasadena Playhouse Sub-district designated land use intensities. Therefore, since the proposed project would not conflict with any land use plan, policy or regulation, a **less than significant impact** would occur. Further discussion in an EIR is not warranted.

It should be noted that the City-wide Mobility Element designates several streets as "De-emphasized Streets." De-emphasized Streets are streets which traffic should be directed away from in order to protect existing residential neighborhoods. The project may take access off of El Molino Avenue, which is designated as a De-emphasized Street. Increased traffic as a result of project implementation could cause a **potentially significant impact** with respect to this issue. This issue is addressed under Section 18, Transportation, item (g) and will be further evaluated in an EIR, pending the results of the traffic analysis.

c. Conflict with any applicable habitat conservation plan (HCP) or natural community conservation plan (NCCP)?

☐ ☐ ☐ ☒

WHY? Currently, there are no adopted Habitat Conservation or Natural Community Conservation Plans within the City of Pasadena. There are also no approved local, regional or state habitat conservation plans in Pasadena. Therefore, **no impact** associated with Habitat Conservation or Natural Community Conservation Plans would occur. Further discussion in an EIR is not warranted.

13. MINERAL RESOURCES. Would the project:

a. Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

☐ ☐ ☐ ☒

WHY? The project site is currently developed with a commercial retail structure and surface parking. The proposed project would redevelop the site with a commercial mixed-use building and six levels of subterranean parking. The geotechnical investigation concluded that the site is underlain by sands, and silty sands, typical of those in the surrounding area (Mactec, 2006). Therefore, the proposed project would have **no impact** to a known mineral resource and further discussion of this issue in an EIR is not warranted.

b. Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?

☐ ☐ ☐ ☒

WHY? The City's 2004 General Plan Land Use Element does not identify any mineral recovery sites within the City. No active mining operations exist in the City of Pasadena and mining is not currently allowed within any of the City's designated land uses. Therefore, the proposed project would have **no impact**

related to the loss of a locally-important mineral resource recovery site. Further discussion in an EIR is not warranted.

14. NOISE. Will the project result in:

a. *Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?*

☐ ☒ ☐ ☐

WHY? Site preparation and construction activities would generate temporary increases in noise onsite and at adjacent properties, including groundborne vibrations/noise. Noise levels during construction can be in the 78-88 dBA range during peak activity periods (U.S. Environmental Protection Agency, 1971). Such levels are substantially higher than ambient noise levels in the project area and could be a source of temporary noise annoyance to sensitive receptors in the vicinity of the project area. In addition, increased traffic associated with operation of the proposed project could cause an increase over current ambient noise levels. Impacts would be **potentially significant unless mitigation is incorporated** and the issue will be further explored and addressed in an EIR.

b. Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?

☐ ☒ ☐ ☐

WHY? See response to 14.a. Groundborne vibrations and groundborne noise generated during construction activities has the potential to cause adverse affects. Therefore, impacts would be **potentially significant unless mitigation is incorporated** and the issue will be further explored and addressed in an EIR.

c. A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

☐ ☒ ☐ ☐

WHY? The main source of noise within the project area is traffic on Colorado Boulevard and El Molino Avenue. Development of the proposed project would contribute to an increase in traffic in the area due to increased vehicle trips. The increased traffic would incrementally contribute to an increase in ambient noise levels on surrounding roadways. Therefore, the impact would be **potentially significant unless mitigation is incorporated**. This issue will be studied further in an EIR.

d. A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

☐ ☒ ☐ ☐

WHY? See response to 14.a. The proposed project would generate temporary noise due to construction activities. The impact would be **potentially significant unless mitigation is incorporated**. This issue will be studied further in an EIR.

	Potentially Significant Impact	Significant Unless Mitigation is Incorporated	Less Than Significant Impact	No Impact

e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

☐ ☐ ☐ ☒

WHY? There are no airports or airport land-use plans in the City of Pasadena. The closest airport is the Bob Hope Airport, which is located about 15 miles northwest of the project site. Therefore, the proposed project would not expose people to excessive airport related noise. **No impact** would occur and further discussion in an EIR is not warranted.

f. For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?

☐ ☐ ☐ ☒

WHY? There are no private-use airports or airstrips within or near the City of Pasadena. **No impact** would occur and further discussion in an EIR is not warranted.

15. POPULATION AND HOUSING. Would the project:

a. Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

☐ ☐ ☒ ☐

WHY? The proposed project involves the construction of a 160,000 square foot, five-story commercial office building with 522 subterranean spaces. The building would have ground floor retail/commercial uses, with the remainder of the building dedicated to office uses. The 2004 Land Use and Mobility Elements, Zoning Code Revisions, and Central District Specific Plan FEIR states that about 2 jobs are generated per 1,000 square feet of non-residential development. Therefore, based on a 160,000 square foot non-residential building, about 320 jobs would be generated. The proposed land use is consistent with land use designations for the project site. In addition, the development intensification is consistent with plans for the Central District, which is intended to accommodate 9,946 new jobs between 2004 and 2015 (The 2004 Land Use and Mobility Elements, Zoning Code Revisions, and Central District Specific Plan FEIR.). The Central District is intended to provide convenient transit access, employment opportunities, commercial businesses within easy walking distance to homes, and other amenities that create a pedestrian-oriented environment. The proposed project would add to the employment base within the Central District, and would complement the numerous recent residential developments. There are 442 recently developed residential units within one block of the site (Archstone, Trio and Madison projects) and an additional 503 residential units planned and/or recently constructed within a three-block radius of the project. Therefore, the proposed office and commercial use would compliment the existing and planned residential development in the vicinity and is consistent with development patterns envisioned for the area.

The proposed project involves only non-residential use, so it would not directly generate housing, but may indirectly generate a need for housing if people find employment in the City and decide to relocate. For financial, retail, office, personal services, eating/drinking and manufacturing about 5.60% of employees will move to Pasadena after finding work in Pasadena (1991, Secondary Impacts of New Non-Residential

Development on Pasadena's Existing Child Care Spaces and Affordable Housing). Thus, based on the provision of 320 new jobs, about 18 people would relocate to the City. The generation of 320 new jobs and generation of demand for 18 additional residential units is consistent with the vision for the Central District, the Land Use Element and the General Plan which envisions 2,750 new residential units and 1.25 million square feet of non-residential development within the Central District between 2004 and 2015. Furthermore, the project is located in a developed urban area with an established roadway network and in-place infrastructure. Therefore, impacts associated with population increase would be **less than significant.** Further discussion in an EIR is not warranted.

b. Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?

☐ ☐ ☐ ☒

WHY? There are no existing housing units on the project site. Therefore, no housing would be displaced. **No impact** would occur and further discussion in an EIR is not warranted.

c. Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?

☐ ☐ ☐ ☒

WHY? The project does not involve the demolition of any housing units. **No impact** would occur and further discussion in an EIR is not warranted.

16. PUBLIC SERVICES. Will the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

a. Fire Protection?

☐ ☐ ☒ ☐

WHY? The proposed project consists of a 160,000 square foot, five-story commercial office building with ground floor retail/commercial uses and 522 subterranean parking spaces. As discussed in Section 15 a., the proposed project would not directly generate population growth since it does not include any housing. However, the proposed project could induce people to move to the City as a result of finding a job at the project site. As previously discussed, the project is anticipated to indirectly generate 18 new residents. These new residents would require fire protection services. However, the 2004 Land Use and Mobility Elements, Zoning Code Revisions, and Central District Specific Plan FEIR indicates that buildout of the Central District Specific Plan would not result in the need for new fire facilities; therefore, the demand associated with 18 new residents would not result in the need for additional new or altered fire protection services. The demand associated with 18 new residents is not anticipated to alter acceptable service ratios or response times, as fire staffing is assessed annually with the budget process to assure that staffing is commensurate with population increases and consistent with City service levels (2004 Land Use and Mobility Elements, Zoning Code Revisions, and Central District Specific Plan FEIR).

	Potentially Significant Impact	Significant Unless Mitigation is Incorporated	Less Than Significant Impact	No Impact

The applicant is required to pay the City's development fees, which are established to offset incremental increases to fire service demand. In addition, impact fees would be paid by developers of residential units. Therefore, the proposed project would not adversely affect fire protection services and impacts would be **less than significant**. Further discussion in an EIR is not warranted. See also Section 10.h) of this document for wildfire-related impacts.

b. Libraries?

☐ ☐ ☒ ☐

WHY? The project is located less than one mile from Central Library, the nearest branch library. The proposed project will generate about 320 new jobs and would indirectly induce 18 new residents to relocate to the City. The City has a special tax that is collected to fund library improvements (Section 4.109 of the Municipal Code). The tax is levied on both residential and non-residential properties. The tax is intended to fund improvements as the City grows. The indirect generation of 18 new residents would neither require construction of new library facilities, nor would it reduce the level of service at the Central Library at such a level as to require construction of new facilities. Moreover, the 2004 Land Use and Mobility Elements, Zoning Code Revisions, and Central District Specific Plan FEIR concludes that buildout of the Central District would not result in a significant impact. Therefore because this project is a portion of the development envisioned through 2015, the impact to libraries as a result of the proposed project would likewise be **less than significant**. Further analysis of this issue in an EIR is not warranted.

c. Parks?

☐ ☐ ☒ ☐

WHY? The City of Pasadena's Memorial Park, Central Park and Grant Park are located approximately one mile from the project site. According to the City's park impact fee nexus study prepared in 2004, for every 1,000 residents the City as a whole has 2.17 acres of developed parkland and 1.49 acres of open space parkland, for a total of 3.66 acres of park and open space per 1,000 residents. The proposed project may indirectly generate 18 residents that would be anticipated to utilize City Parks. In addition, project employees may be anticipated to utilize parks during the daytime hours to walk, exercise or eat lunch. The City levies impact fees on residential development to fund park improvements and has prioritized streetscapes and plazas within the Central District Specific Plan area to provide a pedestrian friendly walkable atmosphere to accommodate daytime users such as those this project would generate. In addition, the proposed project includes a covered plaza adjacent El Molino with a pedestrian walkway that connects to a paseo along the eastern side of the building. This paseo connects with the Arcade building and extends northward to Colorado Boulevard. The paseo would include pedestrian amenities such as seating, tables, landscaping and newspaper stands. The outdoor common spaces planned as part of this project will provide outdoor resting and break areas for future employees. The project with incorporation of pedestrian amenities, outdoor usable spaces and street improvements would have a **less than significant impact** on parks. Further discussion in an EIR is not warranted.

d. Police Protection?

☐ ☐ ☒ ☐

WHY? The proposed project consists of a 160,000 square foot, five-story commercial office building with ground floor retail/commercial and restaurant uses and 522 subterranean parking spaces. As discussed in Section 15 a., the proposed project would not directly generate population growth since it does not include

any housing. The project is anticipated to indirectly generate 18 new residents as a result of the employment generated by the project. However, the 2004 Land Use and Mobility Elements, Zoning Code Revisions, and Central District Specific Plan FEIR indicated that full buildout of the Central District would not have a significant impact on police protection services. Therefore, because the project is consistent with the General Plan and Central District Specific Plan, the proposed project will likewise not result in the need for additional new or altered police protection services and would not alter acceptable service ratios or response times. Similar to Fire Department annual staffing review, police staffing is likewise subject to annual review and budgets are increased to accommodate staffing needs as necessary. Furthermore, the project applicant is required to pay the City's development fees, which are established to offset incremental increases to police service demand. Therefore, the proposed project would not significantly affect police protection services and impacts would be **less than significant**. Further discussion in an EIR is not warranted.

e. *Schools?*

☐ ☐ ☒ ☐

WHY? The proposed project may indirectly generate 18 new residents as previously discussed. Of these new residents 34.58% will have children (1991, Secondary Impacts of New Non-Residential Development on Pasadena's Existing Child Care Spaces and Affordable Housing). This would result in about six of the new residents having children that would need to be served by the City's schools. The City of Pasadena collects a Pasadena Unified School District (PUSD) Construction Tax on all new construction. Payment of this fee mitigates any impacts on schools. Further analysis in an EIR is not warranted.

f. *Other public facilities?*

☐ ☐ ☒ ☐

WHY? The development of the proposed project would not require additional maintenance of public facilities. Therefore, impacts to other public facilities would be **less than significant**. Further analysis in an EIR is not warranted.

17. RECREATION.

a. *Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?*

☐ ☐ ☒ ☐

WHY? The City of Pasadena's Memorial Park, Central Park and Grant Park are located approximately one mile from the project site. The proposed project is anticipated to indirectly generate 18 new residents as a result of the employment it generates. These residents in addition to employees of the building would be anticipated to utilize City parks. However, the Central District Specific Plan area is being designed to provide pedestrian amenities such as benches, streetscapes and plazas and paseos that will provide an environment that is conducive to walking. In addition, as discussed above under item 16.c, the proposed project includes a paseo that will be furnished with pedestrian amenities such as seating, tables and landscaping. The outdoor common spaces planned as part of this project will provide outdoor resting and break areas for future employees. In addition, any new residential development indirectly generated by the project would be subject to recreation impact fees in the amount of $19,743/unit to fund recreational

improvements (2004 Land Use and Mobility Elements, Zoning Code Revisions, and Central District Specific Plan FEIR). Therefore, the project with incorporation of pedestrian amenities, outdoor usable spaces and street improvements would have a **less than significant impact** on parks. Further discussion in an EIR is not warranted.

b. Does the project include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?

☐ ☐ ☒ ☐

WHY? The proposed project consists of a 160,000 square foot, five-story commercial office building with ground floor retail/commercial uses and 522 subterranean parking spaces. The project includes development of a paseo that would contribute to the pedestrian amenities within the Central District. However, these project components will be assessed as part of the overall design. The project does not specifically include recreational facilities or trigger the need for new recreational facilities. The impact is less than significant, and further analysis in an EIR is not warranted.

18. TRANSPORTATION/TRAFFIC. Would the project:

a. *Cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?*

☒ ☐ ☐ ☐

WHY? The proposed project has the potential to increase traffic in the project vicinity and area roadways as the project is expected to increase onsite employment. A traffic and parking study will be conducted to analyze and evaluate the project's potential impacts to traffic, circulation, parking, and access. These impacts are identified as **potentially significant** and will be further evaluated in an EIR.

b. Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?

☒ ☐ ☐ ☐

WHY? The proposed project has the potential to increase traffic in the project vicinity and area roadways as the project is expected to increase onsite employment. A traffic and parking study will be conducted to analyze and evaluate the project's potential impacts. These impacts are identified as **potentially significant** and will be further evaluated in an EIR.

c. Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?

☐ ☐ ☐ ☒

WHY? The project site is not within an airport land use plan or within two miles of a public airport or public use airport. The closest airport is about 15 miles to the northwest in Burbank. Consequently, the proposed project would not affect any airport facilities and would not cause a change in the directional patterns of

	Potentially Significant Impact	Significant Unless Mitigation is Incorporated	Less Than Significant Impact	No Impact

aircraft. Therefore, the proposed project would have **no impact** to air traffic patterns. Further discussion of this issue in an EIR is not warranted.

d. Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

☒ ☐ ☐ ☐

WHY? The proposed project involves new access, which could be taken from El Molino exclusively, or from both El Molino and Green Street. In addition, the proposed project involves construction of a six-level subterranean garage. A significant adverse effect would occur if the project design presented an access hazard to vehicles or pedestrians. This is a **potentially significant** impact that will be further explored and evaluated in an EIR.

e. Result in inadequate emergency access?

☒ ☐ ☐ ☐

WHY? The proposed project involves new access, which could be taken from El Molino exclusively, or from both El Molino and Green Street. In addition, the proposed project involves construction of a six-level subterranean garage. A significant adverse effect would occur if the project design resulted in inadequate emergency access. Roadway and access plans would be reviewed by the City's Traffic Engineer, the Public Works Department and the Fire Department. In addition, a traffic study is being conducted to evaluate the two alternative access scenarios. While review and approval by these agencies would help to ensure safe access and road design, these effects are identified as **potentially significant** and will be further evaluated in an EIR.

f. *Result in inadequate parking capacity?*

☐ ☒ ☐ ☐

WHY? The project plans indicate construction of 522 parking spaces. The proposed parking will be evaluated further in consideration of City requirements and because surplus parking may be developed to serve the Pasadena Playhouse, located across El Molino Avenue along the western boundary of the site. The issue is identified as **significant unless mitigation is incorporated**, and the issue will be further addressed in the EIR.

g. *Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g. bus turnouts, bicycle racks)?*

☒ ☐ ☐ ☐

WHY? The project site is located in the Central District, a highly urbanized part of Pasadena. The City-wide Mobility Element designates several streets as "De-emphasized Streets." De-emphasized Streets are streets which traffic should be directed away from in order to protect existing residential neighborhoods. Since El Molino Avenue is designated as a De-emphasized Street, increased traffic as a result of project implementation could cause a **potentially significant impact**. This issue will be further evaluated in an EIR.

Potentially Significant Impact	Significant Unless Mitigation is Incorporated	Less Than Significant Impact	No Impact

The proposed project includes 16 bicycle parking spaces and would be constructed within the downtown Central District area of Pasadena in the vicinity of existing bus routes. The proposed project includes a mix of retail and office space in an area where there are several existing residential condominium developments. Therefore, the proposed project could be considered to be consistent with "vehicle miles traveled (VMT)" reduction strategies that concentrate development in urban centers close to bus routes, provide for a mix of uses and promote the use of bicycles. The project's impact with respect to alternative transportation policies is considered **less than significant**. Nevertheless the project's effect with respect to adopted alternative transportation policies will be further evaluated in an EIR.

19. UTILITIES AND SERVICE SYSTEMS. Would the project:

a. *Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?*

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WHY? The project would generate wastewater from toilets, sinks and drinking fountains. This type of wastewater is categorized as domestic sewage. Domestic sewage typically meets wastewater treatment requirements because wastewater treatment facilities are designed to treat wastewater from these types of sources. The project does not involve the release of unique or unusual wastewater into the treatment system. Therefore, the project would not exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board, and the project would have **less than significant impacts**. Further discussion in an EIR is not warranted.

b. *Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?*

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WHY? The City's sewer system has adequate capacity to accommodate current demands, and the majority of the system has adequate surplus capacity to accommodate anticipated buildout (City of Pasadena General Plan EIR, 2004). The capacity of the sewer system to accept flow from new developments is currently being addressed on a case-by-case basis by requiring each development to prepare a comprehensive analysis of the impact of the development on the affected segments of the City's sewer system. This analysis typically includes flow monitoring to accurately determine the current load on the sewer system.

The proposed project consists of the demolition of an existing 66,000 square foot commercial retail building and the development of a 160,000 square foot office building with commercial retail uses on the ground floor. Based on a conservative factor of 90% of water used becoming wastewater (City of Pasadena General Plan EIR, 2004), the proposed project would generate approximately 19,766 gallons of wastewater per day, which is approximately 13,826 gallons per day more than the current use. It is noted that the County Sanitation Districts of Los Angeles County estimates that the proposed project will discharge 36,000 gallons per day. The higher wastewater generation estimate produced by County Sanitation Districts is due to a difference in the wastewater generation factors utilized by the agency. Moreover, it is noted that the proposed project will incorporate water efficiency measures pursuant to LEED criteria that will offset wastewater generation through the use of high efficiency fixtures.

As discussed in the City's 2004 General Plan FEIR, new development built pursuant to the 2004 Land Use Element, as implemented by the Zoning Code Revisions, will increase wastewater generation.

Approximately 90% of water consumed within the City becomes wastewater. Using this factor, Pasadena is expected to generate approximately 24.2 million gallons per day (mgd) of wastewater in 2015, an increase of 4.28 million gpd (18%) over 2000 conditions. The City's wastewater is treated at the Whittier Narrows, Los Coyotes the San Jose Creek Water Reclamation Plants. These plants provide primary, secondary and tertiary treatment. No existing deficiencies have been identified in the County Sanitation Districts' collection or treatment facilities serving Pasadena. County Sanitation Districts indicated the Whittier Narrows Water Reclamation Plant has a design capacity of the plant is 15 mgd and that the plant currently processes an average flow of 8.5 mgd. The District also indicated the Los Coyotes WRP has a design capacity of 37.5 mgd and processes an average flow of 22.6 mgd. The design capacities of the Districts' wastewater treatment facilities are based on the regional growth forecast adopted by SCAG. All expansions of the Districts' facilities must be sized and serviced in a manner that is consistent with SCAG regional growth forecasts. The proposed project is commercial and would not generate population or housing. For these reasons, impacts to wastewater treatment facilities would be **less than significant**. Further discussion in an EIR is not warranted.

c. *Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?*

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WHY? The project would not require the construction of new storm water drainage facilities or the expansion of existing facilities. The project is located in a developed urban area where storm drainage is provided by existing streets, storm drains, flood control channels, and catch basins. As discussed in Section 11, the project would involve only minor changes in the site's drainage patterns and would not involve altering any drainage courses or flood control channels.

Further, the project applicant must submit and implement an on-site drainage plan that meets the approval of the Building Official and the Public Works Department. The City's SUSMP ordinance requires that post-development peak storm water runoff rates not exceed pre-development peak storm water runoff rates. Therefore, the proposed project would not require or result in any stormwater drainage improvements and the impacts would be **less than significant**. Further analysis in an EIR is not warranted.

d. *Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?*

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WHY? The proposed project's daily water demand would be an estimated 21,820 gallons. The existing 66,000 square foot commercial retail building on the project site has an estimated daily water demand of 6,600 gallons. Therefore, the net increase in water consumption would be 14,680 gallons of water per day. During periods of drought, this project would be required to comply with the City's Water Shortage Procedures Ordinance, which reduces monthly water consumption to 90 % of the expected consumption for this type of land use.

According to the 2004 General Plan FEIR, development pursuant to the 2004 Land Use Element, and implemented through the Zoning Code Revisions, would neither deplete water supplies nor exceed expected projections. However, conservation is a part of ensuring future supplies are adequate to serve the existing and projected population increases. Therefore, the impact is **significant unless mitigation is incorporated** and will be further discussed in the EIR.

Potentially Significant Impact	Significant Unless Mitigation is Incorporated	Less Than Significant Impact	No Impact

e. *Result in a determination by the wastewater treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?*

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WHY? As discussed in Section 19.b of this report, the proposed project consists of the demolition of an existing 66,000 square foot commercial retail building and the development of a 160,000 square foot office building with commercial retail and restaurant uses on the ground floor. Based on a conservative factor of 90% of water used becoming wastewater (City of Pasadena General Plan EIR, 2004), the proposed project would generate approximately 19,766 gallons of wastewater per day, which is approximately 13,826 gallons per day more than the current use. As discussed in item 19 b., since the proposed project would not substantially increase the population served by the water treatment plants which serve the City, impacts to wastewater treatment facilities would be **less than significant.** Further discussion in an EIR is not warranted.

f. Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?

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WHY? The project site is located in a developed urban area and within the City's refuse collection area. The City of Pasadena is served primarily by Scholl Canyon landfill, which is permitted through 2017, and secondarily by Puente Hills, which was re-permitted in 2003 for 10 years. The Scholl Canyon landfill has a permitted daily capacity of 3,400 tons and an average daily throughput of 1,400 tons (Los Angeles County Sanitation Districts, 2007). Therefore, the Scholl Canyon landfill has a surplus capacity of approximately 2,000 tons per day. Table 1 shows the estimated daily solid waste generated by the proposed project.

Table 1
Estimated Solid Waste Generation

Land Use	Square Feet (SF)	Generation Rate	Solid Waste (lbs per day)	Solid Waste (tons per day)
Proposed Office	145,564	6 lbs/1,000 SF/day	873	0.44
Proposed Commercial Retail	14,407	42 lbs/1,000 SF/day	605	0.30
			Proposed Project Total	**0.74**
Existing Commercial Retail	66,000	42 lbs/1,000 SF/day	2,772	1.34
			Net Change	**- 0.60**

Source: City of Los Angeles Average Solid Waste Generation Rates, April 1961

As shown in Table 1, the proposed project would generate an estimated 0.74 tons of solid waste per day, which would account for less than 0.1% of the Scholl Canyon landfill's average daily surplus capacity.

Additionally, because the existing commercial use has a much higher waste generation rate as compared with the proposed office and retail uses, the proposed project would actually result in a solid waste generation reduction as compared with the existing commercial use. It is noted that the County of Los Angeles Public Works Department indicates that overall solid waste generated by Los Angeles County currently exceeds the available permitted daily landfill capacity and recommends incorporation of mitigation that would include the development of infrastructure in the project to facilitate recycling and should provide adequate space for the storage of recyclable materials. The proposed project will be subject to Chapter 8.62 of the Municipal Code, which is the construction demolition and waste management ordinance. Pursuant to this ordinance, the proposed project will be required to divert a minimum of 50% of the construction and demolition debris from the project. Additionally, because the project will be a LEED certified project, the proposed project will be required to comply with LEED Materials and Resources Prerequisite 1: Storage and Collection of Recyclables. This measure requires the project to "provide an easily accessible area that serves the entire building and is dedicated to the collection and storage of non-hazardous materials for recycling, including (at a minimum) paper, corrugated cardboard, glass, plastics, and metals." Therefore, the proposed project's impact to landfill capacity would be **less than significant** and further discussion in an EIR is not warranted.

g. Comply with federal, state, and local statutes and regulations related to solid waste?

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WHY? In 1992, the City adopted the "Source Reduction and Recycling Element" to comply with the California Integrated Waste Management Act. This Act requires that jurisdictions maintain a 50% or better diversion rate for solid waste. The City implements this requirement through Section 8.61 of the Pasadena Municipal Code, which establishes the City's "Solid Waste Collection Franchise System." As described in Section 8.61.175, each franchisee is responsible for meeting the minimum recycling diversion rate of 50% on both a monthly basis and annual basis. The proposed project is required to comply with the applicable solid waste franchise's recycling system, and thus, would meet Pasadena's and California's solid waste diversion regulations. In accordance with the Construction and Demolition Ordinance (Chapter 8.62 of the Pasadena Municipal Code), the applicant must submit a Construction Waste Management Plan, because the project meets the threshold of "new structures of 1,000 or more gross SF." Therefore, impacts related to solid waste regulations would be **less than significant**. Further discussion in an EIR is not warranted.

20. EARLEIR ANALYSIS. Earlier analysis is not being used for this project, with the exception of referenced documents.

21. MANDATORY FINDINGS OF SIGNIFICANCE.

a. Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

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WHY? The project site is located within a highly urbanized area lacking any biological resources, as discussed in Section 6, Biological Resources. Therefore, no impacts to biological resources are anticipated. In addition with mitigation, the project would not cause significant impacts to archaeological or paleontological resources. The mitigation measures required for archaeological and paleontological

resources will be carried over into the Mitigation, Monitoring and Reporting Program for the project. No further discussion of biological, archaeological or paleontological resources is warranted in the EIR.

There is potential for indirect aesthetic impacts to historic resources, due to the size of the proposed project in relation to the adjacent structures, as the Arcade Building is eligible for designation as a historic resource, and the Pasadena Playhouse across El Molino to the west is a prominent historic resource. The potential for adverse aesthetic effects to these resources is considered **potentially significant** and will be further evaluated in the aesthetics section of the EIR.

The project's potential to degrade the environment due to air quality and noise are identified as potentially significant and will be further evaluated in an EIR. Additionally, one land use conflict pertaining to El Molino Avenue as a de-emphasized street was identified as potentially significant under land use; however, this issue is also addressed and identified as **potentially significant** in the traffic section. This issue will be further addressed in the traffic section of the EIR pending results of the traffic study.

b. Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future project?

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WHY? Cumulative impacts may occur in the issue areas where potentially significant impacts are identified in the Initial Study. The initial study has identified potentially significant effects with respect to Aesthetics, Air Quality, Noise, Traffic, Geology and Soils, and Water. Therefore for these issue areas pending further study, cumulative impacts are **potentially significant** and will be further discussed and evaluated in the EIR.

c. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

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WHY? Buildout of the proposed project has the potential to create environmental effects that could significantly affect human health or safety (refer to Section 5, *Air Quality*; Section 9, *Geology and Soils*; Section 14, *Noise*; and Section 18, *Transportation/Traffic*. Impacts would be **potentially significant** and will be studied further in an EIR.

INITIAL STUDY REFERENCE DOCUMENTS

#	Document
1	Alquist-Priolo Earthquake Fault Zoning Act, California Public Resources Code, revised January 1, 1994 official Mt. Wilson, Los Angeles and Pasadena quadrant maps were released March 25, 1999.
2	CEQA Air Quality Handbook, South Coast Air Quality Management District, revised 1993.
3	City of Pasadena. 1991. Secondary Impacts of New and Non-Residential Development on Pasadena's Existing Child Care Spaces and Affordable Housing.
4	Energy Element of the General Plan, City of Pasadena, adopted 1983
5	FEMA map Community Number 065050
6	Final Environmental Impact Report (FEIR) Land Use and Mobility Elements of the General Plan, Zoning Code Revisions, and Central District Specific Plan, City of Pasadena, certified 2004
7	Land Use Element of the General Plan, City of Pasadena, adopted 2004
8	Mactec, 2006. Report of Geotechnical Investigation Proposed Development, Southeast Corner of El Molino Avenue and Colorado Boulevard, Pasadena, California.
9	Mobility Element of the General Plan, City of Pasadena, adopted 2004
10	Noise Element of the General Plan, City of Pasadena, adopted 2002
11	Noise Protection Ordinance Pasadena Municipal Code Chapter 9.36 Ordinances # 5118, 6132, 6227, 6594 and 6854
12	Pasadena Municipal Code, as amended
13	Recommendations On Siting New Sensitive Land Uses, California Air Resources Board, May 2005
14	Safety Element of the General Plan, City of Pasadena, adopted 2002
15	Sanitation Districts of Los Angeles County, http://www.lacsd.org/
16	Scenic Highways Element of the General Plan, City of Pasadena, adopted 1975
17	Seismic Hazard Maps, California Department of Conservation, official Mt. Wilson, Los Angeles and Pasadena quadrant maps were released March 25, 1999. The preliminary map for Condor Peak was released in 2002.
18	State of California "Aggregate Resource in the Los Angeles Metropolitan Area" by David J. Beeby, Russell V. Miller, Robert L. Hill, and Robert E. Grunwald, Miscellaneous map no. .010, copyright 1999, California Department of Conservation, Division of Mines and Geology
19	Storm Water and Urban Runoff Control Regulations Pasadena Municipal Code Chapter 8.70 Ordinance #6837
20	Tree Protection Ordinance Pasadena Municipal Code Chapter 8.52 Ordinance # 6896
21	Zoning Code, Chapter 17 of the Pasadena Municipal Code
22	U.S. Environmental Protection Agency, Enviromapper. http://www.epa.gov/enviro/emef/
23	U.S. Environmental Protection Agency. 1971. Noise from Construction Equipment and Operations, Building Equipment and Home Appliances. NTID 300.1
24	Personal Communication, Kevin Johnson, 2007.

Appendix B

Air QualityResults

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Urbemis 2007 Version 9.2.4

Summary Report for Summer Emissions (Pounds/Day)

File Name: C:\Documents and Settings\swazlaw\Application Data\Urbemis\Version9a\Projects\680 Colorado - Pasadena.urb924

Project Name: 680 E. Colorado Blvd Commercial Project

Project Location: Los Angeles 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
2009 TOTALS (lbs/day unmitigated)	4.43	26.53	24.97	0.02	36.81	1.57	38.14	7.69	1.45	8.92	3,222.35
2009 TOTALS (lbs/day mitigated)	4.43	26.53	24.97	0.02	36.81	1.57	38.14	7.69	1.45	8.92	3,222.35
2010 TOTALS (lbs/day unmitigated)	97.95	18.96	23.80	0.02	0.07	1.30	1.37	0.03	1.20	1.22	3,221.95
2010 TOTALS (lbs/day mitigated)	39.20	18.96	23.80	0.02	0.07	1.30	1.37	0.03	1.20	1.22	3,221.95

AREA SOURCE EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	1.14	1.09	2.45	0.00	0.01	0.01	1,282.57

OPERATIONAL (VEHICLE) EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	14.81	20.60	183.77	0.19	30.98	6.03	18,452.14

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SUM OF AREA SOURCE AND OPERATIONAL EMISSION ESTIMATES

	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
TOTALS (lbs/day, unmitigated)	15.95	21.69	186.22	0.19	30.99	6.04	19,734.71

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Urbemis 2007 Version 9.2.4

Detail Report for Summer Construction Mitigated Emissions (Pounds/Day)

File Name: C:\Documents and Settings\swazlaw\Application Data\Urbemis\Version9a\Projects\680 Colorado - Pasadena.urb924

Project Name: 680 E. Colorado Blvd Commercial Project

Project Location: Los Angeles County

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

Off-Road Vehicle Emissions Based on: OFFROAD2007

CONSTRUCTION EMISSION ESTIMATES (Summer Pounds Per Day, Mitigated)

	ROG	NOx	CO	SO2	PM10 Dust	PM10 Exhaust	PM10 Total	PM2.5 Dust	PM2.5 Exhaust	PM2.5 Total	CO2
Time Slice 2/10/2009-3/20/2009 Active Days: 29	1.52	11.44	7.25	0.00	4.22	0.78	5.00	0.88	0.72	1.60	1,217.13
Demolition 02/10/2009-03/21/2009	1.52	11.44	7.25	0.00	4.22	0.78	5.00	0.88	0.72	1.60	1,217.13
Fugitive Dust	0.00	0.00	0.00	0.00	4.20	0.00	4.20	0.87	0.00	0.87	0.00
Demo Off Road Diesel	1.23	8.15	4.78	0.00	0.00	0.64	0.64	0.00	0.59	0.59	700.30
Demo On Road Diesel	0.25	3.22	1.30	0.00	0.01	0.14	0.15	0.00	0.13	0.13	392.44
Demo Worker Trips	0.04	0.07	1.16	0.00	0.01	0.00	0.01	0.00	0.00	0.00	124.39
Time Slice 3/24/2009-6/19/2009 Active Days: 64	3.22	26.53	14.14	0.00	36.81	1.34	38.14	7.69	1.23	8.92	2,371.70
Mass Grading 03/24/2009-06/20/2009	3.22	26.53	14.14	0.00	36.81	1.34	38.14	7.69	1.23	8.92	2,371.70
Mass Grading Dust	0.00	0.00	0.00	0.00	36.80	0.00	36.80	7.69	0.00	7.69	0.00
Mass Grading Off Road Diesel	3.18	26.46	12.98	0.00	0.00	1.33	1.33	0.00	1.23	1.23	2,247.32
Mass 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
Mass Grading Worker Trips	0.04	0.07	1.16	0.00	0.01	0.00	0.01	0.00	0.00	0.00	124.39
Time Slice 8/4/2009-8/14/2009 Active Days: 9	2.22	18.97	9.48	0.00	0.01	0.93	0.94	0.00	0.86	0.86	1,839.02
Trenching 08/04/2009-08/15/2009	2.22	18.97	9.48	0.00	0.01	0.93	0.94	0.00	0.86	0.86	1,839.02
Trenching Off Road Diesel	2.18	18.90	8.32	0.00	0.00	0.93	0.93	0.00	0.86	0.86	1,714.64
Trenching Worker Trips	0.04	0.07	1.16	0.00	0.01	0.00	0.01	0.00	0.00	0.00	124.39

Time Slice 8/18/2009-8/28/2009 Active Days: 9	3.62	19.53	12.63	0.01	0.02	1.57	1.60	0.01	1.45	1.46	1,831.86
Asphalt 08/18/2009-08/29/2009	3.62	19.53	12.63	0.01	0.02	1.57	1.60	0.01	1.45	1.46	1,831.86
Paving Off-Gas	0.54	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Paving Off Road Diesel	2.81	16.83	9.27	0.00	0.00	1.46	1.46	0.00	1.34	1.34	1,272.04
Paving On Road Diesel	0.20	2.55	1.03	0.00	0.01	0.11	0.12	0.00	0.10	0.11	311.05
Paving Worker Trips	0.08	0.14	2.32	0.00	0.01	0.01	0.02	0.00	0.01	0.01	248.77
Time Slice 9/1/2009-12/31/2009 Active Days: 88	4.43	19.99	24.97	0.02	0.07	1.39	1.47	0.03	1.28	1.31	3,222.35
Building 09/01/2009-04/24/2010	4.43	19.99	24.97	0.02	0.07	1.39	1.47	0.03	1.28	1.31	3,222.35
Building Off Road Diesel	3.87	17.35	11.50	0.00	0.00	1.28	1.28	0.00	1.17	1.17	1,621.20
Building Vendor Trips	0.17	1.92	1.58	0.00	0.01	0.08	0.10	0.00	0.08	0.08	327.69
Building Worker Trips	0.39	0.72	11.89	0.01	0.06	0.03	0.09	0.02	0.03	0.05	1,273.46
Time Slice 1/1/2010-4/23/2010 Active Days: 81	4.17	18.96	23.80	0.02	0.07	1.30	1.37	0.03	1.20	1.22	3,221.95
Building 09/01/2009-04/24/2010	4.17	18.96	23.80	0.02	0.07	1.30	1.37	0.03	1.20	1.22	3,221.95
Building Off Road Diesel	3.65	16.55	11.20	0.00	0.00	1.19	1.19	0.00	1.10	1.10	1,621.20
Building Vendor Trips	0.16	1.76	1.46	0.00	0.01	0.08	0.09	0.00	0.07	0.07	327.71
Building Worker Trips	0.36	0.66	11.13	0.01	0.06	0.03	0.09	0.02	0.03	0.05	1,273.04
Time Slice 4/27/2010-6/14/2010 Active Days: 35	39.20	0.07	1.24	0.00	0.01	0.00	0.01	0.00	0.00	0.01	142.08
Coating 04/27/2010-06/14/2010	39.20	0.07	1.24	0.00	0.01	0.00	0.01	0.00	0.00	0.01	142.08
Architectural Coating	39.16	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Coating Worker Trips	0.04	0.07	1.24	0.00	0.01	0.00	0.01	0.00	0.00	0.01	142.08

Construction Related Mitigation Measures

The following mitigation measures apply to Phase: Architectural Coating 4/27/2010 - 6/14/2010 - Default Architectural Coating Description

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

ROG: 60%

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

ROG: 60%

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Phase Assumptions

Phase: Demolition 2/10/2009 - 3/21/2009 - Default Demolition Description
Building Volume Total (cubic feet): 66000
Building Volume Daily (cubic feet): 10000
On Road Truck Travel (VMT): 92.59
Off-Road Equipment:
1 Concrete/Industrial Saws (10 hp) operating at a 0.73 load factor for 8 hours per day
1 Rubber Tired Dozers (357 hp) operating at a 0.59 load factor for 1 hours per day
2 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 6 hours per day

Phase: Mass Grading 3/24/2009 - 6/20/2009 - Default Mass Site Grading/Excavation Description
Total Acres Disturbed: 7.34
Maximum Daily Acreage Disturbed: 1.84
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: Trenching 8/4/2009 - 8/15/2009 - Default Trenching Description
Off-Road Equipment:
2 Excavators (168 hp) operating at a 0.57 load factor for 8 hours per day
1 Other General Industrial Equipment (238 hp) operating at a 0.51 load factor for 8 hours per day
1 Tractors/Loaders/Backhoes (108 hp) operating at a 0.55 load factor for 0 hours per day

Phase: Paving 8/18/2009 - 8/29/2009 - Default Paving Description
Acres to be Paved: 1.84
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 Paving Equipment (104 hp) operating at a 0.53 load factor for 8 hours per day

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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 9/1/2009 - 4/24/2010 - 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 4/27/2010 - 6/14/2010 - 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

7/9/2008 2:29:45 PM

Urbemis 2007 Version 9.2.4

Detail Report for Summer Area Source Unmitigated Emissions (Pounds/Day)

File Name: C:\Documents and Settings\swazlaw\Application Data\Urbemis\Version9a\Projects\680 Colorado - Pasadena.urb924

Project Name: 680 E. Colorado Blvd Commercial Project

Project Location: Los Angeles County

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

Off-Road Vehicle Emissions Based on: OFFROAD2007

AREA SOURCE EMISSION ESTIMATES (Summer Pounds Per Day, Unmitigated)

Source	ROG	NOx	CO	SO2	PM10	PM2.5	CO2
Natural Gas	0.08	1.07	0.90	0.00	0.00	0.00	1,279.76
Hearth - No Summer Emissions							
Landscape	0.12	0.02	1.55	0.00	0.01	0.01	2.81
Consumer Products	0.00						
Architectural Coatings	0.94						
TOTALS (lbs/day, unmitigated)	1.14	1.09	2.45	0.00	0.01	0.01	1,282.57

Area Source Changes to Defaults

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Urbemis 2007 Version 9.2.4

Detail Report for Summer Operational Unmitigated Emissions (Pounds/Day)

File Name: C:\Documents and Settings\swazlaw\Application Data\Urbemis\Version9a\Projects\680 Colorado - Pasadena.urb924

Project Name: 680 E. Colorado Blvd Commercial Project

Project Location: Los Angeles County

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

Off-Road Vehicle Emissions Based on: OFFROAD2007

OPERATIONAL EMISSION ESTIMATES (Summer Pounds Per Day, Unmitigated)

Source	ROG	NOX	CO	SO2	PM10	PM25	CO2
General office building	14.81	20.60	183.77	0.19	30.98	6.03	18,452.14
TOTALS (lbs/day, unmitigated)	14.81	20.60	183.77	0.19	30.98	6.03	18,452.14

Does not include correction for passby trips

Does not include double counting adjustment for internal trips

Analysis Year: 2010 Temperature (F): 80 Season: Summer

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
General office building		11.01	1000 sq ft	159.97	1,761.27	17,925.32
					1,761.27	17,925.32

Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Auto	53.6	1.1	98.7	0.2
Light Truck < 3750 lbs	6.8	2.9	94.2	2.9

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Vehicle Fleet Mix

Vehicle Type	Percent Type	Non-Catalyst	Catalyst	Diesel
Light Truck 3751-5750 lbs	22.8	0.4	99.6	0.0
Med Truck 5751-8500 lbs	10.0	1.0	99.0	0.0
Lite-Heavy Truck 8501-10,000 lbs	1.5	0.0	86.7	13.3
Lite-Heavy Truck 10,001-14,000 lbs	0.5	0.0	60.0	40.0
Med-Heavy Truck 14,001-33,000 lbs	0.9	0.0	22.2	77.8
Heavy-Heavy Truck 33,001-60,000 lbs	0.5	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	2.3	69.6	30.4	0.0
School Bus	0.1	0.0	0.0	100.0
Motor Home	0.8	0.0	87.5	12.5

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)						
General office building				35.0	17.5	47.5

Summary of Two Acre Site Example Results By Phase and Equipment

Demolition of Existing 66,000 Square Foot Structure

Vehicle Description	No. of Vehicle	Hours	Trips	Length	CO	NOx	PM10	PM2.5
Concrete/Industrial Saws	1	8.0			3.59	6.11	0.51	0.47
Rubber Tired Dozers	1	8.0			13.56	27.31	1.31	1.11
Tractors/Loaders/Backhoes	3	8.0			9.94	19.93	1.66	1.44
Haul Trucks			7	0.1	0.02	0.07	0.003	0.003
Total Onsite Emissions					**27.1**	**53.4**	**3.5**	**3.0**
Localized Significance Threshold*					**226**	**147**	**6**	**4**
Exceed Significance?					**NO**	**NO**	**NO**	**NO**

Site Preparation

Vehicle Description	No. of Vehicle	Hours	Trips	Length	CO	NOx	PM10	PM2.5
Rubber Tired Dozers	1	7.0			11.86	23.90	1.88	1.13
Graders	1	8.0			5.37	13.76	1.55	0.83
Tractors/Loaders/Backhoes	1	8.0			3.31	6.64	1.31	0.64
Haul Trucks			9	0.1	0.03	0.08	0.004	0.004
Water Trucks			3	1.8	0.16	0.51	0.03	0.023
Total Onsite Emissions					**20.7**	**44.9**	**4.8**	**2.6**
Localized Significance Threshold*					**226**	**147**	**6**	**4**
Exceed Significance?					**NO**	**NO**	**NO**	**NO**

Grading

Vehicle Description	No. of Vehicle	Hours	Trips	Length	CO	NOx	PM10	PM2.5
Bulldozer	1	8.0			13.56	27.31	1.19	1.09
Grader	1	8.0			5.37	13.76	0.72	0.65
Tractor/Loader/Backhoe	2	7.0			5.80	11.62	1.67	0.99
Haul Truck			4	0.1	0.01	0.04	0.00	0.0017
Water Truck			3	1.8	0.16	0.51	0.03	0.02
Total Onsite Emissions					**24.9**	**53.2**	**3.6**	**2.8**
Localized Significance Threshold*					**226**	**147**	**6**	**4**
Exceed Significance?					**NO**	**NO**	**NO**	**NO**

Building of 87,000 Square Foot Structure

Vehicle Description	No. of Vehicle	Hours	Trips	Length	CO	NOx	PM10	PM2.5
Forklifts	1	6.0			1.50	3.86	0.21	0.19
Cranes	1	6.0			3.82	10.17	0.45	0.41
Tractors/Loaders/Backhoes	1	6.0			2.49	4.98	0.38	0.35
Generator Sets	1	8.0			2.84	5.80	0.36	0.33
Electric Welders	3	8.0			N/A	N/A	N/A	N/A
Haul Trucks			30	0.1	0.09	0.28	0.01	0.013
Water Trucks			3	3.2	0.28	0.91	0.04	0.04
Total Onsite Emissions					**11.0**	**26.0**	**1.5**	**1.3**
Localized Significance Threshold*					**226**	**147**	**6**	**4**
Exceed Significance?					**NO**	**NO**	**NO**	**NO**

* Illustration purpose showing the most stringent LSTs. Please consult App. C of the Methodology Paper for applicable LSTs.

Summary of Two Acre Site Example Results By Phase and Equipment

Architectural Coating and Asphalt Paving of Parking Lot

Vehicle Description	No. of Vehicle	Hours	Trips	Length	CO	NOx	PM10	PM2.5
Pavers	1	6.0			3.60	6.77	0.48	0.44
Paving Equipment	1	8.0			3.75	8.27	0.57	0.52
Rollers	1	7.0			3.09	6.35	0.44	0.40
Cement and Mortar Mixers	1	6.0			0.27	0.42	0.03	0.03
Tractors/Loaders/Backhoes	2	8.0			6.63	13.29	1.02	0.94
Haul Trucks			3	0.1	0.01	0.03	0.0014	0.0013
Water Trucks			3	3.2	0.28	0.91	0.04	0.04
Total Onsite Emissions					**17.6**	**36.0**	**2.6**	**2.4**
Localized Significance Threshold*					**226**	**147**	**6**	**4**
Exceed Significance?					**NO**	**NO**	**NO**	**NO**

* Illustration purpose showing the most stringent LSTs. Please consult App. C of the Methodology Paper for applicable LSTs.

Greenhouse Gas Emission Worksheet

Operational Emissions Rose Ranch Project

Electricity Generation *	**(kWH)**		**Project units**	**Project Usage**
Commercial consumption	16,750	per KSF	159.971	2,679,514
Residential Consumption	7,000	per unit	0	0
			Total	**2,679,514**

* Generation Factor Source: CAPCOA, January 2008. CEQA and Climate Change.

Total Project Annual KWh: **2,679,514** kWH/year
Project Annual MWh: **2,680** MWH/year

Emission Factors:

CO2 *	804.54	lbs/MWh/year
CH4 **	0.0067	lbs/MWh/year
N2O **	0.0037	lbs/MWh/year

Total Annual Operational Emissions (metric tons) = (Electricity Use (kWh) x EF)/ 2,204.62 lbs/metric ton

Conversion to Carbon Dioxide Equivalency (CO2e) Units based on Global Warming Potential (GWP)

CH4	23	GWP
N2O	296	GWP

1 ton (short, US) = 0.90718474 metric ton.

Annual Operational Emissions:

	Total Emissions		**Total CO2e Units**	
CO2 emissions, electricity:	1077.8882	tons	**977.8**	metric tons CO2e
CO2 emissions***:	234.0690	tons	**212.3**	metric tons CO2e
CH4 emissions:	0.0081	metric tons	**0.2**	metric tons CO2e
N2O emissions:	0.0045	metric tons	**1.3**	metric tons CO2e
		Project Total	***1,192***	***metric tons CO2e***

References

* Table C.1: EPA eGRID CO2 Electricity Emission Factors by Subregion (Year 2000)
** Table C.2: Methane and Nitrous Oxide Electricity Emission Factors by State and Region (Average years 2001-1003)
*** URBEMIS Annual Emissions output for Area Source emissions; includes natural gas combustion for heating.

Sources: California Climate Action Registry General Reporting Protocol, Reporting Entity-Wide Greenhouse Gas Emissions, Version 2.2, March 2007. Third Assessment Report, 2001, U.S. Environmental Protection Agency, U.S. Greeenhouse Gas Emissions and Sinks, 1990-2000 (April 2002).

Greenhouse Gas Emission Worksheet

Mobile Emissions 680 E Pasadena Playhouse Project

From URBEMIS 2007 Vehicle Fleet Mix Output:

Daily Vehicle Miles Traveled (VMT): 17,925 (Net: Proposed - Existing)

Annual VMT: 6,542,625

Vehicle Type	Percent Type	CH4 Emission Factor (g/mile)*	CH4 Emission (g/mile)	N2O Emission Factor (g/mile)*	N2O Emission (g/mile)
Light Auto	55.6%	0.4	0.2224	0.4	0.2224
Light Truck < 3750 lbs	15.1%	0.5	0.0755	0.6	0.0906
Light Truck 3751-5750 lbs	15.9%	0.5	0.0795	0.6	0.0954
Med Truck 5751-8500 lbs	7.0%	0.5	0.035	0.6	0.042
Lite-Heavy Truck 8501-10,000 lbs	1.1%	0.12	0.00132	0.2	0.0022
Lite-Heavy Truck 10,001-14,000 lbs	0.3%	0.12	0.00036	0.2	0.0006
Med-Heavy Truck 14,001-33,000 lbs	1.0%	0.12	0.0012	0.2	0.002
Heavy-Heavy Truck 33,001-60,000 lbs	0.9%	0.12	0.00108	0.2	0.0018
Other Bus	0.0%	0.5	0	0.6	0
Urban Bus	0.1%	0.5	0.0005	0.6	0.0006
Motorcycle	1.7%	0.09	0.00153	0.01	0.00017
School Bus	0.1%	0.5	0.0005	0.6	0.0006
Motor Home	1.2%	0.12	0.00144	0.2	0.0024
Total			0.42033		**0.46077**

* from Table C.4: Methane and Nitrous Oxide Emission Factors for Mobile Sources by Vehicle and Fuel Type (g/mile).
Assume Model year 2000-present, gasoline fueled.
Source: California Climate Action Registry General Reporting Protocol, Reporting Entity-Wide Greenhouse Gas Emissions, Version 2.2, March 2007.

Total Emissions (metric tons) =
Emission Factor by Vehicle Mix (g/mi) x Annual VMT(mi) x 0.000001 metric tons/g

Conversion to Carbon Dioxide Equivalency (CO2e) Units based on Global Warming Potential (GWP)

CH4 23 GWP

N2O 296 GWP

1 ton (short, US) = 0.90718474 metric ton.

Annual Mobile Emissions:

	Total Emissions		Total CO2e units	
CO2 Emissions* :	**3367.5**	tons CO2	**3,055**	metric tons CO2e
CH4 Emissions:	**2.8**	metric tons CH4	**63**	metric tons CO2e
N20 Emissions:	**3.0**	metric tons N2O	**892**	metric tons CO2e
		Project Total:	***4,011 metric tons CO2e***	

* From URBEMIS 2007 results for mobile sources

Appendix C

Noise Results

C:\LARDAV\SLMUTIL\SMJUN_11.bin Interval Data

Meas Site	Location	Number	Date	Time	Duration	Leq	SEL	Lmax	Lmin	Peak	Uwpk
Pas 1	El Mol/Col	0	11Jun 07	11:13:21	1200	64	94.8	79.1	51.6	104.5	104
Pas 2	El Molino	0	11Jun 07	11:38:36	1200	71.3	102.1	90.4	55.4	104.4	106.5

L(10)	L(33)	L(50)	L(90)	L(100)	L(100)
67.7	63.2	60.2	55.8	0	0
73.6	70.2	68.6	63.2	0	0

ROADWAY TRAFFIC NOISE

Project: 680 Colorado Commercial Project Project No.
Date: 23-Jul-08

Roadway: Colorado between Los Robles and El Molino

PROJECT DATA and ASSUMPTIONS

Vehicle Reference Energy Mean Emission Levels (FHWA 1977, TNM®, or CALVENO):	TNM	
Distance to Receptor:	50	feet
Site Condition (Hard or Soft):	Soft	
Upgrade longer than 1 mile:	0	%
Existing Total Traffic Volume (ADT):	2,074	vehicles
Ambient Growth Factor:	0.0%	
Future Year :	2010	
Total Project Volume (ADT):	20	vehicles
Total Cumulative Growth Volume (ADT):	571	vehicles

Source of Traffic Data: Linscott, Law & Greenspan

Daily Vehicle Mix

	Existing	*Project*	*Future*
Automobile	95.0%	95.0%	95.0%
Medium Truck	3.0%	3.0%	3.0%
Heavy Truck	2.0%	2.0%	2.0%

Source: Assumed given land use and road characteristics

Percentage of Daily Traffic

Existing and Future

	Day (7 am-7 pm)	*Evening (7-10 pm)*	*Night (10 pm - 7 am)*
Automobile	77.5%	12.9%	9.6%
Medium Truck	84.8%	4.9%	10.3%
Heavy Truck	86.5%	2.7%	10.8%

Source: Default Assumption

Project

	Day (7 am-7 pm)	*Evening (7-10 pm)*	*Night (10 pm - 7 am)*
Automobile	100.0%	0.0%	0.0%
Medium Truck	100.0%	0.0%	0.0%
Heavy Truck	100.0%	0.0%	0.0%

Source: Default Assumption

Average Speed

Existing

	Day (7 am-7 pm)	*Evening (7-10 pm)*	*Night (10 pm - 7 am)*
Automobile	40	40	40
Medium Truck	40	40	40
Heavy Truck	40	40	40

Source: Assumed average speed

Future

	Day (7 am-7 pm)	*Evening (7-10 pm)*	*Night (10 pm - 7 am)*
Automobile	40	40	40
Medium Truck	40	40	40
Heavy Truck	40	40	40

Source: Assumed average speed

ROADWAY TRAFFIC NOISE

Project: 680 Colorado Commercial Project Project No. 0
Date: 23-Jul-08

Roadway: Colorado between Los Robles and El Molino

Vehicle Noise Emission Levels*: TNM

RESULTS

DAY-NIGHT AVERAGE LEVEL (Ldn)	Ldn at Site 50 feet from road centerline	Distance to dBA Contour Line from roadway centerline, feet 75	70	65	60	55
Existing	60.4 dBA	#N/A	#N/A	#N/A	54	115
Existing + Project	60.5 dBA	#N/A	#N/A	#N/A	54	116
Future with Ambient Growth	60.4 dBA	#N/A	#N/A	#N/A	54	115
Future with Ambient Growth and Project	60.5 dBA	#N/A	#N/A	#N/A	54	116
Future with Ambient Growth and Cumulative Projects	61.5 dBA	#N/A	#N/A	22	63	136
Future with Ambient, Cumulative, and Project Growth	61.5 dBA	#N/A	#N/A	22	63	136

Change in Noise Levels	
Due to Project	0.0 dBA
Due to Ambient Growth	0.0 dBA
Due to Ambient and Cumulative	1.1 dBA
Due to All Future Growth	1.1 dBA

COMMUNITY NOISE EXPOSURE LEVEL (CNEL)	CNEL at Site 50 feet from road centerline	Distance to dBA Contour Line from roadway centerline, feet 75	70	65	60	55
Existing	60.9 dBA	#N/A	#N/A	19	57	124
Existing + Project	60.9 dBA	#N/A	#N/A	20	58	124
Future with Ambient Growth	60.9 dBA	#N/A	#N/A	19	57	124
Future with Ambient Growth and Project	60.9 dBA	#N/A	#N/A	20	58	124
Future with Ambient Growth and Cumulative Projects	62.0 dBA	#N/A	#N/A	25	68	146
Future with Ambient, Cumulative, and Project Growth	62.0 dBA	#N/A	#N/A	25	68	146

Change in Noise Levels	
Due to Project	0.0 dBA
Due to Ambient Growth	0.0 dBA
Due to Ambient and Cumulative	1.1 dBA
Due to All Future Growth	1.1 dBA

*NOTES: Based on algorithms from the Federal Highway Administration "Traffic Noise Model ®", FHWA-PD-96-010, January, 1998.

#N/A = Not Applicable

ROADWAY TRAFFIC NOISE

Project: 680 Colorado Commercial Project Project No.
Date: 23-Jul-08

Roadway: Colorado between El Molino and Oak Knoll

PROJECT DATA and ASSUMPTIONS

Vehicle Reference Energy Mean Emission Levels (FHWA 1977, TNM®, or CALVENO):	TNM
Distance to Receptor:	50 feet
Site Condition (Hard or Soft):	Soft
Upgrade longer than 1 mile:	0 %
Existing Total Traffic Volume (ADT):	2,166 vehicles
Ambient Growth Factor:	0.0%
Future Year :	2010
Total Project Volume (ADT):	19 vehicles
Total Cumulative Growth Volume (ADT):	432 vehicles

Source of Traffic Data: Linscott, Law & Greenspan

Daily Vehicle Mix

	Existing	*Project*	*Future*
Automobile	95.0%	95.0%	95.0%
Medium Truck	3.0%	3.0%	3.0%
Heavy Truck	2.0%	2.0%	2.0%

Source: Assumed given land use and road characteristics

Percentage of Daily Traffic

	Existing and Future		
	Day (7 am-7 pm)	*Evening (7-10 pm)*	*Night (10 pm - 7 am)*
Automobile	77.5%	12.9%	9.6%
Medium Truck	84.8%	4.9%	10.3%
Heavy Truck	86.5%	2.7%	10.8%

Source: Default Assumption

	Project		
	Day (7 am-7 pm)	*Evening (7-10 pm)*	*Night (10 pm - 7 am)*
Automobile	100.0%	0.0%	0.0%
Medium Truck	100.0%	0.0%	0.0%
Heavy Truck	100.0%	0.0%	0.0%

Source: Default Assumption

Average Speed

	Existing		
	Day (7 am-7 pm)	*Evening (7-10 pm)*	*Night (10 pm - 7 am)*
Automobile	40	40	40
Medium Truck	40	40	40
Heavy Truck	40	40	40

Source: Assumed average speed

	Future		
	Day (7 am-7 pm)	*Evening (7-10 pm)*	*Night (10 pm - 7 am)*
Automobile	40	40	40
Medium Truck	40	40	40
Heavy Truck	40	40	40

Source: Assumed average speed

ROADWAY TRAFFIC NOISE

Project: 680 Colorado Commercial Project Project No. 0
Date: 23-Jul-08

Roadway: Colorado between El Molino and Oak Knoll

Vehicle Noise Emission Levels*: TNM

RESULTS

DAY-NIGHT AVERAGE LEVEL (Ldn)	Ldn at Site 50 feet from road centerline	Distance to dBA Contour Line from roadway centerline, feet 75	70	65	60	55
Existing	60.6 dBA	#N/A	#N/A	18	55	119
Existing + Project	60.7 dBA	#N/A	#N/A	18	55	119
Future with Ambient Growth	60.6 dBA	#N/A	#N/A	18	55	119
Future with Ambient Growth and Project	60.7 dBA	#N/A	#N/A	18	55	119
Future with Ambient Growth and Cumulative Projects	61.4 dBA	#N/A	#N/A	22	62	134
Future with Ambient, Cumulative, and Project Growth	61.4 dBA	#N/A	#N/A	22	62	134
Change in Noise Levels						
Due to Project	0.0 dBA					
Due to Ambient Growth	0.0 dBA					
Due to Ambient and Cumulative	0.8 dBA					
Due to All Future Growth	0.8 dBA					

COMMUNITY NOISE EXPOSURE LEVEL (CNEL)	CNEL at Site 50 feet from road centerline	Distance to dBA Contour Line from roadway centerline, feet 75	70	65	60	55
Existing	61.1 dBA	#N/A	#N/A	20	59	127
Existing + Project	61.1 dBA	#N/A	#N/A	20	59	128
Future with Ambient Growth	61.1 dBA	#N/A	#N/A	20	59	127
Future with Ambient Growth and Project	61.1 dBA	#N/A	#N/A	20	59	128
Future with Ambient Growth and Cumulative Projects	61.9 dBA	#N/A	#N/A	24	67	144
Future with Ambient, Cumulative, and Project Growth	61.9 dBA	#N/A	#N/A	24	67	144
Change in Noise Levels						
Due to Project	0.0 dBA					
Due to Ambient Growth	0.0 dBA					
Due to Ambient and Cumulative	0.8 dBA					
Due to All Future Growth	0.8 dBA					

*NOTES: Based on algorithms from the Federal Highway Administration "Traffic Noise Model ®", FHWA-PD-96-010, January, 1998.

#N/A = Not Applicable

ROADWAY TRAFFIC NOISE

Project: 680 Colorado Commercial Project Project No.
Date: 23-Jul-08

Roadway: El Molino btw Colorado and Green

PROJECT DATA and ASSUMPTIONS

Vehicle Reference Energy Mean Emission Levels (FHWA 1977, TNM®, or CALVENO):	TNM
Distance to Receptor:	50 feet
Site Condition (Hard or Soft):	Soft
Upgrade longer than 1 mile:	0 %
Existing Total Traffic Volume (ADT):	599 vehicles
Ambient Growth Factor:	0.0%
Future Year :	2010
Total Project Volume (ADT):	66 vehicles
Total Cumulative Growth Volume (ADT):	153 vehicles

Source of Traffic Data: Linscott, Law & Greenspan

Daily Vehicle Mix

	Existing	*Project*	*Future*
Automobile	95.0%	95.0%	95.0%
Medium Truck	3.0%	3.0%	3.0%
Heavy Truck	2.0%	2.0%	2.0%

Source: Assumed given land use and road characteristics

Percentage of Daily Traffic

Existing and Future

	Day (7 am-7 pm)	*Evening (7-10 pm)*	*Night (10 pm - 7 am)*
Automobile	77.5%	12.9%	9.6%
Medium Truck	84.8%	4.9%	10.3%
Heavy Truck	86.5%	2.7%	10.8%

Source: Default Assumption

Project

	Day (7 am-7 pm)	*Evening (7-10 pm)*	*Night (10 pm - 7 am)*
Automobile	100.0%	0.0%	0.0%
Medium Truck	100.0%	0.0%	0.0%
Heavy Truck	100.0%	0.0%	0.0%

Source: Default Assumption

Average Speed

Existing

	Day (7 am-7 pm)	*Evening (7-10 pm)*	*Night (10 pm - 7 am)*
Automobile	40	40	40
Medium Truck	40	40	40
Heavy Truck	40	40	40

Source: Assumed average speed

Future

	Day (7 am-7 pm)	*Evening (7-10 pm)*	*Night (10 pm - 7 am)*
Automobile	40	40	40
Medium Truck	40	40	40
Heavy Truck	40	40	40

Source: Assumed average speed

ROADWAY TRAFFIC NOISE

Project: 680 Colorado Commercial Project Project No. 0
Date: 23-Jul-08

Roadway: El Molino btw Colorado and Green

Vehicle Noise Emission Levels*: TNM

RESULTS

DAY-NIGHT AVERAGE LEVEL (Ldn)

	Ldn at Site 50 feet from road centerline	Distance to dBA Contour Line from roadway centerline, feet 75	70	65	60	55
Existing	55.1 dBA	#N/A	#N/A	#N/A	#N/A	50
Existing + Project	55.3 dBA	#N/A	#N/A	#N/A	#N/A	52
Future with Ambient Growth	55.1 dBA	#N/A	#N/A	#N/A	#N/A	50
Future with Ambient Growth and Project	55.3 dBA	#N/A	#N/A	#N/A	#N/A	52
Future with Ambient Growth and Cumulative Projects	56.0 dBA	#N/A	#N/A	#N/A	20	59
Future with Ambient, Cumulative, and Project Growth	56.2 dBA	#N/A	#N/A	#N/A	21	60

Change in Noise Levels	
Due to Project	0.2 dBA
Due to Ambient Growth	0.0 dBA
Due to Ambient and Cumulative	1.0 dBA
Due to All Future Growth	1.2 dBA

COMMUNITY NOISE EXPOSURE LEVEL (CNEL)

	CNEL at Site 50 feet from road centerline	Distance to dBA Contour Line from roadway centerline, feet 75	70	65	60	55
Existing	55.5 dBA	#N/A	#N/A	#N/A	18	54
Existing + Project	55.7 dBA	#N/A	#N/A	#N/A	19	56
Future with Ambient Growth	55.5 dBA	#N/A	#N/A	#N/A	18	54
Future with Ambient Growth and Project	55.7 dBA	#N/A	#N/A	#N/A	19	56
Future with Ambient Growth and Cumulative Projects	56.5 dBA	#N/A	#N/A	#N/A	22	63
Future with Ambient, Cumulative, and Project Growth	56.7 dBA	#N/A	#N/A	#N/A	23	65

Change in Noise Levels	
Due to Project	0.2 dBA
Due to Ambient Growth	0.0 dBA
Due to Ambient and Cumulative	1.0 dBA
Due to All Future Growth	1.2 dBA

*NOTES: Based on algorithms from the Federal Highway Administration "Traffic Noise Model ®", FHWA-PD-96-010, January, 1998.

#N/A = Not Applicable

ROADWAY TRAFFIC NOISE

Project: 680 Colorado Commercial Project Project No.
Date: 23-Jul-08

Roadway: El Molino btw Colorado and Union

PROJECT DATA and ASSUMPTIONS

Vehicle Reference Energy Mean Emission Levels (FHWA 1977, TNM®, or CALVENO):	TNM
Distance to Receptor:	50 feet
Site Condition (Hard or Soft):	Soft
Upgrade longer than 1 mile:	0 %
Existing Total Traffic Volume (ADT):	591 vehicles
Ambient Growth Factor:	0.0%
Future Year :	2010
Total Project Volume (ADT):	76 vehicles
Total Cumulative Growth Volume (ADT):	129 vehicles
Source of Traffic Data:	ATE

Daily Vehicle Mix

	Existing	*Project*	*Future*
Automobile	95.0%	95.0%	95.0%
Medium Truck	3.0%	3.0%	3.0%
Heavy Truck	2.0%	2.0%	2.0%

Source: Assumed given land use and road characteristics

Percentage of Daily Traffic

Existing and Future

	Day (7 am-7 pm)	*Evening (7-10 pm)*	*Night (10 pm - 7 am)*
Automobile	77.5%	12.9%	9.6%
Medium Truck	84.8%	4.9%	10.3%
Heavy Truck	86.5%	2.7%	10.8%

Source: Default Assumption

Project

	Day (7 am-7 pm)	*Evening (7-10 pm)*	*Night (10 pm - 7 am)*
Automobile	100.0%	0.0%	0.0%
Medium Truck	100.0%	0.0%	0.0%
Heavy Truck	100.0%	0.0%	0.0%

Source: Default Assumption

Average Speed

Existing

	Day (7 am-7 pm)	*Evening (7-10 pm)*	*Night (10 pm - 7 am)*
Automobile	40	40	40
Medium Truck	40	40	40
Heavy Truck	40	40	40

Source: Assumed average speed

Future

	Day (7 am-7 pm)	*Evening (7-10 pm)*	*Night (10 pm - 7 am)*
Automobile	40	40	40
Medium Truck	40	40	40
Heavy Truck	40	40	40

Source: Assumed average speed

ROADWAY TRAFFIC NOISE

Project: 680 Colorado Commercial Project Project No. 0
Date: 23-Jul-08

Roadway: El Molino btw Colorado and Union

Vehicle Noise Emission Levels*: TNM

RESULTS

DAY-NIGHT AVERAGE LEVEL (Ldn)

	Ldn at Site 50 feet from road centerline	Distance to dBA Contour Line from roadway centerline, feet 75	70	65	60	55
Existing	55.0 dBA	#N/A	#N/A	#N/A	#N/A	50
Existing + Project	55.3 dBA	#N/A	#N/A	#N/A	#N/A	52
Future with Ambient Growth	55.0 dBA	#N/A	#N/A	#N/A	#N/A	50
Future with Ambient Growth and Project	55.3 dBA	#N/A	#N/A	#N/A	#N/A	52
Future with Ambient Growth and Cumulative Projects	55.9 dBA	#N/A	#N/A	#N/A	19	57
Future with Ambient, Cumulative, and Project Growth	56.1 dBA	#N/A	#N/A	#N/A	20	59

Change in Noise Levels
- Due to Project 0.3 dBA
- Due to Ambient Growth 0.0 dBA
- Due to Ambient and Cumulative 0.9 dBA
- Due to All Future Growth 1.1 dBA

COMMUNITY NOISE EXPOSURE LEVEL (CNEL)

	CNEL at Site 50 feet from road centerline	Distance to dBA Contour Line from roadway centerline, feet 75	70	65	60	55
Existing	55.5 dBA	#N/A	#N/A	#N/A	#N/A	54
Existing + Project	55.7 dBA	#N/A	#N/A	#N/A	19	56
Future with Ambient Growth	55.5 dBA	#N/A	#N/A	#N/A	#N/A	54
Future with Ambient Growth and Project	55.7 dBA	#N/A	#N/A	#N/A	19	56
Future with Ambient Growth and Cumulative Projects	56.3 dBA	#N/A	#N/A	#N/A	21	61
Future with Ambient, Cumulative, and Project Growth	56.5 dBA	#N/A	#N/A	#N/A	22	63

Change in Noise Levels
- Due to Project 0.3 dBA
- Due to Ambient Growth 0.0 dBA
- Due to Ambient and Cumulative 0.9 dBA
- Due to All Future Growth 1.1 dBA

*NOTES: Based on algorithms from the Federal Highway Administration "Traffic Noise Model ®", FHWA-PD-96-010, January, 1998.

#N/A = Not Applicable

ROADWAY TRAFFIC NOISE

Project: 680 Colorado Commercial Project Project No.
Date: 23-Jul-08

Roadway: South Oak Knoll btw Colorado and Green

PROJECT DATA and ASSUMPTIONS

Vehicle Reference Energy Mean Emission Levels (FHWA 1977, TNM®, or CALVENO): TNM
Distance to Receptor: 50 feet
Site Condition (Hard or Soft): Soft
Upgrade longer than 1 mile: 0 %
Existing Total Traffic Volume (ADT): 375 vehicles
Ambient Growth Factor: 0.0%
Future Year : 2030
Total Project Volume (ADT): vehicles
Total Cumulative Growth Volume (ADT): 28 vehicles
Source of Traffic Data: ATE

Daily Vehicle Mix

	Existing	*Project*	*Future*
Automobile	95.0%	95.0%	95.0%
Medium Truck	3.0%	3.0%	3.0%
Heavy Truck	2.0%	2.0%	2.0%

Source: Assumed given land use and road characteristics

Percentage of Daily Traffic

	Existing and Future		
	Day (7 am-7 pm)	*Evening (7-10 pm)*	*Night (10 pm - 7 am)*
Automobile	77.5%	12.9%	9.6%
Medium Truck	84.8%	4.9%	10.3%
Heavy Truck	86.5%	2.7%	10.8%

Source: Default Assumption

	Project		
	Day (7 am-7 pm)	*Evening (7-10 pm)*	*Night (10 pm - 7 am)*
Automobile	100.0%	0.0%	0.0%
Medium Truck	100.0%	0.0%	0.0%
Heavy Truck	100.0%	0.0%	0.0%

Source: Default Assumption

Average Speed

	Existing		
	Day (7 am-7 pm)	*Evening (7-10 pm)*	*Night (10 pm - 7 am)*
Automobile	40	40	40
Medium Truck	40	40	40
Heavy Truck	40	40	40

Source: Assumed average speed

	Future		
	Day (7 am-7 pm)	*Evening (7-10 pm)*	*Night (10 pm - 7 am)*
Automobile	40	40	40
Medium Truck	40	40	40
Heavy Truck	40	40	40

Source: Assumed average speed

ROADWAY TRAFFIC NOISE

Project: 680 Colorado Commercial Project Project No. 0
Date: 23-Jul-08

Roadway: South Oak Knoll btw Colorado and Green

Vehicle Noise Emission Levels*: TNM

RESULTS

DAY-NIGHT AVERAGE LEVEL (Ldn)

	Ldn at Site 50 feet from road centerline	Distance to dBA Contour Line from roadway centerline, feet 75	70	65	60	55
Existing	53.0 dBA	#N/A	#N/A	#N/A	#N/A	32
Existing + Project	53.0 dBA	#N/A	#N/A	#N/A	#N/A	32
Future with Ambient Growth	53.0 dBA	#N/A	#N/A	#N/A	#N/A	32
Future with Ambient Growth and Project	53.0 dBA	#N/A	#N/A	#N/A	#N/A	32
Future with Ambient Growth and Cumulative Projects	53.3 dBA	#N/A	#N/A	#N/A	#N/A	34
Future with Ambient, Cumulative, and Project Growth	53.3 dBA	#N/A	#N/A	#N/A	#N/A	34
Change in Noise Levels						
Due to Project	0.0 dBA					
Due to Ambient Growth	0.0 dBA					
Due to Ambient and Cumulative	0.3 dBA					
Due to All Future Growth	0.3 dBA					

COMMUNITY NOISE EXPOSURE LEVEL (CNEL)

	CNEL at Site 50 feet from road centerline	Distance to dBA Contour Line from roadway centerline, feet 75	70	65	60	55
Existing	53.5 dBA	#N/A	#N/A	#N/A	#N/A	35
Existing + Project	53.5 dBA	#N/A	#N/A	#N/A	#N/A	35
Future with Ambient Growth	53.5 dBA	#N/A	#N/A	#N/A	#N/A	35
Future with Ambient Growth and Project	53.5 dBA	#N/A	#N/A	#N/A	#N/A	35
Future with Ambient Growth and Cumulative Projects	53.8 dBA	#N/A	#N/A	#N/A	#N/A	38
Future with Ambient, Cumulative, and Project Growth	53.8 dBA	#N/A	#N/A	#N/A	#N/A	38
Change in Noise Levels						
Due to Project	0.0 dBA					
Due to Ambient Growth	0.0 dBA					
Due to Ambient and Cumulative	0.3 dBA					
Due to All Future Growth	0.3 dBA					

*NOTES: Based on algorithms from the Federal Highway Administration "Traffic Noise Model ®", FHWA-PD-96-010, January, 1998.

#N/A = Not Applicable

Appendix D

Geotechnical Report

REPORT OF GEOTECHNICAL INVESTIGATION
PROPOSED DEVELOPMENT

SOUTHEAST CORNER OF EL MOLINO AVENUE AND COLORADO BOULEVARD
PASADENA, CALIFORNIA

Prepared for:

I D S REAL ESTATE GROUP

Los Angeles, California

November 29, 2006

MACTEC

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engineering and constructing a better tomorrow

November 29, 2006

Mr. Steve Methot
Vice President, Director of Construction
I D S Real Estate Group
515 South Figueroa Street, 16th Floor
Los Angeles, California 90071

Subject: **Report of Geotechnical Investigation**
Proposed Development
Southeast Corner of El Molino Avenue and Colorado Boulevard
Pasadena, California
MACTEC Project 4953-06-2221

Dear Mr. Methot:

We are pleased to submit the results of our geotechnical investigation for the proposed development to be constructed at southeast corner of El Molino Avenue and Colorado Boulevard in Pasadena, California. This investigation was conducted in general accordance with our proposal dated October 12, 2006.

The scope of our services was planned with you. You advised us of the general features of the proposed development.

The results of our investigation and design recommendations are presented in this report. Please note that you or your representative should submit copies of this report to the appropriate governmental agencies for their review and approval prior to obtaining a building permit.

MACTEC Engineering and Consulting, Inc.
200 Citadel Drive • Los Angeles, CA 90040-1554 • Phone: 323.889.5300 • Fax: 323.721.6700
www.mactec.com

It has been a pleasure to be of professional service to you. Please call if you have any questions or if we can be of further assistance.

Sincerely,

MACTEC Engineering and Consulting, Inc.

Shanzhi Shu, Ph.D.
Staff Engineer

Martin B. Hudson, Ph.D.
Senior Principal Engineer

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(4 copies submitted)

Attachments

REPORT OF GEOTECHNICAL INVESTIGATION
PROPOSED DEVELOPMENT

SOUTHEAST CORNER OF EL MOLINO AVENUE AND COLORADO BOULEVARD
PASADENA, CALIFORNIA

Prepared for:

I D S REAL ESTATE GROUP

Los Angeles, California

MACTEC Engineering and Consulting, Inc.

Los Angeles, California

November 29, 2006

Project 4953-06-2221

TABLE OF CONTENTS

EXECUTIVE SUMMARY

We have completed our geotechnical investigation of the site of the proposed development in Pasadena, California for I D S Real Estate Group. Our subsurface explorations, engineering analyses, and foundation design recommendations are summarized below.

We explored the soil conditions by drilling four borings to depths of 60 to 70 feet below the existing grade at the site; fill soil, 3.5 feet thick, was found in one of our borings and consists of silty sand with some gravel and construction fragments. The natural soils consist of stiff to hard sandy silt and loose to dense silty sand for upper 12 to 22 feet. The underlying natural soils are primarily composed of medium dense to very dense clean sand containing varying amounts of gravel and cobbles and a few layers of medium to very dense silty sand and very stiff to hard sandy silt and silty clay.

Measurable amounts of ground water were not encountered in our borings at the site. Ground water is not anticipated to influence construction of the proposed office building.

This site is not within a State of California designated Liquefaction Hazard Zone and the ground water and soil conditions encountered are not prone to liquefaction. Therefore, there is a low potential for liquefaction to occur at the site.

To supplement our current geotechnical analyses, we also reviewed our report of an investigation conducted at a nearby site in September 21, 1960 for proposed Cafeteria at Colorado Boulevard near Oak Knoll Avenue. The geotechnical information at the northern portion of the site currently being covered by existing building will be referred to current and prior investigation in this stage. The geotechnical recommendations in this report were developed in part using information from our previous investigation.

Based on the project information as we understand it, the subterranean parking structure may extend 4 levels below grade. This will extend below any fill soils and upper sandy silt and silty sand layers into sand layers. The sand layers at and below the planned level of excavation are medium dense to very dense, and the proposed structures may be supported on spread footings established in the undisturbed natural sand. The building floor slabs at the bottom-most level can be supported on grade.

1.0 SCOPE

This report provides foundation design information for the proposed development. The location of the site is shown in Figure 1, Vicinity Map. The locations of the proposed development, existing building, and our current and previous exploration borings are illustrated in Figure 2, Plot Plan.

We submitted the results of our foundation investigation of a nearby site for a project in a report dated September 21, 1960 (our Job No. 60366). The recommendations in the current report were developed in part using geotechnical information from our previous investigation.

This investigation was authorized to determine the static physical characteristics of the soils at the site of the proposed development, and to provide recommendations for foundation design, for design of wall below grade, for floor slab support, for shoring, and for earthwork. We were to evaluate the existing soil and groundwater conditions at the site, including the corrosion potential of the soils, and develop recommendations for the following:

- A feasible foundation system design along with the necessary design parameters;
- Estimated settlement for the anticipated loads;
- Seismic coefficients and seismic zonation based on the 2004 California Building Code;
- Subgrade preparation and floor slab support;
- Design walls below grade and retaining walls;
- Design of shoring;
- Grading, including site preparation, excavation, the placing of compacted fill, and quality control measures relating to earthwork.

The scope of this investigation did not include geologic or seismic studies for the site. Accordingly, our conclusions and recommendations are for static loading conditions only; however, this does not imply that there is a geologic or seismic hazard affecting the site. Also, the assessment of general site environmental conditions for the presence of contaminants in the soils and groundwater of the site was beyond the scope of this investigation.

Our recommendations are based on the results of our current and previous field explorations, laboratory tests, and appropriate engineering analyses. The results of the field explorations and laboratory tests are presented in Appendices A and B.

Our professional services have been performed using that degree of care and skill ordinarily exercised, under similar circumstances, by reputable geotechnical consultants practicing in this or similar localities. No other warranty, expressed or implied, is made as to the professional advice included in this report. This report has been prepared for I D S Real Estate Group and their design consultants to be used solely in the design of the proposed development. The report has not been prepared for use by other parties, and may not contain sufficient information for purpose of other parties or other uses.

2.0 PROJECT DESCRIPTION

I D S Real Estate group plans to construct an office building at the location shown in Figure 2. The building will be 5 stories above grade over 4 levels of subterranean parking, about 340 by 175 feet in plan. The southern portion of the site will be used as a loading and service area. A new Paseo will go across the property (through the southern portion of the building) to connect the arcade buildings to the east and the Pasadena Playhouse across El Molino Avenue to the west.

3.0 SITE CONDITIONS

The site is located at southeast corner of Colorado Boulevard and El Molino Avenue in Pasadena, California; there is an existing building in the northern portion of the site. The southern portion of the site is currently used as parking lots. The site is relatively level. Various underground utilities cross the site.

4.0 EXPLORATIONS AND LABORATORY TESTS

The soil conditions beneath the site were currently explored by drilling four borings to depths of 60 to 70 feet below the existing grade at the locations shown in Figure 2. Details of the current explorations and the logs of the borings are presented in Appendix A.

Laboratory tests were performed on selected samples obtained from the current borings to aid in the classification of the soils and to determine the pertinent engineering properties of the foundation soils. The following tests were performed:

- Moisture content and dry density determinations.
- Direct shear.
- Consolidation.
- Passing No. 200 Sieve.
- Atterberg Limits.
- Corrosion

All testing was done in general accordance with applicable ASTM specifications. Details of the current laboratory testing program and test results are presented in Appendix A.

The soil conditions across the street on the north side of the site were previously explored (our Job No. 60366) by drilling two borings to depths of 19 to 26 feet at the locations shown in Figure 2. Details of the prior explorations are presented in Appendix B.

Laboratory tests were performed on selected samples obtained at the time of the prior borings to aid in the classification of the soils and to determine the pertinent engineering properties of the foundation soils. The following tests were previously performed:

- Moisture content and dry density determinations.
- Direct shear.
- Consolidation.

Details of the prior laboratory testing program and test results are presented in Appendix B.

5.0 SOIL CONDITIONS

Fill soils, up to 3.5 feet thick, were found in one of the four current borings. The fill soils consist of silty sand with some brick fragments and are not uniformly well compacted. The other three current borings and the prior borings did not encounter fill. Nevertheless, deeper fill than that encountered could occur within the site.

The natural soils consist of stiff to hard sandy silt and loose to dense silty sand in the upper 8 to 22 feet. The underlying natural soils are primarily composed of medium dense to very dense fine to coarse sand containing varying amounts of gravel and cobbles with a few layers of medium dense to very dense silty sand and very stiff to hard sandy silt and silty clay.

Water was not encountered within the 70-foot depth currently explored or the 26-foot depth previously explored.

The corrosion studies indicate that the on-site soils are moderately corrosive to ferrous metals and have a low potential for sulfate attack on portland cement concrete. The report of corrosion studies presented in Appendix A should be referred to for a discussion of the corrosion potential of the soils, and for potential mitigation measures.

6.0 LIQUEFACTION POTENTIAL

Liquefaction potential is greatest where the ground water level is shallow, and submerged loose, fine sands occur within a depth of about 50 feet or less. Liquefaction potential decreases as grain size and clay and gravel content increase. As ground acceleration and shaking duration increase during an earthquake, liquefaction potential increases.

The site is not within a State of California designated Liquefaction Hazard Zone; ground water is deeper than 50 feet below the site and is not anticipated to rise to within 50 feet within the design life of the structure, and soil conditions of the site are not prone to liquefaction. Therefore, liquefaction potential of the site is low.

7.0 RECOMMENDATIONS

Based on design concepts at this time, the subterranean parking structure may extend 4 levels below grade. This will extend below any fill soils and upper sandy silt and silty sand layers into the predominantly sand layers. The sand at and below the planned level of excavation is medium dense to very dense. The proposed structures may be supported on spread footing foundations established in the undisturbed natural sand. Silt or clay layers encountered at the bottom of excavation should be removed and the foundations deepened to extend into the sand.

Bearing Value

Spread footings established on undisturbed natural sand as recommended above can be designed to impose a net dead-plus-live load pressure of 7,500 pounds per square foot. Silt or clay layers encountered in foundation excavations should be removed and the footings deepened to extend into the sand. When deepened footings are required, the excavation can be backfilled with 2 sack sand-cement slurry up to the planned level of the base of the footing; the use of slurry for backfill under footings should be confirmed with the City of Pasadena building department.

The recommendation of bearing value is based upon an assumed maximum column loading of 700 kips; the bearing value should be re-evaluated when actual design loads are available.

Verification of the condition of the exposed footing bottoms should be performed prior to reinforcing steel and concrete placement to ensure that the exposed soils are similar to those encountered in our borings and that footing bottoms are clean, neat and undisturbed.

A one-third increase can be used for wind or seismic loads. The recommended bearing value is a net value, and the weight of concrete in the footings can be taken as 50 pounds per cubic foot; the weight of soil backfill can be neglected when determining the downward loads.

Footings for minor structures (loading dock walls, minor retaining walls, and free-standing walls) that are structurally separate from the proposed development can be designed to impose a net dead-plus-live load pressure of 2,000 pounds per square foot at a depth of 2 feet below the lowest adjacent grade. Such footings can be established in either properly compacted fill soils or undisturbed natural soils.

Settlement

The total settlement of spread footings, with the bearing pressure as presented in the section above, is estimated to be on the order of 3/4 inches. Differential settlement between columns in the new structure is expected to be less than ½ inch. These estimates of settlement were based upon an assumed maximum column loading of 700 kips; the settlement estimates should be re-evaluated when actual design loads are available.

Lateral Resistance

Lateral loads can be resisted by soil friction and by the passive resistance of the soils. A coefficient of friction of 0.5 can be used between the footings and the floor slab and the supporting soils. The passive resistance of natural soils or properly compacted fill soils can be assumed to be equal to the pressure developed by a fluid with a density of 300 pounds per cubic foot. A one-third increase in the passive value can be used for wind or seismic loads. The frictional resistance and the passive resistance of the soils can be combined without reduction in determining the total lateral resistance.

7.1 SITE COEFFICIENT AND SEISMIC ZONATION

The site coefficient, S, can be determined as established in the Earthquake Regulations under Section 1629 of the CBC, 2004 edition, for seismic design of the proposed development. Based on a review of the local soil and geologic conditions, the site may be classified as Soil Profile Type S_D. The site is located within CBC Seismic Zone 4.

The site is near the Raymond fault, which has been determined to be a Type B seismic source by the California Division of Mines and Geology. According to Map M-32 in the 1998 publication from the International Conference of Building Officials entitled "Maps of Known Active Fault Near-Source Zones in California and Adjacent Portions of Nevada," the proposed development is within 2 kilometers of the Raymond fault. At this distance for a seismic source type B, the near source factors, N_a and N_v, are to be taken as 1.3 and 1.6, respectively, based on Tables 16-S and 16-T of the 2004 UBC.

7.2 FLOOR SLAB SUPPORT

If the subgrade is prepared as recommended in the following section on grading, the building floor slab can be supported on grade. Construction activities and exposure to the environment can cause deterioration of the prepared subgrade. Therefore, we recommend that our field representative observe the condition of the final subgrade soils immediately prior to slab-on-grade construction, and, if necessary, perform further density and moisture content tests to determine the suitability of the final prepared subgrade.

If vinyl or other moisture-sensitive floor covering is planned, we recommend that the floor slab in those areas be underlain by a capillary break consisting of a vapor-retarding membrane over a 4-inch-thick layer of gravel. A 2-inch-thick layer of sand should be placed between the gravel and the membrane to decrease the possibility of damage to the membrane. We suggest the following gradation for the gravel:

Sieve Size	Percent Passing
¾"	90 - 100
No. 4	0 - 10
No. 100	0 - 3

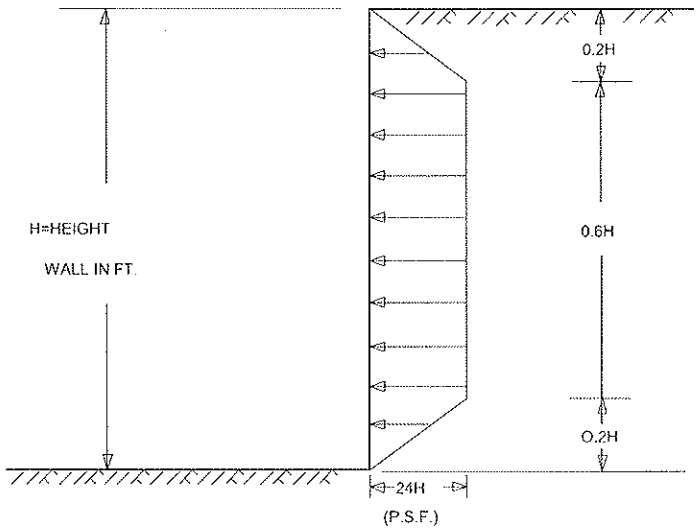
A low-slump concrete should be used to reduce possible curling of the slab. A 2-inch-thick layer of coarse sand can be placed over the vapor retarding membrane to reduce slab curling. If this sand bedding is used, care should be taken during the placement of the concrete to prevent displacement of the sand. The concrete slab should be allowed to cure properly before placing vinyl or other moisture-sensitive floor covering.

7.3 BASEMENT AND RETAINING WALLS

Lateral Earth Pressure

For design of cantilevered retaining walls, where the surface of the backfill is level, it can be assumed that drained soils will exert a lateral pressure equal to that developed by a fluid with a density of 35 pounds per cubic foot. In addition to the recommended earth pressure, the walls should be designed to resist any applicable surcharges due to storage or traffic loads.

For the design of braced basement walls, a trapezoidal distribution of lateral earth pressure plus any surcharge loadings occurring as a result of traffic and adjacent foundations should be used. The recommended pressure distribution for the case where the grade is level behind the walls is illustrated in the following diagram, where the maximum lateral pressure will be 24H in pounds per square foot, where H is the height of the basement wall in feet.



In addition to the recommended earth pressure, retaining walls adjacent to areas subject to vehicular traffic should be designed to resist a uniform lateral pressure of 120 pounds per square foot, acting as a result of an assumed 350 pounds per square foot surcharge behind the walls due to normal vehicular traffic. If the traffic is kept back at least 10 feet from the walls, the traffic surcharge can be neglected. Furthermore, the shoring system should be designed to support the lateral surcharge pressures imposed by adjacent foundations, concrete trucks and other heavy construction equipment or loads placed near the shoring system.

Drainage

Walls below grade and any retaining walls should be properly drained. Drainage behind the basement walls may be provided by a geosynthetic drainage composite. In our opinion, Miradrain 6000 (or the equivalent), attached to the back of the wall before backfilling, would provide satisfactory drainage. The Miradrain strips may be placed at a depth starting at about 4 feet below the existing grade. The strips should be placed continuously along the wall.

The Miradrain should be connected to a 4-inch-diameter perforated discharge pipe placed with the perforations down at the base of the wall or should connected with lateral lines to a solid discharge pipe inside the perimeter of the basement wall. If a solid discharge pipe is used, the lateral lines should be spaced at no more than 10 feet along the wall. The pipe should be sloped at least 2 inches in 100 feet. If a perforated discharge pipe is used at the base of the wall, it should be surrounded by filter gravel. The filter gravel should meet the requirements of Class 2 Permeable Material as defined in the current State of California, Department of Transportation, Standard Specifications. If Class 2 Permeable Material is not available, ¾-inch crushed rock or gravel separated from the on-site soils by an appropriate filter fabric can be used. The crushed rock or gravel should have less than 5% passing a No. 200 sieve. The discharge pipes should be connected to a drainage system. An NPDES permit will be required to allow discharge of the water to a storm drain or sanitary sewer.

Free standing retaining walls should be designed to resist hydrostatic pressures or be provided with a drain pipe or weepholes. The drain could consist of a 4-inch-diameter perforated pipe placed with perforations down at the base of the wall. The pipe should be sloped at least 2 inches in 100 feet and surrounded by filter gravel. The filter gravel should meet the requirements of Class 2 Permeable Material as defined in the current State of California, Department of Transportation, Standard Specifications. If Class 2 Permeable Material is not available, ¾-inch crushed rock or gravel separated from the on-site soils by an appropriate filter fabric can be used. The crushed rock or gravel should have less than 5% passing a No. 200 sieve. If weepholes are used, they should be spaced at no more than 10 feet on center.

7.4 SHORING

Shoring will be required for subterranean construction. One method of shoring would consist of steel soldier piles placed in drilled holes, backfilled with concrete, and tied back with earth anchors.

Some difficulty may be encountered in the drilling of the soldier piles and the anchors because of caving in the sandy deposits. Although caving wasn't observed in the borings, the sand was poorly graded and had a low moisture content, indicating that it might be prone to caving. Special techniques, such as the use of steel shell casing or drilling mud, and/or vibrating soldier piles

below the excavation level, may be necessary to permit the installation of the soldier piles and/or tie-back anchors.

Another potential method of installing the soldier piles is the use of vibratory equipment, which would be helpful in this case because of the potentially caving sands at the site. Soldier piles which are vibrated into place may need to be predrilled, but only after testing the vibratory method by installing the soldier piles without predrilling. The predrilling should be no deeper than the planned depth of excavation, and should not leave an open hole before vibrating the soldier piles into place. If vibration is used, the vibration should be monitored such that the mean peak particle velocity of the soils adjacent to an existing structure is no greater than 1 inch per second.

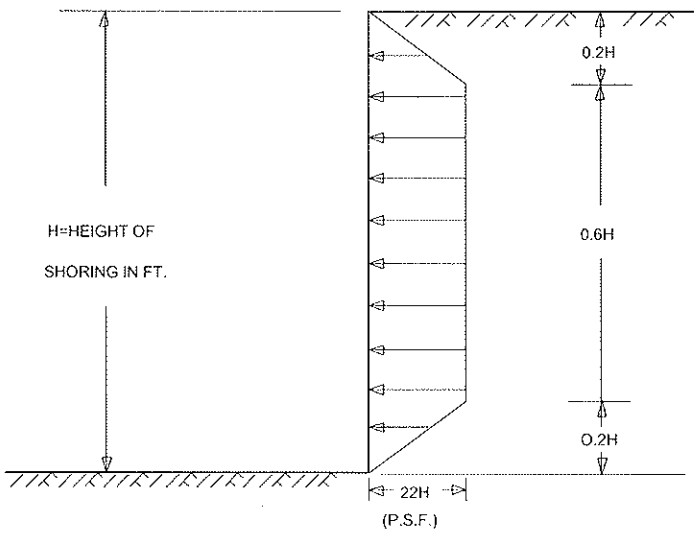
If there is not sufficient space to install the tie-back anchors to the desired lengths on any side of the excavation, the soldier piles of the shoring system may require internal bracing.

The following information on the design and installation of the shoring is based on the information available at this time. We can furnish any additional required data as the design progresses, if authorized. Also, we suggest that our firm review the final shoring plans and specifications prior to bidding or negotiating with a shoring contractor.

Lateral Pressures

For design of cantilevered shoring, a triangular distribution of lateral earth pressure may be used. It may be assumed that the retained soils with a level surface behind the cantilevered shoring will exert a lateral pressure equal to that developed by a fluid with a density of 30 pounds per cubic foot.

For the design of tied-back or braced shoring, we recommend the use of a trapezoidal distribution of earth pressure. The recommended pressure distribution, for the case where the grade is level behind the shoring, is illustrated in the following diagram with the maximum pressure equal to 22H in pounds per square foot, where H is the height of the shoring in feet. The distribution given is made assuming that the soils behind the shoring are drained. Where a combination of sloped embankment and shoring is used, the pressure would be greater and must be determined for each combination.



In addition to the recommended earth pressure, the upper 10 feet of shoring adjacent to the streets and vehicular traffic areas should be designed to resist a uniform lateral pressure of 120 pounds per square foot, acting as a result of an assumed 350 pounds per square foot surcharge behind the shoring due to normal street traffic. If the traffic is kept back at least 10 feet from the shoring, the traffic surcharge may be neglected.

Furthermore, the shoring system adjacent to the existing structures should also be designed to support the lateral surcharge pressures imposed by the adjacent structure foundations. The lateral surcharge pressures imposed by cranes or concrete conveying trucks and other heavy construction equipment placed near the shoring system. We can provide estimates of these surcharge pressures when sufficient information is available, if authorized.

Design of Soldier Piles

For the design of soldier piles spaced at least two diameters on centers, the allowable lateral bearing value (passive value) of the soils below the level of excavation may be assumed to be 600 pounds per square foot per foot of depth at the excavated surface, up to a maximum of 6,000 pounds per square foot. To develop the full lateral value, provisions should be taken to assure firm contact between the soldier piles and the undisturbed soils. If the soldier piles are not vibrated into place, the concrete placed in the soldier pile excavations may be a lean-mix concrete. However, the

concrete used in that portion of the soldier pile which is below the planned excavated level should be of sufficient strength to adequately transfer the imposed loads to the surrounding soils. If the pole formula in the CBC is used to compute the depth of embedment, the diagonal of the soldier pile may be used in the computation, as discussed in the CBC. If the embedment is computed using beam theory, the passive pressure given above should be applied to the diameter of the drilled shaft. In case the soldier piles are vibrated into position below the bottom of the drilled hole, the passive pressure of the soldier piles should be limited to the width of the beam flange.

The frictional resistance between the soldier piles and the retained earth may be used in resisting the downward component of the anchor load. The coefficient of friction between the soldier piles and the retained earth may be taken as 0.4. This value is based on the assumption that uniform full bearing will be developed between the steel soldier beam and the lean-mix concrete and between the lean-mix concrete and the retained earth. In addition, provided that the portion of the soldier piles below the excavated level is backfilled with structural concrete, the soldier piles below the excavated level may be used to resist downward loads. For resisting the downward loads, the frictional resistance between the concrete soldier piles and the soils below the excavated level may be taken equal to 250 pounds per square foot. The friction resistance can be re-evaluated if the embedment depth is greater than 10 feet.

Lagging

Continuous lagging will be required between the soldier piles. The soldier piles and anchors should be designed for the full anticipated lateral pressure. However, the pressure on the lagging will be lower due to arching in the soils. We recommend that the lagging be designed for the recommended earth pressure but limited to a maximum value of 400 pounds per square foot. The pressure distribution for the lagging may be assumed to be semi-circular, where the pressure at the soldier pile is 0, and the pressure at the center is 400 pounds per square foot.

Anchor Design

Tie-back friction anchors may be used to resist lateral loads. For design purposes, it may be assumed that the active wedge adjacent to the shoring is defined by a plane drawn at 35 degrees with the vertical through the bottom of the excavation. The anchors should extend at least 16 feet beyond the potential active wedge and to a greater length if necessary depending on the depth of

excavation to develop the desired capacities. If the existing basement walls of nearby buildings do not permit the anchor to extend the minimum length beyond the active wedge as recommended, the entire width of soil between the planned and existing basement may need to be excavated and recompacted after construction of the basement wall; more specific minimum tie-back lengths can be re-evaluated once the shoring design is completed.

The capacities of anchors should be determined by testing of the initial anchors as outlined in a following section. For design purposes, we estimate that drilled friction anchors will develop and average friction value of 800 pounds per square foot. For post-grouted anchors, it may be estimated that the anchors will develop an average friction of 1,800 pounds per square foot. Only the frictional resistance developed beyond the active wedge would be effective in resisting lateral loads. If the anchors are spaced at least 6 feet on centers, no reduction in the capacity of the anchors needs to be considered due to group action.

Anchor Installation

The anchors may be installed at angles of 15 to 40 degrees below the horizontal. Caving of the anchor holes at certain locations should be anticipated and provisions made to minimize such caving. The anchors should be filled with concrete placed by pumping from the tip out, and the concrete should extend from the tip of the anchor to the active wedge. To minimize chances of caving, we suggest that the portion of the anchor shaft within the active wedge be backfilled with sand before testing the anchor. This portion of the shaft should be filled tightly and flush with the face of the excavation. The sand backfill may contain a small amount of cement to allow the sand to be placed by pumping. For post-grouted anchors of 8-inch diameter or less, the anchor may be filled with concrete to the surface of the shoring.

Anchor Testing

Our representative should select at least one of the initial anchors from each shored wall (for a total of four for each excavation) for 24-hour 200% tests, and 10% of the remainder of the anchors for quick 200% tests. The purpose of the 200% tests is to verify the friction value assumed in design. The anchors should be tested to develop twice the assumed friction value. Where satisfactory tests are not achieved on the initial anchors, the anchor diameter and/or length should be increased until satisfactory test results are obtained.

For post-grouted anchors where concrete is used to backfill the anchor along its entire length, the test load should be computed as that required to develop the appropriate friction along the entire bonded length of the anchor. If the friction assumed in the postgrouted portion, f_p, divided by the friction assumed in the non-postgrouted portion, f_n, is x:

$$f_p/f_n = x$$

Then the test load can be taken as:

$$P_{test} = P_{design} * \frac{\frac{1}{x} L_u + L_a}{L_a} * M$$

where L_a=Postgrouted length of Anchor
L_u=Non-postgrouted length of Anchor
M=150% or 200%, depending on the test performed

The total deflection during the 24-hour 200% tests should not exceed 12 inches during loading; the anchor deflection should not exceed 0.75 inch during the 24-hour period, measured after the 200% test load is applied. If the anchor movement after the 200% load has been applied for 12 hours is less than 0.5 inch, and the movement over the previous 4 hours has been less than 0.1 inch, the test may be terminated.

For the quick 200% tests, the 200% test load should be maintained for 30 minutes. The total deflection of the anchor during the 200% quick test should not exceed 12 inches; the deflection after the 200% test load has been applied should not exceed 0.25 inch during the 30-minute period. Where satisfactory tests are not achieved on the initial anchors, the anchor diameter and/or length should be increased until satisfactory test results are obtained.

All of the production anchors should be pretested to at least 150% of the design load; the total deflection during the tests should not exceed 12 inches. The rate of creep under the 150% test should not exceed 0.1 inch over a 15-minute period for the anchor to be approved for the design loading.

After a satisfactory test, each production anchor should be locked-off at the design load. The locked-off load should be verified by rechecking the load in the anchor. If the locked-off load

varies by more than 10% from the design load, the load should be reset until the anchor is locked-off within 10% of the design load.

The installation of the anchors and the testing of the completed anchors should be observed by our firm.

Deflection

It is difficult to accurately predict the amount of deflection of a shored embankment. It should be realized, however, that some deflection will occur. We estimate that this deflection could be on the order of 1 inch at the top of the shored embankment. If greater deflection occurs during construction, additional bracing may be necessary to minimize settlement of the utilities in the adjacent streets. If it is desired to reduce the deflection of the shoring, a greater lateral earth pressure could be used in the shoring design.

Monitoring

Some means of monitoring the performance of the shoring system is recommended. The monitoring should consist of periodic surveying of the lateral and vertical locations of the tops of all the soldier piles. Also it is recommended that a slope inclinometer be placed along the shoring line about at the center of the east side to help monitor movement adjacent to the Arcade Building. We will be pleased to discuss this further with the design consultants and the contractor when the design of the shoring system has been finalized.

7.5 GRADING

The existing fill soils were not observed and tested during placement and are not considered suitable for support of pavement or floor slab on grade. The existing fill soils expected to be removed automatically within the proposed excavation. Around the perimeter of the excavation, the existing fill soils should be excavated and replaced as properly compacted fill beneath hardscape and at-grade footings. All required fill should be uniformly well compacted and observed and tested during placement. The on-site soils can be used in any required fill.

Site Preparation

In areas to receive additional fill (such as outside of the subterranean excavation), after the site is cleared and any existing fill soils are excavated as recommended, the exposed natural soils should be carefully observed for the removal of all unsuitable deposits. Next, the exposed soils should be scarified to a depth of 6 inches, brought to near-optimum moisture content, and rolled with heavy compaction equipment. At least the upper 6 inches of the exposed soils should be compacted to at least 90% of the maximum dry density obtainable by the ASTM Designation D1557-91 method of compaction.

Excavations and Temporary Slopes

Where unshored excavations are deeper than about 4 feet, the sides of the excavations should be sloped back at 1:1 (horizontal to vertical) or shored for safety. Unshored excavations should not extend below a plane drawn at 1½:1 (horizontal to vertical) extending downward from adjacent existing footings.

Excavations should be observed by personnel of our firm so that any necessary modifications based on variations in the soil conditions can be made. All applicable safety requirements and regulations, including OSHA regulations, should be met.

Compaction

Any required fill should be placed in loose lifts not more than 8-inches-thick and compacted. The fill should be compacted to at least 90% of the maximum density obtainable by the ASTM Designation D1557-91 method of compaction. The moisture content of the on-site sand at the time of compaction should vary no more than 2% below or above optimum moisture content. The moisture content of the on-site silt and clay at the time of compaction should be between 2% and 4% above the optimum moisture content.

Backfill

All required backfill should be mechanically compacted in layers; flooding should not be permitted. Proper compaction of backfill will be necessary to reduce settlement of the backfill and

to reduce settlement of overlying slabs and paving. Backfill should be compacted to at least 90% of the maximum dry density obtainable by the ASTM Designation D1557-91 method of compaction. The on-site soils can be used in the compacted backfill. The exterior grades should be sloped to drain away from the foundations to prevent ponding of water.

Some settlement of the backfill should be expected, and any utilities supported therein should be designed to accept differential settlement, particularly at the points of entry to the building. Also, provisions should be made for some settlement of concrete walks supported on backfill.

Material for Fill

The on-site soils, less any debris or organic matter, can be used in required fills. Cobbles larger than 4 inches in diameter should not be used in the fill. Any required import material should consist of relatively non-expansive soils with an expansion index of less than 35. The imported materials should contain sufficient fines (binder material) so as to be relatively impermeable and result in a stable subgrade when compacted. All proposed import materials should be approved by our personnel prior to being placed at the site.

7.6 GEOTECHNICAL OBSERVATION

The reworking of the upper soils and the compaction of all required fill should be observed and tested during placement by a representative of our firm. This representative should perform at least the following duties:

- Observe the clearing and grubbing operations for proper removal of all unsuitable materials.
- Observe the exposed subgrade in areas to receive fill and in areas where excavation has resulted in the desired finished subgrade. The representative should also observe proofrolling and delineation of areas requiring overexcavation.
- Evaluate the suitability of on-site and import soils for fill placement; collect and submit soil samples for required or recommended laboratory testing where necessary.
- Observe the fill and backfill for uniformity during placement.

- Test backfill for field density and compaction to determine the percentage of compaction achieved during backfill placement.
- Observe the testing and installation of soldier piles to verify the desired diameter and depth are obtained.
- Observe the installation and testing of the temporary tie-back anchors.
- Observe and probe foundation materials to confirm that suitable bearing materials are present at the design foundation depths.

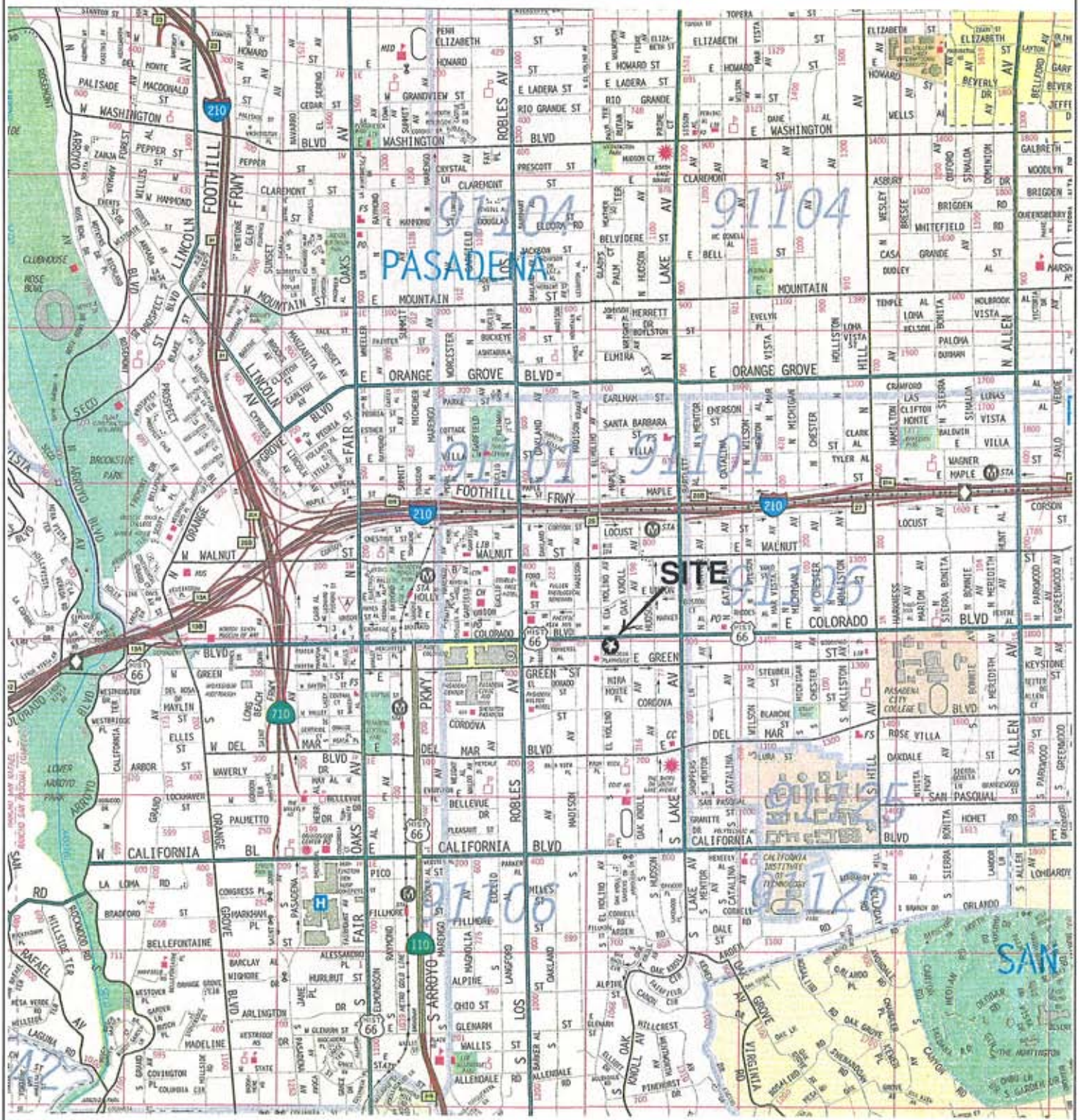
The governmental agencies having jurisdiction over the project should be notified prior to commencement of grading so that the necessary grading permits can be obtained and arrangements can be made for required inspection(s). The contractor should be familiar with the inspection requirements of the reviewing agencies.

8.0 BASIS FOR RECOMMENDATIONS

The recommendations provided in this report are based upon our understanding of the described project information and on our interpretation of the data collected during our current and previous subsurface explorations. We have made our recommendations based upon experience with similar subsurface conditions under similar loading conditions. The recommendations apply to the specific project discussed in this report; therefore, any change in the structure configuration, loads, location, or the site grades should be provided to us so that we can review our conclusions and recommendations and make any necessary modifications.

The recommendations provided in this report are also based upon the assumption that the necessary geotechnical observations and testing during construction will be performed by representatives of our firm. The field observation services are considered a continuation of the geotechnical investigation and essential to verify that the actual soil conditions are as expected. This also provides for the procedure whereby the client can be advised of unexpected or changed conditions that would require modifications of our original recommendations. In addition, the presence of our representative at the site provides the client with an independent professional opinion regarding the geotechnically related construction procedures. If another firm is retained for the geotechnical observation services, our professional responsibility and liability would be limited to the extent that we would not be the geotechnical engineer of record.

FIGURES



REFERENCE:
THE THOMAS GUIDE, THOMAS BROS. MAPS, LOS AGELES COUNTY, 2006 EDITION, PAGES 565 AND 566.

0 1200 2400
Scale in Feet

NORTH

MACTEC
200 CITADEL DRIVE
LOS ANGELES, CALIFORNIA 90040
(323) 889-5300 FAX (323) 889-5398

VICINITY MAP

PROPOSED DEVELOPMENT
SE CORNER OF EL MOLINO AVE. AND COLORADO BLVD.
PASADENA, CALIFORNIA

FIGURE 1

PROJECT NO.	4953-06-2221	REVISION:	
DATE:	11/08/06		
SCALE:	1" = 2400'		
DWG BY:	T.T.	CHECKED BY:	SS 11/10/06

LEGEND:

4 ● CURRENT INVESTIGATION (4953-06-2221)

2 ◒ PREVIOUS INVESTIGATION (60366)

└ BORING LOCATION AND NUMBER

REFERENCE:
BASE MAP, ASSESSOR'S MAP,
COUNTY OF LOS ANGELES.

COLORADO BLVD.

AVE. 60

MADISON

EL MOLINO

OAK KNOLL

CONVERSE ALLEY

GREEN

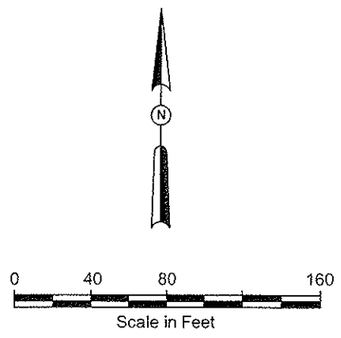
ARCADE ALLEY

ST.

PROPOSED BUILDING

EXISTING BUILDING

B.M. FOR BOR. ELEVS.
ASSUMED ELEV. = 100.0



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200 CITADEL DRIVE
LOS ANGELES, CALIFORNIA 90040
(323) 889-5300 FAX (323) 889-5398

FIGURE 2

PLOT PLAN

PROPOSED DEVELOPMENT
SE CORNER OF EL MOLINO AVE. AND COLORADO BLVD.
PASADENA, CALIFORNIA

PROJECT NO.	4953-06-2221	REVISION:	
DATE:	11/06/06		
SCALE:	1" = 80'		
DWG BY:	T.T.	CHECKED BY:	SS 11/10/06

APPENDIX A

CURRENT EXPLORATIONS AND LABORATORY TESTS

APPENDIX A

EXPLORATIONS AND LABORATORY TESTS

EXPLORATIONS

The soil conditions beneath the site were explored by drilling four borings at the locations shown in Figure 2. The borings were drilled to depths of 60 to 70 feet below the existing grade using 8-inch-diameter hollow-stem-auger drilling equipment. Caving and raveling of the boring walls were not observed; casing or drilling mud was not used to extend the borings to the depths drilled.

The soils encountered were logged by our field technician, and undisturbed and bulk samples were obtained for laboratory inspection and testing. The logs of the borings are presented in Figures A-1.1 and A-1.4; the depths at which undisturbed samples were obtained are indicated to the left of the boring logs. The number of blows required to drive the Crandall sampler 12 inches and the hammer weight and drop are indicated on the logs. The soils are classified in accordance with the Unified Soil Classification System described in Figure A-2.

LABORATORY TESTS

Laboratory tests were performed on selected samples obtained from the borings to aid in the classification of the soils and to determine their engineering properties.

The field moisture content and dry density of the soils encountered were determined by performing tests on the undisturbed samples. The results of the tests are shown to the left of the boring logs.

Direct shear tests were performed on selected undisturbed samples to determine the strength of the soils. The tests were performed at field moisture content and at various surcharge pressures. The yield-point values determined from the direct shear tests are presented in Figure A-3, Direct Shear Test Data.

Confined consolidation tests were performed on three undisturbed samples to determine the compressibility of the soils. The results of the tests are presented in Figures A-4.1 and A-4.2, Consolidation Test Data.

Tests to determine the percentage of fines (material passing through a -200 sieve) in selected samples were performed. The results of these tests are presented on the boring logs.

An atterberg limits test was also performed on a sample from Boring 1; the results of that test are shown on the boring log.

Soil corrosivity studies were performed on samples of the on-site soils. The results of the study and recommendations for mitigating procedures are presented in Figures A-5.

BORING 1

DATE DRILLED: October 19, 2006
EQUIPMENT USED: Hollow Stem Auger
HOLE DIAMETER (in.): 8
ELEVATION: 104**

THIS RECORD IS A REASONABLE INTERPRETATION OF SUBSURFACE CONDITIONS AT THE EXPLORATION LOCATION. SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND AT OTHER TIMES MAY DIFFER. INTERFACES BETWEEN STRATA ARE APPROXIMATE. TRANSITIONS BETWEEN STRATA MAY BE GRADUAL

ELEVATION (ft)	DEPTH (ft)	MOISTURE (% of dry wt.)	DRY DENSITY (pcf)	BLOW COUNT* (blows/ft)	SAMPLE LOC.		
						SM	4" Thick Asphalt Concrete SILTY SAND - moist, light brown, fine, slightly porous
100	5	7.2	113	54		ML	SANDY SILT - moist, brown, trace fine gravel
95	10	6.7	122	60/6"			Fines increased Thin layers of clayey sand with gravel
90	15	3.9	109	51		SM	SILTY SAND - moist, brown, fine, trace gravel
85	20	1.3	112	44		SP	POORLY GRADED SAND - moist, light brown, fine to coarse, trace gravel
80	25	1.5	110	53			
75	30	2.2	123	56			
70	35	4.2	103	43			Thin layer of silt
65	40	1.6	94	50			
		2.5	97	70			With gravels

(CONTINUED ON FOLLOWING FIGURE)

Field Tech: AR/GMC
Prepared By: SS
Checked By: HP

IDS Development
Pasadena, California

MACTEC

LOG OF BORING
Project: 4953-06-2221 Figure: A-1.1a

B:\SOIL_CRANDALL(ELEVATION) 62221.GPJ LAW_CRAN.GDT 11/28/06

BORING 1 (Continued)

DATE DRILLED: October 19, 2006
EQUIPMENT USED: Hollow Stem Auger
HOLE DIAMETER (in.): 8
ELEVATION: 104**

THIS RECORD IS A REASONABLE INTERPRETATION OF SUBSURFACE CONDITIONS AT THE EXPLORATION LOCATION SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND AT OTHER TIMES MAY DIFFER INTERFACES BETWEEN STRATA ARE APPROXIMATE TRANSITIONS BETWEEN STRATA MAY BE GRADUAL.

ELEVATION (ft)	DEPTH (ft)	MOISTURE (% of dry wt.)	DRY DENSITY (pcf)	BLOW COUNT* (blows/ft)	SAMPLE LOC.	
60	45			50/6"		
		6.5	112	47		
55	50	2.3	105	44		
		2.6	114	73		
50	55					ML
		38.1	84	32		
45	60	3.7	107	35		SP-SM
40	65	15.9	114	49		CL-ML
35	70			50/6"		SP
30	75					
25	80					

SANDY SILT - moist, brownish gray

POORLY GRADED SAND with Silt - moist, grayish brown, trace fine gravel

SILTY CLAY - moist, brownish gray

LL=26, PI=7

POORLY GRADED SAND with Gravel - moist, brown, with cobble

END OF BORING AT 70 FEET.

NOTES:

Ground water not encountered during drilling.
Borehole backfilled with soil cuttings and tamped.

* Number of blows required to drive the Crandall sampler 12 inches using a 140 pounds hammer falling 30 inches.

** Elevation based on an assumption that the bench mark shown in Figure 2 is 100 feet.

Field Tech: AR/GMC
Prepared By: SS
Checked By: HP

IDS Development
Pasadena, California

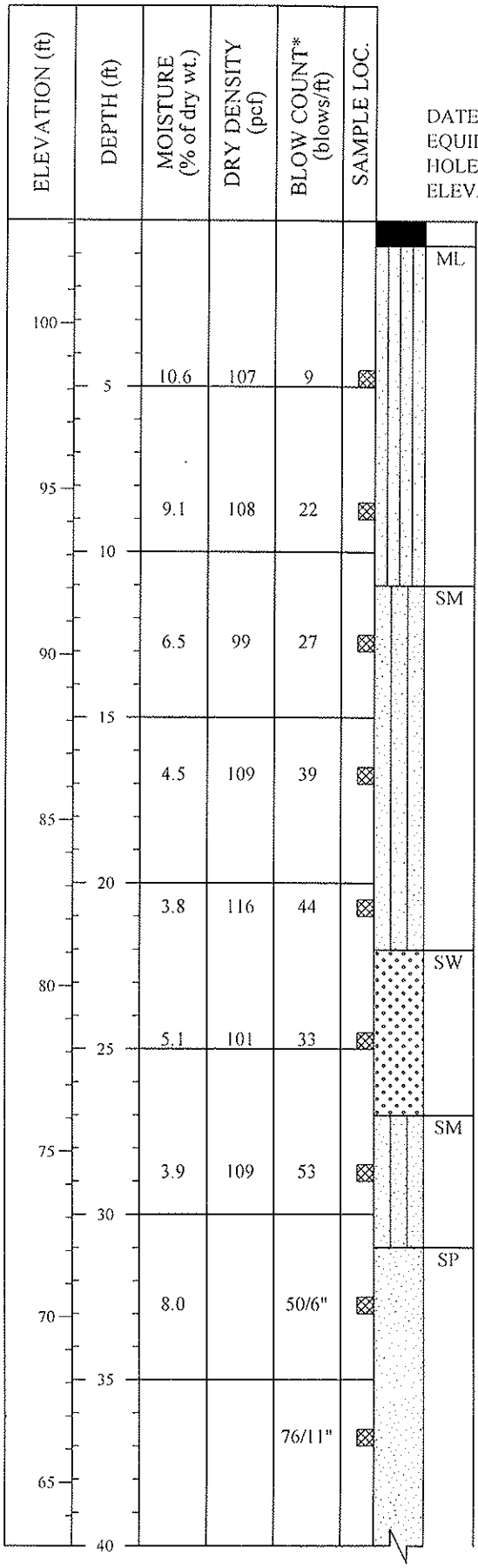
MACTEC

LOG OF BORING
Project: 4953-06-2221 Figure: A-1.1b

B11SOIL_CRANDALL(ELEVATION) 62221.GPJ LAW_CRAN.GDT 11/28/06

BORING 2

DATE DRILLED: October 19, 2006
EQUIPMENT USED: Hollow Stem Auger
HOLE DIAMETER (in.): 8
ELEVATION: 103**



8" Thick Concrete Asphalt

ML SANDY SILT - moist, dark brown, trace fine gravel

51% Passing No. 200 Sieve

SM SILTY SAND - moist, dark brown, fine, trace fine gravel

Thin layers of silt, brown

SW WELL-GRADED SAND - moist, brown, fine, trace fine gravel

SM SILTY SAND - moist, light brown

SP POORLY GRADED SAND - moist, grayish brown, fine to coarse, trace gravel

(CONTINUED ON FOLLOWING FIGURE)

Field Tech: AR
Prepared By: SS
Checked By: HP

THIS RECORD IS A REASONABLE INTERPRETATION OF SUBSURFACE CONDITIONS AT THE EXPLORATION LOCATION. SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND AT OTHER TIMES MAY DIFFER. INTERFACES BETWEEN STRATA ARE APPROXIMATE. TRANSITIONS BETWEEN STRATA MAY BE GRADUAL.

B1\SOIL_CRANDALL(ELEVATION) 62221.GPJ LAW_CRAN.GDT 11/28/06

IDS Development
Pasadena, California

MACTEC

LOG OF BORING
Project: 4953-06-2221 Figure: A-1.2a

BORING 2 (Continued)

DATE DRILLED: October 19, 2006
EQUIPMENT USED: Hollow Stem Auger
HOLE DIAMETER (in.): 8
ELEVATION: 103**

THIS RECORD IS A REASONABLE INTERPRETATION OF SUBSURFACE CONDITIONS AT THE EXPLORATION LOCATION. SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND AT OTHER TIMES MAY DIFFER. INTERFACES BETWEEN STRATA ARE APPROXIMATE. TRANSITIONS BETWEEN STRATA MAY BE GRADUAL.

ELEVATION (ft)	DEPTH (ft)	MOISTURE (% of dry wt.)	DRY DENSITY (pcf)	BLOW COUNT* (blows/ft)	SAMPLE LOC.		
60	45	2.3	116	67	⊠		
		2.7	105	61	⊠		
55		6.9	115	90/11"	⊠	SM	SILTY SAND - moist, dark brown, fine to medium, trace gravel
	50	2.1	110	85	⊠	SP	POORLY GRADED SAND - moist, brown, fine to coarse, with garvel
50							
	55	14.1	115	73	⊠	SM	SILTY SAND - moist, dark brown, fine, trace gravel
45						SP	POORLY GRADED SAND - moist, brown, with gravel
	60			79/8"	⊠		END OF BORING AT 60 FEET.
40							
	65						
35							
	70						
30							
	75						
25							
	80						

NOTES:

Hand auger upper 5 feet.
Ground water not encountered during drilling.
Borehole backfilled with soil cuttings and tamped.

Field Tech: AR
Prepared By: SS
Checked By: HP

IDS Development
Pasadena, California

MACTEC

LOG OF BORING
Project: 4953-06-2221 Figure: A-1.2b

B11SOIL_CRANDALL(ELEVATION) 62221.GPJ LAW_CRAN.GDT 11/28/06

BORING 3

DATE DRILLED: October 20, 2006
EQUIPMENT USED: Hollow Stem Auger
HOLE DIAMETER (in.): 8
ELEVATION: 102**

THIS RECORD IS A REASONABLE INTERPRETATION OF SUBSURFACE CONDITIONS AT THE EXPLORATION LOCATION. SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND AT OTHER TIMES MAY DIFFER. INTERFACES BETWEEN STRATA ARE APPROXIMATE. TRANSITIONS BETWEEN STRATA MAY BE GRADUAL.

ELEVATION (ft)	DEPTH (ft)	MOISTURE (% of dry wt.)	DRY DENSITY (pcf)	BLOW COUNT* (blows/ft)	SAMPLE LOC.		
							8" Thick Asphalt Concrete
100						ML	SANDY SILT - moist, brown, fine, trace gravel
	5	6.4	106	20	⊠		Highly porous
95		8.9	113	67	⊠		62.8% Passing No. 200 Sieve
	10	8.9	118	91	⊠		
90						SP	POORLY GRADED SAND - moist, brown, fine to coarse, with gravel
	15	1.4	107	27	⊠		
85				39	○		
	20	3.3	102	33	⊠		Light brown, trace gravel
80							
	25	4.7	97	62	⊠	ML	SANDY SILT - moist, grayish brown
75							53.2% Passing No. 200 Sieve, non-plastic
	30	5.3	114	46	⊠		Trace gravel
70						SP	POORLY GRADED SAND - moist, brown, fine to coarse, with gravel
	35	1.9	113	56	⊠		
65							
	40	1.6	105	51	⊠		

(CONTINUED ON FOLLOWING FIGURE)

Field Tech: AR
Prepared By: SS
Checked By: HP

IDS Development
Pasadena, California

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LOG OF BORING
Project: 4953-06-2221 Figure: A-1.3a

BORING 3 (Continued)

DATE DRILLED: October 20, 2006
EQUIPMENT USED: Hollow Stem Auger
HOLE DIAMETER (in.): 8
ELEVATION: 102**

ELEVATION (ft)	DEPTH (ft)	MOISTURE (% of dry wt.)	DRY DENSITY (pcf)	BLOW COUNT* (blows/ft)	SAMPLE LOC.		
60		5.6	120	71/8"	⊠	SM	SILTY SAND - moist, brown, few gravel
						SP	POORLY GRADED SAND - moist, light brown, fine to coarse, with gravel and cobble
55	45	1.9	100	53	⊠		
	50	2.0	110	64	⊠		
50						ML	SANDY SILT - moist, brown
						SM	SILTY SAND - moist, grayish brown, fine, trace gravel
45	55	5.6	101	63	⊠		
	60	14.3	99	67	⊠		END OF BORING AT 60 FEET.
40							NOTES:
	65						Hand auger upper 5 feet. Ground water not encountered during drilling. Borehole backfilled with soil cuttings and tamped.
35							
	70						
30							
	75						
25							
	80						

THIS RECORD IS A REASONABLE INTERPRETATION OF SUBSURFACE CONDITIONS AT THE EXPLORATION LOCATION. SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND AT OTHER TIMES MAY DIFFER. INTERFACES BETWEEN STRATA ARE APPROXIMATE. TRANSITIONS BETWEEN STRATA MAY BE GRADUAL.

Field Tech: AR
Prepared By: SS
Checked By: HP

IDS Development
Pasadena, California

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LOG OF BORING
Project: 4953-06-2221 Figure: A-1.3b

B11SOIL_CRANDALL(ELEVATION) 62221.GPJ LAW_CRAN.GDT 11/28/06

BORING 4

DATE DRILLED: October 20, 2006
EQUIPMENT USED: Hollow Stem Auger
HOLE DIAMETER (in.): 8
ELEVATION: 103**

THIS RECORD IS A REASONABLE INTERPRETATION OF SUBSURFACE CONDITIONS AT THE EXPLORATION LOCATION SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND AT OTHER TIMES MAY DIFFER INTERFACES BETWEEN STRATA ARE APPROXIMATE TRANSITIONS BETWEEN STRATA MAY BE GRADUAL

ELEVATION (ft)	DEPTH (ft)	MOISTURE (% of dry wt.)	DRY DENSITY (pcf)	BLOW COUNT* (blows/ft)	SAMPLE LOC.		
100	0						5" Thick Asphalt Concrete
						SM	FILL - SILTY SAND - moist, light brown, fine to medium, trace gravel, some brick fragments 10" chunk of concrete
	5			50		SM	SILTY SAND - moist, reddish brown, fine
95		6.1	113	51		ML	SANDY SILT - moist, reddish brown
	10						
90		8.2	116	59			
	15					SC	CLAYEY SAND - moist, reddish brown
85		4.2	94	38		SP	POORLY GRADED SAND - moist, light brown, fine, trace gravel
	20			50			Fine to coarse, few gravel and cobble
80							
	25	1.6	115	74			
75		0.8	110	57			With gravel and cobble
	30						
70				42			
	35						
65		1.2	117	52			
	40						

(CONTINUED ON FOLLOWING FIGURE)

Field Tech: AR
Prepared By: SS
Checked By: HP

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LOG OF BORING
Project: 4953-06-2221 Figure: A-1.4a

B11SOIL_CRANDALL(ELEVATION) 62221.GPJ LAW_CRAN.GDT 11/28/06

BORING 4 (Continued)

DATE DRILLED: October 20, 2006
EQUIPMENT USED: Hollow Stem Auger
HOLE DIAMETER (in.): 8
ELEVATION: 103**

THIS RECORD IS A REASONABLE INTERPRETATION OF SUBSURFACE CONDITIONS AT THE EXPLORATION LOCATION. SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND AT OTHER TIMES MAY DIFFER. INTERFACES BETWEEN STRATA ARE APPROXIMATE. TRANSITIONS BETWEEN STRATA MAY BE GRADUAL.

ELEVATION (ft)	DEPTH (ft)	MOISTURE (% of dry wt.)	DRY DENSITY (pcf)	BLOW COUNT* (blows/ft)	SAMPLE LOC.		
60	45	1.0	113	47			
		3.7	104	45			
55		3.2	98	36		SP-SM	POORLY GRADED SAND with Silt - moist, light brown, fine, trace gravel
	50	1.4	122	54		SP	POORLY GRADED SAND - moist, light brown, fine to medium, with gravel
50							
	55	10.9	103	69		SM	SILTY SAND - moist, dark brown, fine
45							
	60	8.9	86	36		SP	POORLY GRADED SAND - moist, brown, fine to coarse, few gravel and cobble
40							
	65	2.5	105	68		ML	SANDY SILT - moist, brown
35						SM	SILTY SAND - moist, dark brown, fine to medium
	70	8.7	111	69			END OF BORING AT 70 FEET.
30							NOTES:
	75						Ground water not encountered during drilling. Borehole backfilled with soil cuttings and tamped.
25							
	80						

Field Tech: AR
Prepared By: SS
Checked By: HP

IDS Development
Pasadena, California

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LOG OF BORING
Project: 4953-06-2221 Figure: A-1.4b

B:\ISOIL_CRANDALL(ELEVATION) 62221.GPJ LAW_CRAN.GDT 11/28/06

MAJOR DIVISIONS			GROUP SYMBOLS	TYPICAL NAMES
COARSE GRAINED SOILS (More than 50% of material is LARGER than No. 200 sieve size)	GRAVELS (More than 50% of coarse fraction is LARGER than the No. 4 sieve size)	CLEAN GRAVELS (Little or no fines)	GW	Well graded gravels, gravel - sand mixtures, little or no fines.
			GP	Poorly graded gravels or grave - sand mixtures, little or no fines.
		GRAVELS WITH FINES (Appreciable amount of fines)	GM	Silty gravels, gravel - sand - silt mixtures.
			GC	Clayey gravels, gravel - sand - clay mixtures.
	SANDS (More than 50% of coarse fraction is SMALLER than the No. 4 Sieve Size)	CLEAN SANDS (Little or no fines)	SW	Well graded sands, gravelly sands, little or no fines.
			SP	Poorly graded sands or gravelly sands, little or no fines.
		SANDS WITH FINES (Appreciable amount of fines)	SM	Silty sands, sand - silt mixtures
			SC	Clayey sands, sand - clay mixtures.
FINE GRAINED SOILS (More than 50% of material is SMALLER than No. 200 sieve size)	SILTS AND CLAYS (Liquid limit LESS than 50)		ML	Inorganic silts and very fine sands, rock flour, silty of clayey fine sands or clayey silts and with slight plasticity.
			CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays.
			OL	Organic silts and organic silty clays of low plasticity.
	SILTS AND CLAYS (Liquid limit GREATER than 50)		MH	Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts.
			CH	Inorganic clays of high plasticity, fat clays
			OH	Organic clays of medium to high plasticity, organic silts.
HIGHLY ORGANIC SOILS			PT	Peat and other highly organic soils.

BOUNDARY CLASSIFICATIONS: Soils possessing characteristics of two groups are designated by combinations of group symbols.

SILT OR CLAY	SAND			GRAVEL		Cobbles	Boulders
	Fine	Medium	Coarse	Fine	Coarse		

No.200 No.40 No.10 No.4 3/4" 3" 12"

U.S. STANDARD SIEVE SIZE

Reference: The Unified Soil Classification System, Corps of Engineers, U.S. Army Technical Memorandum No. 3-357, Vol. 1, March, 1953 (Revised April, 1960)

Undisturbed Sample		Auger Cuttings	
Split Spoon Sample		Bulk Sample	
Rock Core		Crandall Sampler	
Dilatometer		Pressure Meter	
Packer		No Recovery	
Water Table at time of drilling		Water Table after drilling	

Correlation of Penetration Resistance with Relative Density and Consistency

SAND & GRAVEL		SILT & CLAY	
No. of Blows	Relative Density	No. of Blows	Consistency
0 - 4	Very Loose	0 - 1	Very Soft
5 - 10	Loose	2 - 4	Soft
11 - 30	Medium Dense	5 - 8	Medium Stiff
31 - 50	Dense	9 - 15	Stiff
Over 50	Very Dense	16 - 30	Very Stiff
		Over 30	Hard

KEY TO SYMBOLS AND DESCRIPTIONS

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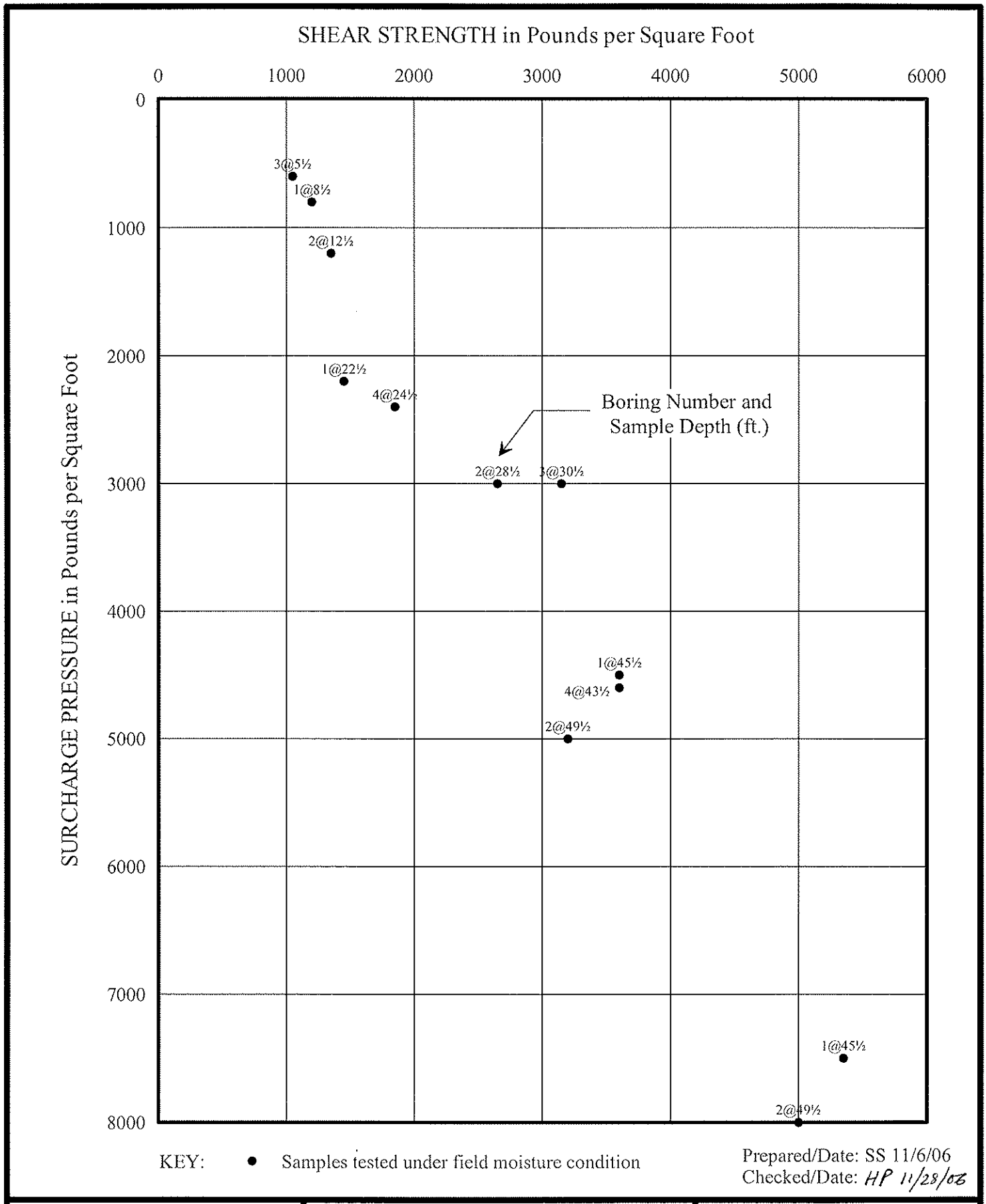
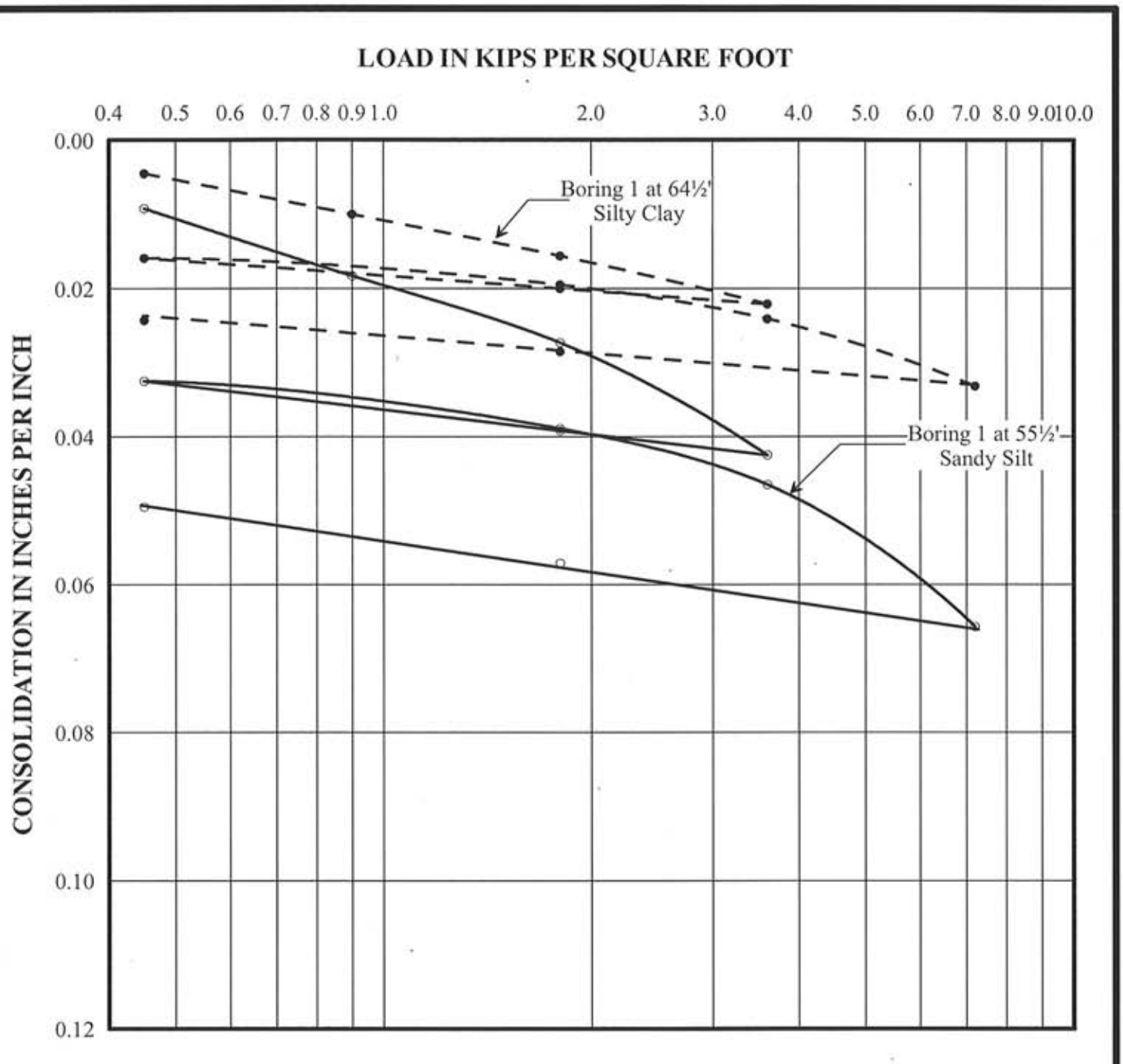
Figure A - 2



KEY: ● Samples tested under field moisture condition

Prepared/Date: SS 11/6/06
Checked/Date: HP 11/28/06

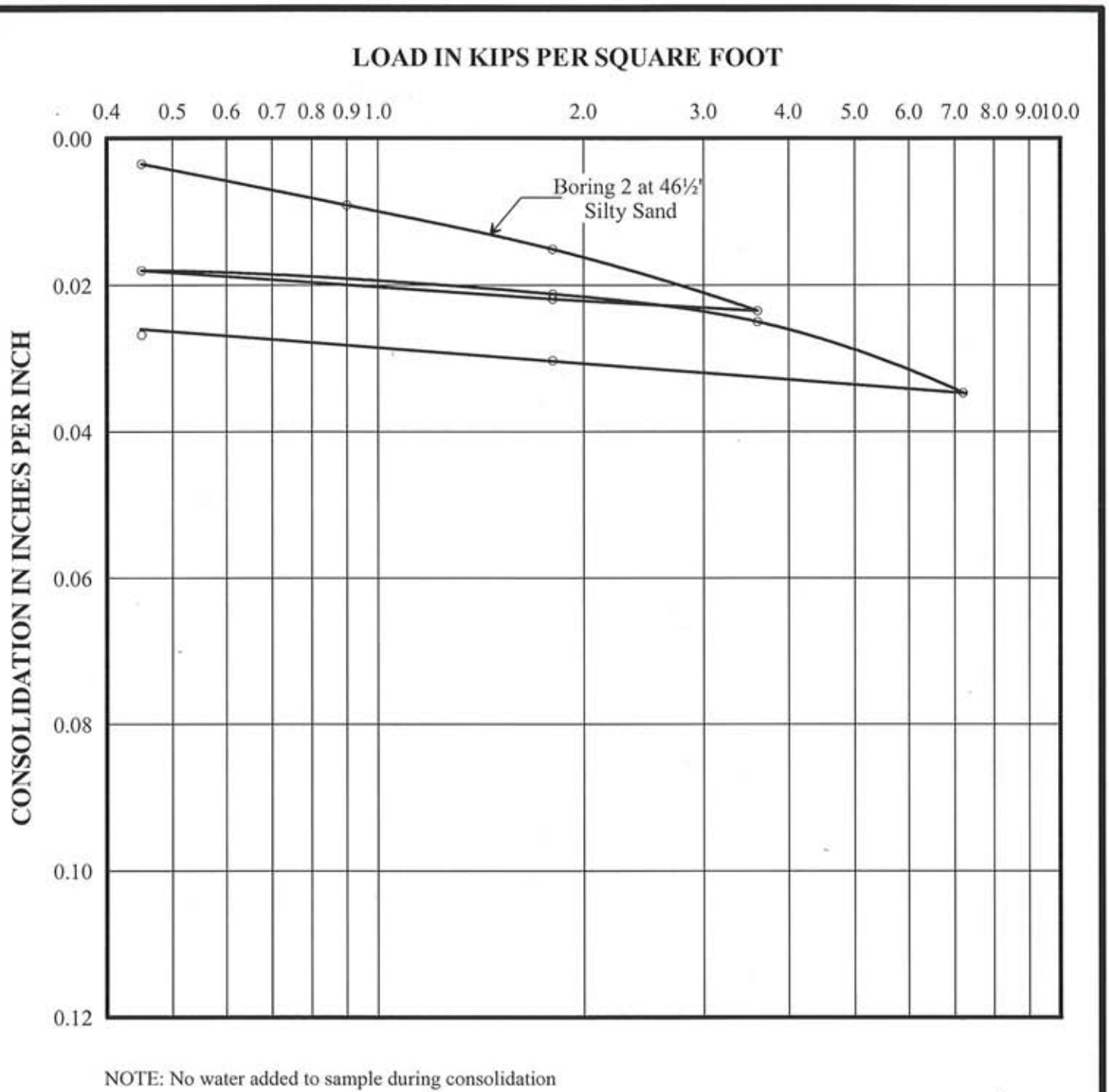
IDS Development Pasadena, California	MACTEC	DIRECT SHEAR TEST DATA Project No. 4953-06-2221 Figure A-3



NOTE: No water added to samples during consolidation

Prepared/Date: SS 11/10/06
Checked/Date: HP 11/28/06

IDS Development Pasadena, California	MACTEC	CONSOLIDATION TEST DATA Project No. 4953-06-2221 Figure A-4.1



NOTE: No water added to sample during consolidation

Prepared/Date: SS 11/10/06
Checked/Date: HP 11/28/06

IDS Development Pasadena, California	MACTEC	CONSOLIDATION TEST DATA Project No. 4953-06-2221 Figure A-4.2

SCHIFF ASSOCIATES

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November 8, 2006 via fax: 323.889.5398

MACTEC
200 Citadel Dr.
Los Angeles, CA 90040

Attention: Mr. Shanzhi Shu

Re: Soil Corrosivity Study
Colorado Blvd.
Pasadena, California
MACTEC #4953-06-2221, SA #06-1855LAB

INTRODUCTION

Laboratory tests have been completed on three soil samples provided for the referenced project. The purpose of these tests was to determine if the soils might have deleterious effects on underground utility piping and concrete structures. Schiff Associates assumes that the samples provided are representative of the most corrosive soils at the site.

The site is located on Colorado Boulevard in Pasadena, California. The water table depth was not provided; therefore, its effect on site corrosivity could not be accounted for in this analysis and report.

The scope of this study is limited to a determination of soil corrosivity and general corrosion control recommendations for materials likely to be used for construction. Our recommendations do not constitute, and are not meant as a substitute for, design documents for the purpose of construction. If the architects and/or engineers desire more specific information, designs, specifications, or review of design, Schiff Associates will be happy to work with them as a separate phase of this project.

LABORATORY SOIL CORROSIVITY TESTS

The electrical resistivity of each sample was measured in a soil box per ASTM G57 in its as-received condition and again after saturation with distilled water. Resistivities are at about their lowest value when the soil is saturated. The pH of the saturated samples was measured. A 5:1 water:soil extract from each sample was chemically analyzed for the major soluble salts commonly found in soils and for ammonium and nitrate. Test results are shown in Table 1.

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SA #06-1855SCS

November 8, 2006

SOIL CORROSIVITY

A major factor in determining soil corrosivity is electrical resistivity. The electrical resistivity of a soil is a measure of its resistance to the flow of electrical current. Corrosion of buried metal is an electrochemical process in which the amount of metal loss due to corrosion is directly proportional to the flow of electrical current (DC) from the metal into the soil. Corrosion currents, following Ohm's Law, are inversely proportional to soil resistivity. Lower electrical resistivities result from higher moisture and soluble salt contents and indicate corrosive soil.

A correlation between electrical resistivity and corrosivity toward ferrous metals is:

Soil Resistivity in ohm-centimeters			Corrosivity Category
over		10,000	mildly corrosive
2,000	to	10,000	moderately corrosive
1,000	to	2,000	corrosive
below		1,000	severely corrosive

Other soil characteristics that may influence corrosivity towards metals are pH, soluble salt content, soil types, aeration, anaerobic conditions, and site drainage.

Electrical resistivities were in the mildly corrosive category with as-received moisture. When saturated, the resistivities were in the mildly to moderately corrosive categories. The resistivities dropped considerably with added moisture because the samples were dry as-received.

Soil pH values varied from 7.4 to 7.7. This range is mildly alkaline.

The soluble salt content of the samples was low.

Ammonium and nitrate were detected in low concentrations.

Tests were not made for sulfide and negative oxidation-reduction (redox) potential because these samples did not exhibit characteristics typically associated with anaerobic conditions.

This soil is classified as moderately corrosive to ferrous metals.

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CORROSION CONTROL RECOMMENDATIONS

The life of buried materials depends on thickness, strength, loads, construction details, soil moisture, etc., in addition to soil corrosivity, and is, therefore, difficult to predict. Of more practical value are corrosion control methods that will increase the life of materials that would be subject to significant corrosion.

Steel Pipe

Abrasive blast underground steel piping and apply a dielectric coating such as polyurethane, extruded polyethylene, a tape coating system, hot applied coal tar enamel, or fusion bonded epoxy intended for underground use.

Bond underground steel pipe with rubber gasketed, mechanical, grooved end, or other nonconductive type joints for electrical continuity. Electrical continuity is necessary for corrosion monitoring and cathodic protection.

Install corrosion monitoring test stations at each end of the pipeline, at each end of any casings, and other locations as necessary so the interval between test stations does not exceed 1,500 feet. Test stations will facilitate corrosion monitoring and the application of cathodic protection.

Electrically insulate each buried steel pipeline from dissimilar metals and metals with dissimilar coatings (cement-mortar vs. dielectric), and above ground steel pipe to prevent dissimilar metal corrosion cells and to facilitate the application of cathodic protection.

Apply cathodic protection to steel piping as per NACE International Standard RP0169-2002. The amount of cathodic protection current needed can be minimized by coating the pipe.

As an alternative to dielectric coating and cathodic protection, apply a ¾-inch cement mortar coating per AWWA Standard C205-2000 or encase in concrete 3 inches thick, using any type of cement. Joint bonds, test stations, and insulated joints are still required for these alternatives.

Some steel piping systems, such as for gas and oil, have special corrosion and cathodic protection requirements that must be evaluated for each specific application.

Iron Pipe

Pressurized Pipe:

Encase pressurized cast and ductile iron piping per AWWA Standard C105, coat with epoxy or polyurethane intended for underground use, or with wax tape per AWWA C217. The thin factory-applied asphaltic coating applied to ductile iron pipe for transportation and aesthetic purposes does not constitute a corrosion control coating. Electrically insulate underground iron pipe from dissimilar metals and from above ground iron pipe with insulating joints per NACE International Standard RP0286-2002. Bond all nonconductive type joints for electrical continuity. Install corrosion monitoring test stations at each end of the pipeline, at each end of any casings, and other locations as necessary so the interval between test stations does not exceed 1,500 feet.

Apply cathodic protection to cast and ductile iron piping as per NACE International Standard RP0169-2002.

Non-Pressurized Pipe (Select one of the following alternatives for protection):

1. Polyethylene encase cast- and ductile-iron piping per AWWA Standard C105. Electrically insulate underground pipe from dissimilar metals and from above ground iron pipe with insulating joints per NACE International Standard RP0286-2002. Protect all non-cast iron and non-ductile iron fittings and valves with wax tape per AWWA Standard C217-99 after assembly. Install electrical resistance (ER) probes designed for cast and ductile iron piping to discern if/when cathodic protection will be warranted in the future.
2. Concrete encase all buried portions of metallic piping so that there is a minimum of 3-inches of concrete cover provided over and around surfaces of pipe, fittings, and valves.
3. Apply cathodic protection to cast and ductile iron piping as per NACE International Standard RP0169-2002. The amount of cathodic protection current needed can be minimized by coating the piping. Install corrosion monitoring test stations at each end of the pipeline, at each end of any casings, and other locations as necessary so the interval between test stations does not exceed 1,500 feet.

Copper Tubing

Wrap copper tubing for cold water in 12-mil polyethylene pipe wrapping tape with butyl rubber mastic over suitable low volatile organic carbon primer, bed and backfill in cement slurry at least 2 inches thick surrounding the tubing, or protect the same as copper tubing for hot water. Hot water tubing may be subject to a higher corrosion rate. Protect hot copper by applying cathodic protection per NACE International Standard RP0169-2002 or by preventing soil contact. Soil contact may be prevented by placing the tubing above ground or inside a plastic pipe. The amount of cathodic protection current needed can be minimized by coating the tubing.

Plastic and Vitrified Clay Pipe

No special precautions are required for plastic and vitrified clay piping placed underground from a corrosion viewpoint. Protect all metallic fittings and valves with wax tape per AWWA Standard C217-99 or epoxy.

All Pipe

On all pipes, appurtenances, and fittings not protected by cathodic protection, coat bare metal such as valves, bolts, flange joints, joint harnesses, and flexible couplings with wax tape per AWWA Standard C217-99 after assembly.

Where metallic pipelines penetrate concrete structures such as building floors, vault walls, and thrust blocks use plastic sleeves, rubber seals, or other dielectric material to prevent pipe contact with the concrete and reinforcing steel.

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Concrete

Any type of cement may be used for concrete structures and pipe because the sulfate concentration is negligible, 0 to 0.1 percent, per 1997 Uniform Building Code (UBC) Table 19-A-4 and American Concrete Institute (ACI-318) Table 4.3.1.

Standard concrete cover over reinforcing steel may be used for concrete structures and pipe in contact with these soils.

CLOSURE

Our services have been performed with the usual thoroughness and competence of the engineering profession. No other warranty or representation, either expressed or implied, is included or intended.

Please call if you have any questions.

Respectfully Submitted,
SCHIFF ASSOCIATES

Brien Clark, EIT for Eric Fechtel

Enc: Table 1

Reviewed by,

John W. French, P. E.

REGISTERED PROFESSIONAL ENGINEER
JOHN W. FRENCH
No. CR001023
CORROSION
STATE OF CALIFORNIA

Table 1 - Laboratory Tests on Soil Samples

MACTEC
Colorado Blvd., Pasadena, CA
Your #4953-06-2221, SA #06-1855SCS
30-Oct-06

Sample ID			B-1 @ 4.5' ML	B-3 @ 8' ML	B-4 @ 41' SP
Resistivity		**Units**			
as-received		ohm-cm	48,000	56,000	4,400,000
saturated		ohm-cm	2,120	2,600	28,000
pH			7.6	7.4	7.7
Electrical Conductivity		mS/cm	0.16	0.11	0.01
Chemical Analyses					
Cations					
calcium	Ca^{2+}	mg/kg	42	15	10
magnesium	Mg^{2+}	mg/kg	15	6.0	3.0
sodium	Na^{1+}	mg/kg	90	98	7.9
potassium	K^{1+}	mg/kg	7.1	3.7	3.9
Anions					
carbonate	CO_3^{2-}	mg/kg	ND	ND	ND
bicarbonate	HCO_3^{1-}	mg/kg	52	40	18
flouride	F^{1-}	mg/kg	0.7	1.3	0.8
chloride	Cl^{1-}	mg/kg	35	4.9	0.9
sulfate	SO_4^{2-}	mg/kg	100	104	2.4
phosphate	PO_4^{3-}	mg/kg	2.4	3.9	1.2
Other Tests					
ammonium	NH_4^{1+}	mg/kg	3.5	0.6	ND
nitrate	NO_3^{1-}	mg/kg	21.5	ND	1.4
sulfide	S^{2-}	qual	na	na	na
Redox		mV	na	na	na

Electrical conductivity in millisiemens/cm and chemical analysis were made on a 1:5 soil-to-water extract.
mg/kg = milligrams per kilogram (parts per million) of dry soil.
Redox = oxidation-reduction potential in millivolts
ND = not detected
na = not analyzed

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APPENDIX B

PRIOR EXPLORATIONS AND LABORATORY TESTS

APPENDIX B

PRIOR EXPLORATIONS AND LABORATORY TESTS

EXPLORATIONS

The soil conditions near the site were previously explored by drilling 18-inch diameter bucket-type borings at the locations depicted in Figure 2. The borings were drilled to depths of 19 and 26 feet below the ground surface. Caving and raveling of the boring walls were not observed; casing or drilling mud was not used to extend the borings to the depths drilled.

The soils encountered were logged by our field technician, and undisturbed and bulk samples were obtained for laboratory inspection and testing. The logs of the borings are presented in Figures B-1.1 and B-1.2; the depths at which undisturbed samples were obtained are indicated to the left of the boring logs. The number of blows required to drive the Crandall sampler 12 inches and the hammer weight and drop are indicated on the logs. The soils are classified in accordance with the Unified Soil Classification System described in Figure B-2.

LABORATORY TESTS

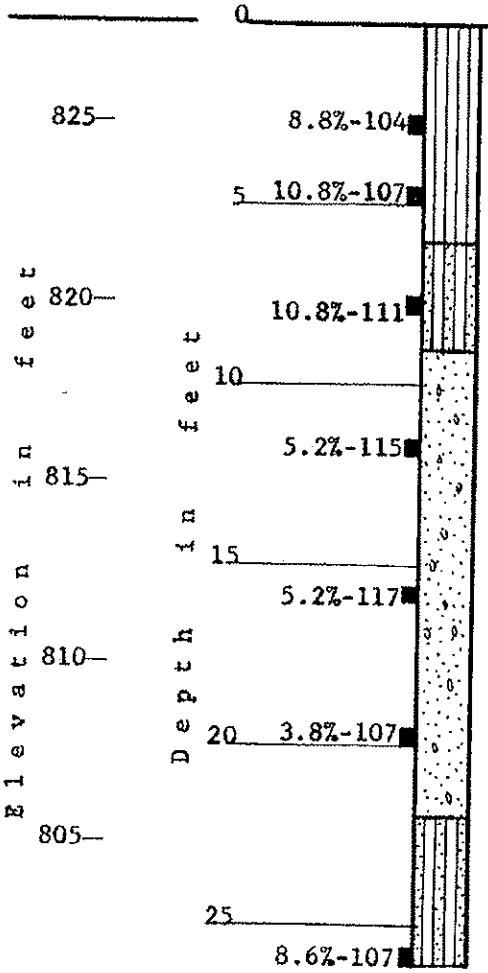
Laboratory tests were performed on selected samples obtained from the borings to aid in the classification of the soils and to determine their engineering properties.

The field moisture content and dry density of the soils encountered were determined by performing tests on the undisturbed samples. The results of the tests are shown to the left of the boring logs.

Direct shear tests were performed on selected undisturbed samples to determine the strength of the soils. The tests were performed at field moisture content and after soaking to near-saturated moisture content and at various surcharge pressures. The yield-point values determined from the direct shear tests are presented in Figure B-3, Direct Shear Test Data.

Confined consolidation tests were performed on two undisturbed samples to determine the compressibility of the soils. Water was added to both samples during the tests to illustrate the effect of moisture on the compressibility. The results of the tests are presented in Figure B-4, Consolidation Test Data.

LOG OF BORING 1
18"-Diameter Rotary Bucket Hole
Drilled August 7, 1960



SILT - large amount of very fine to fine sand, light reddish brown

Medium amount of sand, light brown

SILTY SAND - very fine, medium amount of silt, 10%-15% gravel, light brown

Fine, small amount of silt, light brown

POORLY GRADED SAND - fine, medium amount of fines, approximately 20% gravel, light brown

Large amount of gravel

SILTY SAND - very fine, medium amount of silt, brown

Large amount of silt

NOTE: Groundwater not encountered; no caving.

KEY:

8.6%-107 ■
- Indicates depth at which undisturbed sample obtained
- Dry density in pounds per cubic foot
- Field moisture content in percent of dry weight

Soils classified in accordance with Unified Soil Classification System.

* Elevations refer to datum of reference drawing (see Plot Plan).

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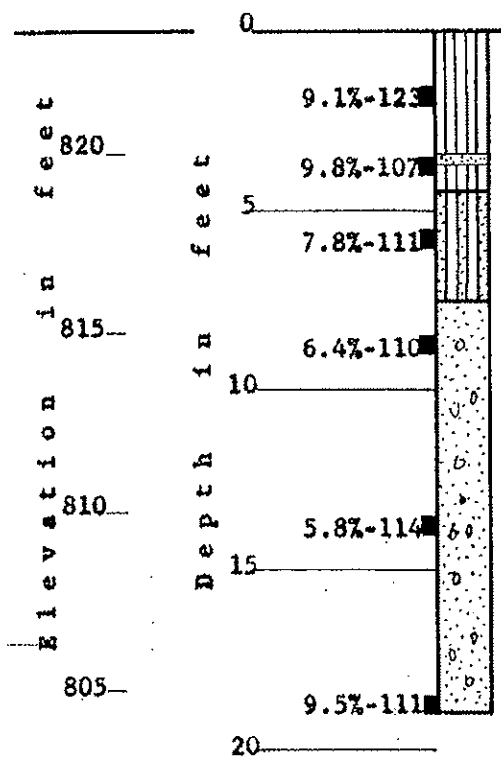
Figure B-1.1

LOG OF BORING 2
18"-Diameter Rotary Bucket Hole
Drilled August 2, 1960



SILT - large amount of very fine sand, light reddish brown

Layer of WELL GRADED SAND - medium amount of silt, light brown

SILTY SAND - fine, medium amount of silt, patches of well graded sand, trace of gravel, light brown

POORLY GRADED SAND - fine, large amount of fines, trace of gravel, light brown

Medium, 15-20% gravel

Patches of silty sand, brown

Fine, trace of gravel

NOTE: Groundwater not encountered; no caving.

LEROY CRANDALL & ASSOCIATES

Figure B-1.2

IDENTIFICATION, CLASSIFICATION AND DESCRIPTION OF SOILS

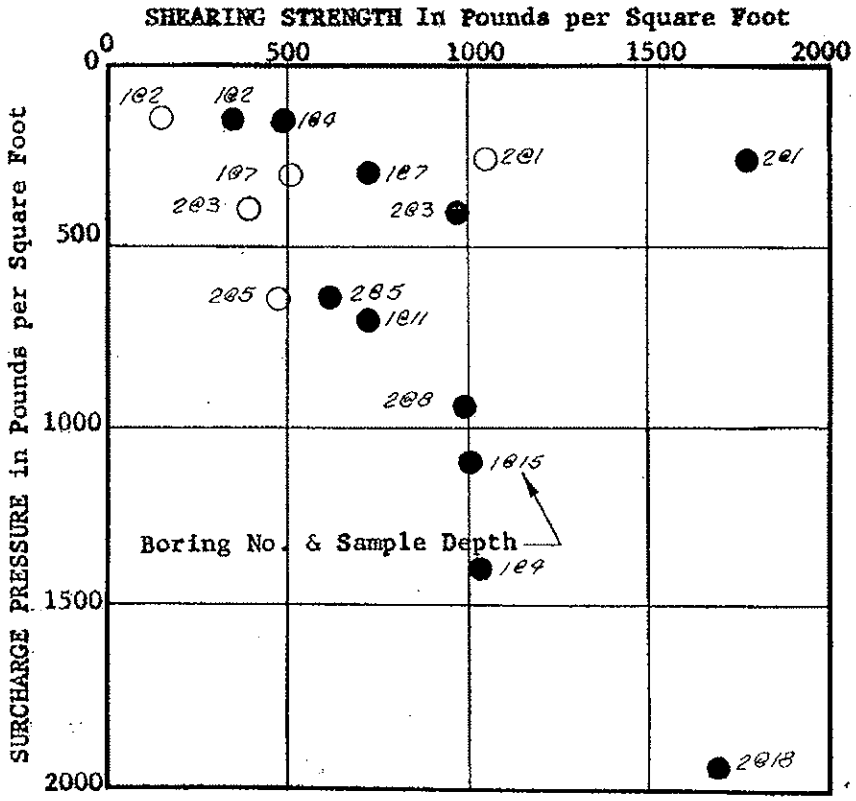
UNIFIED SOIL CLASSIFICATION SYSTEM

MAJOR DIVISIONS & SUBDIVISIONS			STANDARD NAMES AND SOIL GROUP DESCRIPTIONS	SYMB.	DESCRIPTIVE INFORMATION TO BE ADDED TO THE STANDARD NAMES FOR DESCRIPTION
COARSE GRAINED SOILS Less than one-half the total soil passing the 200 mesh sieve.	GRAVELLY SOILS Less than one-half the coarse grains passing the No. 4 sieve	GRAVELS "clean" material Little or no fines	WELL GRADED GRAVEL (GW) Well-graded gravels or gravel-sand mixtures, little or no fines.		Maximum size, angularity and surface conditions, friability or hardness, and approximate percentage of sand, if any.
			POORLY GRADED GRAVEL (GP) Poorly graded gravels or sand-gravel mixtures, little or no fines.		Maximum size, predominant size, angularity, surface conditions, friability or hardness, and approximate percentage of sand, if any.
		GRAVEL WITH FINES "dirty" material Apprec. amount of fines	SILTY GRAVEL (GM) Silty gravels, or poorly graded gravel-sand-silt mixtures.		Maximum size, predominant size, friability or hardness; describe fines as being very silty, moderately silty, or slightly silty.
			CLAYEY GRAVEL (GC) Clayey gravels or gravel-sand-clay mixtures.		Well or poorly graded, maximum size, predominant size if poorly graded, angularity, friability or hardness; describe fines as slightly, moderately, or very clayey or type of binder in well graded gravels with clay binder.
	SANDY SOILS More than one-half the coarse grains passing the No. 4 sieve.	SANDS "clean" material Little fines	WELL GRADED SAND (SW) Well graded sands or gravelly sands, little or no fines.		Angularity, particle shape, friability or hardness, approximate color, percentage of gravel, if any.
			POORLY GRADED SAND (SP) Poorly graded sands or gravelly sands, little or no fines.		Coarse, medium, or fine particle, particle shape, clean or slightly dirty, approximate percentage of gravel, if any.
		SANDS WITH FINES "dirty" material Apprec. amount of fines	SILTY SAND (SM) Silty sands or poorly graded sand-silt mixtures.		Fine, medium, or coarse particles, shape and hardness of particles, large, medium or small proportion of silt, color, approximate percentage of gravel, if any.
			CLAYEY SAND (SC) Clayey sands or sand-clay mixture.		Well graded or poorly graded, predominant size if poorly graded, quality of binder if well graded, large medium, or small amount of clay, color, approximate percentage of gravel, if any.
FINE GRAINED SOILS More than one-half the total soil passing the 200 mesh sieve.	SILT AND CLAY SOILS with low compressibility		SILT (ML) Inorganic silts and very fine sand, silty or clayey fine sands.		Presence of clay or sand, and color, degree of plasticity, if any.
			LEAN CLAY (CL) Inorganic clays of low to medium plasticity, gravelly or sandy.		Degree of plasticity, silt, sand, or gravel content, and color.
			ORGANIC SILT (OL) Organic silts and organic silt-clays of low plasticity.		Visibility of organic material, odor, plasticity, and color.
	SILT AND CLAY SOILS with high compressibility		ELASTIC SILT (MH) Very compressible silts, micaceous or diatomaceous sandy or silt soil.		Presence of clay, degree of plasticity, and color.
			FAT CLAY (CH) Very compressible clays, inorganic clays of high plasticity.		Color, presence of gravel and other significant factors.
			ORGANIC CLAY (OH) Organic clays of medium to high plasticity, very compressible.		Odor, degree of plasticity, and color.
ORGANIC SOILS			PEAT (Pt) Peat and other highly organic swamp soils.		Odor, presence of fibrous material, color.

Figure B-2

LEROY GRANDALL & ASSOCIATES

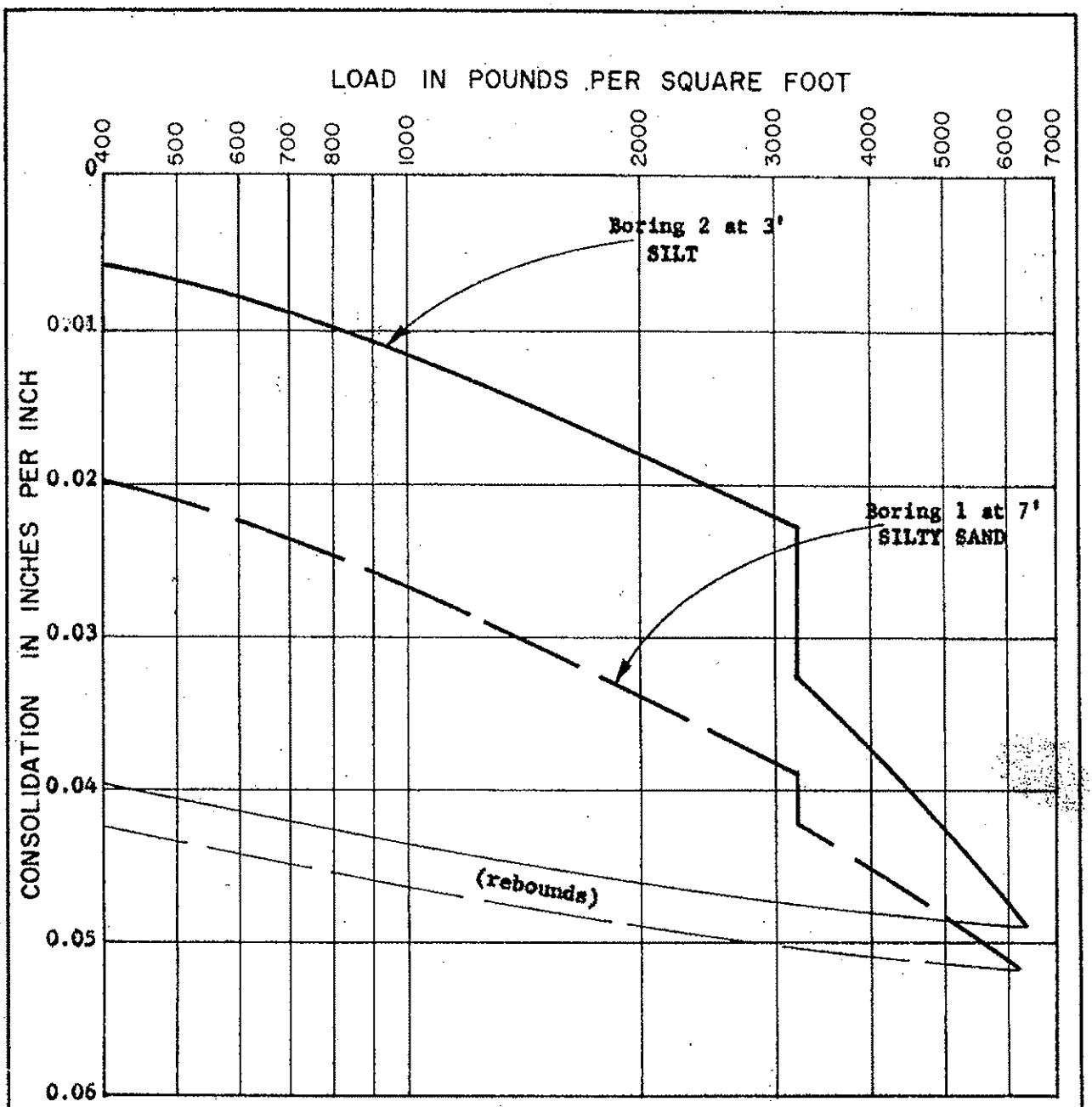
SHEAR SUMMARY



KEY:

● Tests run at field moisture Content

○ Tests run at increased moisture content



NOTE: Water was added to samples after consolidation under a load of 3,200 pounds per square foot.

CONSOLIDATION TEST DATA

LEROY CRANDALL & ASSOCIATES

Figure B-4

Appendix E

Traffic Study

MEMORANDUM - CITY OF PASADENA
DEPARTMENT OF TRANSPORTATION

DATE: **March 10, 2009**

TO: **Denver Miller, Zoning Administrator**
Planning and Development Department

FROM: **Mike Bagheri**
Transportation Planning and Development Manager

RE: **680 East Colorado Boulevard Traffic Impact Study**
Additional El Molino Avenue Street Segment Analysis

At the request of area residents and the Transportation Advisory Commission during the public comments period, additional street segments along El Molino Avenue, a de-emphasized street, were analyzed for the project located at the southeast corner of Colorado Boulevard and El Molino Avenue. Linscott, Law and Greenspan, Engineers (LLG) were retained to prepare the analysis for five additional segments along El Molino Avenue taking into consideration project trip distribution patterns from the four scenarios previously reviewed in the Traffic Impact Study dated July 3, 2008.

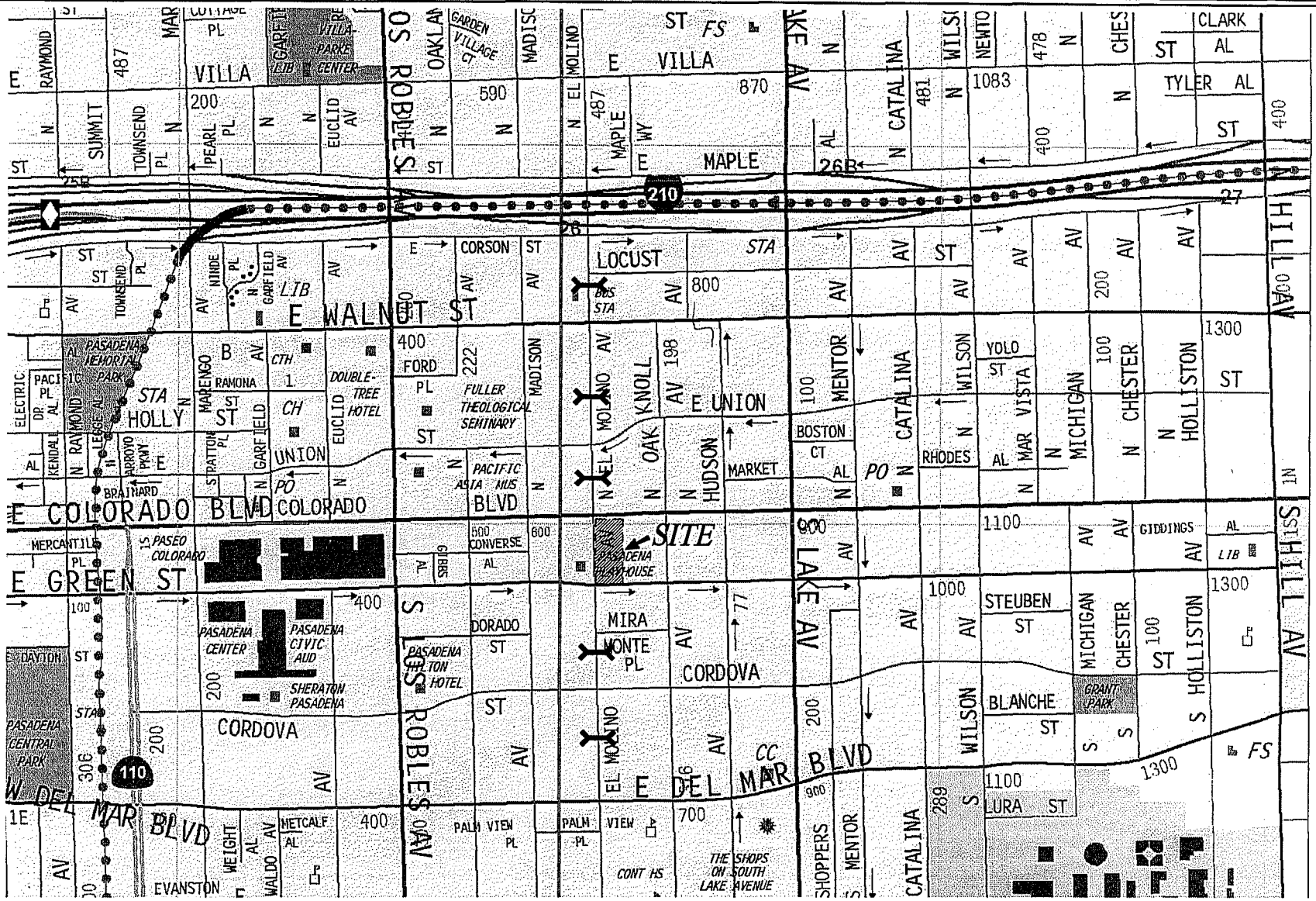
The analysis determined that the additional project traffic distributed along four of the five street segments under each scenario had impacts ranging between 2.9% - 4.9%, requiring soft mitigation. Along El Molino Avenue between Union Street and Colorado Boulevard, the additional project traffic resulted in project growth ranging between 5.5% - 6.5%, requiring soft and physical mitigation.

DOT has determined that there are no feasible mitigation measures to reduce the impacts of the project on El Molino Street to below levels of significance. Significant impacts will remain. This determination is consistent with the outcome of the Traffic Impact Study dated July 3, 2008.

MIKE BAGHERI
Transportation Planning and Development Manager

CLV:clv

Attachment: "Playhouse Plaza Project Figure 1 and Table 2-6," Linscott Law and Greenspan, Engineers



MAP SOURCE: THOMAS BROS. GUIDE

STUDY STREET SEGMENT

NOT TO SCALE

FIGURE 1
VICINITY MAP

LINSCOTT, LAW & GREENSPAN, engineers

PLAYHOUSE PLAZA PROJECT

o:\job_file\3727-2\dwg\f-1.dwg LDP 16:32:33 02/11/2009 rodriquez

Table 2
SUMMARY OF STREET SEGMENT ANALYSES
FOR PROJECT ALTERNATIVES 1, 2, 3 and 4 [1]

12-Mar-2009

Location	Dir.	Project Alt. 1 All Pkg On-Site/ 1 Site Access Point [2]	Project Alt. 2 All Pkg On-Site/ 2 Site Access Points [3]	Project Alt. 3 Pkg On-Site and Madison Ave Structure [4]	Project Alt. 4 Pkg On-Site and 621 E. Colorado Blvd [5]
1 El Molino Avenue north of Walnut Street	NB	3.1%	3.1%	2.6%	3.1%
	SB	3.9%	3.9%	3.4%	3.4%
Total Location 1		3.5%	3.5%	3.0%	3.3%
2 El Molino Avenue between Walnut Street and Union Street	NB	4.3%	4.3%	3.6%	4.3%
	SB	5.5%	5.5%	4.8%	4.8%
Total Location 2		4.9%	4.9%	4.2%	4.5%
3 El Molino Avenue between Union Street and Colorado Boulevard	NB	6.0%	6.0%	5.0%	5.6%
	SB	7.1%	7.1%	6.0%	6.6%
Total Location 3		6.5%	6.5%	5.5%	6.1%
4 El Molino Avenue between Green Street and Cordova Street	NB	4.6%	4.6%	3.8%	3.8%
	SB	3.7%	3.7%	3.1%	3.1%
Total Location 4		4.2%	4.2%	3.5%	3.5%
5 El Molino Avenue between Cordova Street and Del Mar Boulevard	NB	4.0%	4.0%	3.3%	3.3%
	SB	2.8%	2.8%	2.4%	2.4%
Total Location 5		3.4%	3.4%	2.9%	2.9%

[1] Values reflect the percent ADT growth along a segment for each project alternative. The percent ADT growth is based on the forecast daily project alternative trip ends divided by the existing with project alternative ADT volume.
[2] A detailed summary table of the street segment analysis for Project Alternative 1 is provided in Table 3.
[3] A detailed summary table of the street segment analysis for Project Alternative 2 is provided in Table 4.
[4] A detailed summary table of the street segment analysis for Project Alternative 3 is provided in Table 5.
[5] A detailed summary table of the street segment analysis for Project Alternative 4 is provided in Table 6.

City of Pasadena ADT impact thresholds for street segments are as follows:

ADT Growth on Street Segment	Review	Required Mitigation
0.0 - 2.4% ADT Growth	Project review/initial study	Staff review and conditions
2.5 - 4.9% ADT Growth	Initial study/focused traffic study	Soft mitigation (TDM, etc.)
5.0 - 7.4% ADT Growth	Initial study/full traffic study	Soft/physical mitigation; alternatives
7.5% + ADT Growth	Initial study/full traffic study	Soft/physical mitigation; alternatives

Table 3
PROJECT ALTERNATIVE 1: ALL PARKING ON-SITE/ONE SITE ACCESS POINT
SUMMARY OF STREET SEGMENT ANALYSIS

12-Mar-2009

Location	Dir.	[1] Existing Weekday ADT Volume	Project Alt. 1 [2] Total Project Dist.	Project Alt. 1 [3] Daily Project Trip Ends	[4] Existing W/Project ADT Volume ([1]+[3])	[5] Percent ADT Growth ([3]/[4])
1 El Molino Avenue north of Walnut Street	NB	3,702	15.0% Out	119	3,821	3.1%
	SB	3,904	20.0% In	159	4,063	3.9%
Total Location 1		7,606	----	278	7,884	3.5%
2 El Molino Avenue between Walnut Street and Union Street	NB	3,562	20.0% Out	159	3,721	4.3%
	SB	4,057	30.0% In	238	4,295	5.5%
Total Location 2		7,619	----	397	8,016	4.9%
3 El Molino Avenue between Union Street and Colorado Boulevard	NB	4,342	35.0% Out	277	4,619	6.0%
	SB	3,631	35.0% In	277	3,908	7.1%
Total Location 3		7,973	----	554	8,527	6.5%
4 El Molino Avenue between Green Street and Cordova Street	NB	3,304	20.0% In	159	3,463	4.6%
	SB	3,110	15.0% Out	119	3,229	3.7%
Total Location 4		6,414	----	278	6,692	4.2%
5 El Molino Avenue between Cordova Street and Del Mar Boulevard	NB	2,888	15.0% In	119	3,007	4.0%
	SB	2,704	10.0% Out	79	2,783	2.8%
Total Location 5		5,592	----	198	5,790	3.4%

[1] Weekday machine count data conducted by Accutek Traffic Data, Inc. in February 2009. Copies of the summary data worksheets of the 24-hour count are provided in Appendix A. The existing ADT volume for location 3 (El Molino Avenue between Union Street and Colorado Boulevard) reflects the proposed left-turn prohibitions at the northbound and southbound approaches on El Molino Avenue at the Colorado Boulevard intersection.
[2] Total distribution of inbound and outbound daily project alternative traffic at the analyzed street segment.
[3] Daily project volume includes inbound and outbound trips based on the project alternative net increase of 1,585 daily trip ends (approximately 793 inbound trips and 793 outbound trips) as contained in Table 6-1 of the "Final Traffic Impact Study for the Playhouse Plaza Project in City of Pasadena", prepared by LLG Engineers, July 3, 2008.
[4] Total of columns [1] and [3].
[5] Column [3] divided by column [4].

City of Pasadena ADT impact thresholds for street segments are as follows:

ADT Growth on Street Segment	Review	Required Mitigation
0.0 - 2.4% ADT Growth	Project review/initial study	Staff review and conditions
2.5 - 4.9% ADT Growth	Initial study/focused traffic study	Soft mitigation (TDM, etc.)
5.0 - 7.4% ADT Growth	Initial study/full traffic study	Soft/physical mitigation; alternatives
7.5% + ADT Growth	Initial study/full traffic study	Soft/physical mitigation; alternatives

Table 4
PROJECT ALTERNATIVE 2: ALL PARKING ON-SITE/TWO SITE ACCESS POINTS
SUMMARY OF STREET SEGMENT ANALYSIS

12-Mar-2009

Location	Dir.	[1] Existing Weekday ADT Volume	Project Alt. 2 [2] Total Project Dist.	Project Alt. 2 [3] Daily Project Trip Ends	[4] Existing W/Project ADT Volume ([1]+[3])	[5] Percent ADT Growth ([3]/[4])
1 El Molino Avenue north of Walnut Street	NB	3,702	15.0% Out	119	3,821	3.1%
	SB	3,904	20.0% In	159	4,063	3.9%
Total Location 1		7,606	----	278	7,884	3.5%
2 El Molino Avenue between Walnut Street and Union Street	NB	3,562	20.0% Out	159	3,721	4.3%
	SB	4,057	30.0% In	238	4,295	5.5%
Total Location 2		7,619	----	397	8,016	4.9%
3 El Molino Avenue between Union Street and Colorado Boulevard	NB	4,342	35.0% Out	277	4,619	6.0%
	SB	3,631	35.0% In	277	3,908	7.1%
Total Location 3		7,973	----	554	8,527	6.5%
4 El Molino Avenue between Green Street and Cordova Street	NB	3,304	20.0% In	159	3,463	4.6%
	SB	3,110	15.0% Out	119	3,229	3.7%
Total Location 4		6,414	----	278	6,692	4.2%
5 El Molino Avenue between Cordova Street and Del Mar Boulevard	NB	2,888	15.0% In	119	3,007	4.0%
	SB	2,704	10.0% Out	79	2,783	2.8%
Total Location 5		5,592	----	198	5,790	3.4%

[1] Weekday machine count data conducted by Accutek Traffic Data, Inc. in February 2009. Copies of the summary data worksheets of the 24-hour count are provided in Appendix A. The existing ADT volume for location 3 (El Molino Avenue between Union Street and Colorado Boulevard) reflects the proposed left-turn prohibitions at the northbound and southbound approaches on El Molino Avenue at the Colorado Boulevard intersection.
[2] Total distribution of inbound and outbound daily project alternative traffic at the analyzed street segment.
[3] Daily project volume includes inbound and outbound trips based on the project alternative net increase of 1,585 daily trip ends (approximately 793 inbound trips and 793 outbound trips) as contained in Table 6-1 of the "Final Traffic Impact Study for the Playhouse Plaza Project in City of Pasadena", prepared by LLG Engineers, July 3, 2008.
[4] Total of columns [1] and [3].
[5] Column [3] divided by column [4].

City of Pasadena ADT impact thresholds for street segments are as follows:

ADT Growth on Street Segment	Review	Required Mitigation
0.0 - 2.4% ADT Growth	Project review/initial study	Staff review and conditions
2.5 - 4.9% ADT Growth	Initial study/focused traffic study	Soft mitigation (TDM, etc.)
5.0 - 7.4% ADT Growth	Initial study/full traffic study	Soft/physical mitigation; alternatives
7.5% + ADT Growth	Initial study/full traffic study	Soft/physical mitigation; alternatives

Table 5
PROJECT ALTERNATIVE 3: PARKING ON-SITE AND AT THE MADISON AVENUE STRUCTURE
SUMMARY OF STREET SEGMENT ANALYSIS

12-Mar-2009

Location	Dir.	[1] Existing Weekday ADT Volume	Project Alternative 3 [2] Total Project Site Dist.	[3] Subtotal Daily Site Trip Ends	[4] Total Project Off-Site Dist.	[5] Subtotal Daily Off-Site Dist.	[6] Total Daily Project Trip Ends	[7] Existing W/Project ADT Volume ([1]+[6])	[8] Percent ADT Growth ([6]/[7])
1 El Molino Avenue north of Walnut Street	NB	3,702	15.0% Out	99	0.0% Out	0	99	3,801	2.6%
	SB	3,904	20.0% In	132	5.0% In	7	139	4,043	3.4%
Total Location 1		7,606	----	231	----	7	238	7,844	3.0%
2 El Molino Avenue between Walnut Street and Union Street	NB	3,562	20.0% Out	132	0.0% Out	0	132	3,694	3.6%
	SB	4,057	30.0% In	197	5.0% In	7	204	4,261	4.8%
Total Location 2		7,619	----	329	----	7	336	7,955	4.2%
3 El Molino Avenue between Union Street and Colorado Boulevard	NB	4,342	35.0% Out	230	0.0% Out	0	230	4,572	5.0%
	SB	3,631	35.0% In	230	0.0% In	0	230	3,861	6.0%
Total Location 3		7,973	----	460	----	0	460	8,433	5.5%
4 El Molino Avenue between Green Street and Cordova Street	NB	3,304	20.0% In	132	0.0% Out	0	132	3,436	3.8%
	SB	3,110	15.0% Out	99	0.0% In	0	99	3,209	3.1%
Total Location 4		6,414	----	231	----	0	231	6,645	3.5%
5 El Molino Avenue between Cordova Street and Del Mar Boulevard	NB	2,888	15.0% In	99	0.0% Out	0	99	2,987	3.3%
	SB	2,704	10.0% Out	66	0.0% In	0	66	2,770	2.4%
Total Location 5		5,592	----	165	----	0	165	5,757	2.9%

[1] Weekday machine count data conducted by Accutek Traffic Data, Inc. in February 2009. Copies of the summary data worksheets of the 24-hour counts are provided in Appendix A. The existing ADT volume for Location 3 (El Molino Avenue between Union Street and Colorado Boulevard) reflects the proposed left-turn prohibitions at the northbound and southbound approaches on El Molino Avenue at the Colorado Boulevard intersection.

[2] Total project site distribution of inbound and outbound daily project alternative traffic at the analyzed street segment.

[3] Daily project volume includes inbound and outbound trips based on 83 percent of the project alternative net increase of 1,585 daily trip ends (approximately 793 inbound trips and 793 outbound trips) as contained in Table 6-1 of the "Final Traffic Impact Study for the Playhouse Plaza Project in City of Pasadena", prepared by LLG Engineers, July 3, 2008.

[4] Total off-site distribution of inbound and outbound daily project traffic at the analyzed street segment.

[5] Daily project volume includes inbound and outbound trips based on 17 percent of the project alternative net increase of 1,585 daily trip ends (approximately 793 inbound trips and 793 outbound trips) as contained in Table 6-1 of the "Final Traffic Impact Study for the Playhouse Plaza Project in City of Pasadena", prepared by LLG Engineers, July 3, 2008.

[6] Total of columns [3] and [5].

[7] Total of columns [1] and [6].

[8] Column [6] divided by column [7].

City of Pasadena ADT impact thresholds for street segments are as follows:

ADT Growth on Street Segment	Review	Required Mitigation
0.0 - 2.4% ADT Growth	Project review/initial study	Staff review and conditions
2.5 - 4.9% ADT Growth	Initial study/focused traffic study	Soft mitigation (TDM, etc.)
5.0 - 7.4% ADT Growth	Initial study/full traffic study	Soft/physical mitigation; alternatives
7.5% + ADT Growth	Initial study/full traffic study	Soft/physical mitigation; alternatives

Table 6
PROJECT ALTERNATIVE 4: PARKING ON-SITE AND AT 621 E. COLORADO BOULEVARD
SUMMARY OF STREET SEGMENT ANALYSIS

12-Mar-2009

Location	Dir.	[1] Existing Weekday ADT Volume	Project Alternative 4 [2] Total Project Site Dist.	[3] Subtotal Daily Site Trip Ends	[4] Total Project Off-Site Dist.	[5] Subtotal Daily Off-Site Trip Ends	[6] Total Daily Project Trip Ends	[7] Existing W/Project ADT Volume ([1]+[6])	[8] Percent ADT Growth ([6]/[7])
1 El Molino Avenue north of Walnut Street	NB	3,702	15.0% Out	99	15.0% Out	20	119	3,821	3.1%
	SB	3,904	20.0% In	132	5.0% In	7	139	4,043	3.4%
Total Location 1		7,606	----	231	----	27	258	7,864	3.3%
2 El Molino Avenue between Walnut Street and Union Street	NB	3,562	20.0% Out	132	20.0% Out	27	159	3,721	4.3%
	SB	4,057	30.0% In	197	5.0% In	7	204	4,261	4.8%
Total Location 2		7,619	----	329	----	34	363	7,982	4.5%
3 El Molino Avenue between Union Street and Colorado Boulevard	NB	4,342	35.0% Out	230	20.0% Out	27	257	4,599	5.6%
	SB	3,631	35.0% In	230	20.0% In	27	257	3,888	6.6%
Total Location 3		7,973	----	460	----	54	514	8,487	6.1%
4 El Molino Avenue between Green Street and Cordova Street	NB	3,304	20.0% In	132	0.0% Out	0	132	3,436	3.8%
	SB	3,110	15.0% Out	99	0.0% In	0	99	3,209	3.1%
Total Location 4		6,414	----	231	----	0	231	6,645	3.5%
5 El Molino Avenue between Cordova Street and Del Mar Boulevard	NB	2,888	15.0% In	99	0.0% Out	0	99	2,987	3.3%
	SB	2,704	10.0% Out	66	0.0% In	0	66	2,770	2.4%
Total Location 5		5,592	----	165	----	0	165	5,757	2.9%

[1] Weekday machine count data conducted by Accutek Traffic Data, Inc. in February 2009. Copies of the summary data worksheets of the 24-hour counts are provided in Appendix A. The existing ADT volume for Location 3 (El Molino Avenue between Union Street and Colorado Boulevard) reflects the proposed left-turn prohibitions at the northbound and southbound approaches on El Molino Avenue at the Colorado Boulevard intersection.
[2] Total project site distribution of inbound and outbound daily project alternative traffic at the analyzed street segment.
[3] Daily project volume includes inbound and outbound trips based on 83 percent of the project alternative net increase of 1,585 daily trip ends (approximately 793 inbound trips and 793 outbound trips) as contained in Table 6-1 of the "Final Traffic Impact Study for the Playhouse Plaza Project in City of Pasadena", prepared by LLG Engineers, July 3, 2008.
[4] Total off-site distribution of inbound and outbound daily project traffic at the analyzed street segment.
[5] Daily project volume includes inbound and outbound trips based on 17 percent of the project alternative net increase of 1,585 daily trip ends (approximately 793 inbound trips and 793 outbound trips) as contained in Table 6-1 of the "Final Traffic Impact Study for the Playhouse Plaza Project in City of Pasadena", prepared by LLG Engineers, July 3, 2008.
[6] Total of columns [3] and [5].
[7] Total of columns [1] and [6].
[8] Column [6] divided by column [7].

City of Pasadena ADT impact thresholds for street segments are as follows:

ADT Growth on Street Segment	Review	Required Mitigation
0.0 - 2.4% ADT Growth	Project review/initial study	Staff review and conditions
2.5 - 4.9% ADT Growth	Initial study/focused traffic study	Soft mitigation (TDM, etc.)
5.0 - 7.4% ADT Growth	Initial study/full traffic study	Soft/physical mitigation; alternatives
7.5% + ADT Growth	Initial study/full traffic study	Soft/physical mitigation; alternatives

APPENDIX A

AUTOMATIC 24-HOUR MACHINE TRAFFIC COUNTS

Accutek Traffic Data, Inc.
21114 Trigger Lane
Diamond Bar, CA 91765
Tel: (909) 595-6199 Fax: (909) 595-6022

El Molino Av n/o Walnut St

Start Time	04-Feb-0 Wed	NB		Hour Totals		SB		Hour Totals		Combined Totals	
		Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		10	65			5	60				
12:15		6	58			1	63				
12:30		4	53			1	76				
12:45		3	62	23	238	2	94	9	293	32	531
01:00		2	55			0	79				
01:15		1	79			1	78				
01:30		1	68			1	71				
01:45		1	62	5	264	3	68	5	296	10	560
02:00		1	65			0	70				
02:15		1	66			1	55				
02:30		3	57			0	72				
02:45		1	62	6	250	0	62	1	259	7	509
03:00		0	65			0	62				
03:15		1	88			1	65				
03:30		0	92			1	74				
03:45		0	67	1	312	4	85	6	286	7	598
04:00		0	87			1	48				
04:15		0	89			1	58				
04:30		3	104			3	56				
04:45		1	77	4	357	5	48	10	210	14	567
05:00		1	143			5	65				
05:15		0	116			11	61				
05:30		0	99			14	62				
05:45		1	90	2	448	17	61	47	249	49	697
06:00		3	88			17	71				
06:15		6	89			14	54				
06:30		8	62			30	52				
06:45		17	55	34	294	43	64	104	241	138	535
07:00		31	64			41	39				
07:15		27	50			51	33				
07:30		26	38			72	31				
07:45		50	54	134	206	117	31	281	134	415	340
08:00		53	43			117	28				
08:15		60	52			103	19				
08:30		49	52			102	18				
08:45		53	31	215	178	103	21	425	86	640	264
09:00		33	31			92	22				
09:15		29	36			74	17				
09:30		41	49			68	15				
09:45		34	26	137	142	76	5	310	59	447	201
10:00		34	22			64	18				
10:15		37	23			58	10				
10:30		38	16			62	7				
10:45		42	9	151	70	86	12	270	47	421	117
11:00		46	16			54	13				
11:15		44	7			55	10				
11:30		53	7			55	2				
11:45		53	5	196	35	82	5	246	30	442	65
Total		908	2794			1714	2190			2622	4984
Percent		24.5%	75.5%			43.9%	56.1%			34.5%	65.5%
Grand Total		908	2794			1714	2190			2622	4984
Percent		24.5%	75.5%			43.9%	56.1%			34.5%	65.5%
ADT		ADT 7,606		AADT 7,606							

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El Molino Av b/t Walnut St & Union St

Start Time	04-Feb-0 Wed	NB Morning	NB Afternoon	Hour Totals Morning	Hour Totals Afternoon	SB Morning	SB Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		7	71			5	88				
12:15		6	50			2	69				
12:30		3	55			1	72				
12:45		3	69	19	245	1	77	9	306	28	551
01:00		4	62			1	93				
01:15		1	65			1	79				
01:30		1	66			1	73				
01:45		1	74	7	267	3	72	6	317	13	584
02:00		1	63			0	80				
02:15		1	71			0	61				
02:30		3	40			0	72				
02:45		0	70	5	244	0	75	0	288	5	532
03:00		1	66			0	73				
03:15		0	104			1	76				
03:30		0	79			0	72				
03:45		0	74	1	323	1	90	2	311	3	634
04:00		0	90			1	57				
04:15		0	79			0	62				
04:30		3	97			1	68				
04:45		0	79	3	345	1	71	3	258	6	603
05:00		1	114			4	96				
05:15		1	106			9	71				
05:30		3	90			8	71				
05:45		3	90	8	400	18	75	39	313	47	713
06:00		2	88			13	74				
06:15		7	86			9	56				
06:30		6	58			22	55				
06:45		16	58	31	290	38	63	82	248	113	538
07:00		23	63			36	44				
07:15		19	45			45	41				
07:30		32	34			78	39				
07:45		47	40	121	182	108	29	267	153	388	335
08:00		52	43			113	30				
08:15		56	36			104	15				
08:30		48	40			93	23				
08:45		46	40	202	159	100	19	410	87	612	246
09:00		30	30			90	23				
09:15		34	44			69	20				
09:30		33	29			59	10				
09:45		38	25	135	128	62	8	280	61	415	189
10:00		41	28			62	15				
10:15		35	16			77	10				
10:30		37	14			53	8				
10:45		51	15	164	73	78	15	270	48	434	121
11:00		48	12			67	10				
11:15		42	5			62	8				
11:30		46	5			62	2				
11:45		47	5	183	27	82	6	273	26	456	53
Total		879	2683			1641	2416			2520	5099
Percent		24.7%	75.3%			40.4%	59.6%			33.1%	66.9%
Grand Total		879	2683			1641	2416			2520	5099
Percent		24.7%	75.3%			40.4%	59.6%			33.1%	66.9%
ADT		ADT 7,619		AADT 7,619							

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El Molino Av b/t Union St & Colorado Bl

Start Time	04-Feb-0 Wed	NB Morning	NB Afternoon	Hour Totals Morning	Hour Totals Afternoon	SB Morning	SB Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		9	75			5	77				
12:15		6	79			4	68				
12:30		6	66			2	66				
12:45		5	74	26	294	1	59	12	270	38	564
01:00		8	57			1	81				
01:15		1	87			0	80				
01:30		0	63			1	65				
01:45		0	75	9	282	1	56	3	282	12	564
02:00		1	75			4	67				
02:15		1	69			1	52				
02:30		3	53			0	55				
02:45		0	67	5	264	0	67	5	241	10	505
03:00		1	59			0	72				
03:15		0	80			1	75				
03:30		2	84			0	76				
03:45		0	83	3	306	0	79	1	302	4	608
04:00		1	75			0	59				
04:15		0	84			0	65				
04:30		4	101			0	76				
04:45		1	62	6	322	2	65	2	265	8	587
05:00		0	96			5	104				
05:15		0	81			9	68				
05:30		3	83			8	62				
05:45		3	83	6	343	12	63	34	297	40	640
06:00		2	76			13	72				
06:15		11	78			9	61				
06:30		12	58			11	49				
06:45		18	68	43	280	26	60	59	242	102	522
07:00		28	68			32	38				
07:15		24	61			46	38				
07:30		49	47			53	38				
07:45		75	49	176	225	92	21	223	135	399	360
08:00		95	39			97	35				
08:15		89	37			80	18				
08:30		78	35			72	23				
08:45		96	36	358	147	84	23	333	99	691	246
09:00		50	26			66	17				
09:15		73	41			46	25				
09:30		48	29			41	19				
09:45		57	30	228	126	66	15	219	76	447	202
10:00		57	29			57	13				
10:15		43	27			65	12				
10:30		54	21			46	5				
10:45		58	14	212	91	70	14	238	44	450	135
11:00		55	13			51	14				
11:15		49	10			57	4				
11:30		61	7			53	3				
11:45		76	6	241	36	61	6	222	27	463	63
Total		1313	2716			1351	2280			2664	4996
Percent		32.6%	67.4%			37.2%	62.8%			34.8%	65.2%
Grand Total		1313	2716			1351	2280			2664	4996
Percent		32.6%	67.4%			37.2%	62.8%			34.8%	65.2%
ADT		ADT 7,660		AADT 7,660							

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21114 Trigger Lane
Diamond Bar, CA 91765
Tel: (909) 595-6199 Fax: (909) 595-6022

371104NS
Site Code: 003711041301

El Molino Av b/t Green St & Cordova St

Start Time	04-Feb-0 Wed	NB Morning	NB Afternoon	Hour Totals Morning	Hour Totals Afternoon	SB Morning	SB Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		6	60			3	67				
12:15		4	58			4	67				
12:30		2	50			2	56				
12:45		3	71	15	239	2	63	11	253	26	492
01:00		4	47			1	65				
01:15		1	86			0	57				
01:30		0	65			1	53				
01:45		0	68	5	266	0	46	2	221	7	487
02:00		1	70			5	54				
02:15		1	60			0	44				
02:30		3	49			0	40				
02:45		1	62	6	241	0	58	5	196	11	437
03:00		1	56			0	60				
03:15		1	79			1	66				
03:30		0	77			0	51				
03:45		0	58	2	270	1	65	2	242	4	512
04:00		1	62			1	53				
04:15		0	71			1	48				
04:30		4	79			0	61				
04:45		0	54	5	266	0	62	2	224	7	490
05:00		1	79			0	90				
05:15		0	62			4	61				
05:30		3	65			6	72				
05:45		6	69	10	275	6	63	16	286	26	561
06:00		1	58			5	68				
06:15		6	59			8	58				
06:30		10	51			9	52				
06:45		14	62	31	230	16	46	38	224	69	454
07:00		25	56			16	37				
07:15		31	35			33	35				
07:30		41	27			48	34				
07:45		61	31	158	149	82	16	179	122	337	271
08:00		74	32			87	22				
08:15		64	30			69	20				
08:30		71	24			68	21				
08:45		79	22	288	108	62	17	286	80	574	188
09:00		48	22			50	22				
09:15		58	21			48	29				
09:30		35	16			38	15				
09:45		47	19	188	78	42	21	178	87	366	165
10:00		49	21			40	15				
10:15		46	16			52	16				
10:30		51	16			44	9				
10:45		55	11	201	64	49	8	185	48	386	112
11:00		45	9			39	10				
11:15		36	4			41	4				
11:30		43	7			56	7				
11:45		60	5	184	25	61	5	197	26	381	51
Total		1093	2211			1101	2009			2194	4220
Percent		33.1%	66.9%			35.4%	64.6%			34.2%	65.8%
Grand Total		1093	2211			1101	2009			2194	4220
Percent		33.1%	66.9%			35.4%	64.6%			34.2%	65.8%
ADT		ADT 6,414		AADT 6,414							

Accutek Traffic Data, Inc.
21114 Trigger Lane
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El Molino Av b/t Cordova St & Del Mar Bl

Start Time	04-Feb-0 Wed	NB Morning	NB Afternoon	Hour Totals Morning	Hour Totals Afternoon	SB Morning	SB Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		4	53			2	57				
12:15		1	56			0	39				
12:30		1	62			2	45				
12:45		0	51	6	222	1	36	5	177	11	399
01:00		0	48			3	45				
01:15		0	43			1	44				
01:30		1	35			0	51				
01:45		0	53	1	179	0	56	4	196	5	375
02:00		0	56			0	64				
02:15		1	90			0	57				
02:30		0	53			0	50				
02:45		1	52	2	251	0	59	0	230	2	481
03:00		1	58			0	56				
03:15		1	69			0	45				
03:30		1	48			1	61				
03:45		4	54	7	229	0	64	1	226	8	455
04:00		1	52			1	81				
04:15		1	48			2	69				
04:30		2	59			5	80				
04:45		8	50	12	209	8	55	16	285	28	494
05:00		2	50			3	59				
05:15		10	52			7	50				
05:30		11	43			11	48				
05:45		13	43	36	188	14	43	35	200	71	388
06:00		17	40			24	41				
06:15		33	32			28	36				
06:30		47	24			37	26				
06:45		83	17	180	113	60	17	149	120	329	233
07:00		81	22			61	30				
07:15		86	23			38	17				
07:30		73	24			64	22				
07:45		100	24	340	93	43	24	206	93	546	186
08:00		51	19			40	25				
08:15		58	18			27	20				
08:30		38	16			27	21				
08:45		44	15	191	68	28	14	122	80	313	148
09:00		36	13			32	14				
09:15		42	15			31	16				
09:30		34	13			33	10				
09:45		37	9	149	50	32	7	128	47	277	97
10:00		43	6			30	12				
10:15		39	8			29	3				
10:30		32	3			44	7				
10:45		51	1	165	18	36	5	139	27	304	45
11:00		41	3			57	4				
11:15		44	1			46	2				
11:30		43	3			55	0				
11:45		40	4	168	11	50	4	208	10	376	21
Total		1257	1631			1013	1691			2270	3322
Percent		43.5%	56.5%			37.5%	62.5%			40.6%	59.4%
Grand Total		1257	1631			1013	1691			2270	3322
Percent		43.5%	56.5%			37.5%	62.5%			40.6%	59.4%
ADT		ADT 5,592		AADT 5,592							

LINSCOTT LAW & GREENSPAN
engineers

FINAL TRAFFIC IMPACT STUDY

PLAYHOUSE PLAZA PROJECT

City of Pasadena, California
July 3, 2008

Prepared for:

City of Pasadena Department of Transportation
221 East Walnut Street, Suite 210
Pasadena, California 91101

LLG Ref. 1-08-3727-1

Under the Supervision of:

Clare M. Look-Jaeger

Clare M. Look-Jaeger, P.E.
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1.0 INTRODUCTION

This traffic analysis has been prepared to identify and evaluate the potential traffic impacts of the proposed Playhouse Plaza project. The traffic analysis includes the review and evaluation of a total of four project alternatives which reflect different parking and site access schemes. The proposed development project is located at 680 East Colorado Boulevard in the City of Pasadena, California. The project site is located on the southeast corner of the El Molino Avenue/Colorado Boulevard intersection within the City's Playhouse District. The project site is bounded by Colorado Boulevard to the north, Green Street to the south, existing commercial properties to the east, and El Molino Avenue to the west. The proposed project site location and general vicinity are shown in ***Figure 1–1***.

The traffic analysis follows City of Pasadena traffic study guidelines[1] and is consistent with traffic impact assessment guidelines set forth in the *2004 Congestion Management Program for Los Angeles County*[2] This traffic analysis evaluates potential project-related impacts at 13 key intersections in the vicinity of the project site. The study intersections were determined in consultation with City of Pasadena Department of Transportation staff. The Intersection Capacity Utilization and Highway Capacity Manual methods were used to determine Volume-to-Capacity ratios and corresponding Levels of Service at the study intersections. Five street segments in the project vicinity were also evaluated for project-related impacts based on criteria set forth in the City's traffic study guidelines. In addition, a review was conducted of Los Angeles County Metropolitan Transportation Authority intersection and freeway monitoring stations to determine if a Congestion Management Program transportation impact assessment analysis is required for the proposed project.

This study (i) presents existing traffic volumes, (ii) forecasts future traffic volumes with the related projects, (iii) forecasts future traffic volumes with the proposed project, (iv) determines project-related impacts, and (v) recommends mitigation measures, where necessary.

1.1 Study Area

Based on direction from City of Pasadena staff, a total of 18 locations, including 13 study intersections and five street segments, have been identified for evaluation. These study locations provide local access to the study area and define the extent of the boundaries for this traffic impact investigation. Further discussion of the existing street system and study area is provided in Section 4.0 herein.

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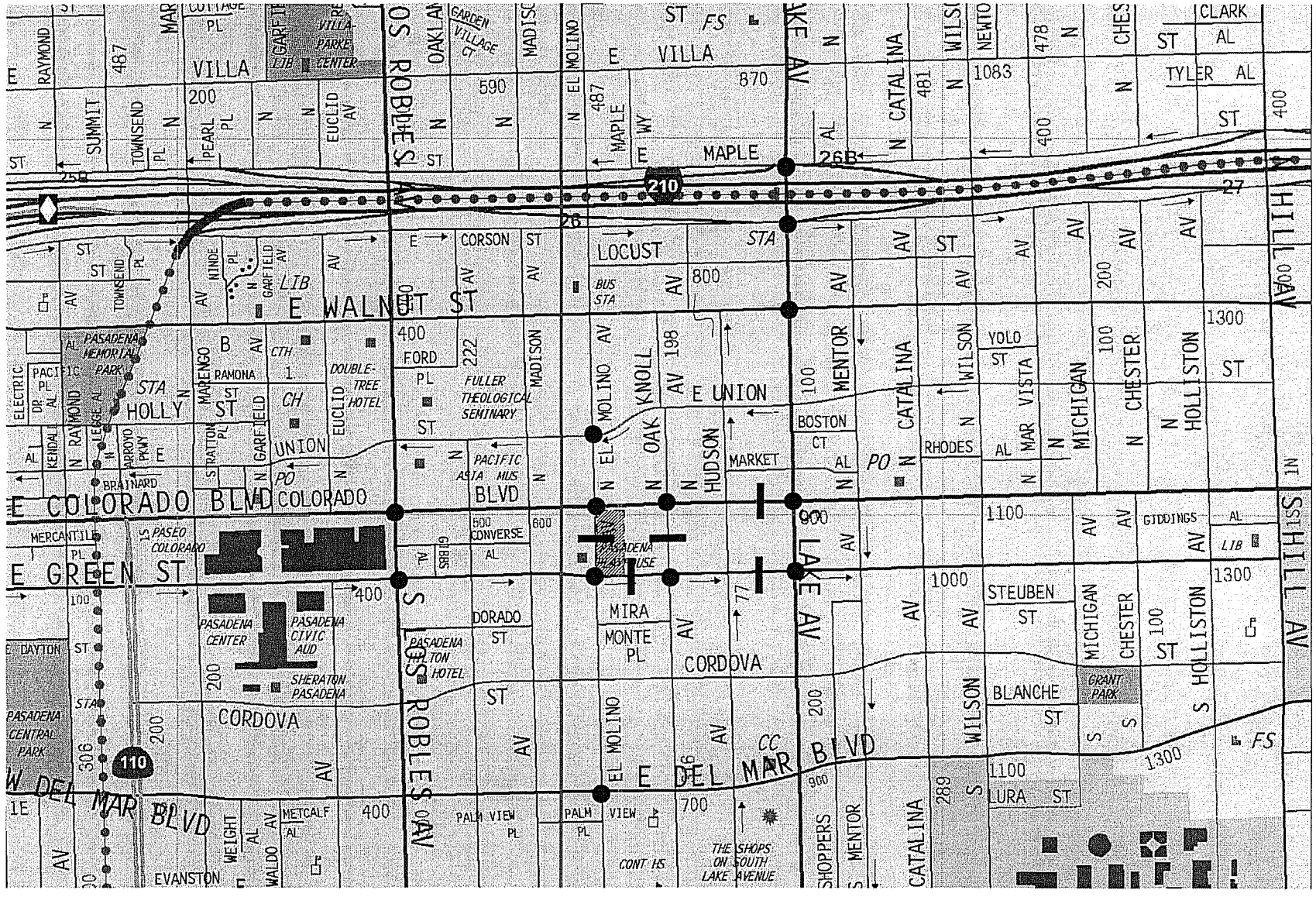
[1] *Guidelines for Transportation Review of Projects*, City of Pasadena Department of Transportation, February 2004.
[2] *2004 Congestion Management Program for Los Angeles County*, Los Angeles County Metropolitan Transportation Authority, July 2004.



NOT TO SCALE

MAP SOURCE: THOMAS BROS. GUIDE

STUDY INTERSECTION

STUDY STREET SEGMENT

FIGURE 1-1
VICINITY MAP

LINSCOTT, LAW & GREENSPAN, engineers

PLAYHOUSE PLAZA PROJECT

The general location of the project in relation to the study locations and surrounding street system is presented in *Figure 1–1*. The traffic analysis study area is generally comprised of those locations which have the greatest potential to experience significant traffic impacts due to the proposed project as defined by the Lead Agency. In the traffic engineering practice, the study area generally includes those intersections that are:

a. Immediately adjacent or in close proximity to the project site;

b. In the vicinity of the project site that are documented to have current or projected future adverse operational issues; and

c. In the vicinity of the project site that are forecast to experience a relatively greater percentage of project-related vehicular turning movements (e.g., at freeway ramp intersections).

The locations selected for analysis were based on the above criteria, proposed Playhouse Plaza project peak hour vehicle trip generation, the anticipated distribution of project vehicular trips and existing intersection/corridor operations.

2.0 PROJECT DESCRIPTION

2.1 Site Location

The proposed development project is located within the Playhouse District of the City of Pasadena, California. The project site is located at 680 East Colorado Boulevard, at the southeast corner of the El Molino Avenue/Colorado Boulevard intersection. The project site is bounded by Colorado Boulevard to the north, Green Street to the south, existing commercial properties to the east, and San Gabriel Boulevard to the west.

The project site is located within close proximity to several multi-modal corridors such as Los Robles Avenue, Lake Avenue, Maple Street, Corson Street, Walnut Street, Union Street, Colorado Boulevard, Green Street, and Del Mar Boulevard. As stated in the 2004 Mobility Element of the City of Pasadena General Plan (November 8, 2004), multi-modal corridors are being developed to promote the efficient and convenient travel by all appropriate modes (e.g., pedestrian, bicycle, regional and local bus transit, light rail, vehicular, etc.). The City's intent is to "create an environment where different modes of travel can co-exist and share the roadway, providing seamless connections and reinforcing each other to develop a balanced and efficient transportation system."[3]

The Playhouse Plaza project site is well-located to facilitate pedestrian activity and usage of public transit services, particularly the Los Angeles Metropolitan Transportation Authority (Metro) Gold Line Light Rail system and transit routes. The Metro Gold Line Lake Avenue station is located approximately one-half mile from the project site on Lake Avenue at the I-210 Freeway. The project site is situated adjacent to the Pasadena Playhouse and is within close proximity to the retail, restaurant, and other commercial businesses located along the Colorado Boulevard, Green Street and El Molino Avenue corridors. Further, regional and local public bus transit stops are provided nearby on Los Robles Avenue, Lake Avenue, Walnut Street, Union Street, Colorado Boulevard, Green Street, and Del Mar Boulevard.

2.2 Existing Project Site

The project site is currently occupied by a vacated commercial building with approximately 66,000 square feet of floor area. The vacated commercial building previously housed the Homestead House furniture store. The existing structures located on the project site will be demolished to accommodate development of the Playhouse Plaza project. Vehicular access to the existing project site and surface parking area is presently provided via driveways along El Molino Avenue. Further discussion of the existing site access and circulation scheme is provided in Section 3.0 herein.

[3] *City of Pasadena General Plan 2004 Mobility Element,* prepared by the Department of Transportation, adopted in November 2004.

2.3 Proposed Project Description

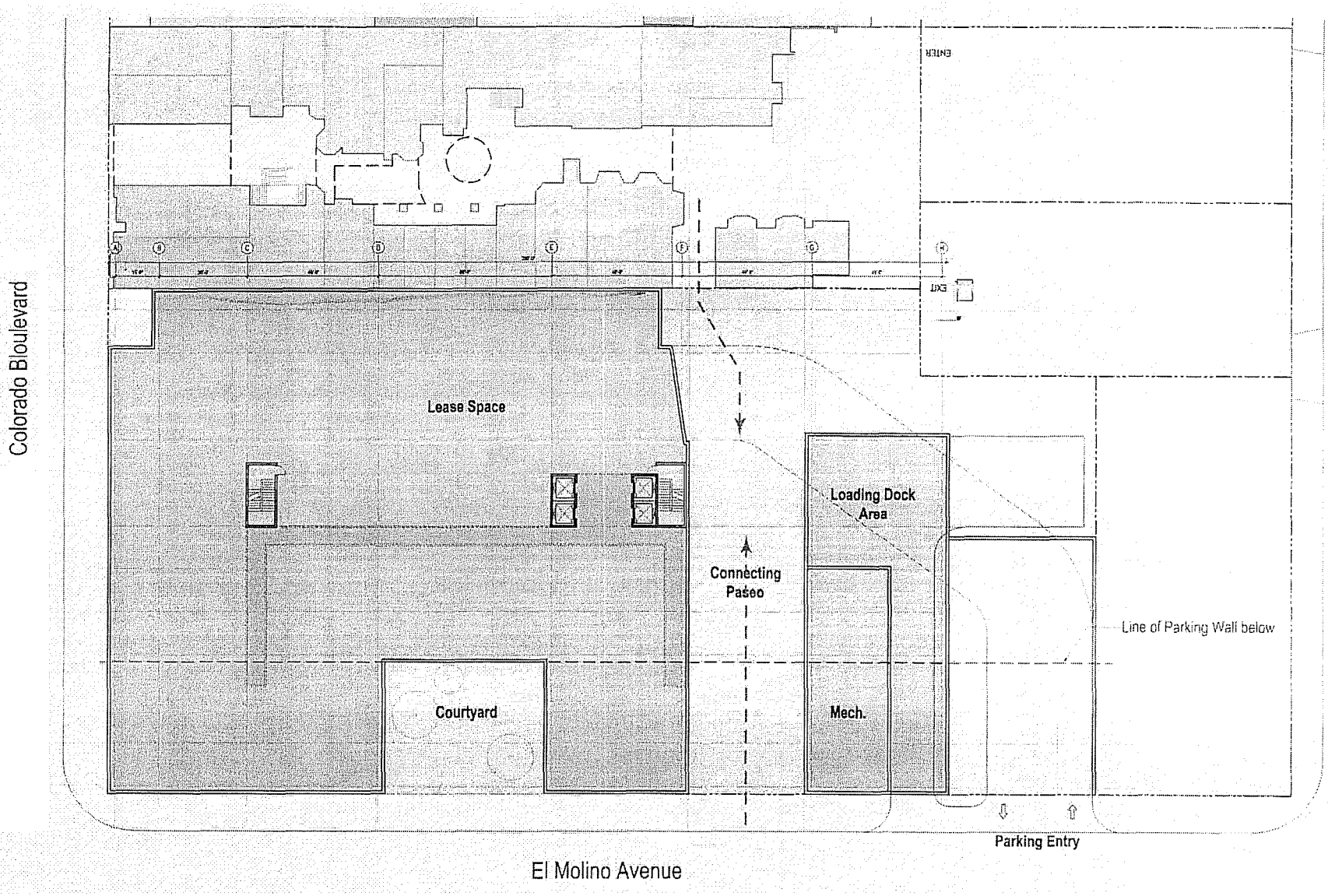
The proposed project consists of the development of a five-story commercial building with a total of 159,971 gross square feet of building area. The proposed commercial building is planned to include a total of 145,564 square feet of general office space and 14,407 square feet of ground floor commercial space. The ground floor commercial space is expected to contain office building tenant services such as restaurant, cafeteria and retail uses. In addition, the proposed project is planned to include a total of 522 parking spaces to be provided in subterranean parking levels. The parking spaces to be provided as part of the project will include 366 project-only spaces and 156 public spaces to serve the Playhouse District.

The proposed project is planned to be developed in one construction phase. Construction of the proposed project is planned to begin in year 2008 with occupancy in year 2010. The site plan for the proposed project is illustrated in ***Figure 2–1***.

Based on direction from City staff, a total of four alternative parking and site access schemes have been evaluated for the proposed project. The parking schemes vary from providing all parking (i.e., both project-only and public spaces) on-site to providing a combination of on-site parking and off-site parking. The site access schemes involve variations for on-site access and access at the off-site parking facilities. The following four alternative parking and access schemes have been evaluated for the proposed project:

- Project Alternative 1: All Parking On-Site/One Site Access Point
- Project Alternative 2: All Parking On-Site/Two Site Access Points
- Project Alternative 3: Parking On-Site and at the Madison Avenue Structure
- Project Alternative 4: Parking On-Site and at 621 E. Colorado Boulevard

A detailed summary of the project alternative parking and access schemes is presented in ***Table 2–1***. Also, an aerial photograph with the location of the project site and potential off-site parking facilities is shown in ***Figure 2–2***. Further discussion of the parking and site access schemes associated with the project alternatives is contained in Section 3.0 herein.



NOT TO SCALE

SOURCE: GENSLER

FIGURE 2-1
PROJECT SITE PLAN

LINSCOTT, LAW & GREENSPAN, engineers

PLAYHOUSE PLAZA PROJECT

Table 2-1
SUMMARY OF PARKING AND ACCESS SCHEMES FOR PROJECT ALTERNATIVES

03-Jul-2008

PROJECT COMPONENT	PROJECT ALTERNATIVE 1: All Parking On-Site/ One Site Access Point	PROJECT ALTERNATIVE 2 All Parking On-Site/ Two Site Access Points	PROJECT ALTERNATIVE 3 Parking On-Site & at Madison Structure	PROJECT ALTERNATIVE 4 Parking On-Site & at 621 E. Colorado Blvd.
ON-SITE PARKING:				
Total Number of On-Site Parking Spaces	522 Spaces	522 Spaces	400 Spaces	400 Spaces
OFF-SITE PARKING:				
Total Number of Off-Site Parking Spaces	N/A	N/A	122 Spaces	122 Spaces
ACCESS SCHEME TO/FROM PARKING:				
On-Site Parking	Via one driveway on El Molino Avenue	Via one driveway on El Molino Avenue & one driveway on Green Street	Via one driveway on El Molino Avenue	Via one driveway on El Molino Avenue
Off-Site Parking	N/A	N/A	Via inbound driveways on Madison Avenue & via outbound driveways on Madison Avenue/Green Street	Via one driveway on Madison Avenue & one driveway on El Molino Avenue

N/A = Not Applicable

N

NOT TO SCALE

MAP SOURCE: VIRTUAL EARTH

FIGURE 2-2
LOCATION OF PROJECT SITE AND POTENTIAL OFF-SITE PARKING FACILITIES

LINSCOTT, LAW & GREENSPAN, engineers

PLAYHOUSE PLAZA PROJECT

3.0 SITE ACCESS AND CIRCULATION

Descriptions of the existing site access and site access and circulation schemes for each project alternative are provided in the following subsections.

3.1 Existing Site Access

Vehicular access to the existing project site is presently provided via two driveways along El Molino Avenue. These driveways currently provide access to the site and existing surface parking spaces. All of the existing project site driveways presently accommodate full access (i.e., left-turn and right-turn ingress and egress turning movements). The existing driveways will be closed pursuant to City standards with concrete curb, gutter and sidewalk with project construction. Also, the project applicant will repair any existing or newly damaged curb, gutter and sidewalk without cutting any asphalt pavement along the Colorado Boulevard and El Molino Avenue property frontages.

3.2 Proposed Project Site Access

As previously noted, a detailed summary of the project alternative parking and access schemes is presented in *Table 2–1*.

3.2.1 *Project Alternative 1 Site Access*

Project Alternative 1 assumes provision of all parking spaces (i.e., 366 project-only spaces and 156 public spaces) on-site and one site driveway on El Molino Avenue. Vehicular access under Project Alternative 1 would occur at a single driveway located along the east side of El Molino Avenue approximately mid-way between Colorado Boulevard and Green Street. The El Molino Avenue driveway would provide access to an internal ramp, which would extend to the subterranean parking levels. This driveway would accommodate access for employees, visitors and patrons of the proposed project, as well as for motorists accessing the public parking spaces within the site. The driveway would accommodate full access (i.e., both left-turn and right-turn ingress and egress turning movements). Additionally, should the proposed project be developed with the Project Alternative 1 parking and site access scheme, the project driveway would be constructed to City of Pasadena design standards.

3.2.2 *Project Alternative 2 Site Access*

Project Alternative 2 assumes provision of all parking spaces (i.e., 366 project-only spaces and 156 public spaces) on-site and two site driveways: one driveway on El Molino Avenue and one driveway on Green Street. Vehicular access under Project Alternative 2 would occur at one driveway located along the east side of El Molino Avenue approximately mid-way between Colorado Boulevard and Green Street and at one driveway located along the north side of Green Street between El Molino Avenue and Oak Knoll Avenue. Both driveways would accommodate access for employees, visitors and patrons of the proposed project, as well as for motorists accessing the public parking spaces within the site. The El Molino Avenue driveway would accommodate full access (i.e., both left-turn and right-turn ingress and egress turning movements). The Green Street driveway would be shared with the existing Arcade Alley

development and the two developments would need to enter into a reciprocal access agreement. Also, as Green Street is a one-way eastbound roadway, the Green Street driveway would be limited to left-turn ingress and egress turning movements. In addition, should the proposed project be developed with the Project Alternative 2 parking and site access scheme, the project driveways would be constructed to City of Pasadena design standards.

3.2.3 *Project Alternative 3 Site Access*

Project Alternative 3 assumes a combination of on-site parking and off-site parking. A total of 400 spaces of the project's total of 522 parking spaces would be provided on-site. This total of 400 spaces would include a total of 304 project-only spaces and 96 public spaces. The remaining 122 project parking spaces (i.e., 62 project-only spaces and 60 public spaces) would be provided within a proposed parking structure to be located along Madison Avenue. Access to the project site would be provided via one driveway along El Molino Avenue, consistent with Project Alternative 1 described above. Access to the proposed Madison Avenue parking structure would be provided via inbound driveways on Madison Avenue and via outbound driveways on Madison Avenue and Green Street.

3.2.4 *Project Alternative 4 Site Access*

Project Alternative 4 assumes a combination of on-site parking and off-site parking. A total of 400 spaces of the project's total of 522 parking spaces would be provided on-site. This total of 400 spaces would include a total of 304 project-only spaces and 96 public spaces. The remaining 122 project parking spaces (i.e., 62 project-only spaces and 60 public spaces) would be provided within the parking structure located at 621 E. Colorado Boulevard. Access to the project site would be provided via one driveway along El Molino Avenue, consistent with Project Alternative 1 described above. Access to the commercial levels of the parking structure at 621 E. Colorado Boulevard is provided via single driveways on Madison Avenue and El Molino Avenue. Both driveways currently accommodate left-turn and right-turn ingress and egress turning movements.

3.3 Pedestrian Access

The project has been designed to encourage pedestrian activity and walking as a transportation mode. As indicated in *Figure 2–1*, walkways are located adjacent to the proposed commercial building, as well as connect to adjacent sidewalks in a manner that promotes walkability. Walkability is a term for the extent to which walking is readily available as a safe, connected, accessible and pleasant mode of transport.[4] There are five basic requirements that are widely accepted as key aspects of the walkability of urban areas that should be satisfied. The underlying principle is that pedestrians should not be delayed, diverted, or placed in danger. The five primary characteristics of walkability are as follows:

- Connectivity: People can walk from one place to another without encountering major obstacles, obstructions, or loss of connectivity.

[4] Chapter 4 of the *Pedestrian Network Planning and Facilities Design Guide*, Government of New Zealand, from the www.ltsa.govt.nz website.

- Convivial: Pedestrian routes are friendly and attractive, and are perceived as such by pedestrians.

- Conspicuous: Suitable levels of lighting, visibility and surveillance over its entire length, with high quality delineation and signage.

- Comfortable: High quality and well-maintained footpaths of suitable widths, attractive landscaping and architecture, shelter and rest spaces, and a suitable allocation of roadspace to pedestrians.

- Convenient: Walking is a realistic travel choice, partly because of the impact of the other criteria set forth above, but also because walking routes are of a suitable length as a result of land use planning with minimal delays.

A review of the proposed project pedestrian walkway network indicates that these five primary characteristics are accommodated as part of the proposed project. The project is situated adjacent to and accessible to the Pasadena Playhouse, retail, restaurant, and other commercial businesses located along the Colorado Boulevard, Green Street and El Molino Avenue corridors. Further, regional and local public bus transit stops are provided adjacent to the project site as well as nearby on Los Robles Avenue, Lake Avenue, Walnut Street, Union Street, Colorado Boulevard, and Green Street. The pedestrian walkways will be appropriately landscaped and adorned to provide a friendly walking environment.

3.4 Bicycle Access

Bicycle access to the project site will be facilitated by the City of Pasadena bicycle roadway network. A total of eight bicycle routes (i.e., Class II Bike Lanes, Class III Bike Routes or Enhanced Class III Bike Routes) in the City's bicycle network are located within an approximate one-mile radius from the project site. The following key bicycle routes are located near the Playhouse Plaza project site:

- North-South Routes

  - Marengo Avenue: Class III Bike Route - north of Del Mar Boulevard

    Class II Bike Lane – south of Del Mar Boulevard

  - Los Robles Avenue: Class III Bike Route (Enhanced)

  - Wilson Avenue: Class III Bike Route (Enhanced)

- East-West Routes

  - Maple Street: Class II Bike Lane
  - Corson Street: Class II Bike Lane
  - Cordova Street: Class III Bike Route
  - Del Mar Boulevard: Class III Bike Route
  - California Boulevard: Class III Bike Route west of Lake Avenue
    Class III Bike Route (Enhanced) east of Lake Avenue

Class II bikeways are lanes on the outside edge of roadways reserved for the exclusive use of bicycles and are designated with special signing and pavement markings. Class III bikeways are roadways recommended for bicycle use and are designated with signs posted along roadways. Enhanced Class III bikeways include 4" white edgelines and "Share the Road" signage.

Use of bicycles as a transportation mode to and from the project site (particularly for employees) should be encouraged by the provision of ample and safe parking. As identified in the City Code, the required number of bicycle parking spaces is 5 percent (5.0%) of the required number of automobile parking spaces. The type of spaces and dimensions should be provided based on City Code requirements, as well as to meet the needs of a variety of bicycles. The bicycle spaces should be provided in a readily accessible location. The selected location(s) should encourage use and maintain visibility for personal safety and theft protection. As needed, the project applicant should include site improvements such as planting and trash receptacles wherever bicycle parking is provided. Further, appropriate lighting should be provided to increase safety and provide theft protection during night-time parking.

4.0 EXISTING STREET SYSTEM

Immediate access to the project site is via El Molino Avenue. The following 13 study intersections were selected for analysis by City of Pasadena Department of Transportation (PasDOT) staff in order to determine potential impacts related to the proposed project:

1. Los Robles Avenue/Colorado Boulevard.
2. Los Robles Avenue/Green Street.
3. El Molino Avenue/Union Street.
4. El Molino Avenue/Colorado Boulevard.
5. El Molino Avenue/Green Street.
6. El Molino Avenue/Del Mar Boulevard.
7. Oak Knoll Avenue/Colorado Boulevard.
8. Oak Knoll Avenue/Green Street.
9. Lake Avenue-Maple Street/I-210 Freeway Westbound (WB) Ramps.
10. Lake Avenue-Corson Street/I-210 Freeway Eastbound (EB) Ramps.
11. Lake Avenue/Walnut Street.
12. Lake Avenue/Colorado Boulevard.
13. Lake Avenue/Green Street.

All of the study intersections are presently controlled by traffic signals. The existing lane configurations at the 13 study intersections are displayed in ***Figure 4-1***.

4.1 Roadway Classifications

The City of Pasadena utilizes the roadway categories recognized by regional, state and federal transportation agencies. There are four categories in the roadway hierarchy, ranging from freeways with the highest capacity to two-lane undivided roadways with the lowest capacity. The roadway categories are summarized as follows:

- *Freeways* are limited-access and high speed travel ways included in the state and federal highway systems. Their purpose is to carry regional through-traffic. Access is provided by interchanges with typical spacing of one mile or greater. No local access is provided to adjacent land uses.

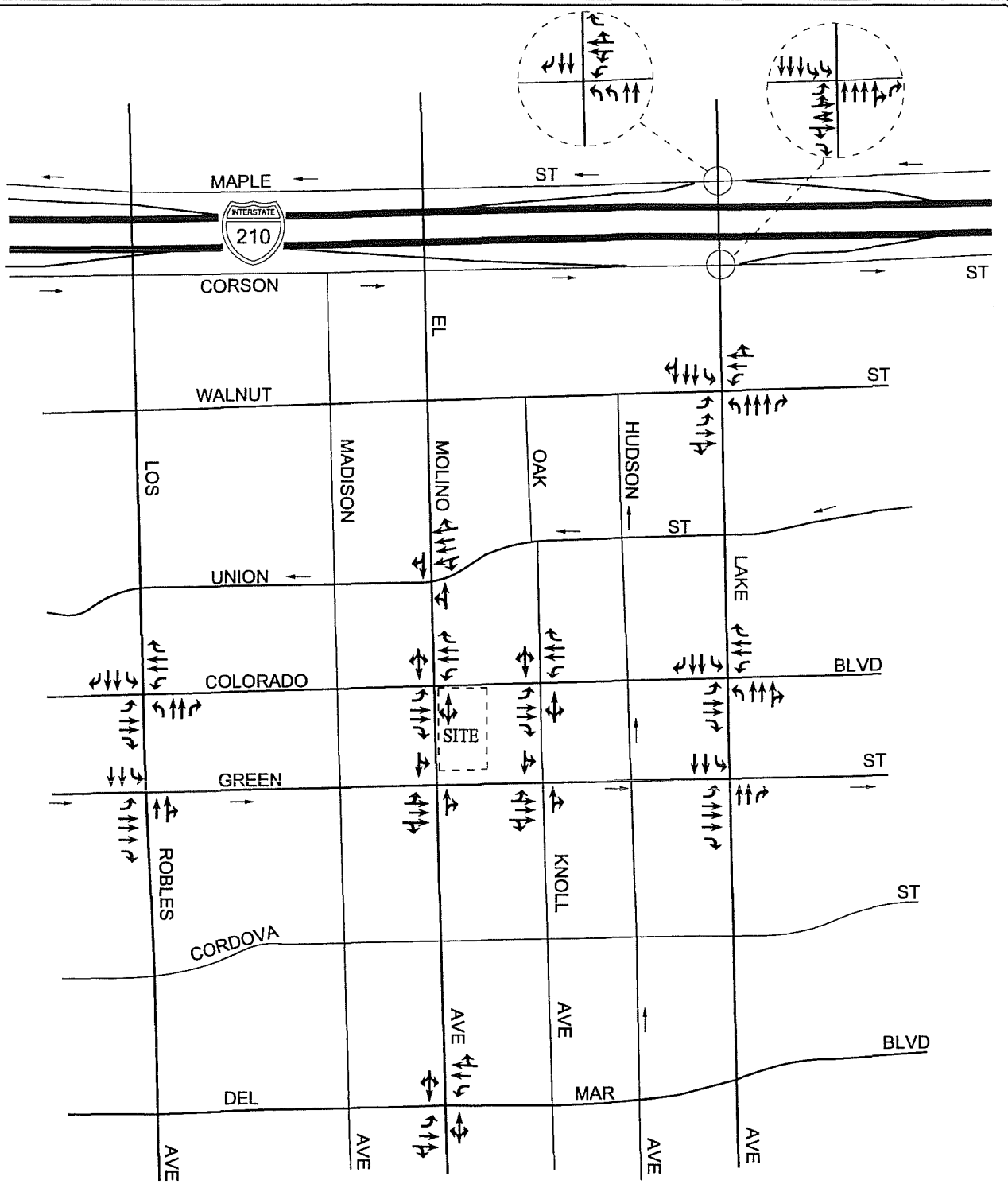


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FIGURE 4-1
EXISTING LANE CONFIGURATIONS

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- *Arterial* roadways are major streets that primarily serve through-traffic and provide access to abutting properties as a secondary function. Arterials are generally designed with two to six travel lanes and their major intersections are signalized. This roadway type is divided into two categories: principal and minor arterials. Principal arterials are typically four-or-more lane roadways and serve both local and regional through-traffic. Minor arterials are typically two-to-four lane streets that service local and commute traffic.

- *Collector* roadways are streets that provide access and traffic circulation within residential and non-residential (e.g., commercial and industrial) areas. Collector roadways connect local streets to arterials and are typically designed with two through travel lanes (i.e., one through travel lane in each direction) that may accommodate on-street parking. They may also provide access to abutting properties.

- *Local* roadways distribute traffic within a neighborhood, or similar adjacent neighborhoods, and are not intended for use as a through-street or a link between higher capacity facilities such as collector or arterial roadways. Local streets are fronted by residential uses and do not typically serve commercial uses.

4.2 Roadway Descriptions

A brief description of the important roadways in the project site vicinity is provided in the following paragraphs.

Los Robles Avenue is a north-south roadway located three blocks west of the project site. Los Robles Avenue is classified as a Principal Arterial in the City's General Plan Mobility Element (November 2004). Los Robles Avenue is also designated as a multimodal corridor north of Del Mar Boulevard and a de-emphasized street from Del Mar Boulevard to the southerly border of the City of Pasadena in the City's General Plan Mobility Element. Two through travel lanes are provided in each direction in the project study area. Exclusive left-turn and right-turn lanes are provided in both directions at the Colorado Boulevard intersection. An exclusive left-turn lane is also provided in the southbound direction at the Green Street intersection. Curbside parking is generally prohibited along both sides of Los Robles Avenue south of Colorado Boulevard in the project study area. However, north of Colorado Boulevard metered parking is provided along both sides of Los Robles Avenue. Los Robles Avenue is posted for a speed limit of 30 miles per hour in the project study area.

El Molino Avenue is a north-south roadway that borders the project site to the west. El Molino Avenue is classified as a Minor Arterial in the City's General Plan Mobility Element (November 2004). El Molino Avenue is also designated as a de-emphasized street in the City's General Plan Mobility Element. One through travel lane is provided in each direction in the project study area. Curbside parking is generally prohibited along both sides of El Molino Avenue in the project study area. However, between Colorado Boulevard and Green Street one-hour parking is provided along the west side of the roadway. South of Cordova Street, two-hour parking is provided along the east side of El Molino Avenue. El Molino Avenue is posted for a speed limit of 25 miles per hour in the project study area.

Oak Knoll Avenue is a north-south roadway located one block east of the project site. Oak Knoll Avenue is classified as a Minor Arterial in the City's General Plan Mobility Element (November 2004). One through travel lane is provided in each direction in the project study area. One-hour curbside parking is generally provided along both sides of Oak Knoll Avenue in the project study area. However, south of Green Street two-hour parking is provided along both sides of Oak Knoll Avenue. Oak Knoll Avenue is posted for a speed limit of 25 miles per hour in the project study area.

Lake Avenue is a north-south roadway located approximately one-quarter mile east of the project site. Lake Avenue is classified as a Minor Arterial in the City's General Plan Mobility Element (November 2004). Lake Avenue is also designated as a multimodal corridor between Woodbury Road and California Boulevard in the City's General Plan Mobility Element. Two to three through lanes are generally provided in each direction in the project study area. Dual left-turn lanes are provided in the northbound direction at the I-210 Freeway WB ramps-Maple Street intersection. Dual left-turn lanes are also provided in the southbound direction at the I-210 Freeway EB ramps-Corson Street intersection. Exclusive left-turn lanes are provided in both directions at the Walnut Street and Colorado Boulevard intersections as well as in the southbound direction at the Green Street intersection. Separate right-turn lanes are provided in the southbound direction at the I-210 Freeway WB ramps-Maple Street and Colorado Boulevard intersections and in the northbound direction at the I-210 Freeway EB ramps-Corson Street, Walnut Street, and Green Street intersections. Parking is generally prohibited along both sides of Lake Avenue between the I-210 Freeway ramps and Colorado Boulevard. South of Green Street, one-hour parking is provided along both sides of Lake Avenue. Lake Avenue is posted for a speed limit of 35 miles per hour speed limit north of the I-210 Freeway and 25 miles per hour south of Walnut Street.

Walnut Street is an east-west oriented roadway that is located two blocks north of the project site. Walnut Street is classified as a Minor Arterial in the City's General Plan Mobility Element (November 2004). Walnut Street is also designated as a multimodal corridor in the City's General Plan Mobility Element. Two through travel lanes are provided in each direction within the project study area. Dual left-turn lanes are provided in the eastbound direction and an exclusive left-turn lane is provided in the westbound direction on Walnut Street at the Lake Avenue intersection. Parking is generally prohibited on both sides of Walnut Street near Lake Avenue within the project study area. Walnut Street is posted for a 30 miles per hour speed limit in the project vicinity.

Colorado Boulevard is an east-west roadway that borders the project site to the north. Colorado Boulevard is classified as a Principal Arterial in the City's General Plan Mobility Element (November 2004). Colorado Boulevard is also designated as a multimodal corridor in the City's General Plan Mobility Element. Two through travel lanes are provided in each direction on Colorado Boulevard in the project vicinity. Exclusive left-turn and right-turn lanes are provided in each direction at all signalized locations near the project site (e.g., Los Robles Avenue, El Molino Avenue, Oak Knoll Avenue, etc.). Dual left-turn lanes are provided in the eastbound direction and an exclusive left-turn lane is provided in the westbound direction on Colorado

Boulevard at the Lake Avenue intersection. One-hour parking between the hours of 9:00 AM and 6:00 PM is provided along both sides of Colorado Boulevard in the project vicinity. Colorado Boulevard is posted for a speed limit of 30 miles per hour near the project site.

Green Street is a one-way eastbound roadway located that borders the project site to the south. Green Street extends between Grand Avenue to the west and Hill Avenue to the east. Green Street is classified as a Collector roadway in the Mobility Element of the City's General Plan Mobility Element (November 2004). Green Street is also designated as a multimodal corridor in the City's General Plan Mobility Element. Three through lanes are provided in the eastbound direction within the project study area. Exclusive left-turn and right-turn lanes are provided on Green Street in the eastbound direction at the Los Robles Avenue and Lake Avenue intersections. One-hour parking is generally provided along both sides of the roadway in the project study area. Green Street is posted for a 30 miles per hour speed limit in the project vicinity.

Del Mar Boulevard is an east-west roadway located two blocks south of the project site. Del Mar Boulevard is classified as a Minor Arterial in the City's General Plan Mobility Element (November 2004). Del Mar Boulevard is also designated as a multimodal corridor in the City's General Plan Mobility Element. Two through travel lanes are provided in each direction on Del Mar Boulevard in the project vicinity. Exclusive left-turn lanes are provided in each direction at the El Molino Avenue intersections. Two-hour parking between the hours of 9:00 AM and 4:00 PM is provided along both sides of Del Mar Boulevard in the project vicinity. Del Mar Boulevard is posted for a speed limit 30 miles per hour in the project study area.

4.3 Existing Public Bus Transit Service

Public bus transit service within the Playhouse Plaza project study area is currently provided by Metro, Foothill Transit Service, and Pasadena Area Rapid Transit Service (ARTS). A summary of the existing transit service, including the transit route, destinations and peak hour headways is presented in ***Table 4–1***. The existing public transit routes in the Playhouse Plaza project site vicinity are illustrated in ***Figure 4–2***.

4.4 Light Rail Transit Service

The Metro Gold Line is a light rail transit line that runs east-west from East Pasadena to the Pasadena Civic Center area and north-south from the Pasadena Civic Center area to Union Station in Downtown Los Angeles. The Gold Line travels within the median of the Foothill (I-210) Freeway and in Metro right-of-way between Raymond Avenue and Arroyo Parkway in the project vicinity. The Gold Line Light Rail system provides six stations in the City of Pasadena: 1) Sierra Madre Villa station, 2) Allen Avenue station, 3) Lake Avenue station, 4) Memorial Park station, 5) Del Mar station, and 6) Fillmore Street station. The Lake Avenue station is located approximately one-half mile northeast from the project site. The station serves as a transportation hub that connects travelers to local and regional transit services provided by Pasadena ARTS, Foothill Transit, Metro, and others.

Table 4-1
EXISTING TRANSIT ROUTES [1]

03-Jul-2008

ROUTE	DESTINATIONS	ROADWAY NEAR SITE	NO. OF BUSES/TRAINS DURING PEAK HOUR		
			DIR	AM	PM
Metro 180, 181	Altadena to Hollywood	Colorado Boulevard, Lake Avenue	EB WB	3 2	3 3
Metro 256	City of Commerce to Altadena (via Commerce, East Los Angeles, CSULA, El Sereno Highland Park, Pasadena)	Colorado Boulevard	NB SB	2 1	2 1
Metro 267	El Monte to Altadena (via El Monte Bus Station, Temple City, Arcadia, Pasadena)	Los Robles Avenue	NB SB	2 2	2 2
Metro 485	Los Angeles to Altadena (via Downtown Los Angeles, Alhambra, South Pasadena, Pasadena, Altadena)	Lake Avenue	NB SB	3 3	3 3
Metro 686	Altadena to Pasadena (Fair Oaks Ave., Colorado Blvd., Allen Ave.)	Colorado Boulevard	NB SB	3 3	3 3
Metro 687	Altadena to Pasadena (Fair Oaks Ave., Colorado Blvd., Los Robles Ave.)	Colorado Boulevard, Los Robles Avenue	NB SB	3 3	4 3
Metro 780	Hollywood to Pasadena	Colorado Boulevard	EB WB	6 5	5 6
Metro 804 (Gold Line)	Los Angeles to Pasadena	Lake Avenue (Lake Avenue Station)	NB SB	8 8	8 8
Commuter Express 549	Encino to Pasadena (Encino, North Hollywood, Burbank, Glendale)	Lake Avenue	NB SB	2 2	1 2
ARTS 10 [2]	Pasadena (Pasadena City College, Allen Gold Line Station)	Colorado Boulevard, Green Street, Lake Avenue	EB WB	4 4	4 4

Table 4-1 (Continued)
EXISTING TRANSIT ROUTES [1]

03-Jul-2008

ROUTE	DESTINATIONS	ROADWAY NEAR SITE	NO. OF BUSES/TRAINS DURING PEAK HOUR		
			DIR	AM	PM
ARTS 20 [2]	Pasadena (North/South Lake, North/South Fair Oaks)	Lake Avenue	NB SB	3 2	3 2
FT 187 [3]	Montclair Transit Center to Pasadena (via Montclair, Claremont, Glendora)	Colorado Boulevard	EB WB	3 3	3 3
FT 690 [3]	Montclair Transit Center to Pasadena (via 210 Freeway Corridor - Commuter Express)	Lake Avenue, Union Street	EB WB	0 2	2 0

[1] Source: Los Angeles County Metropolitan Transportation Authority (Metro) website.

[2] Source: Pasadena Area Rapid Transit System (ARTS) website.

[3] Source: Foothill Transit System (FT) website.

MAP SOURCE: METROPOLITAN TRANSPORTATION AUTHORITY

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FIGURE 4-2
EXISTING PUBLIC TRANSIT ROUTES

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5.0 TRAFFIC COUNTS

Manual traffic counts were obtained from the draft traffic impact study[5] for the 680 East. Colorado Boulevard Project prepared by Willdan Associates. Manual traffic counts of vehicular turning movements were conducted at each of the 13 study intersections during the weekday morning and afternoon commuter periods to determine the peak hour traffic volume. The manual traffic counts at the study intersections were conducted from 7:00 to 9:00 AM to determine the AM peak commuter hour, and from 4:00 to 6:00 PM to determine the PM peak commuter hour. Traffic volumes at the study intersections show the typical peak periods between 7:00 to 9:00 AM generally associated with the peak morning commuter hours, and 4:00 to 6:00 PM generally associated with the afternoon commuter hours. Additionally, based on discussions with PasDOT staff, the existing traffic volumes for the study intersections were increased at an annual rate of one and one-half percent (1.5%) per year to reflect year 2008 existing conditions.

The AM and PM peak period manual counts of vehicle movements at the 13 study intersections are summarized in ***Table 5–1***. The existing traffic volumes at the study intersections during the AM and PM peak hours are shown in ***Figures 5–1*** and ***5–2***, respectively. Summary data worksheets of the manual traffic counts at the study intersections are contained in ***Appendix A***.

[5] *Draft Traffic Impact Study, Mixed-Use Project 680 E. Colorado Boulevard, City of Pasadena, CA*, dated June 8, 2007 and prepared by Willdan.

Table 5-1
EXISTING TRAFFIC VOLUMES [1]

03-Jul-2008

NO.	INTERSECTION	DATE	DIR	AM PEAK HOUR		PM PEAK HOUR	
				BEGAN	VOLUME	BEGAN	VOLUME
1	Los Robles Avenue/ Colorado Boulevard	04/17/07	NB	8:00	590	4:45	950
			SB		831		776
			EB		603		1,065
			WB		573		971
2	Los Robles Avenue/ Green Street	04/17/07	NB	7:45	521	5:00	786
			SB		828		791
			EB		656		1,448
			WB		0		0
3	El Molino Avenue/ Union Street	05/28/08	NB	7:45	243	4:45	269
			SB		377		341
			EB		0		0
			WB		773		932
4	El Molino Avenue/ Colorado Boulevard	04/12/07	NB	8:00	194	4:45	287
			SB		224		318
			EB		530		1,110
			WB		619		1,060
5	El Molino Avenue/ Green Street	04/12/07	NB	7:45	232	5:00	271
			SB		224		332
			EB		612		1,246
			WB		0		0
6	El Molino Avenue/ Del Mar Boulevard	04/12/07	NB	8:00	238	4:45	224
			SB		120		274
			EB		546		736
			WB		654		787
7	Oak Knoll Avenue/ Colorado Boulevard	04/12/07	NB	8:00	75	5:00	158
			SB		122		263
			EB		516		1,127
			WB		635		1,032
8	Oak Knoll Avenue/ Green Street	04/12/07	NB	8:00	74	5:00	129
			SB		161		217
			EB		645		1,210
			WB		0		0
9	Lake Avenue/ Maple Street-I-210 Freeway WB Ramps	04/17/07	NB	8:00	1,190	5:00	1,987
			SB		1,419		1,205
			EB		0		0
			WB		1,595		1,546
10	Lake Avenue/ Corson Street-I-210 Freeway EB Ramps	04/17/07	NB	8:00	1,066	4:45	1,720
			SB		1,350		1,178
			EB		2,032		3,087
			WB		0		0

[1] Based on direction of PasDOT staff, the traffic counts were obtained from the Draft Traffic Impact Study for the 680 E. Colorado Boulevard Project prepared by Willdan Associates, June 2007. The year 2007 existing traffic volumes were adjusted by 1.5 percent (1.5%) to reflect year 2008 existing conditions.

Table 5-1 (Continued)
EXISTING TRAFFIC VOLUMES [1]

03-Jul-2008

NO.	INTERSECTION	DATE	DIR	AM PEAK HOUR		PM PEAK HOUR	
				BEGAN	VOLUME	BEGAN	VOLUME
11	Lake Avenue/ Walnut Street	04/17/07	NB	8:00	948	4:45	1,340
			SB		1,524		1,682
			EB		501		1,327
			WB		648		617
12	Lake Avenue/ Colorado Boulevard	04/12/07	NB	8:00	833	5:00	1,137
			SB		1,399		1,586
			EB		543		1,108
			WB		699		1,008
13	Lake Avenue/ Green Street	04/12/07	NB	8:00	808	5:00	1,051
			SB		1,284		1,370
			EB		670		1,275
			WB		0		0

[1] Based on direction of PasDOT staff, the traffic counts were obtained from the Draft Traffic Impact Study for the 680 E. Colorado Boulevard Project prepared by Willdan Associates, June 2007. The year 2007 existing traffic volumes were adjusted by 1.5 percent (1.5%) to reflect year 2008 existing conditions.

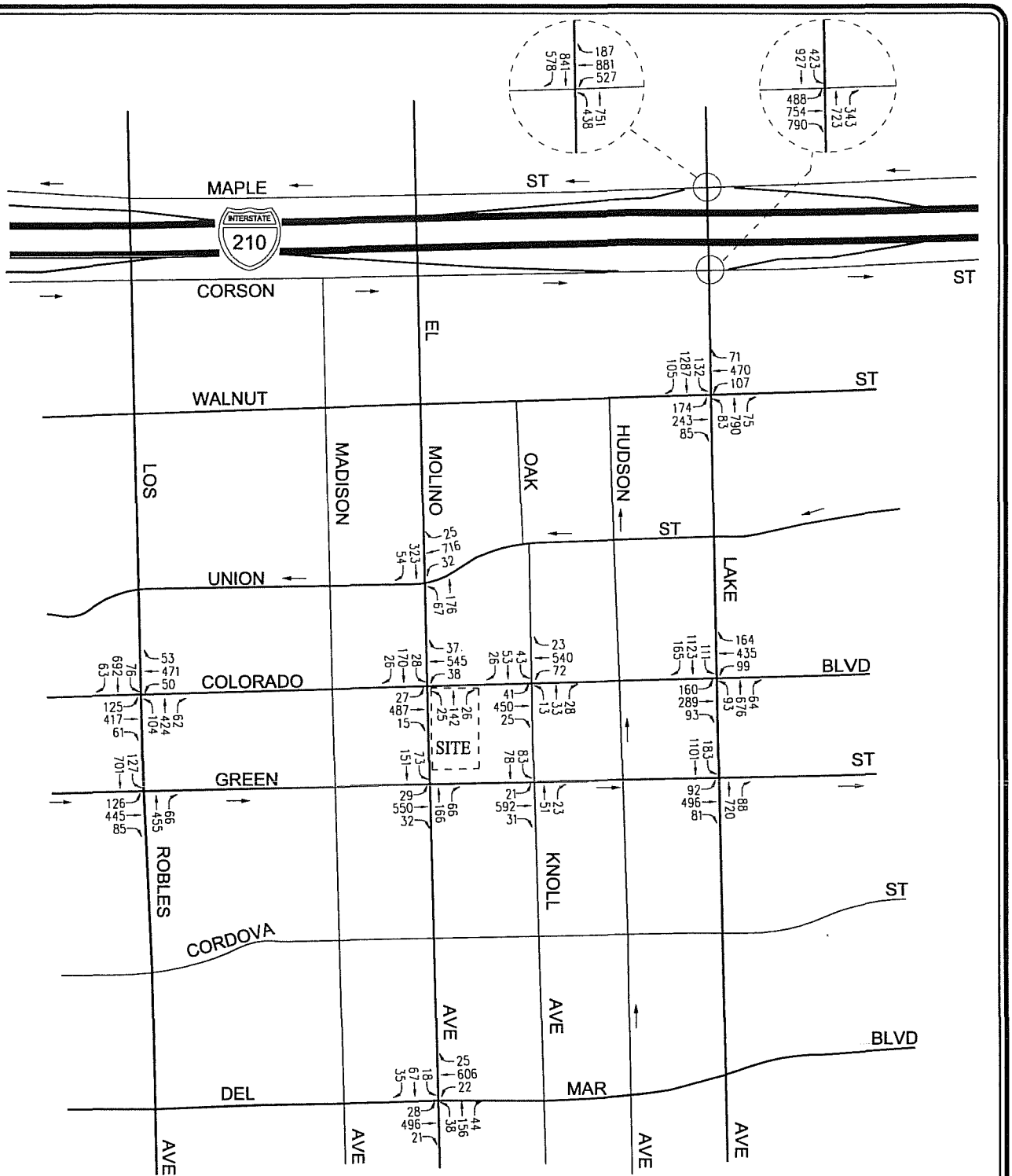

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FIGURE 5-1
EXISTING TRAFFIC VOLUMES
AM PEAK HOUR

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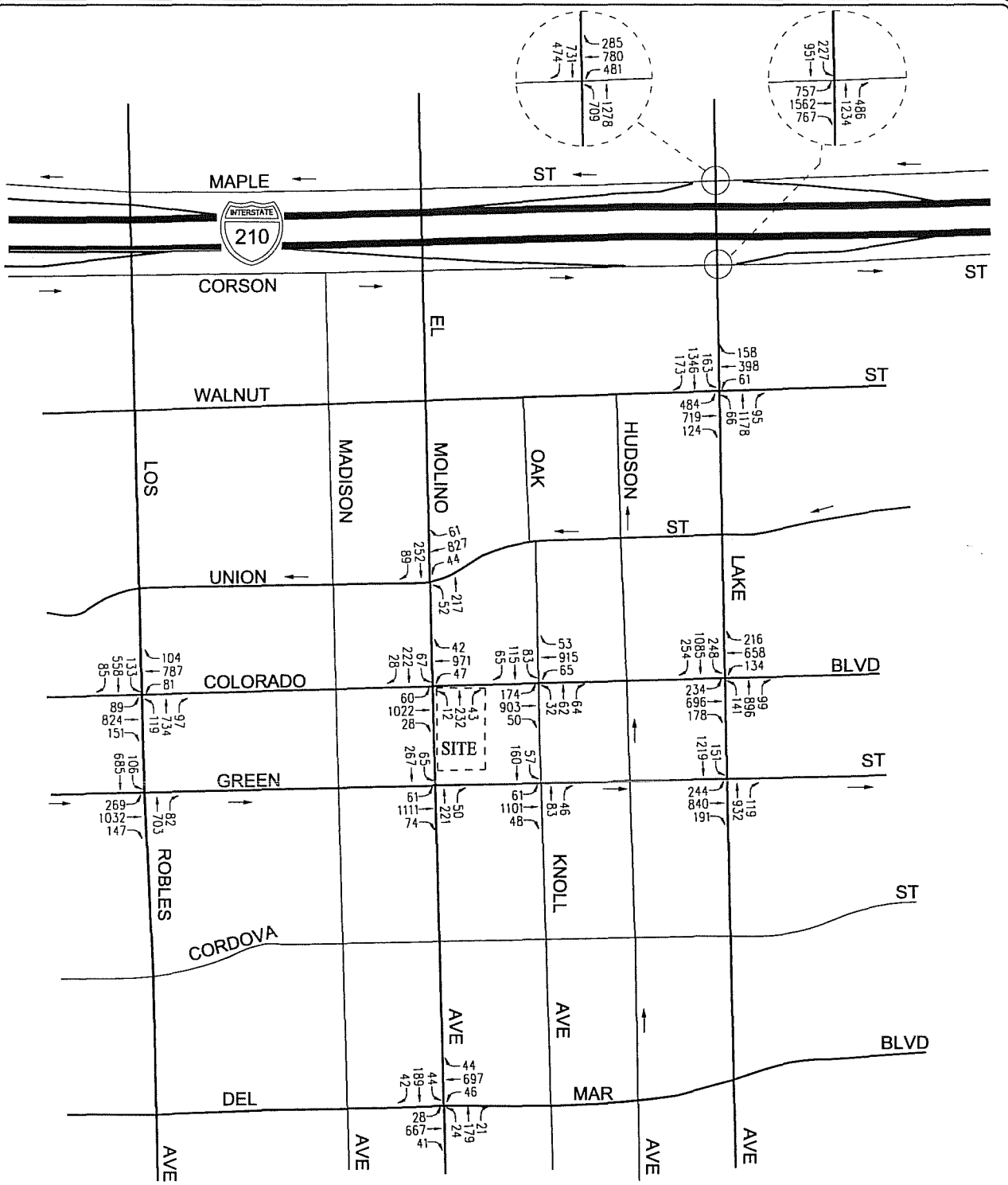

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FIGURE 5-2
EXISTING TRAFFIC VOLUMES
PM PEAK HOUR

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6.0 TRAFFIC FORECASTING METHODOLOGY

In order to estimate the traffic impact characteristics of the project, a multi-step process has been utilized. The first step is trip generation, which estimates the total arriving and departing traffic volumes on a peak hour and daily basis. The traffic generation potential is forecast by applying the appropriate vehicle trip generation equations or rates to the project development tabulation.

The second step of the forecasting process is trip distribution, which identifies the origins and destinations of inbound and outbound project traffic volumes. These origins and destinations are typically based on demographics and existing/anticipated travel patterns in the study area.

The third step is traffic assignment, which involves the allocation of project traffic to study area streets and intersections. Traffic assignment is typically based on minimization of travel time, which may or may not involve the shortest route, depending on prevailing operating conditions and travel speeds. Traffic distribution patterns are indicated by general percentage orientation, while traffic assignment allocates specific volume forecasts to individual roadway links and intersection turning movements throughout the study area.

With the forecasting process complete and project traffic assignments developed, the impact of the proposed project is isolated by comparing operational (i.e., Levels of Service) conditions at the selected key intersections using expected future traffic volumes with and without forecast project-related traffic. The need for site-specific and/or cumulative local area traffic improvements can then be evaluated and the significance of the project's impacts identified.

6.1 Project Traffic Generation

Traffic volumes expected to be generated by the proposed project during the AM and PM peak hours, as well as on a daily basis, were estimated using rates published in the Institute of Transportation Engineers' (ITE) *Trip Generation* manual, 7th Edition, 2003. Traffic volumes expected to be generated by the proposed project were based upon rates per thousand square feet of building floor area. ITE Land Use Code 710 (General Office Building) trip generation average rates were used to forecast traffic volumes expected to be generated by the proposed project.

It should be noted that the description contained in the *Trip Generation* manual for the ITE Land Use Code 710 category states that an office building may contain a mixture of tenants, including professional services, insurance companies, investment brokers and tenant services such as a bank, restaurant or cafeteria, and service retail facilities. Therefore, ancillary ground floor commercial space (i.e., non-general office space) to be provided as part of the proposed project was included in the total building square footage for trip generation forecasting purposes. Additionally, as the existing commercial building which will be removed to accommodate the proposed project has been vacated, existing use trip credits were not applied to the project trip generation forecasts in order to provide a conservative trip generation forecast.

The trip generation rates and forecast of the vehicular trips anticipated to be generated by the proposed project are presented in ***Table 6–1***. The project trip generation forecast was submitted for review and acceptance by PasDOT staff. As presented in *Table 6–1*, the proposed project is expected to generate a net increase of 223 vehicle trips (196 inbound trips and 27 outbound trips) during the AM peak hour. During the PM peak hour, the proposed project is expected to generate a net increase of 214 vehicle trips (36 inbound trips and 178 outbound trips). Over a 24-hour period, the proposed project is forecast to generate a net increase of 1,585 daily trip ends during a typical weekday (approximately 793 inbound trips and 793 outbound trips).

6.2 Project Traffic Distribution and Assignment

Project traffic volumes both entering and exiting the site have been distributed and assigned to the adjacent street system based on the following considerations:

- The site's proximity to major traffic corridors (i.e., Los Robles Avenue, Lake Avenue, Walnut Street, Union Street, Colorado Boulevard, Green Street, etc.);
- Expected localized traffic flow patterns based on adjacent roadway channelization and presence of traffic signals;
- Existing intersection traffic volumes;
- Ingress/egress availability at the project site;
- The site access and circulation schemes for each of the four project alternatives;
- The location of existing and proposed parking areas; and
- Input from PasDOT staff.

6.2.1 *Project Alternative 1 Trip Distribution and Assignment*

Project Alternative 1 assumes provision of all parking spaces on-site and one site driveway on El Molino Avenue. The general, directional traffic distribution pattern for the Project Alternative 1 access scheme is presented in ***Figure 6–1A.*** The forecast AM and PM peak hour project traffic volumes associated with Project Alternative 1 are presented in ***Figures 6–1B*** and ***6–1C***, respectively. The traffic volume assignments presented in *Figures 6–1B* and *6–1C* reflect the traffic distribution characteristics shown in *Figure 6–1A* and the project traffic generation forecast presented in *Table 6–1*.

6.2.2 *Project Alternative 2 Trip Distribution and Assignment*

Project Alternative 2 assumes provision of all parking spaces on-site and two site driveways: one driveway on El Molino Avenue and one driveway on Green Street. The general, directional traffic distribution pattern for the Project Alternative 2 access scheme is presented in ***Figure 6–2A.*** The forecast AM and PM peak hour project traffic volumes associated with Project Alternative 2 are presented in ***Figures 6–2B*** and ***6–2C***, respectively. The traffic volume

Table 6-1
PROJECT TRIP GENERATION [1]

03-Jul-2008

LAND USE	SIZE	DAILY TRIP ENDS [2] VOLUMES	AM PEAK HOUR VOLUMES [2]			PM PEAK HOUR VOLUMES [2]		
			IN	OUT	TOTAL	IN	OUT	TOTAL
Office [3]	159,971 GSF	1,761	218	30	248	40	198	238
Less 10% Transit Credit [4]		(176)	(22)	(3)	(25)	(4)	(20)	(24)
NET INCREASE		**1,585**	**196**	**27**	**223**	**36**	**178**	**214**

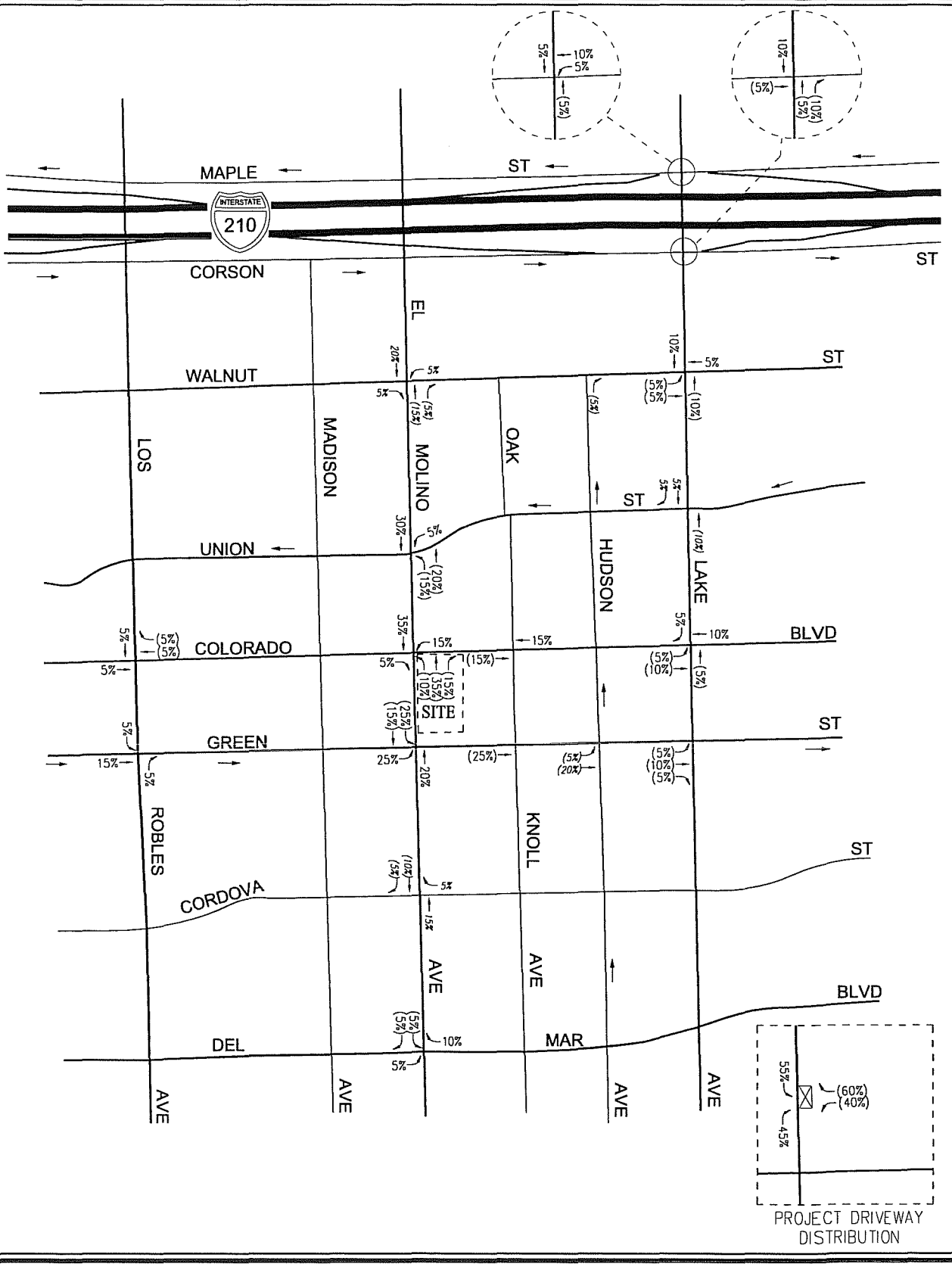
[1] Source: ITE "Trip Generation", 7th Edition, 2003.

[2] Trips are one-way traffic movements, entering or leaving.

[3] ITE Land Use Code 710 (General Office) trip generation average rates per 1,000 square feet of gross floor area.
- Daily Trip Rate: 11.01 trips/1,000 GSF; 50% inbound/50% outbound
- AM Peak Hour Trip Rate: 1.55 trips/1,000 GSF; 88% inbound/12% outbound
- PM Peak Hour Trip Rate: 1.49 trips/1,000 GSF; 17% inbound/83% outbound

The proposed project consists of an office building with approximately 145,564 square feet of office uses and 14,407 square feet of ground floor commercial uses. The description contained in the "Trip Generation" manual for the ITE Land Use 710 category states that an office building may contain a mixture of tenants, including professional services, insurance companies, investment brokers, and tenant services such as a bank, restaurant or cafeteria, and service retail facilities. Therefore, the ancillary ground floor commercial space (i.e., non general office space) to be provided as part of the project was included in the total building square footage for trip generation forecasting purposes.

[4] The project site is located within one-half mile of the Lake Avenue Gold Line light rail transit station and is adjacent to transit corridors within the City of Pasadena.



XX = INBOUND PERCENTAGES
(XX) = OUTBOUND PERCENTAGES

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FIGURE 6-1A
PROJECT ALTERNATIVE 1 TRIP DISTRIBUTION
ALL PARKING ON SITE; ACCESS ON EL MOLINO AVE

LINSCOTT, LAW & GREENSPAN, engineers

PLAYHOUSE PLAZA PROJECT

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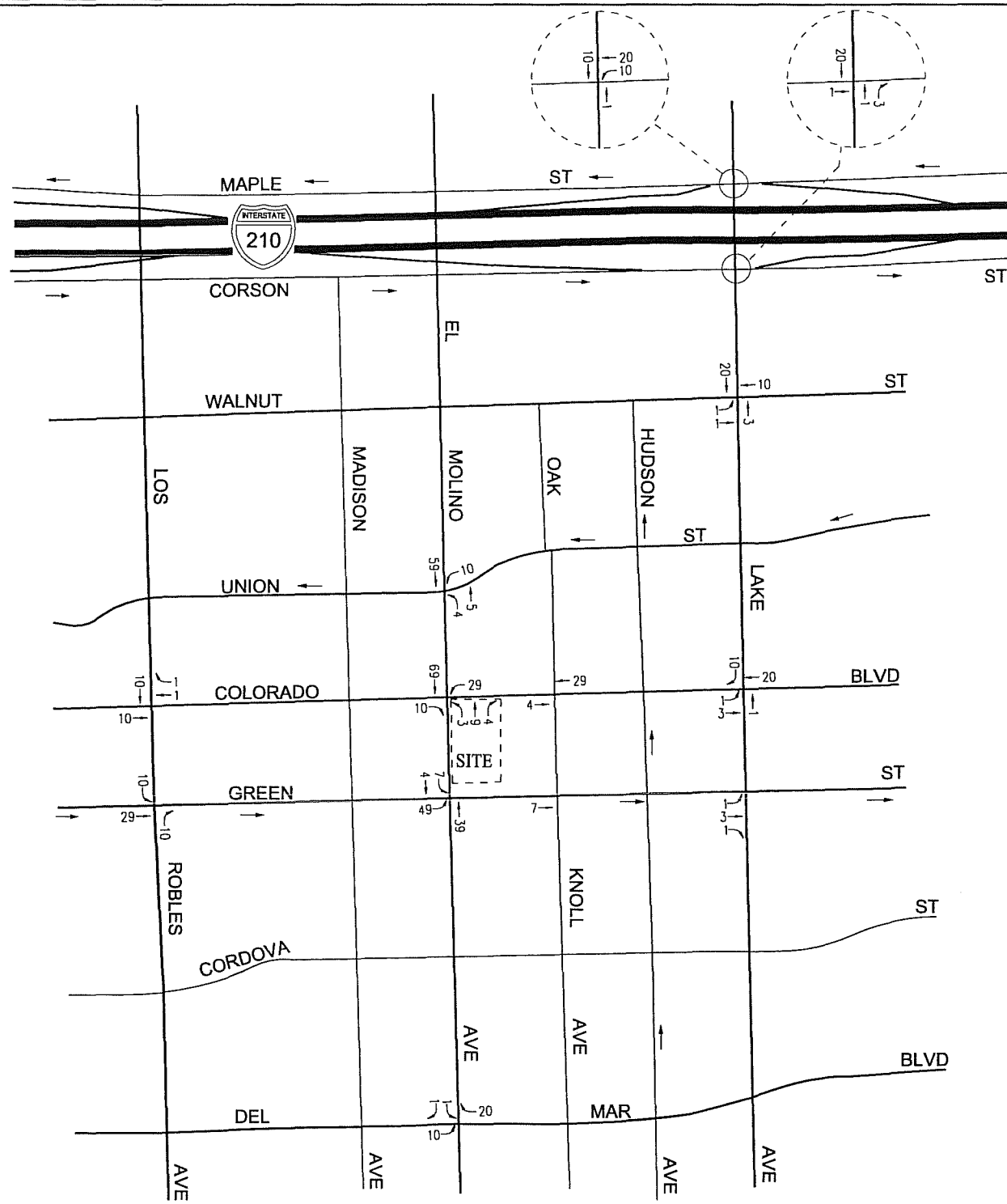

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FIGURE 6-1B
PROJECT ALTERNATIVE 1 TRAFFIC VOLUMES
AM PEAK HOUR

LINSCOTT, LAW & GREENSPAN, engineers

PLAYHOUSE PLAZA PROJECT

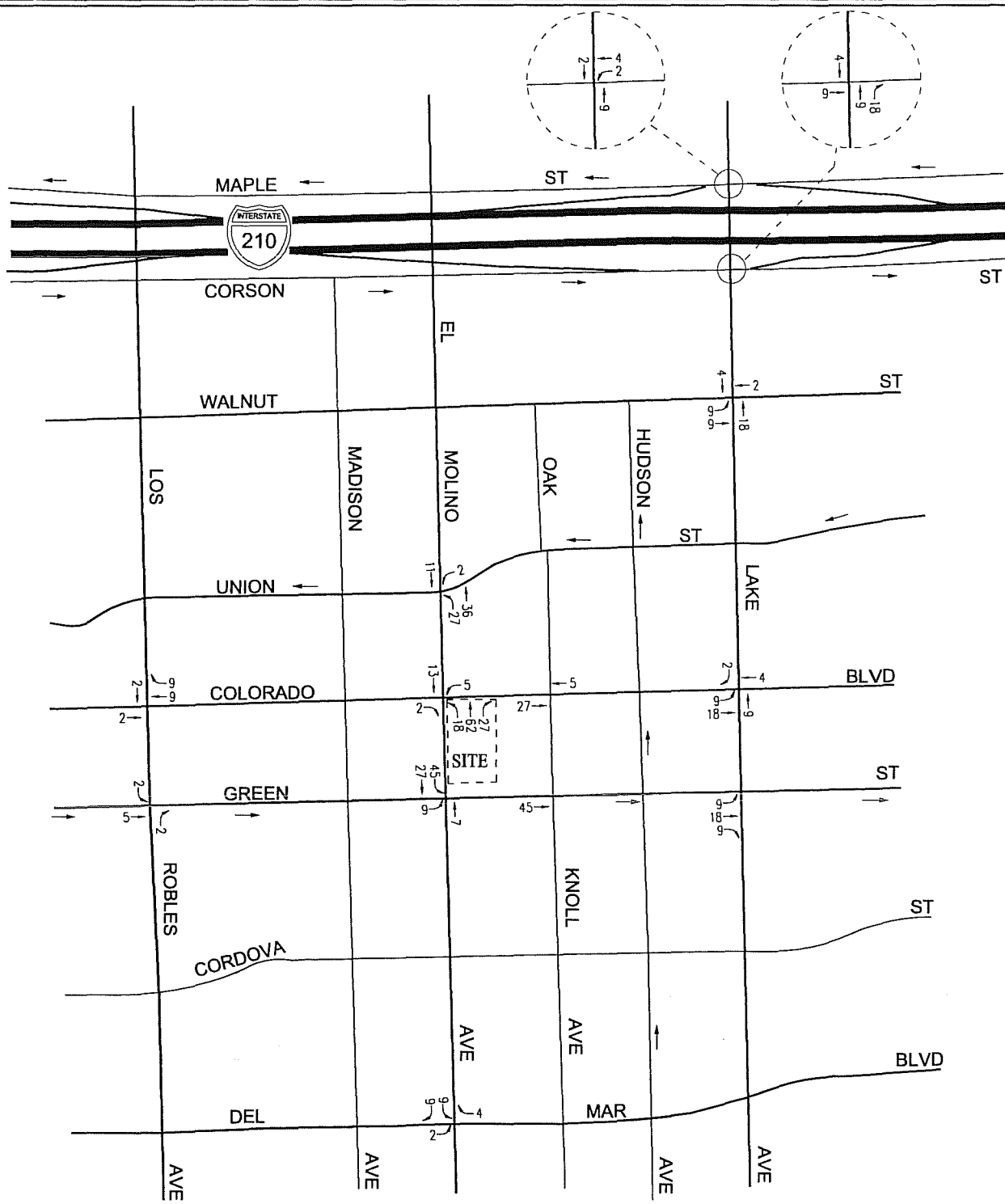

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FIGURE 6-1C
PROJECT ALTERNATIVE 1 TRAFFIC VOLUMES
PM PEAK HOUR

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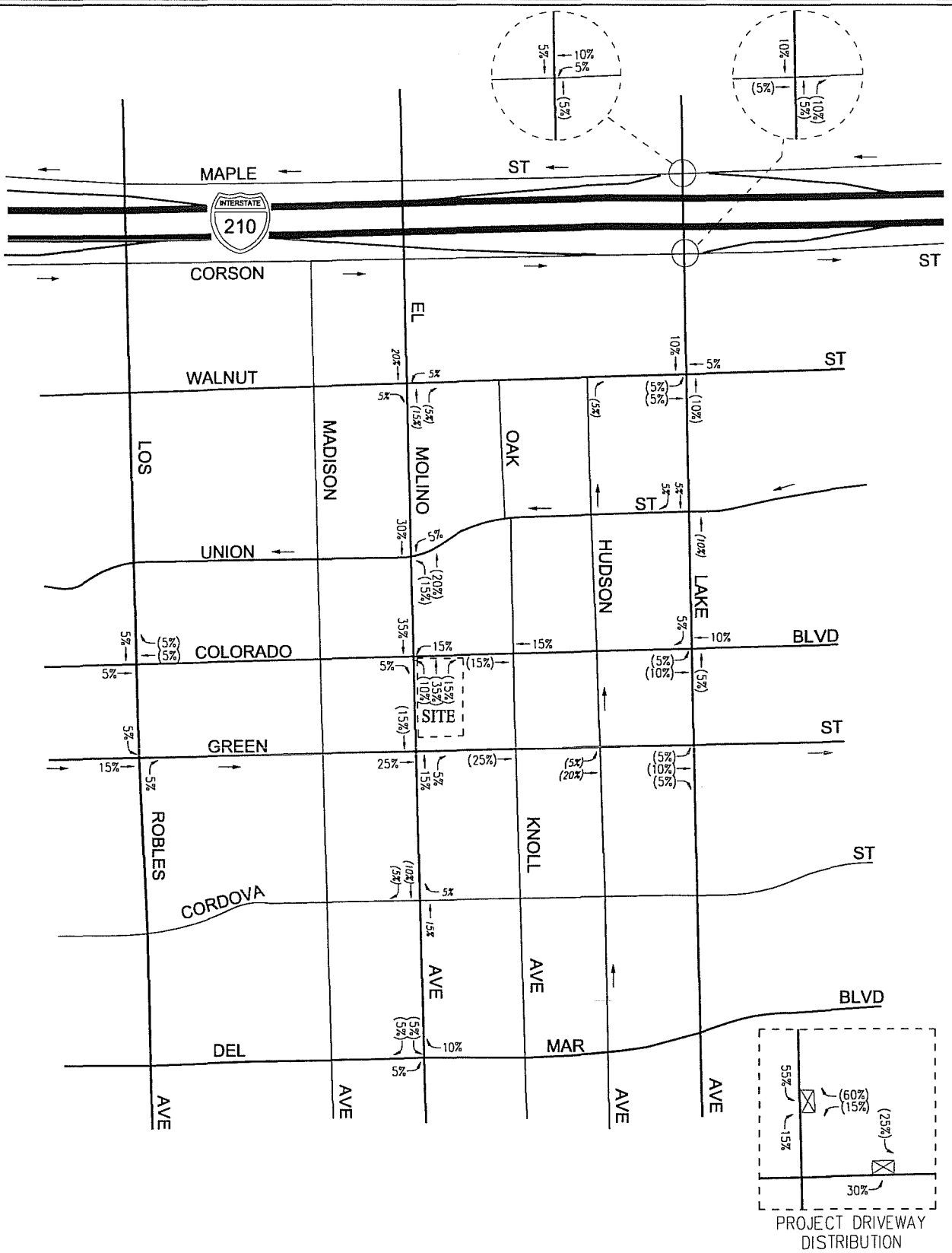

XX = INBOUND PERCENTAGES
(XX) = OUTBOUND PERCENTAGES

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FIGURE 6-2A

PROJECT ALTERNATIVE 2 TRIP DISTRIBUTION

ALL PARKING ON SITE; ACCESS ON EL MOLINO AVE & GREEN ST

LINSCOTT, LAW & GREENSPAN, engineers

PLAYHOUSE PLAZA PROJECT

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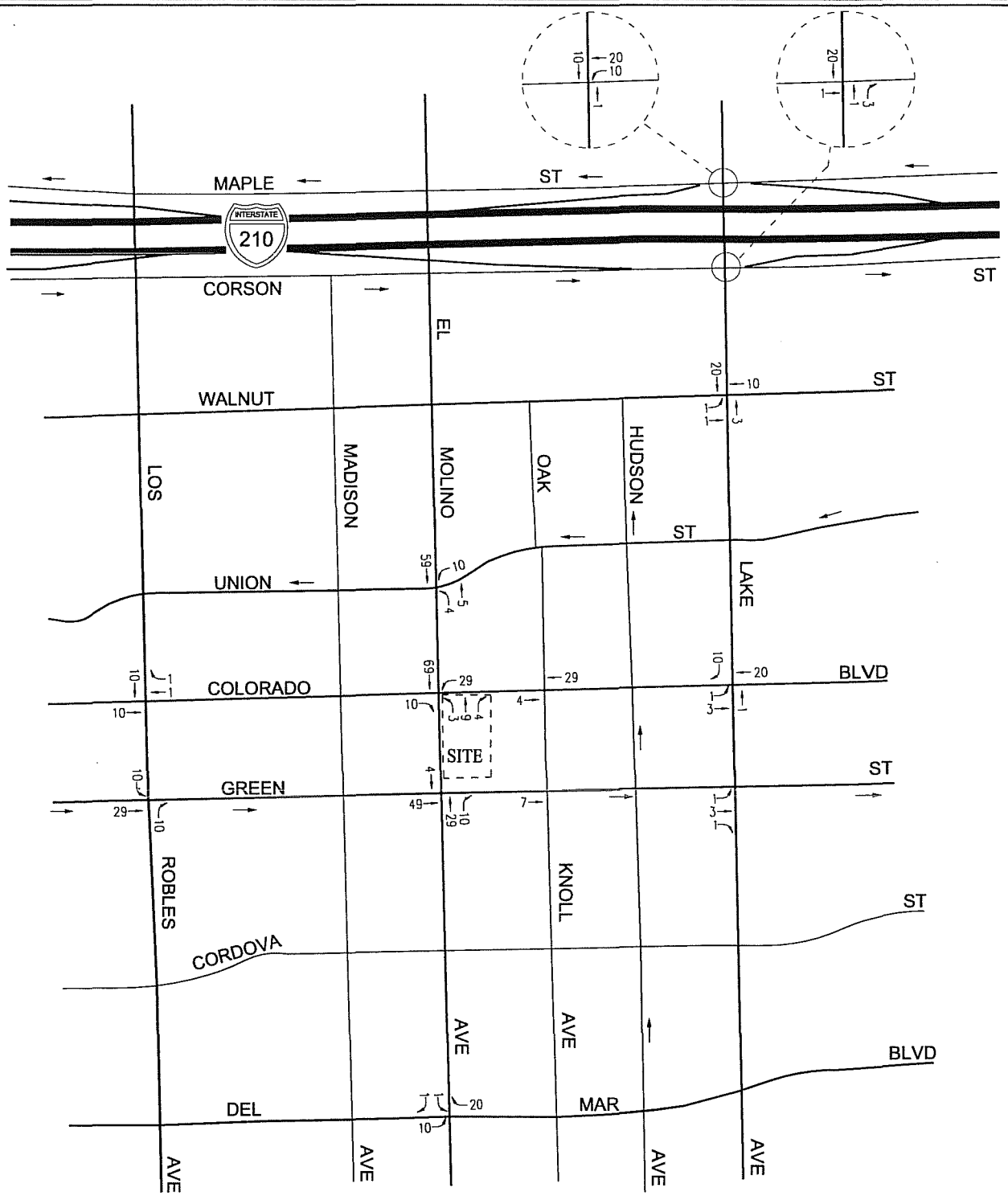

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FIGURE 6-2B
PROJECT ALTERNATIVE 2 TRAFFIC VOLUMES
AM PEAK HOUR

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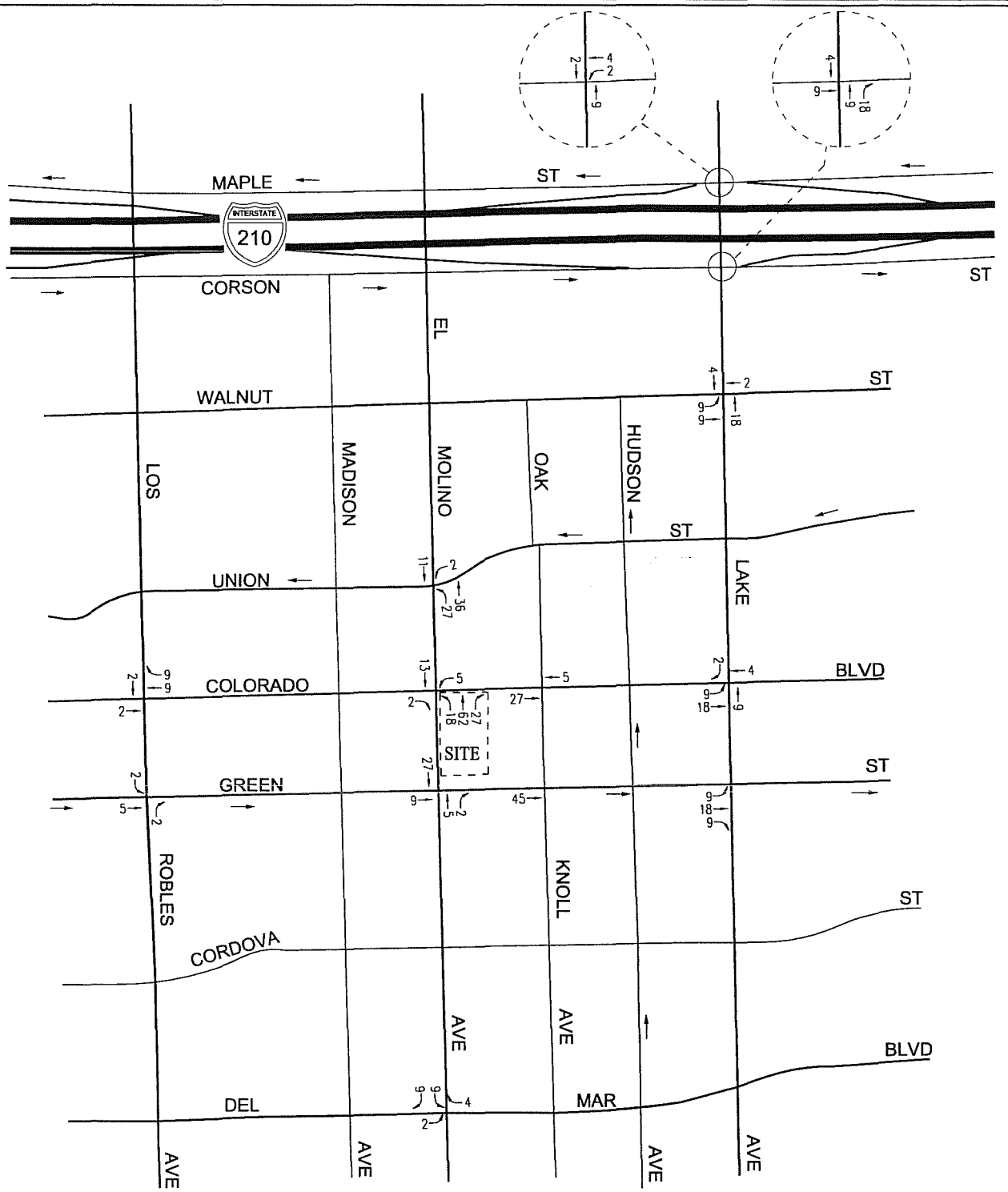

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FIGURE 6-2C
PROJECT ALTERNATIVE 2 TRAFFIC VOLUMES
PM PEAK HOUR

LINSCOTT, LAW & GREENSPAN, engineers

PLAYHOUSE PLAZA PROJECT

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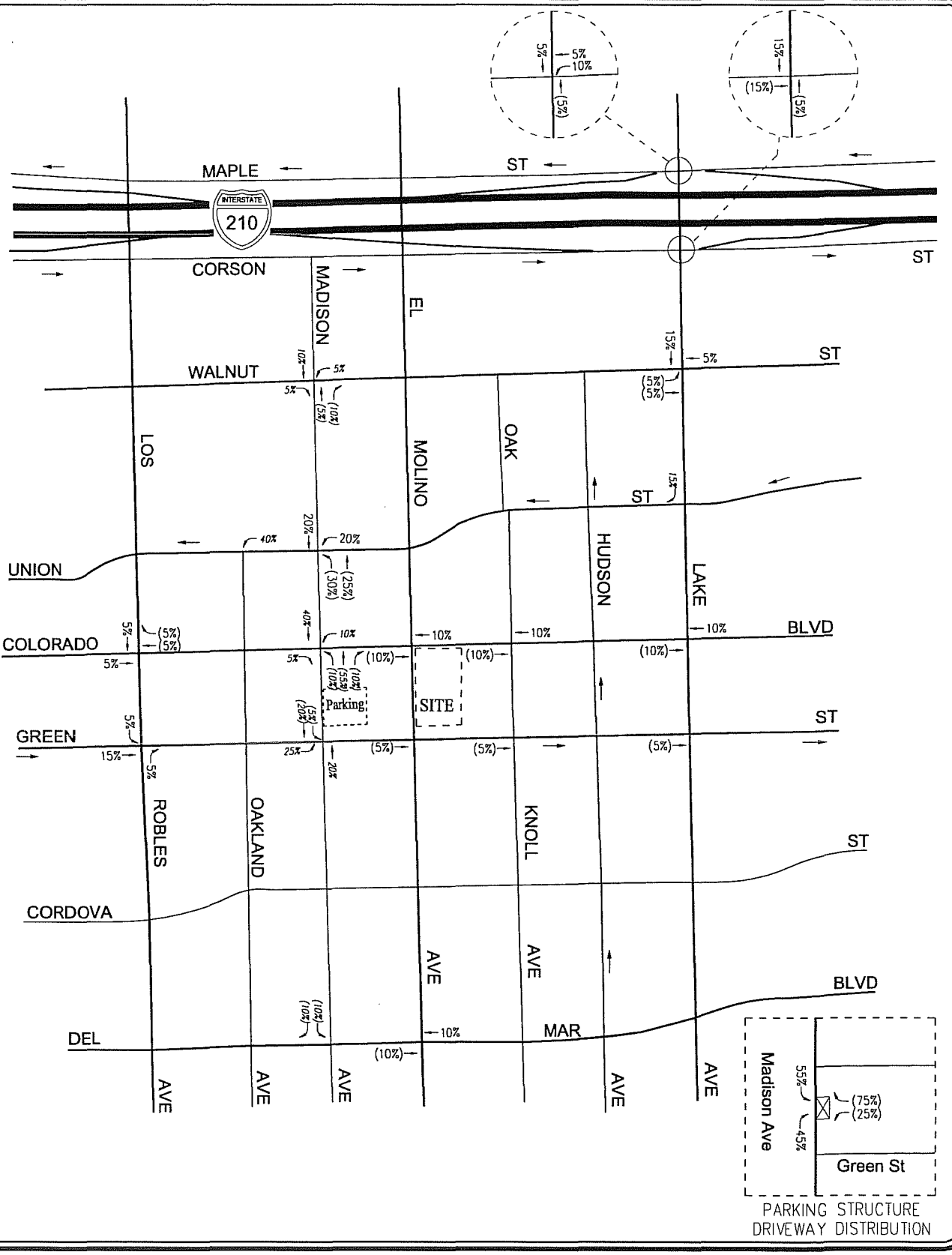
assignments presented in *Figures 6–2B* and *6–2C* reflect the traffic distribution characteristics shown in *Figure 6–2A* and the project traffic generation forecast presented in *Table 6–1*.

6.2.3 *Project Alternative 3 Trip Distribution and Assignment*

Project Alternative 3 assumes a combination of on-site parking and off-site parking. A total of 400 spaces of the project's total of 522 parking spaces would be provided on-site. The remaining 122 project parking spaces would be provided within a proposed parking structure to be located along Madison Avenue. Access to the project site would be provided via one driveway along El Molino Avenue, consistent with Project Alternative 1 described above. Accordingly, the general, directional traffic distribution pattern for the Project Alternative 1 access scheme shown in *Figure 6–1A* was utilized for vehicle trips destined to/from the project site under Project Alternative 3. Access to the proposed Madison Avenue parking structure would be provided via inbound driveways on Madison Avenue and via outbound driveways on Madison Avenue and Green Street. The general, directional traffic distribution pattern for vehicle trips destined to/from the proposed Madison Avenue parking structure with the Project Alternative 3 access scheme is presented in ***Figure 6–3A.*** The forecast AM and PM peak hour project traffic volumes associated with Project Alternative 3 are presented in ***Figures 6–3B*** and ***6–3C***, respectively. The traffic volume assignments presented in *Figures 6–3B* and *6–3C* reflect the traffic distribution characteristics shown in *Figures 6–1A* and *6–3A* and the project traffic generation forecast presented in *Table 6–1*.

6.2.4 *Project Alternative 4 Trip Distribution and Assignment*

Project Alternative 4 assumes a combination of on-site parking and off-site parking. A total of 400 spaces of the project's total of 522 parking spaces would be provided on-site. The remaining 122 project parking spaces would be provided within the parking structure located at 621 E. Colorado Boulevard. Access to the project site would be provided via one driveway along El Molino Avenue, consistent with Project Alternative 1 described above. Accordingly, the general, directional traffic distribution pattern for the Project Alternative 1 access scheme shown in *Figure 6–1A* was utilized for vehicle trips destined to/from the project site under Project Alternative 4. Access to the commercial levels of the parking structure at 621 E. Colorado Boulevard is provided via single driveways on Madison Avenue and El Molino Avenue. The general, directional traffic distribution pattern for vehicle trips destined to/from the 621 E. Colorado Boulevard structure with the Project Alternative 4 access scheme is presented in ***Figure 6–4A.*** The forecast AM and PM peak hour project traffic volumes associated with Project Alternative 4 are presented in ***Figures 6–4B*** and ***6–4C***, respectively. The traffic volume assignments presented in *Figures 6–4B* and *6–4C* reflect the traffic distribution characteristics shown in *Figures 6–1A* and *6–4A* and the project traffic generation forecast presented in *Table 6–1*.



XX = INBOUND PERCENTAGES
(XX) = OUTBOUND PERCENTAGES

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FIGURE 6-3A
PROJECT ALTERNATIVE 3 TRIP DISTRIBUTION
PARKING AT MADISON STRUCTURE

LINSCOTT, LAW & GREENSPAN, engineers

PLAYHOUSE PLAZA PROJECT

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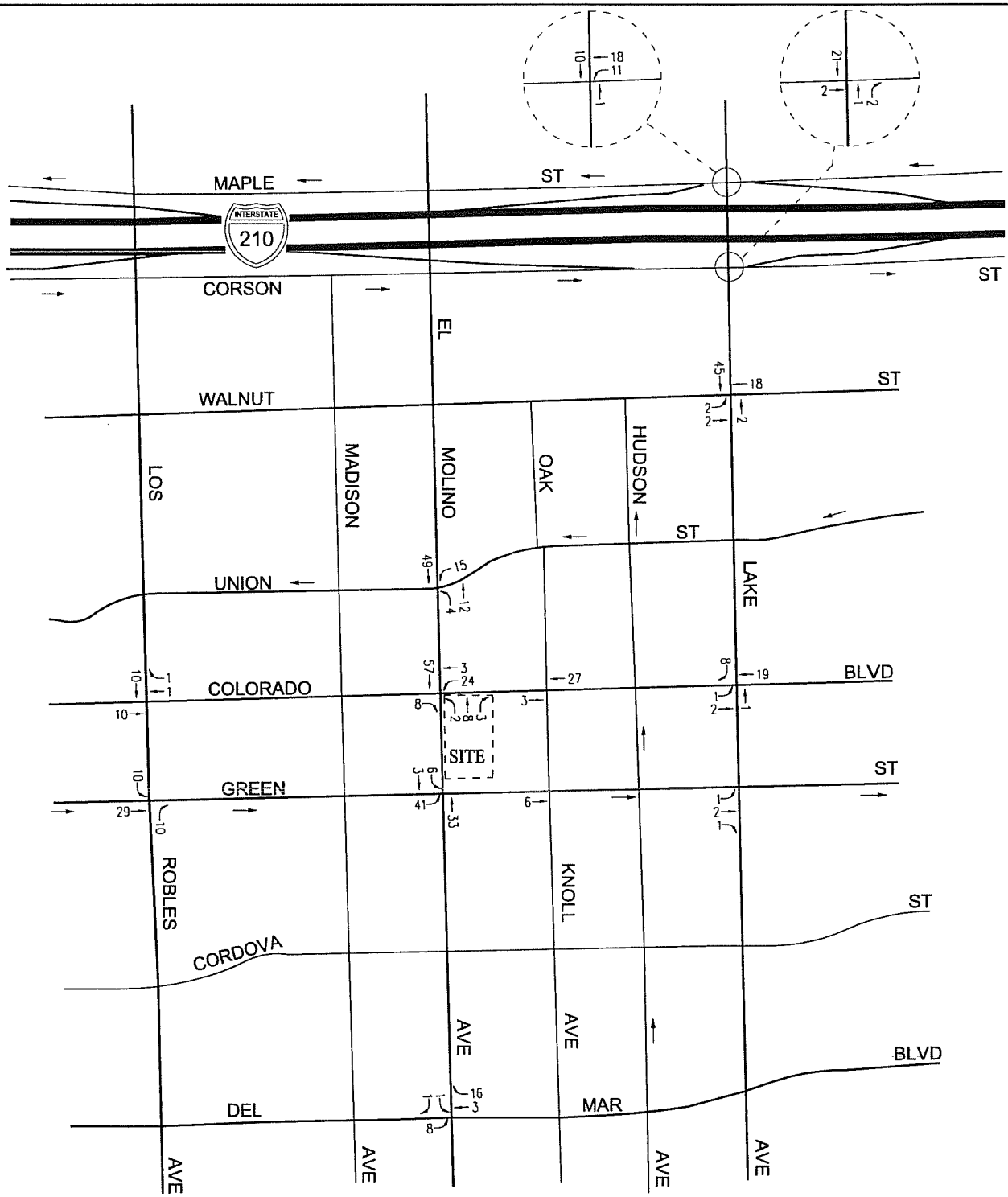

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FIGURE 6-3B
PROJECT ALTERNATIVE 3 TRAFFIC VOLUMES
AM PEAK HOUR

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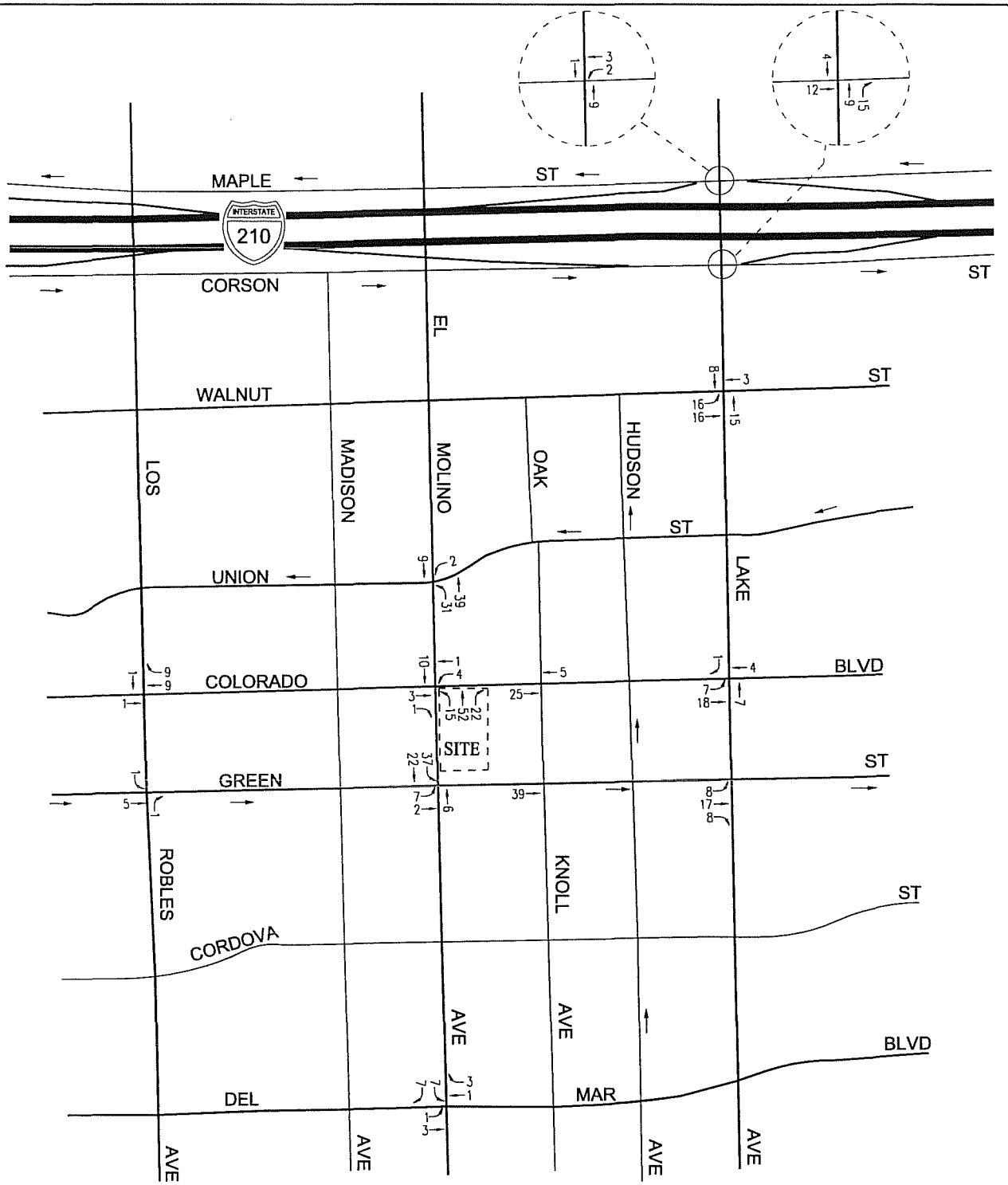

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FIGURE 6-3C
PROJECT ALTERNATIVE 3 TRAFFIC VOLUMES
PM PEAK HOUR

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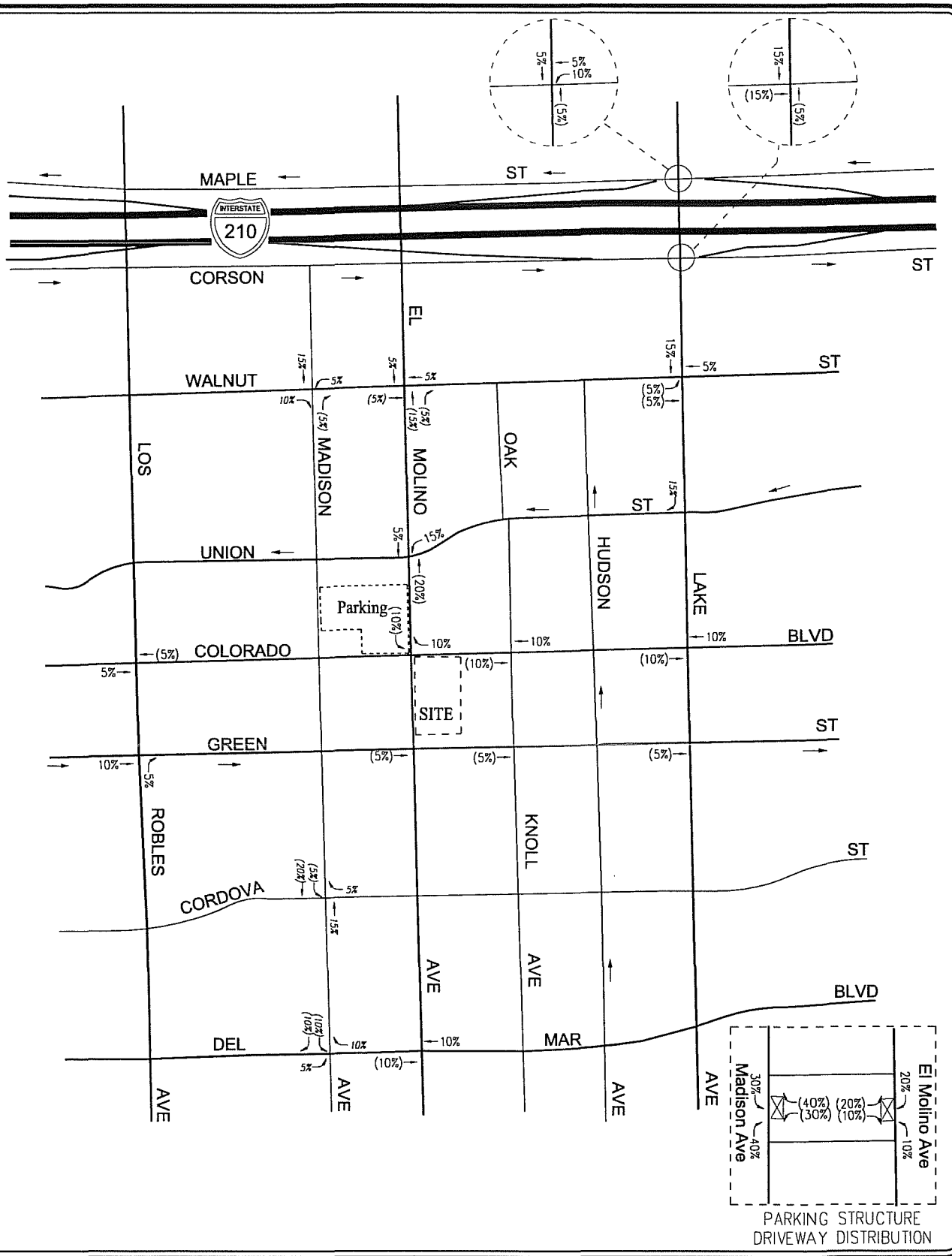

XX = INBOUND PERCENTAGES
(XX) = OUTBOUND PERCENTAGES

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FIGURE 6-4A

PROJECT ALTERNATIVE 4 TRIP DISTRIBUTION

PARKING AT 621 E. COLORADO BOULEVARD

LINSCOTT, LAW & GREENSPAN, engineers

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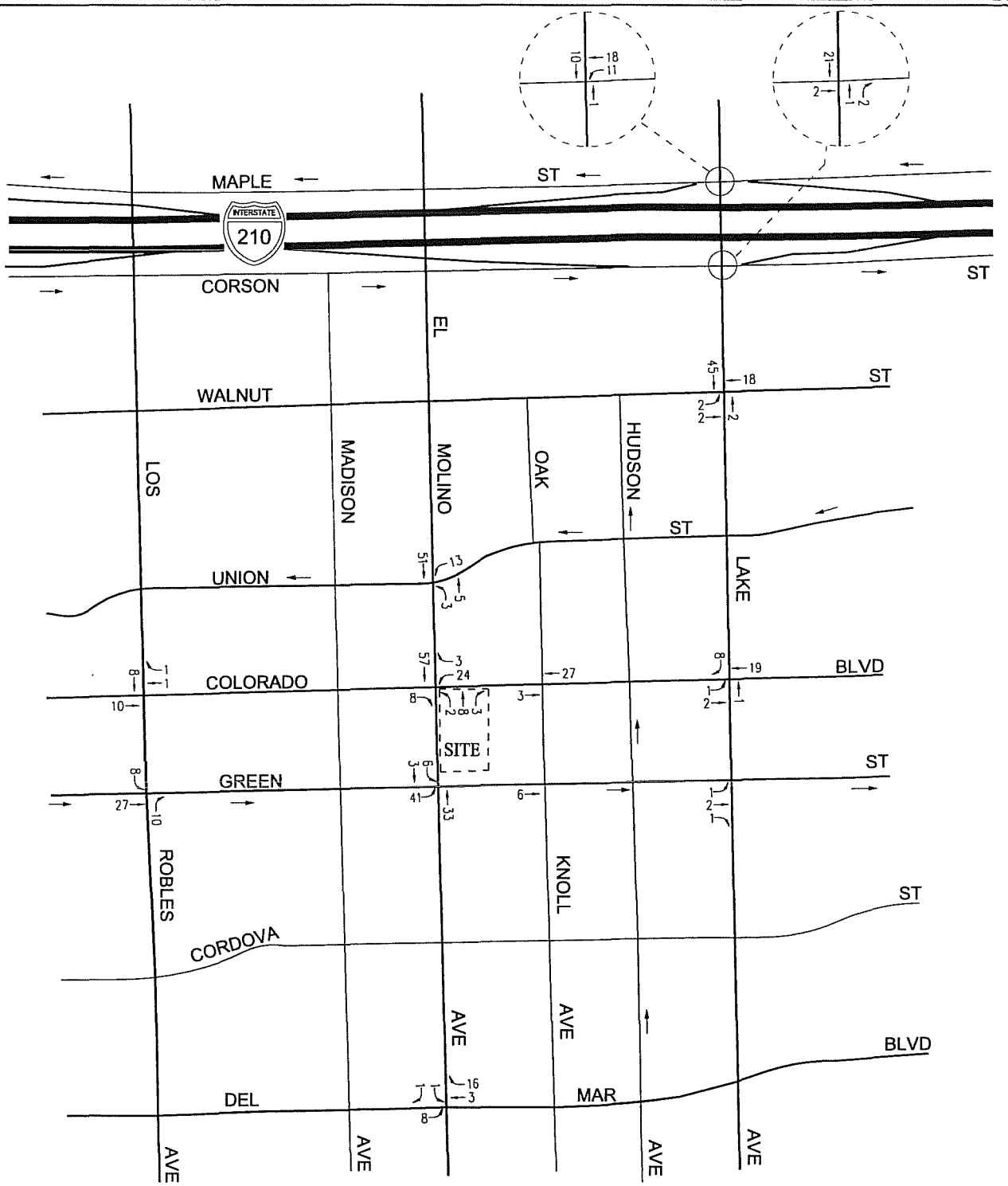

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FIGURE 6-4B
PROJECT ALTERNATIVE 4 TRAFFIC VOLUMES
AM PEAK HOUR

LINSCOTT, LAW & GREENSPAN, engineers

PLAYHOUSE PLAZA PROJECT

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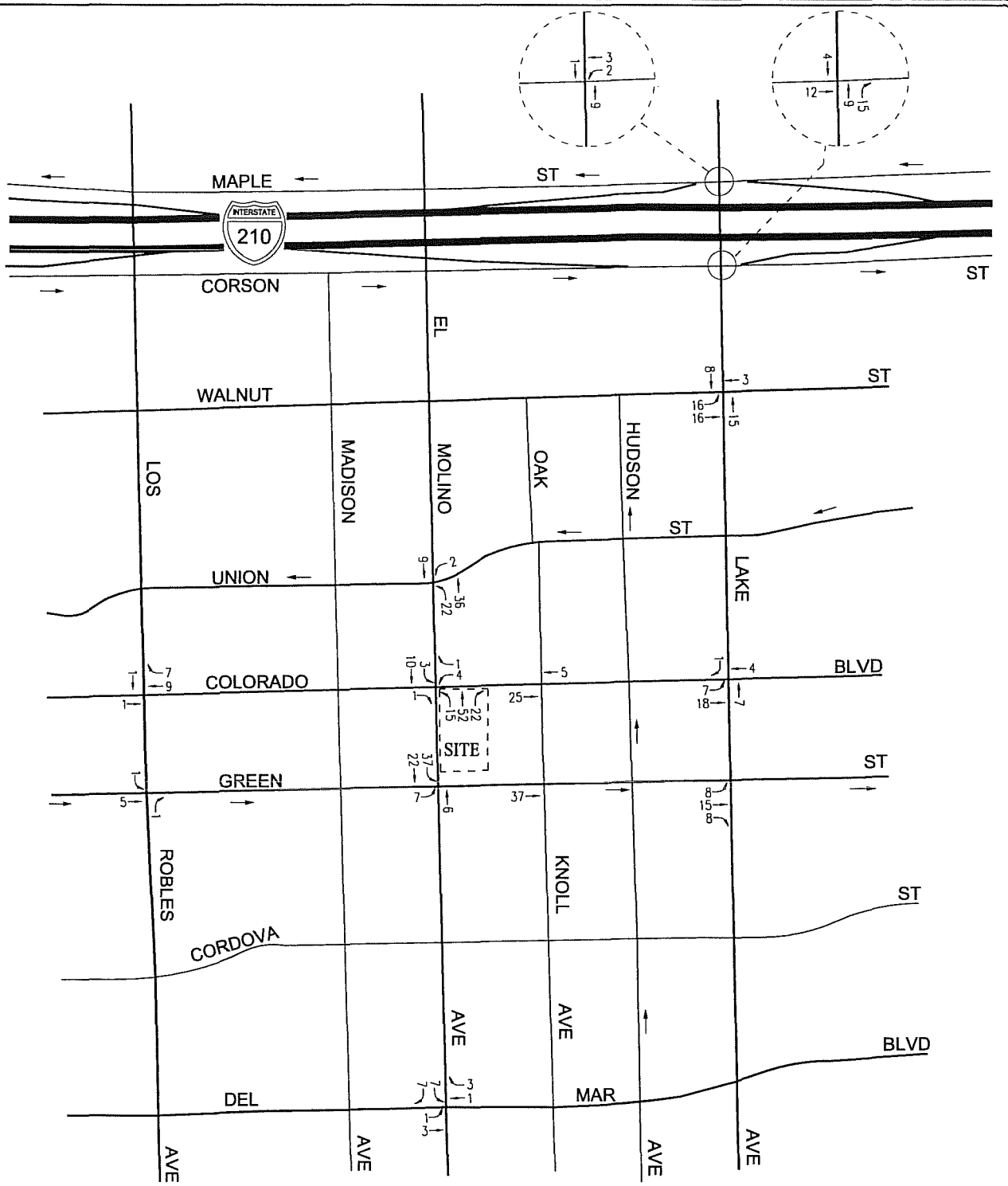

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FIGURE 6-4C
PROJECT ALTERNATIVE 4 TRAFFIC VOLUMES
PM PEAK HOUR

LINSCOTT, LAW & GREENSPAN, engineers

PLAYHOUSE PLAZA PROJECT

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7.0 CUMULATIVE DEVELOPMENT PROJECTS

The forecast of future pre-project conditions was prepared in accordance with procedures outlined in Section 15130 of the CEQA Guidelines. Specifically, the CEQA Guidelines provides two options for developing the future traffic volume forecast:

> "(A) A list of past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the [lead] agency, or
>
> (B) A summary of projections contained in an adopted general plan or related planning document, or in a prior environmental document which has been adopted or certified, which described or evaluated regional or areawide conditions contributing to the cumulative impact. Any such planning document shall be referenced and made available to the public at a location specified by the lead agency."

Accordingly, the traffic analysis provides a highly conservative estimate of future pre-project traffic volumes as it incorporates both the "A" and "B" options outlined in the CEQA Guidelines for purposes of developing the forecast. In general, a review of cumulative impacts must address approved related projects under construction, approved related projects not yet under construction, and unapproved projects under environmental review with related impacts or which result in significant cumulative impacts.

7.1 Related Projects

A forecast of on-street traffic conditions prior to occupancy of the proposed project was prepared by incorporating the potential trips associated with other known development projects (related projects) in the area. With this information, the potential impact of the proposed project can be evaluated within the context of the cumulative impact of all ongoing development. Based on the direction of PasDOT staff, the list of related projects was obtained from the draft traffic impact study for the 680 East Colorado Boulevard Mixed-Use Project prepared by Willdan Associates (June 2007). The list of related projects in the project site area is presented in ***Table 7–1***. The location of the related projects is shown in ***Figure 7–1***. The list of related projects was submitted to City of Pasadena Department of Transportation staff for review and acceptance.

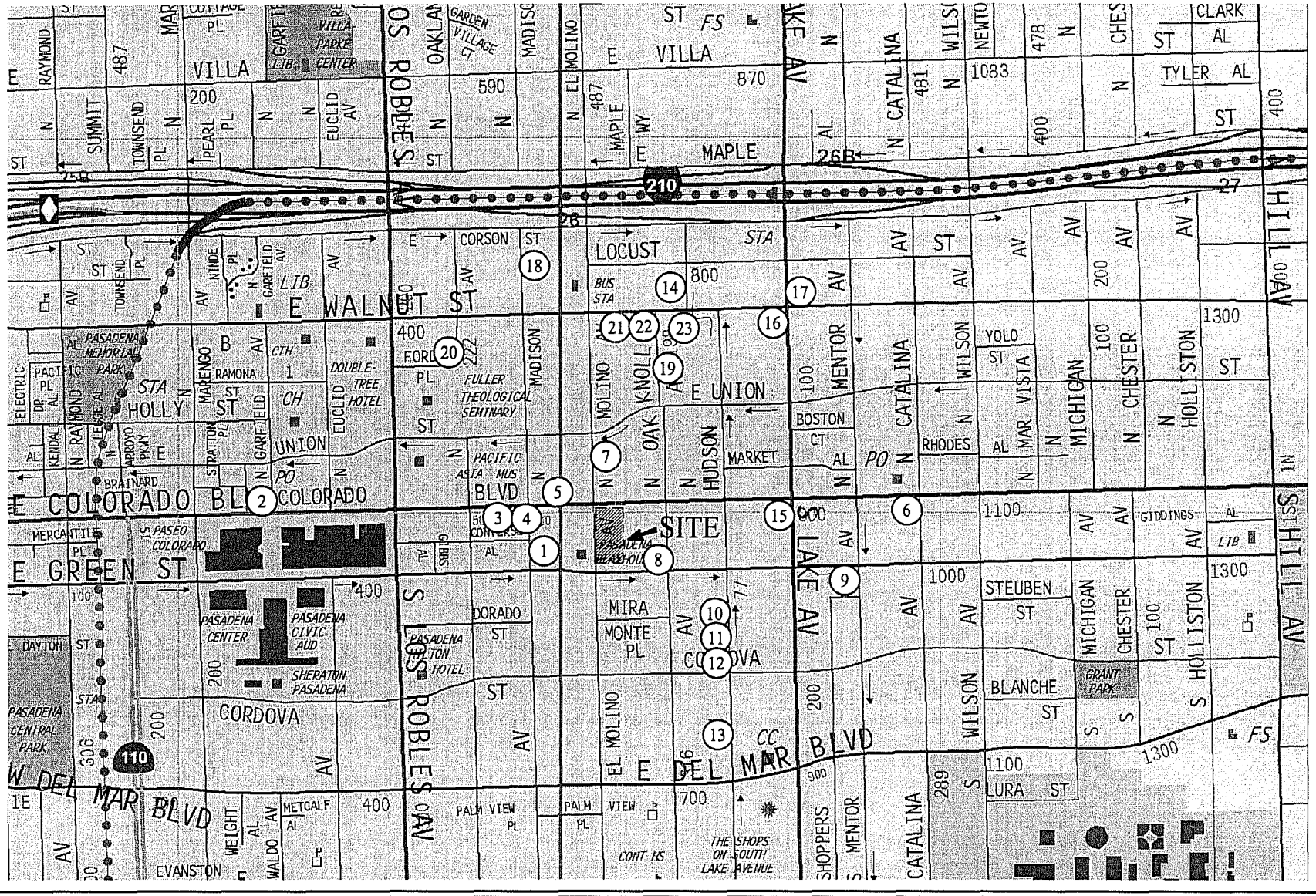
Traffic volumes expected to be generated by the related projects were also obtained from the draft traffic impact study for the 680 East Colorado Boulevard Mixed-Use Project prepared by Willdan Associates (June 2007) based on direction from PasDOT. The related projects respective traffic generation for the AM and PM peak hours, as well as on a daily basis for a typical weekday, is also summarized in *Table 7–1*. The anticipated distribution of the related projects traffic volumes to the study intersections during the AM and PM peak hours is displayed in ***Figures 7–2*** and ***7–3***, respectively.

Table 7-1
LIST OF RELATED PROJECTS AND
RELATED PROJECTS TRIP GENERATION [1]

03-Jul-2008

MAP NO.	PROJECT LOCATION	DAILY TRIP ENDS VOLUMES	AM PEAK HOUR VOLUMES			PM PEAK HOUR VOLUMES		
			IN	OUT	TOTAL	IN	OUT	TOTAL
1	44 S. Madison Avenue	473	7	11	18	21	20	41
2	301 E. Colorado Boulevard	644	7	25	32	28	24	52
3	558 E. Colorado Boulevard	4,437	209	63	272	113	254	367
4	592 E. Colorado Boulevard	1,633	68	75	143	17	14	31
5	621 E. Colorado Boulevard	1,970	22	102	124	129	58	187
6	1010 E. Colorado Boulevard	1,970	22	102	124	6	6	12
7	62 N. El Molino Avenue	1,245	(19)	62	43	76	18	94
8	747 E. Green Street	399	36	12	48	13	35	48
9	936 E. Green Street	479	(7)	18	11	27	9	36
10	141 S. Hudson Avenue	103	7	6	13	6	7	13
11	151 S. Hudson Avenue	169	8	4	12	6	11	17
12	171 S. Hudson Avenue	84	(2)	7	5	6	0	6
13	251 S. Hudson Avenue	100	6	1	7	6	3	9
14	233 N. Hudson Avenue	268	5	15	20	18	15	33
15	85 S. Lake Avenue	1,181	50	79	129	56	46	102
16	203 N. Lake Avenue	24,999	260	39	299	79	259	338
17	220 N. Lake Avenue	710	12	42	54	31	24	55
18	240 N. Madison Avenue	915	12	59	71	58	28	86
19	128 N. Oak Knoll Avenue	311	4	19	23	18	9	27
20	135 N. Oakland Avenue	2,650	89	93	182	105	118	223
21	690 E. Walnut Street	75	10	20	30	8	3	11
22	712 E. Walnut Street	269	3	12	15	15	10	25
23	770 E. Walnut Street	65	(9)	11	2	9	(9)	0
	TOTAL	**45,149**	**800**	**877**	**1,677**	**851**	**962**	**1,813**

[1] As directed by PasDOT staff, the related projects (i.e., list, trip generation, and traffic volume forecasts) were obtained from the Draft Traffic Impact Study for the 680 E. Colorado Boulevard Mixed-Use project prepared by Willdan Associates, June 2007.



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MAP SOURCE: THOMAS BROS. GUIDE

FIGURE 7-1
LOCATION OF RELATED PROJECTS

LINSCOTT, LAW & GREENSPAN, engineers

PLAYHOUSE PLAZA PROJECT

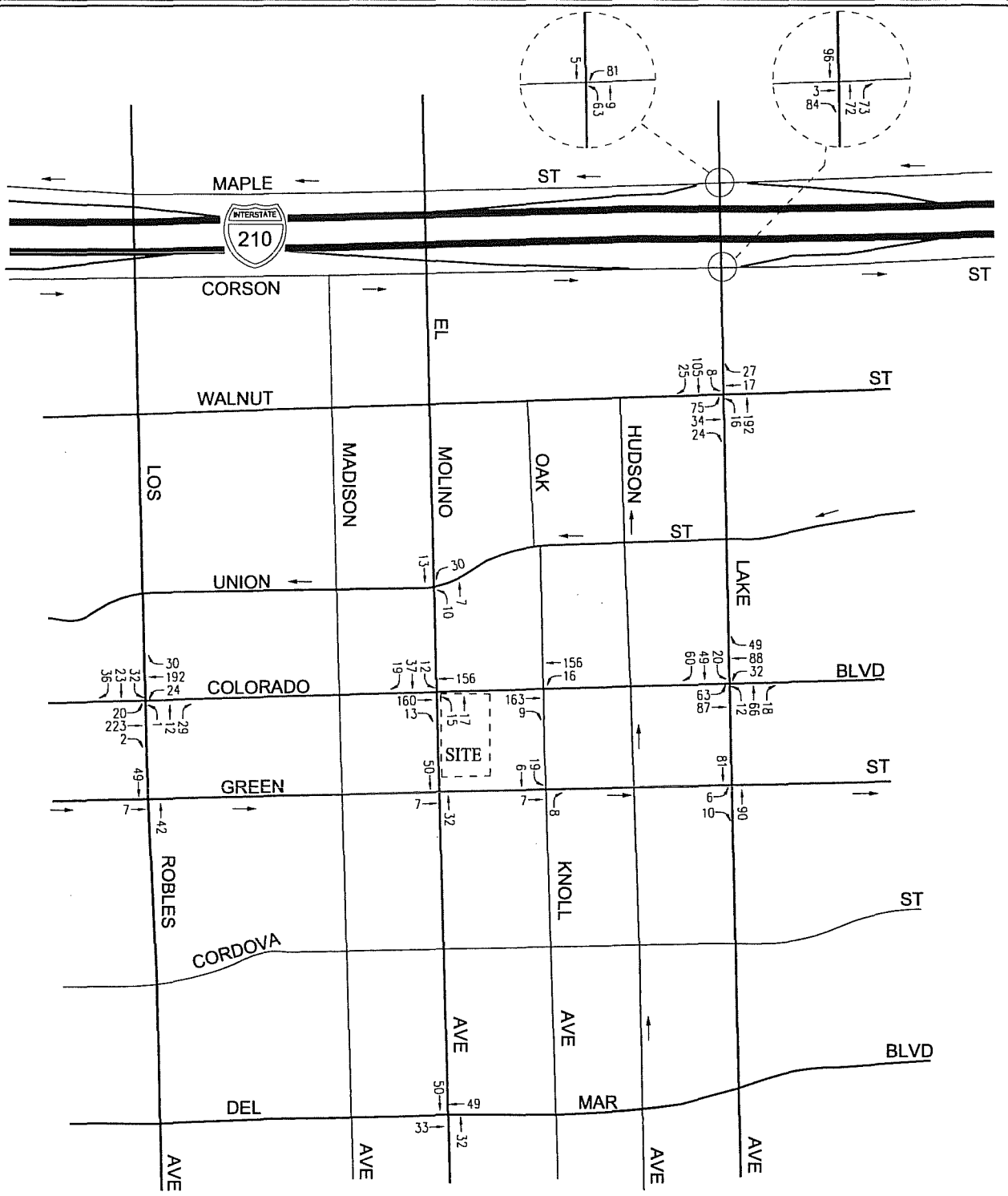

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FIGURE 7-2
RELATED PROJECTS TRAFFIC VOLUMES
AM PEAK HOUR

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PLAYHOUSE PLAZA PROJECT

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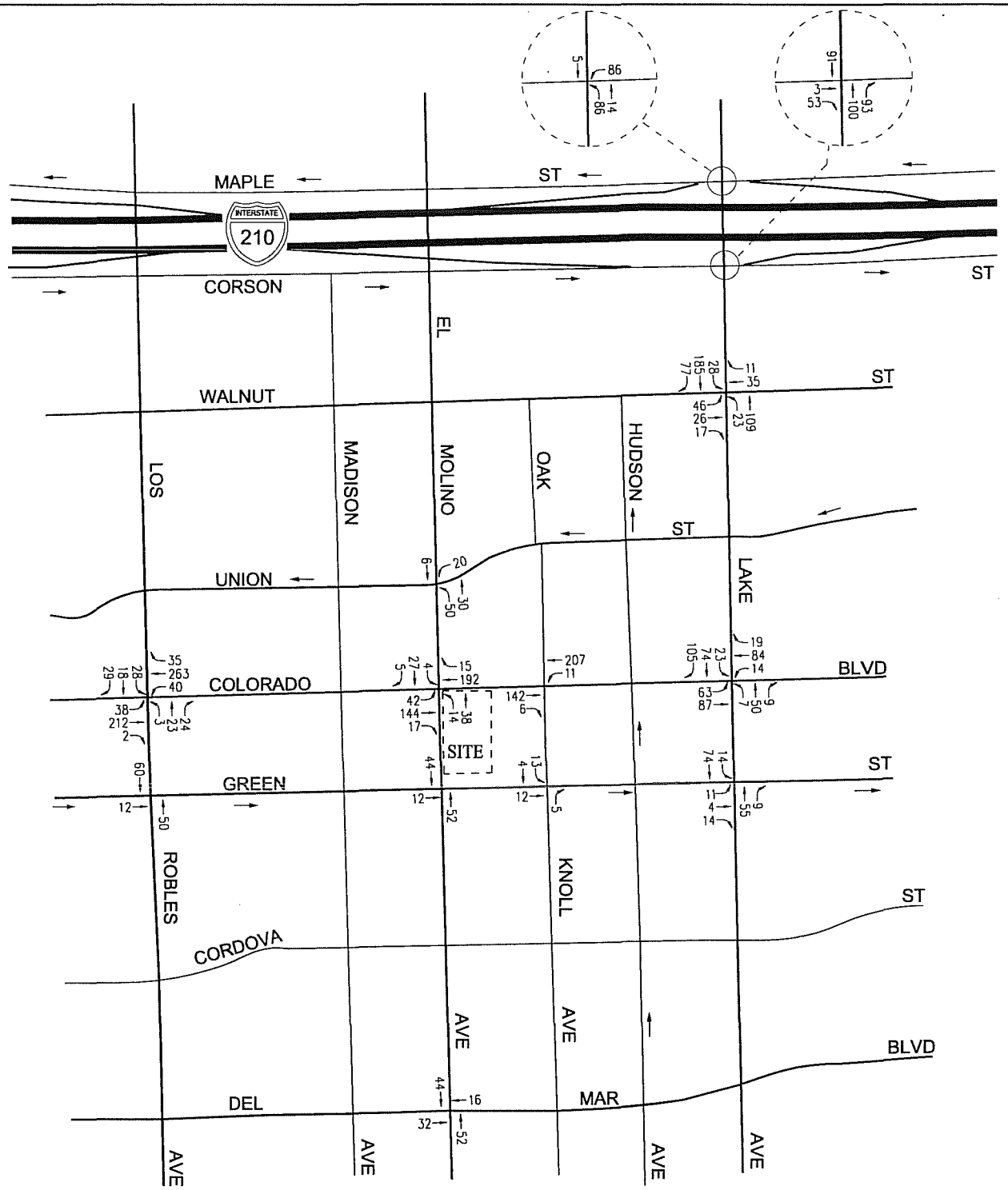

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FIGURE 7-3
RELATED PROJECTS TRAFFIC VOLUMES
PM PEAK HOUR

LINSCOTT, LAW & GREENSPAN, engineers

PLAYHOUSE PLAZA PROJECT

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7.2 Ambient Traffic Growth Factor

In order to account for unknown related projects not included in this analysis, the existing traffic volumes were increased at an annual rate of one and one-half percent (1.5%) per year to the year 2010 (i.e., the anticipated year of project build-out). The ambient growth factor was based on general traffic growth factors provided in the *2004 Congestion Management Program for Los Angeles County* (the "CMP manual") and determined in consultation with PasDOT staff. It is noted that based on review of the general traffic growth factors provided in the CMP manual for the San Gabriel Valley area, it is anticipated that the existing traffic volumes are expected to increase at an annual rate of less than 1.0% per year between the years 2001 and 2015. Thus, application of this annual growth factor allows for a conservative, worst case forecast of future traffic volumes in the area. Further, it is noted that the CMP manual's traffic growth rate is intended to anticipate future traffic generated by development projects in the project vicinity. Thus, the inclusion in this traffic analysis of both a forecast of traffic generated by known related projects plus the use of an ambient growth traffic factor based on CMP traffic model data results in a conservative estimate of future traffic volumes at the study intersections.

8.0 TRAFFIC IMPACT ANALYSIS METHODOLOGY

The study intersections were evaluated using the Intersection Capacity Utilization (ICU) method of analysis that determines Volume-to-Capacity (*v/c*) ratios on a critical lane basis. The overall intersection *v/c* ratio is subsequently assigned a Level of Service (LOS) value to describe intersection operations. Level of Service varies from LOS A (free flow) to LOS F (jammed condition). A description of the ICU method and corresponding Level of Service is provided in ***Appendix B***.

8.1 Impact Criteria and Thresholds

The relative impact of the added project traffic volumes to be generated by the proposed Playhouse Plaza project during the AM and PM peak hours was evaluated based on analysis of future operating conditions at the study intersections, without and with the proposed project. The previously discussed capacity analysis procedures were utilized to evaluate the future *v/c* relationships and service level characteristics at each study intersection.

The significance of the potential impacts of project generated traffic at each study intersection was identified using criteria set forth in the City of Pasadena's *Transportation Impact Review Current Practice and Guidelines*. According to the City's Sliding Scale Method for calculating the level of impact due to traffic generated by the proposed project, a significant transportation impact is determined based on the criteria presented in ***Table 8–1***.

Table 8–1
CITY OF PASADENA
INTERSECTION IMPACT THRESHOLD CRITERIA

Final *v/c*	Level of Service	Project Related Increase in *v/c*
0.000 - 0.600	A	equal to or greater than 0.06
> 0.600 - 0.700	B	equal to or greater than 0.05
> 0.700 - 0.800	C	equal to or greater than 0.04
> 0.800 - 0.900	D	equal to or greater than 0.03
> 0.900 - 1.000	E	equal to or greater than 0.02
> 1.000	F	equal to or greater than 0.01

The City's Sliding Scale Method requires mitigation of project traffic impacts whenever traffic generated by the proposed development causes an increase of the analyzed intersection *v/c* ratio by an amount equal to or greater than the values shown above.

The ICU calculations use a lane capacity of 1,700 vehicles per hour (vph) for left-turn, through and right-turn lanes, and a dual turn lane capacity of 3,060 vph. A clearance interval of 0.10 is also included in the ICU calculations.

8.2 Traffic Impact Analysis Scenarios

Traffic impacts at the study intersections were analyzed for the following conditions:

(a) Existing conditions.

(b) Condition (a) plus 1.5 percent (1.5%) ambient traffic growth through year 2010.

(c) Condition (b) with completion and occupancy of the related projects.

(d) Condition (c) with completion and occupancy of the proposed project.

(e) Condition (d) with implementation of project mitigation measures, where necessary.

The traffic volumes for each new condition were added to the volumes in the prior condition to determine the change in capacity utilization at the 13 study intersections.

Summaries of the *v/c* ratios and LOS values for the study intersections during the AM and PM peak hours associated with Project Alternatives 1, 2, 3 and 4 are shown in ***Tables 8–2, 8–3, 8–4*** and ***8–5***. The ICU data worksheets for the analyzed intersections associated with Project Alternatives 1, 2, 3 and 4 are contained in *Appendices B–1* through *B–4*, respectively.

Table 8-2
PROJECT ALTERNATIVE 1: ALL PARKING ON-SITE/ONE SITE ACCESS POINT
SUMMARY OF VOLUME TO CAPACITY RATIOS
AND LEVELS OF SERVICE
WEEKDAY AM AND PM PEAK HOURS

03-Jul-2008

NO.	INTERSECTION	PEAK HOUR	[1] YEAR 2008 EXISTING V/C	LOS	[2] YEAR 2010 W/ AMBIENT GROWTH V/C	LOS	[3] YEAR 2010 W/ RELATED PROJECTS V/C	LOS	[4] YEAR 2010 W/ PROPOSED PROJECT ALT 1 V/C	LOS	CHANGE V/C [(4)-(3)]	SIGNIF. IMPACT	[5] YEAR 2010 W/ PROJECT MITIGATION V/C	LOS	CHANGE V/C [(5)-(3)]	MITIGATED
1	Los Robles Avenue/	AM	0.576	A	0.591	A	0.666	B	0.670	B	0.004	NO	0.657	B	-0.009	---
	Colorado Boulevard	PM	0.684	B	0.702	C	0.818	D	0.821	D	0.003	NO	0.833	D	0.015	---
2	Los Robles Avenue/	AM	0.415	A	0.424	A	0.438	A	0.453	A	0.015	NO	0.453	A	0.015	---
	Green Street	PM	0.596	A	0.610	B	0.627	B	0.630	B	0.003	NO	0.630	B	0.003	---
3	El Molino Avenue/	AM	0.513	A	0.525	A	0.545	A	0.584	A	0.039	NO	0.597	A	0.052	---
	Union Street	PM	0.514	A	0.526	A	0.563	A	0.586	A	0.023	NO	0.591	A	0.028	---
4	El Molino Avenue/	AM	0.423	A	0.433	A	0.528	A	0.577	A	0.049	NO	0.545	A	0.017	---
	Colorado Boulevard	PM	0.636	B	0.653	B	0.759	C	0.822	D	0.063	YES	0.780	C	0.021	YES
5	El Molino Avenue/	AM	0.400	A	0.409	A	0.429	A	0.466	A	0.037	NO	0.477	A	0.048	---
	Green Street	PM	0.542	A	0.555	A	0.588	A	0.625	B	0.037	NO	0.642	B	0.054	---
6	El Molino Avenue/	AM	0.453	A	0.463	A	0.497	A	0.509	A	0.012	NO	0.509	A	0.012	---
	Del Mar Boulevard	PM	0.510	A	0.523	A	0.558	A	0.569	A	0.011	NO	0.569	A	0.011	---
7	Oak Knoll Avenue/	AM	0.362	A	0.370	A	0.419	A	0.424	A	0.005	NO	0.424	A	0.005	---
	Colorado Boulevard	PM	0.645	B	0.661	B	0.722	C	0.724	C	0.002	NO	0.724	C	0.002	---
8	Oak Knoll Avenue/	AM	0.321	A	0.328	A	0.344	A	0.345	A	0.001	NO	0.349	A	0.005	---
	Green Street	PM	0.465	A	0.476	A	0.488	A	0.497	A	0.009	NO	0.504	A	0.016	---
9	Lake Avenue/	AM	0.844	D	0.866	D	0.900	D	0.905	E	0.005	NO	0.905	E	0.005	---
	Maple Street-I-210 Freeway WB Ramps	PM	0.863	D	0.886	D	0.928	E	0.929	E	0.001	NO	0.929	E	0.001	---
10	Lake Avenue/	AM	0.643	B	0.660	B	0.690	B	0.691	B	0.001	NO	0.691	B	0.001	---
	Corson Street-I-210 Freeway EB Ramps	PM	0.803	D	0.824	D	0.856	D	0.861	D	0.005	NO	0.861	D	0.005	---

Table 8-2 (Continued)
PROJECT ALTERNATIVE 1: ALL PARKING ON-SITE/ONE SITE ACCESS POINT
SUMMARY OF VOLUME TO CAPACITY RATIOS
AND LEVELS OF SERVICE
WEEKDAY AM AND PM PEAK HOURS

03-Jul-2008

			[1]		[2]		[3]		[4]				[5]			
NO.	INTERSECTION	PEAK HOUR	YEAR 2008 EXISTING V/C	LOS	YEAR 2010 W/ AMBIENT GROWTH V/C	LOS	YEAR 2010 W/ RELATED PROJECTS V/C	LOS	YEAR 2010 W/ PROPOSED PROJECT ALT 1 V/C	LOS	CHANGE V/C [(4)-(3)]	SIGNIF. IMPACT	YEAR 2010 W/ PROJECT MITIGATION V/C	LOS	CHANGE V/C [(5)-(3)]	MITIGATED
11	Lake Avenue/	AM	0.638	B	0.654	B	0.726	C	0.733	C	0.007	NO	0.733	C	0.007	---
	Walnut Street	PM	0.758	C	0.778	C	0.872	D	0.876	D	0.004	NO	0.876	D	0.004	---
12	Lake Avenue/	AM	0.708	C	0.726	C	0.810	D	0.817	D	0.007	NO	0.817	D	0.007	---
	Colorado Boulevard	PM	0.833	D	0.855	D	0.943	E	0.950	E	0.007	NO	0.950	E	0.007	---
13	Lake Avenue/	AM	0.521	A	0.534	A	0.558	A	0.558	A	0.000	NO	0.562	A	0.004	---
	Green Street	PM	0.628	B	0.644	B	0.669	B	0.672	B	0.003	NO	0.679	B	0.010	---

City of Pasadena intersection impact threshold criteria is as follows:

Final v/c	LOS	Project Related Increase in v/c
>=0.000 - 0.600	A	equal to or greater than 0.06
>=0.600 - 0.700	B	equal to or greater than 0.05
>=0.700 - 0.800	C	equal to or greater than 0.04
>=0.800 - 0.900	D	equal to or greater than 0.03
>=0.900 - 1.000	E	equal to or greater than 0.02
> 1.000	F	equal to or greater than 0.01

Table 8-3
PROJECT ALTERNATIVE 2: ALL PARKING ON-SITE/TWO SITE ACCESS POINTS
SUMMARY OF VOLUME TO CAPACITY RATIOS
AND LEVELS OF SERVICE
WEEKDAY AM AND PM PEAK HOURS

03-Jul-2008

NO.	INTERSECTION	PEAK HOUR	[1] YEAR 2008 EXISTING V/C	LOS	[2] YEAR 2010 W/ AMBIENT GROWTH V/C	LOS	[3] YEAR 2010 W/ RELATED PROJECTS V/C	LOS	[4] YEAR 2010 W/ PROPOSED PROJECT ALT 2 V/C	LOS	CHANGE V/C [(4)-(3)]	SIGNIF. IMPACT	[5] YEAR 2010 W/ PROJECT MITIGATION V/C	LOS	CHANGE V/C [(5)-(3)]	MITIGATED
1	Los Robles Avenue/	AM	0.576	A	0.591	A	0.666	B	0.670	B	0.004	NO	0.657	B	-0.009	---
	Colorado Boulevard	PM	0.684	B	0.702	C	0.818	D	0.821	D	0.003	NO	0.833	D	0.015	---
2	Los Robles Avenue/	AM	0.415	A	0.424	A	0.438	A	0.453	A	0.015	NO	0.453	A	0.015	---
	Green Street	PM	0.596	A	0.610	B	0.627	B	0.630	B	0.003	NO	0.630	B	0.003	---
3	El Molino Avenue/	AM	0.513	A	0.525	A	0.545	A	0.584	A	0.039	NO	0.597	A	0.052	---
	Union Street	PM	0.514	A	0.526	A	0.563	A	0.586	A	0.023	NO	0.591	A	0.028	---
4	El Molino Avenue/	AM	0.423	A	0.433	A	0.528	A	0.577	A	0.049	NO	0.545	A	0.017	---
	Colorado Boulevard	PM	0.636	B	0.653	B	0.759	C	0.822	D	0.063	YES	0.780	C	0.021	YES
5	El Molino Avenue/	AM	0.400	A	0.409	A	0.429	A	0.461	A	0.032	NO	0.473	A	0.044	---
	Green Street	PM	0.542	A	0.555	A	0.588	A	0.599	A	0.011	NO	0.615	B	0.027	---
6	El Molino Avenue/	AM	0.453	A	0.463	A	0.497	A	0.509	A	0.012	NO	0.509	A	0.012	---
	Del Mar Boulevard	PM	0.510	A	0.523	A	0.558	A	0.569	A	0.011	NO	0.569	A	0.011	---
7	Oak Knoll Avenue/	AM	0.362	A	0.370	A	0.419	A	0.424	A	0.005	NO	0.424	A	0.005	---
	Colorado Boulevard	PM	0.645	B	0.661	B	0.722	C	0.724	C	0.002	NO	0.724	C	0.002	---
8	Oak Knoll Avenue/	AM	0.321	A	0.328	A	0.344	A	0.345	A	0.001	NO	0.349	A	0.005	---
	Green Street	PM	0.465	A	0.476	A	0.488	A	0.497	A	0.009	NO	0.504	A	0.016	---
9	Lake Avenue/	AM	0.844	D	0.866	D	0.900	D	0.905	E	0.005	NO	0.905	E	0.005	---
	Maple Street-I-210 Freeway WB Ramps	PM	0.863	D	0.886	D	0.928	E	0.929	E	0.001	NO	0.929	E	0.001	---
10	Lake Avenue/	AM	0.643	B	0.660	B	0.690	B	0.691	B	0.001	NO	0.691	B	0.001	---
	Corson Street-I-210 Freeway EB Ramps	PM	0.803	D	0.824	D	0.856	D	0.861	D	0.005	NO	0.861	D	0.005	---

Table 8-3 (Continued)
PROJECT ALTERNATIVE 2: ALL PARKING ON-SITE/TWO SITE ACCESS POINTS
SUMMARY OF VOLUME TO CAPACITY RATIOS
AND LEVELS OF SERVICE
WEEKDAY AM AND PM PEAK HOURS

03-Jul-2008

NO.	INTERSECTION	PEAK HOUR	[1] YEAR 2008 EXISTING V/C	LOS	[2] YEAR 2010 W/ AMBIENT GROWTH V/C	LOS	[3] YEAR 2010 W/ RELATED PROJECTS V/C	LOS	[4] YEAR 2010 W/ PROPOSED PROJECT ALT 2 V/C	LOS	CHANGE V/C [(4)-(3)]	SIGNIF. IMPACT	[5] YEAR 2010 W/ PROJECT MITIGATION V/C	LOS	CHANGE V/C [(5)-(3)]	MITIGATED
11	Lake Avenue/	AM	0.638	B	0.654	B	0.726	C	0.733	C	0.007	NO	0.733	C	0.007	---
	Walnut Street	PM	0.758	C	0.778	C	0.872	D	0.876	D	0.004	NO	0.876	D	0.004	---
12	Lake Avenue/	AM	0.708	C	0.726	C	0.810	D	0.817	D	0.007	NO	0.817	D	0.007	---
	Colorado Boulevard	PM	0.833	D	0.855	D	0.943	E	0.950	E	0.007	NO	0.950	E	0.007	---
13	Lake Avenue/	AM	0.521	A	0.534	A	0.558	A	0.558	A	0.000	NO	0.562	A	0.004	---
	Green Street	PM	0.628	B	0.644	B	0.669	B	0.672	B	0.003	NO	0.679	B	0.010	---

City of Pasadena intersection impact threshold criteria is as follows:

Final v/c	LOS	Project Related Increase in v/c
>=0.000 - 0.600	A	equal to or greater than 0.06
>=0.600 - 0.700	B	equal to or greater than 0.05
>=0.700 - 0.800	C	equal to or greater than 0.04
>=0.800 - 0.900	D	equal to or greater than 0.03
>=0.900 - 1.000	E	equal to or greater than 0.02
> 1.000	F	equal to or greater than 0.01

Table 8-4
PROJECT ALTERNATIVE 3: PARKING ON-SITE AND AT THE MADISON AVENUE STRUCTURE
SUMMARY OF VOLUME TO CAPACITY RATIOS
AND LEVELS OF SERVICE
WEEKDAY AM AND PM PEAK HOURS

03-Jul-2008

NO.	INTERSECTION	PEAK HOUR	[1] YEAR 2008 EXISTING V/C	LOS	[2] YEAR 2010 W/ AMBIENT GROWTH V/C	LOS	[3] YEAR 2010 W/ RELATED PROJECTS V/C	LOS	[4] YEAR 2010 W/ PROPOSED PROJECT ALT 3 V/C	LOS	CHANGE V/C [(4)-(3)]	SIGNIF. IMPACT	[5] YEAR 2010 W/ PROJECT MITIGATION V/C	LOS	CHANGE V/C [(5)-(3)]	MITIGATED
1	Los Robles Avenue/	AM	0.576	A	0.591	A	0.666	B	0.670	B	0.004	NO	0.657	B	-0.009	---
	Colorado Boulevard	PM	0.684	B	0.702	C	0.818	D	0.821	D	0.003	NO	0.833	D	0.015	---
2	Los Robles Avenue/	AM	0.415	A	0.424	A	0.438	A	0.453	A	0.015	NO	0.453	A	0.015	---
	Green Street	PM	0.596	A	0.610	B	0.627	B	0.629	B	0.002	NO	0.629	B	0.002	---
3	El Molino Avenue/	AM	0.513	A	0.525	A	0.545	A	0.579	A	0.034	NO	0.592	A	0.047	---
	Union Street	PM	0.514	A	0.526	A	0.563	A	0.587	A	0.024	NO	0.590	A	0.027	---
4	El Molino Avenue/	AM	0.423	A	0.433	A	0.528	A	0.566	A	0.038	NO	0.535	A	0.007	---
	Colorado Boulevard	PM	0.636	B	0.653	B	0.759	C	0.812	D	0.053	YES	0.769	C	0.010	YES
5	El Molino Avenue/	AM	0.400	A	0.409	A	0.429	A	0.460	A	0.031	NO	0.472	A	0.043	---
	Green Street	PM	0.542	A	0.555	A	0.588	A	0.618	B	0.030	NO	0.636	B	0.048	---
6	El Molino Avenue/	AM	0.453	A	0.463	A	0.497	A	0.508	A	0.011	NO	0.508	A	0.011	---
	Del Mar Boulevard	PM	0.510	A	0.523	A	0.558	A	0.567	A	0.009	NO	0.567	A	0.009	---
7	Oak Knoll Avenue/	AM	0.362	A	0.370	A	0.419	A	0.424	A	0.005	NO	0.424	A	0.005	---
	Colorado Boulevard	PM	0.645	B	0.661	B	0.722	C	0.724	C	0.002	NO	0.724	C	0.002	---
8	Oak Knoll Avenue/	AM	0.321	A	0.328	A	0.344	A	0.345	A	0.001	NO	0.349	A	0.005	---
	Green Street	PM	0.465	A	0.476	A	0.488	A	0.496	A	0.008	NO	0.503	A	0.015	---
9	Lake Avenue/	AM	0.844	D	0.866	D	0.900	D	0.904	E	0.004	NO	0.904	E	0.004	---
	Maple Street-I-210 Freeway WB Ramps	PM	0.863	D	0.886	D	0.928	E	0.929	E	0.001	NO	0.929	E	0.001	---
10	Lake Avenue/	AM	0.643	B	0.660	B	0.690	B	0.691	B	0.001	NO	0.691	B	0.001	---
	Corson Street-I-210 Freeway EB Ramps	PM	0.803	D	0.824	D	0.856	D	0.861	D	0.005	NO	0.861	D	0.005	---

Table 8-4 (Continued)
PROJECT ALTERNATIVE 3: PARKING ON-SITE AND AT THE MADISON AVENUE STRUCTURE
SUMMARY OF VOLUME TO CAPACITY RATIOS
AND LEVELS OF SERVICE
WEEKDAY AM AND PM PEAK HOURS

03-Jul-2008

NO.	INTERSECTION	PEAK HOUR	[1] YEAR 2008 EXISTING V/C	LOS	[2] YEAR 2010 W/ AMBIENT GROWTH V/C	LOS	[3] YEAR 2010 W/ RELATED PROJECTS V/C	LOS	[4] YEAR 2010 W/ PROPOSED PROJECT ALT 3 V/C	LOS	CHANGE V/C [(4)-(3)]	SIGNIF. IMPACT	[5] YEAR 2010 W/ PROJECT MITIGATION V/C	LOS	CHANGE V/C [(5)-(3)]	MITIGATED
11	Lake Avenue/	AM	0.638	B	0.654	B	0.726	C	0.741	C	0.015	NO	0.741	C	0.015	---
	Walnut Street	PM	0.758	C	0.778	C	0.872	D	0.879	D	0.007	NO	0.879	D	0.007	---
12	Lake Avenue/	AM	0.708	C	0.726	C	0.810	D	0.816	D	0.006	NO	0.816	D	0.006	---
	Colorado Boulevard	PM	0.833	D	0.855	D	0.943	E	0.948	E	0.005	NO	0.948	E	0.005	---
13	Lake Avenue/	AM	0.521	A	0.534	A	0.558	A	0.558	A	0.000	NO	0.562	A	0.004	---
	Green Street	PM	0.628	B	0.644	B	0.669	B	0.672	B	0.003	NO	0.679	B	0.010	---

City of Pasadena intersection impact threshold criteria is as follows:

Final v/c	LOS	Project Related Increase in v/c
>=0.000 - 0.600	A	equal to or greater than 0.06
>=0.600 - 0.700	B	equal to or greater than 0.05
>=0.700 - 0.800	C	equal to or greater than 0.04
>=0.800 - 0.900	D	equal to or greater than 0.03
>=0.900 - 1.000	E	equal to or greater than 0.02
> 1.000	F	equal to or greater than 0.01

Table 8-5
PROJECT ALTERNATIVE 4: PARKING ON-SITE AND AT 621 E. COLORADO BOULEVARD
SUMMARY OF VOLUME TO CAPACITY RATIOS
AND LEVELS OF SERVICE
WEEKDAY AM AND PM PEAK HOURS

03-Jul-2008

			[1]		[2]		[3]		[4]				[5]			
NO.	INTERSECTION	PEAK HOUR	YEAR 2008 EXISTING V/C	LOS	YEAR 2010 W/ AMBIENT GROWTH V/C	LOS	YEAR 2010 W/ RELATED PROJECTS V/C	LOS	YEAR 2010 W/ PROPOSED PROJECT ALT 4 V/C	LOS	CHANGE V/C [(4)-(3)]	SIGNIF. IMPACT	YEAR 2010 W/ PROJECT MITIGATION V/C	LOS	CHANGE V/C [(5)-(3)]	MITIGATED
1	Los Robles Avenue/	AM	0.576	A	0.591	A	0.666	B	0.669	B	0.003	NO	0.656	B	-0.010	---
	Colorado Boulevard	PM	0.684	B	0.702	C	0.818	D	0.821	D	0.003	NO	0.834	D	0.016	---
2	Los Robles Avenue/	AM	0.415	A	0.424	A	0.438	A	0.451	A	0.013	NO	0.451	A	0.013	---
	Green Street	PM	0.596	A	0.610	B	0.627	B	0.629	B	0.002	NO	0.629	B	0.002	---
3	El Molino Avenue/	AM	0.513	A	0.525	A	0.545	A	0.579	A	0.034	NO	0.592	A	0.047	---
	Union Street	PM	0.514	A	0.526	A	0.563	A	0.582	A	0.019	NO	0.584	A	0.021	---
4	El Molino Avenue/	AM	0.423	A	0.433	A	0.528	A	0.566	A	0.038	NO	0.535	A	0.007	---
	Colorado Boulevard	PM	0.636	B	0.653	B	0.759	C	0.813	D	0.054	YES	0.769	C	0.010	YES
5	El Molino Avenue/	AM	0.400	A	0.409	A	0.429	A	0.460	A	0.031	NO	0.472	A	0.043	---
	Green Street	PM	0.542	A	0.555	A	0.588	A	0.617	B	0.029	NO	0.637	B	0.049	---
6	El Molino Avenue/	AM	0.453	A	0.463	A	0.497	A	0.508	A	0.011	NO	0.508	A	0.011	---
	Del Mar Boulevard	PM	0.510	A	0.523	A	0.558	A	0.567	A	0.009	NO	0.567	A	0.009	---
7	Oak Knoll Avenue/	AM	0.362	A	0.370	A	0.419	A	0.424	A	0.005	NO	0.424	A	0.005	---
	Colorado Boulevard	PM	0.645	B	0.661	B	0.722	C	0.724	C	0.002	NO	0.724	C	0.002	---
8	Oak Knoll Avenue/	AM	0.321	A	0.328	A	0.344	A	0.345	A	0.001	NO	0.349	A	0.005	---
	Green Street	PM	0.465	A	0.476	A	0.488	A	0.496	A	0.008	NO	0.503	A	0.015	---
9	Lake Avenue/	AM	0.844	D	0.866	D	0.900	D	0.904	E	0.004	NO	0.904	E	0.004	---
	Maple Street-I-210 Freeway WB Ramps	PM	0.863	D	0.886	D	0.928	E	0.929	E	0.001	NO	0.929	E	0.001	---
10	Lake Avenue/	AM	0.643	B	0.660	B	0.690	B	0.691	B	0.001	NO	0.691	B	0.001	---
	Corson Street-I-210 Freeway EB Ramps	PM	0.803	D	0.824	D	0.856	D	0.861	D	0.005	NO	0.861	D	0.005	---

Table 8-5 (Continued)
PROJECT ALTERNATIVE 4: PARKING ON-SITE AND AT 621 E. COLORADO BOULEVARD
SUMMARY OF VOLUME TO CAPACITY RATIOS
AND LEVELS OF SERVICE
WEEKDAY AM AND PM PEAK HOURS

03-Jul-2008

			[1]		[2]		[3]		[4]				[5]			
NO.	INTERSECTION	PEAK HOUR	YEAR 2008 EXISTING V/C	LOS	YEAR 2010 W/ AMBIENT GROWTH V/C	LOS	YEAR 2010 W/ RELATED PROJECTS V/C	LOS	YEAR 2010 W/ PROPOSED PROJECT ALT 4 V/C	LOS	CHANGE V/C [(4)-(3)]	SIGNIF. IMPACT	YEAR 2010 W/ PROJECT MITIGATION V/C	LOS	CHANGE V/C [(5)-(3)]	MITIGATED
11	Lake Avenue/	AM	0.638	B	0.654	B	0.726	C	0.741	C	0.015	NO	0.741	C	0.015	---
	Walnut Street	PM	0.758	C	0.778	C	0.872	D	0.879	D	0.007	NO	0.879	D	0.007	---
12	Lake Avenue/	AM	0.708	C	0.726	C	0.810	D	0.816	D	0.006	NO	0.816	D	0.006	---
	Colorado Boulevard	PM	0.833	D	0.855	D	0.943	E	0.948	E	0.005	NO	0.948	E	0.005	---
13	Lake Avenue/	AM	0.521	A	0.534	A	0.558	A	0.558	A	0.000	NO	0.562	A	0.004	---
	Green Street	PM	0.628	B	0.644	B	0.669	B	0.672	B	0.003	NO	0.679	B	0.010	---

City of Pasadena intersection impact threshold criteria is as follows:

Final v/c	LOS	Project Related Increase in v/c
>=0.000 - 0.600	A	equal to or greater than 0.06
>=0.600 - 0.700	B	equal to or greater than 0.05
>=0.700 - 0.800	C	equal to or greater than 0.04
>=0.800 - 0.900	D	equal to or greater than 0.03
>=0.900 - 1.000	E	equal to or greater than 0.02
> 1.000	F	equal to or greater than 0.01

9.0 TRAFFIC ANALYSIS

9.1 Existing Conditions

As indicated in column [1] of *Table 8–2*, all of the study intersections are presently operating at LOS D or better during the AM and PM peak hours under existing conditions. As previously mentioned, the existing traffic volumes at the study intersections during the AM and PM peak hours are displayed in *Figures 5–1* and *5–2*, respectively.

9.2 Existing With Ambient Growth Conditions

Growth in traffic due to the combined effects of continuing development, intensification of existing developments and other factors was assumed to be 1.5 percent (1.5%) per year through year 2010. This ambient growth incrementally increases the *v/c* ratios at all of the study intersections. As presented in column [2] of *Table 8–2*, all of the study intersections are expected to continue operating at LOS D or better during the AM and PM peak hours with the addition of ambient growth traffic.

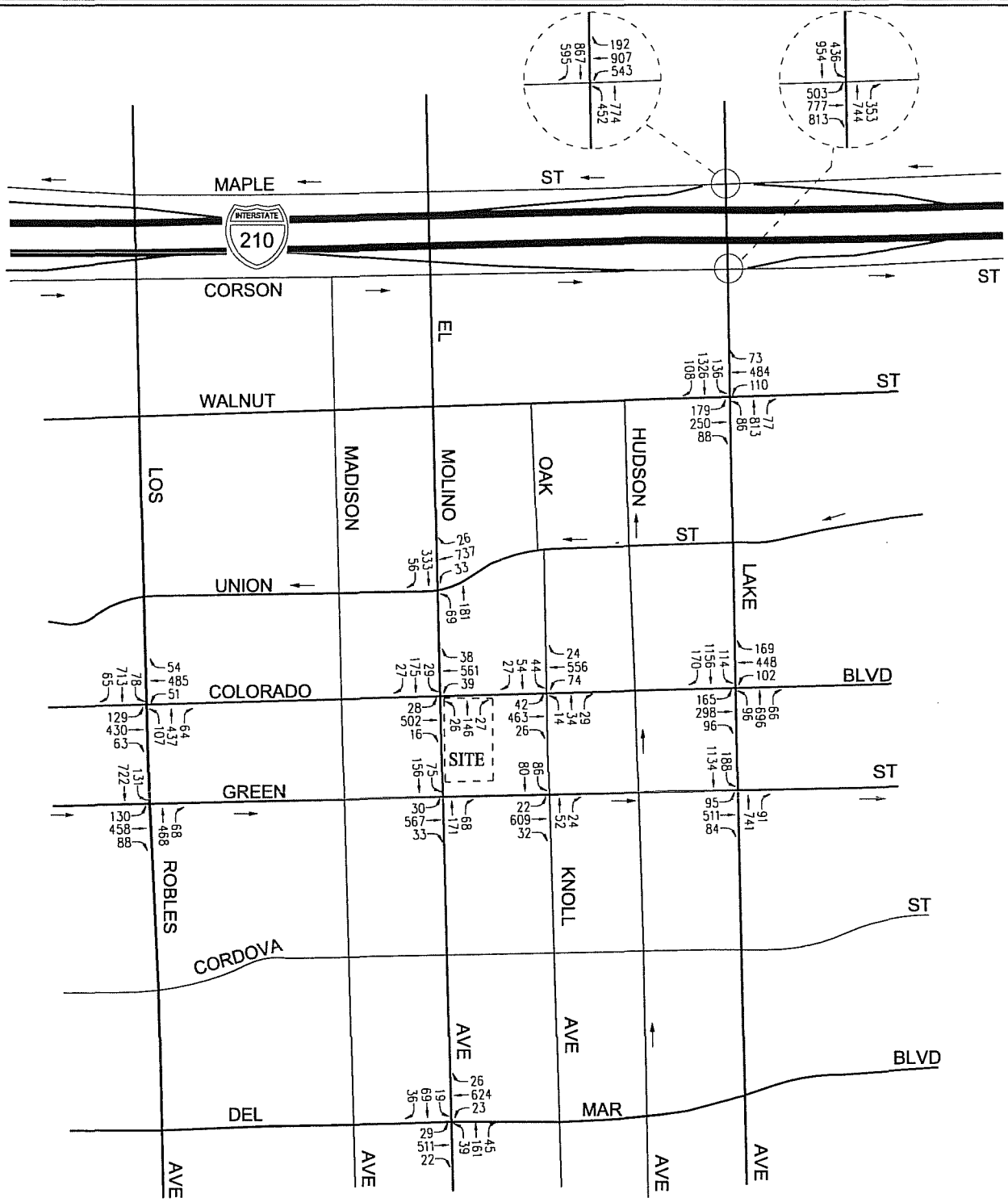
The existing with ambient growth traffic volumes at the study intersections during the AM and PM peak hours are shown in ***Figures 9–1*** and ***9–2***, respectively.

9.3 Future Pre-Project Conditions

The *v/c* ratios at all 13 study intersections are incrementally increased with the addition of traffic generated by the related projects listed in *Table 7–1*. As shown in column [3] of *Table 8–2*, 11 of the 13 study intersections are expected to continue operating at LOS D or better during the AM and PM peak hours with the addition of ambient traffic growth and the traffic due to the related projects. The following two study intersections are expected to operate at LOS E during the peak hour shown below with the addition of ambient growth traffic and traffic due to the related projects:

- Int. No. 9: Lake Ave./Maple St.-I-210 Fwy. WB Ramps PM Peak Hour: *v/c*=0.928, LOS E
- Int. No. 12: Lake Avenue/Colorado Boulevard PM Peak Hour: *v/c*=0.943, LOS E

The future pre-project (existing, ambient growth and related projects) traffic volumes at the study intersections during the AM and PM peak hours are presented in ***Figures 9–3*** and ***9–4***, respectively.



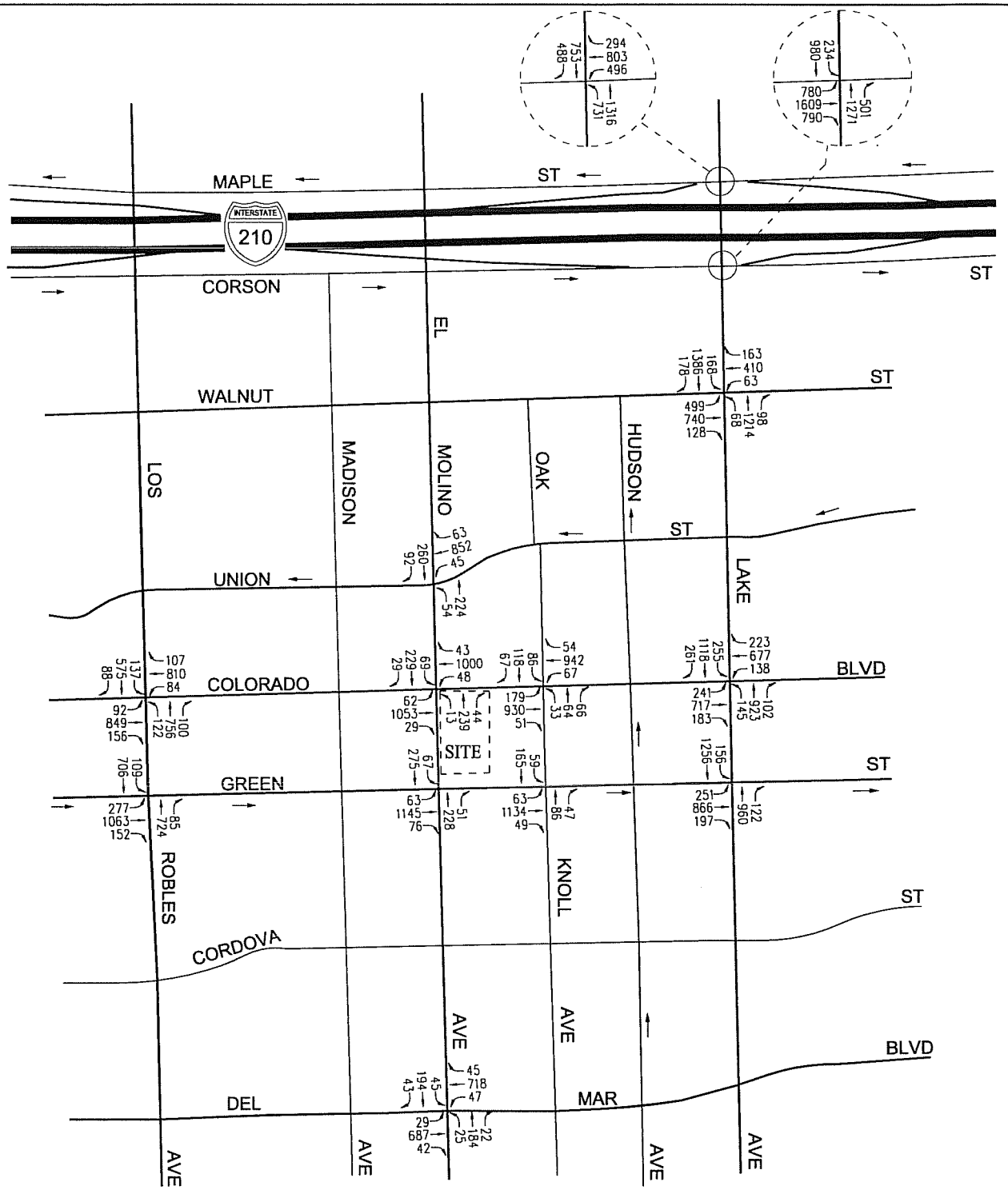
NOT TO SCALE

FIGURE 9-1
EXISTING WITH AMBIENT GROWTH TRAFFIC VOLUMES
AM PEAK HOUR

LINSCOTT, LAW & GREENSPAN, engineers

PLAYHOUSE PLAZA PROJECT

o:\job_file\3727\dwg\f9-1.dwg LDP 14:59:48 07/03/2008 rodriquez



MAP SOURCE: THOMAS BROS. GUIDE

NOT TO SCALE

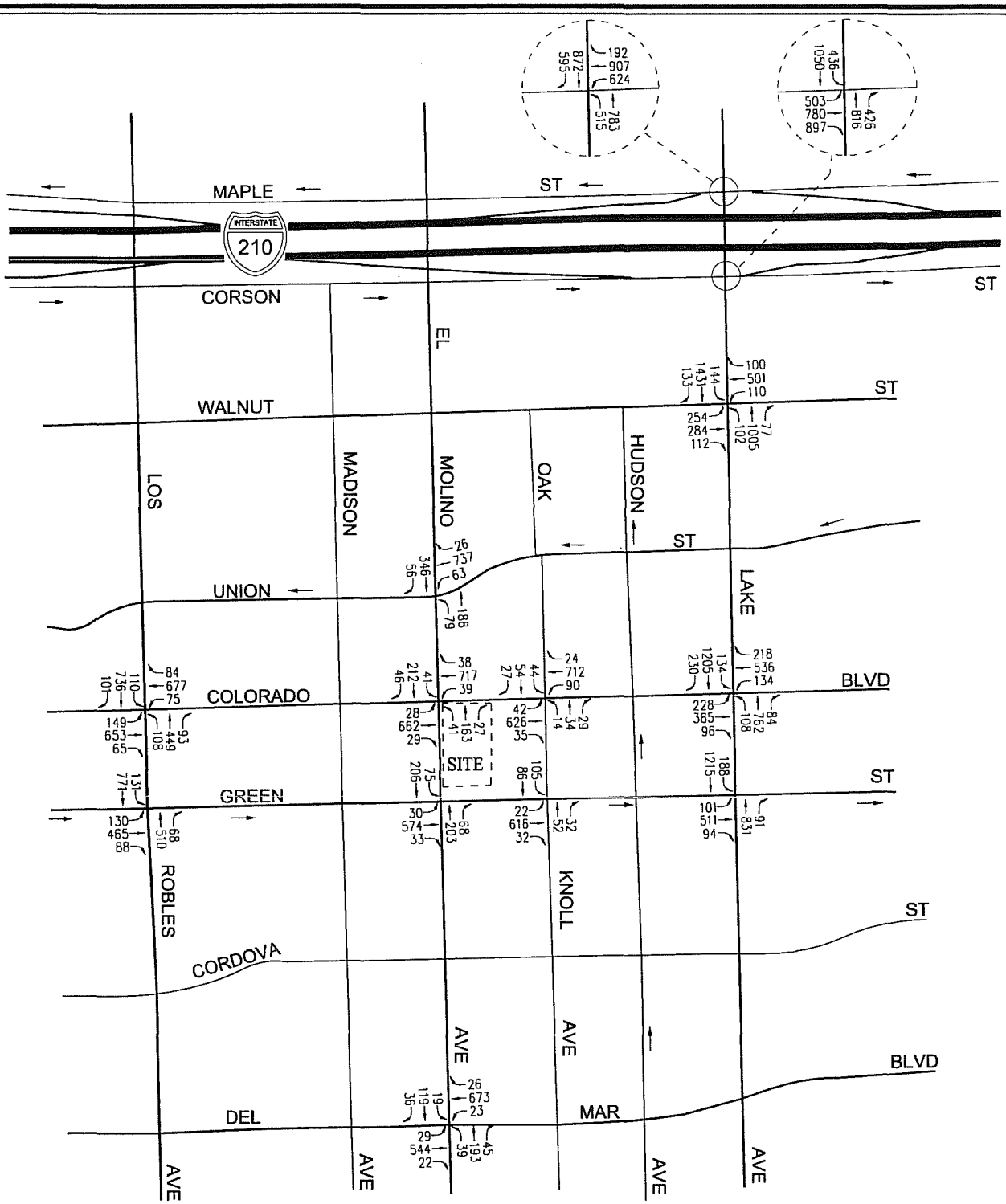
FIGURE 9-2

EXISTING WITH AMBIENT GROWTH TRAFFIC VOLUMES

PM PEAK HOUR

LINSCOTT, LAW & GREENSPAN, engineers

PLAYHOUSE PLAZA PROJECT



NOT TO SCALE

FIGURE 9-3
FUTURE PRE-PROJECT TRAFFIC VOLUMES
AM PEAK HOUR

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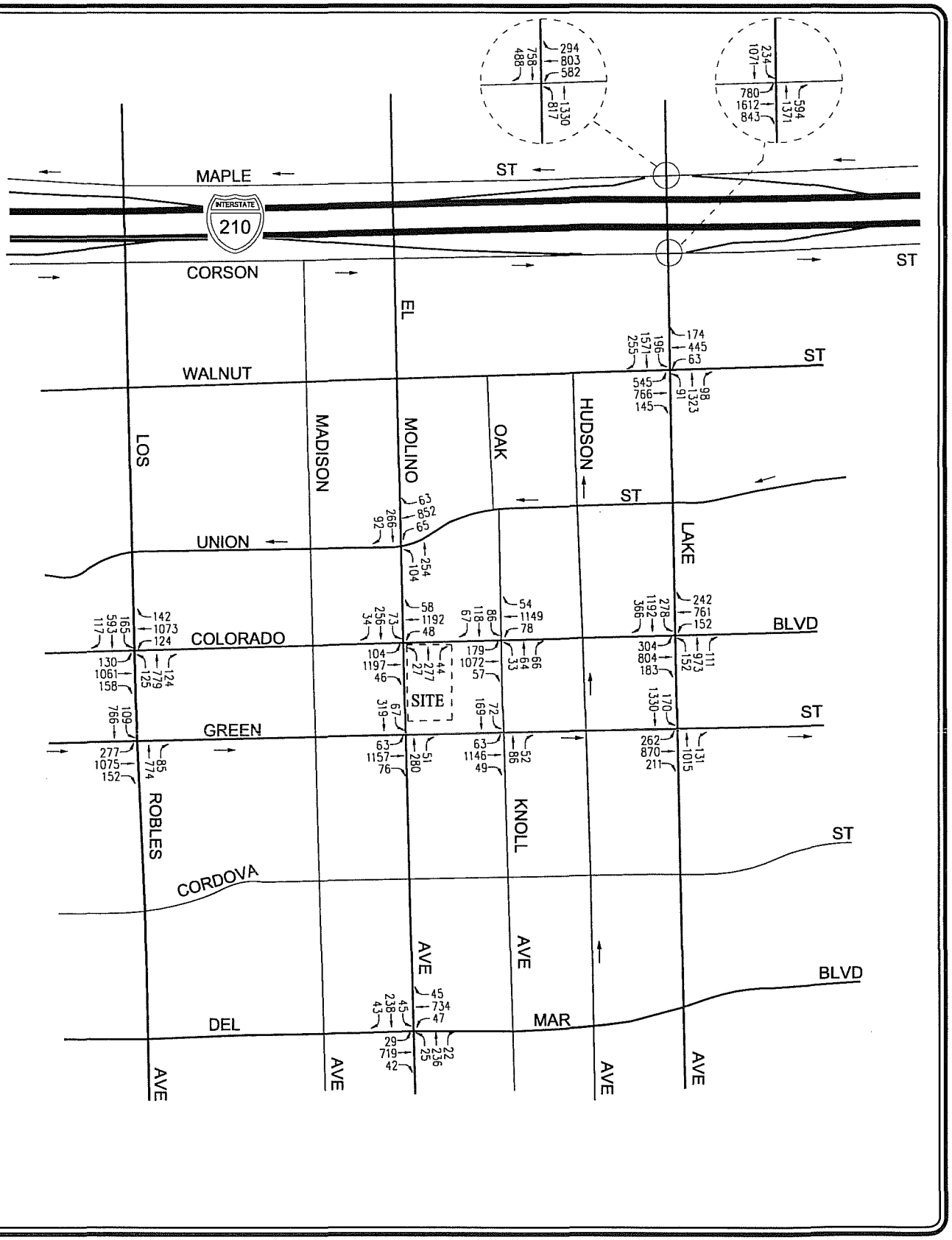

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MAP SOURCE: THOMAS BROS. GUIDE

FIGURE 9-4

FUTURE PRE-PROJECT TRAFFIC VOLUMES

PM PEAK HOUR

LINSCOTT, LAW & GREENSPAN, engineers

PLAYHOUSE PLAZA PROJECT

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9.4 Future With Project Conditions

9.4.1 *Future With Project Alternative 1 Conditions*

As shown in column [4] of *Table 8–2*, application of the City's threshold criteria to the "With Proposed Project" scenario indicates that Project Alternative 1 is expected to create a significant impact at one of the 13 study intersections. Project Alternative 1 is expected to create a significant impact at the following location according to the City's impact criteria during the peak hour shown below with the addition of ambient growth, related projects traffic, and project-related traffic:

- Int. No. 4: El Molino Avenue/Colorado Boulevard

  PM peak hour *v/c* ratio increase of 0.063 [to 0.822 (LOS D) from 0.759 (LOS C)]

Incremental but not significant impacts are noted at the remaining 12 study intersections, as presented in *Table 8–2*. Recommended traffic mitigation measures expected to reduce the forecast project-related impact to less than significant levels are described in Section 11.0 herein. The future with Project Alternative 1 (existing, ambient growth, related projects and project) traffic volumes at the study intersections during the AM and PM peak hours are illustrated in ***Figures 9–5A*** and ***9–5B***, respectively.

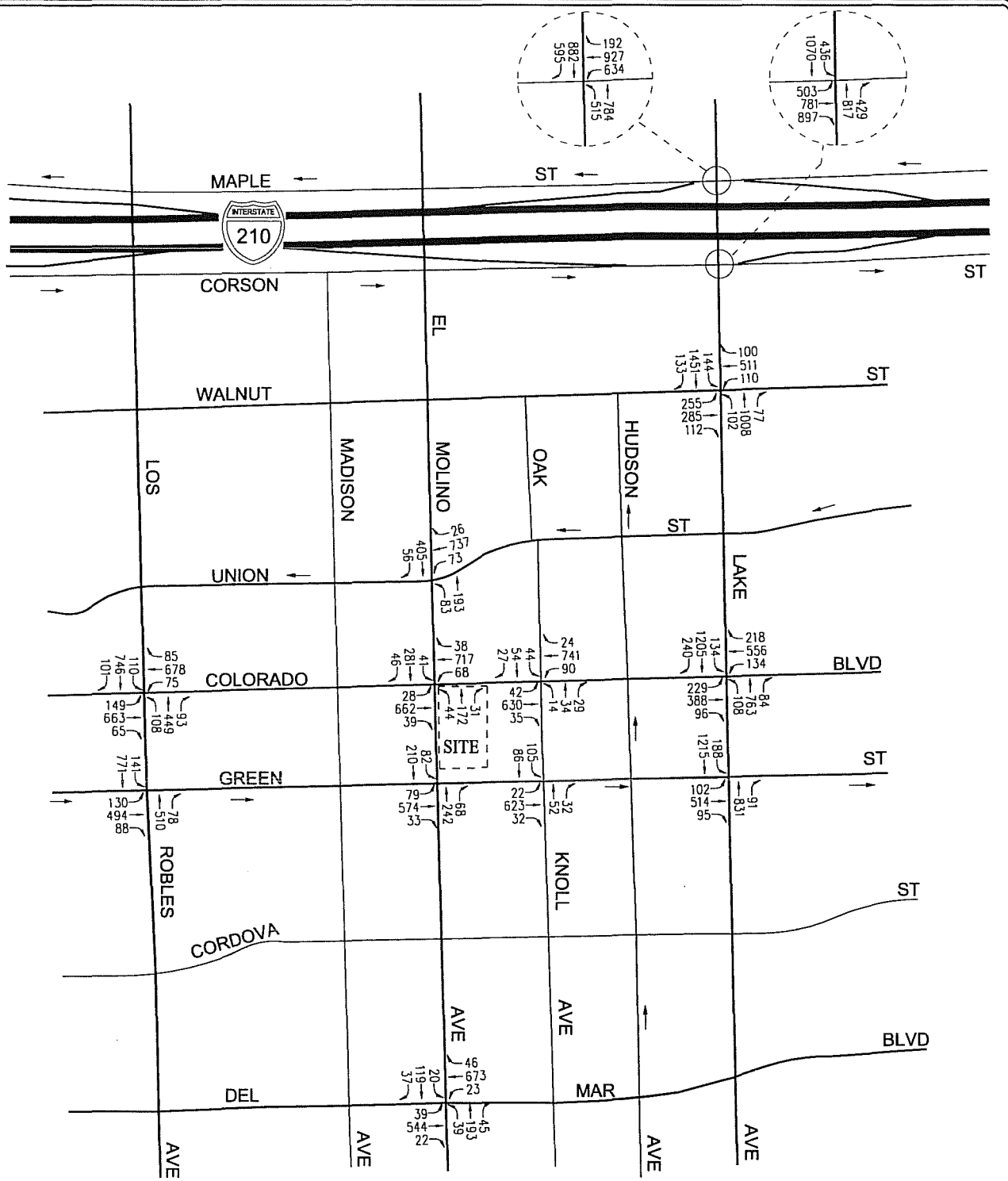
9.4.2 *Future With Project Alternative 2 Conditions*

As shown in column [4] of *Table 8–3*, application of the City's threshold criteria to the "With Proposed Project" scenario indicates that Project Alternative 2 is expected to create a significant impact at one of the 13 study intersections. Project Alternative 2 is expected to create a significant impact at the following location according to the City's impact criteria during the peak hour shown below with the addition of ambient growth, related projects traffic, and project-related traffic:

- Int. No. 4: El Molino Avenue/Colorado Boulevard

  PM peak hour *v/c* ratio increase of 0.063 [to 0.822 (LOS D) from 0.759 (LOS C)]

Incremental but not significant impacts are noted at the remaining 12 study intersections, as presented in *Table 8–3*. Recommended traffic mitigation measures expected to reduce the forecast project-related impact to less than significant levels are described in Section 11.0 herein. The future with Project Alternative 2 (existing, ambient growth, related projects and project) traffic volumes at the study intersections during the AM and PM peak hours are illustrated in ***Figures 9–6A*** and ***9–6B***, respectively.



NOT TO SCALE

FIGURE 9-5A
FUTURE WITH PROJECT ALTERNATIVE 1
TRAFFIC VOLUMES
AM PEAK HOUR

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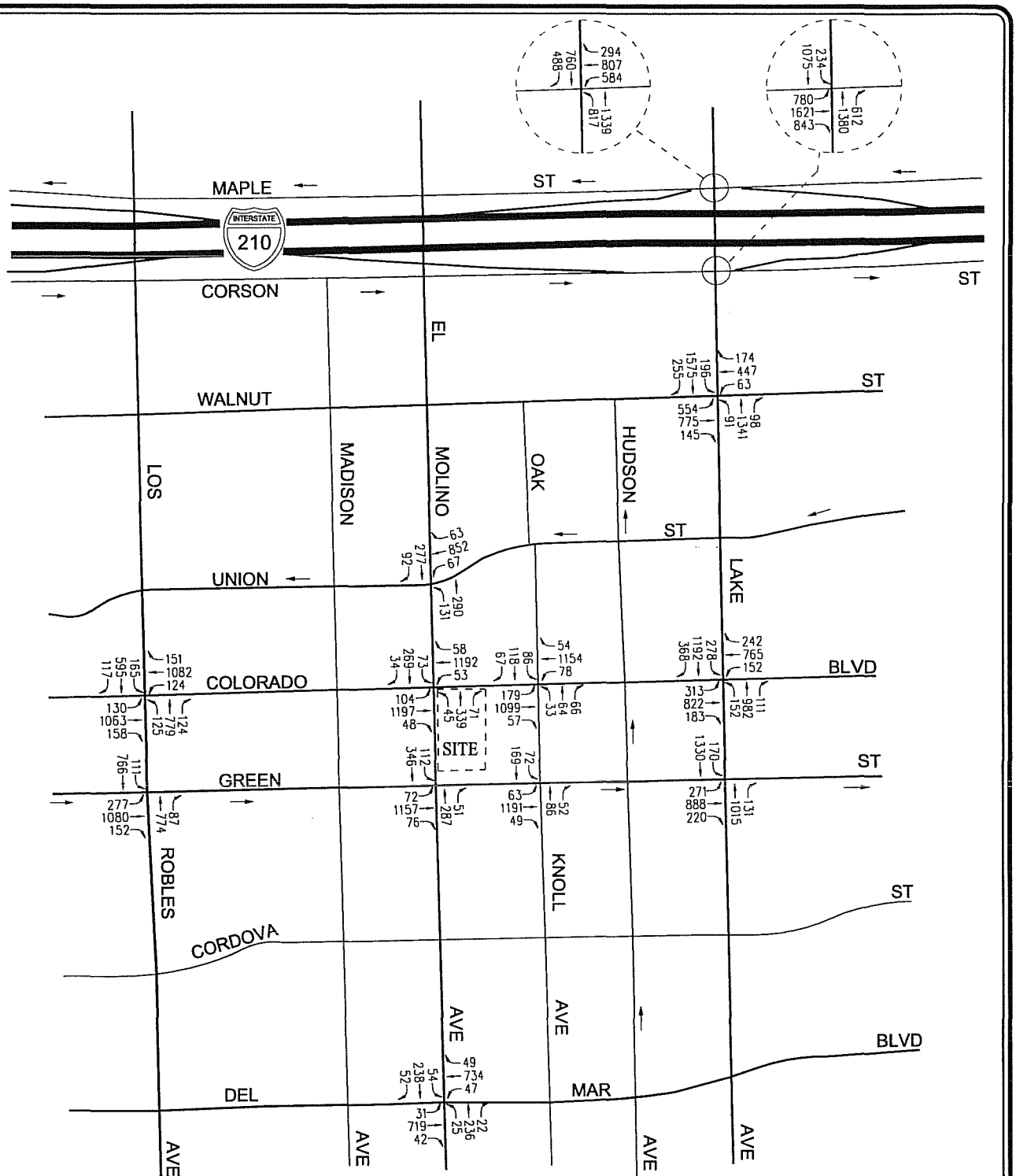

NOT TO SCALE

FIGURE 9-5B
FUTURE WITH PROJECT ALTERNATIVE 1 TRAFFIC VOLUMES
PM PEAK HOUR

LINSCOTT, LAW & GREENSPAN, engineers

PLAYHOUSE PLAZA PROJECT

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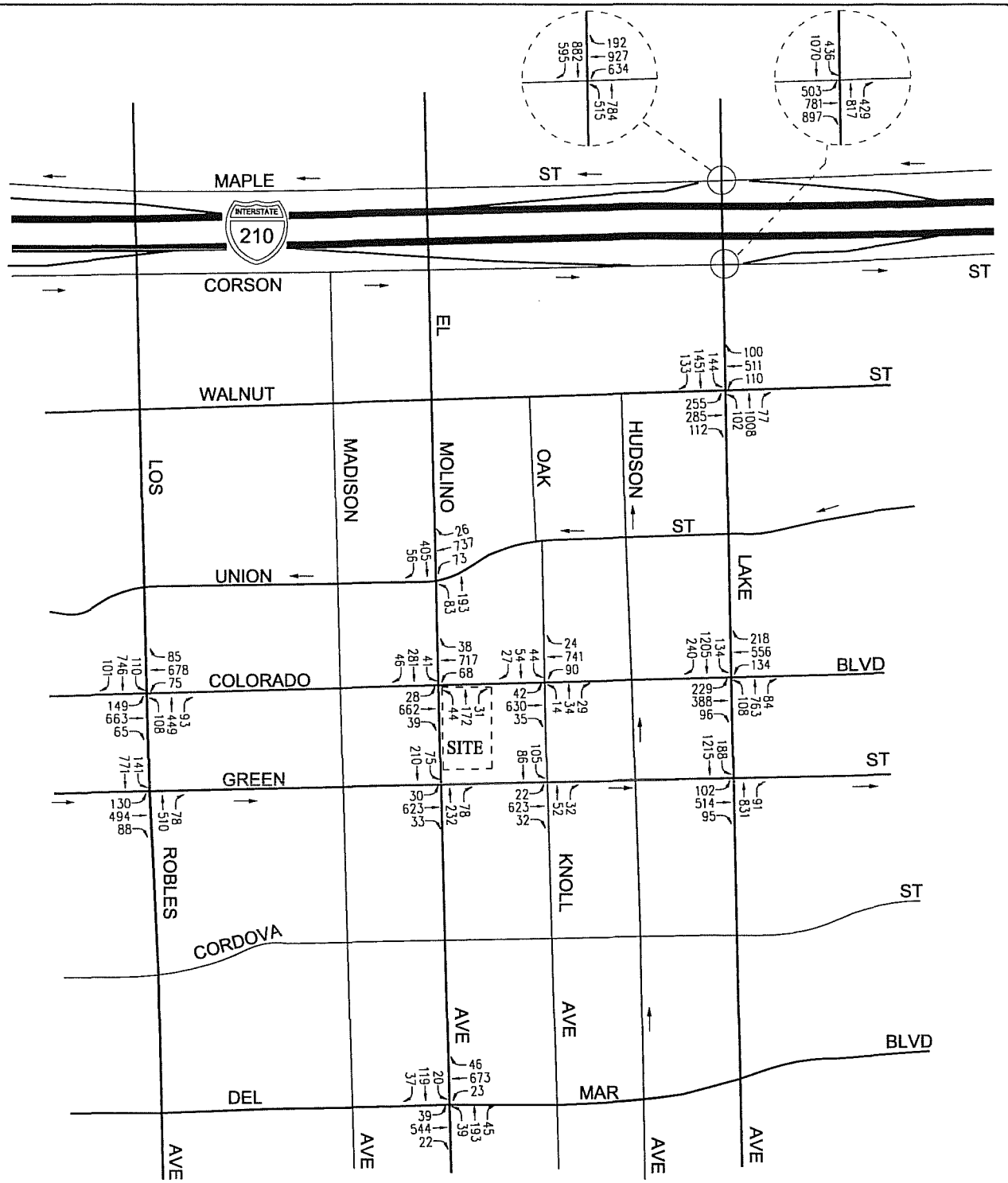

NOT TO SCALE

FIGURE 9-6A
FUTURE WITH PROJECT ALTERNATIVE 2
TRAFFIC VOLUMES
AM PEAK HOUR

LINSCOTT, LAW & GREENSPAN, engineers

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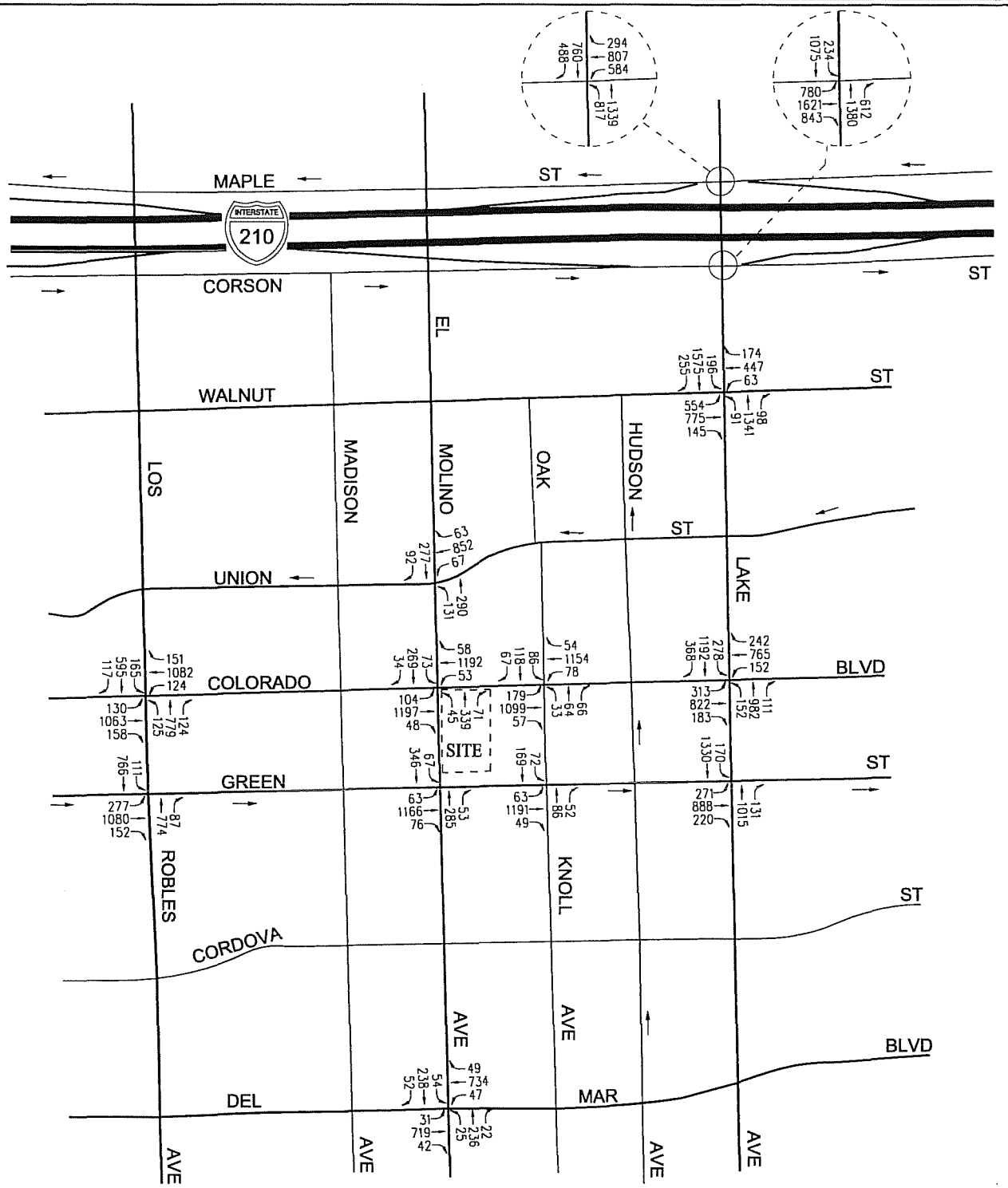

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FIGURE 9-6B
FUTURE WITH PROJECT ALTERNATIVE 2 TRAFFIC VOLUMES
PM PEAK HOUR

LINSCOTT, LAW & GREENSPAN, engineers

PLAYHOUSE PLAZA PROJECT

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9.4.3 *Future With Project Alternative 3 Conditions*

As shown in column [4] of *Table 8–4*, application of the City's threshold criteria to the "With Proposed Project" scenario indicates that the Project Alternative 3 is expected to create a significant impact at one of the 13 study intersections. Project Alternative 3 is expected to create a significant impact at the following location according to the City's impact criteria during the peak hour shown below with the addition of ambient growth, related projects traffic, and project-related traffic:

- Int. No. 4: El Molino Avenue/Colorado Boulevard

  PM peak hour *v/c* ratio increase of 0.053 [to 0.812 (LOS D) from 0.759 (LOS C)]

Incremental but not significant impacts are noted at the remaining 12 study intersections, as presented in *Table 8–4*. Recommended traffic mitigation measures expected to reduce the forecast project-related impact to less than significant levels are described in Section 11.0 herein. The future with Project Alternative 3 (existing, ambient growth, related projects and project) traffic volumes at the study intersections during the AM and PM peak hours are illustrated in ***Figures 9–7A*** and ***9–7B***, respectively.

9.4.4 *Future With Project Alternative 4 Conditions*

As shown in column [4] of *Table 8–5*, application of the City's threshold criteria to the "With Proposed Project" scenario indicates that the Project Alternative 4 is expected to create a significant impact at one of the 13 study intersections. Project Alternative 4 is expected to create a significant impact at the following location according to the City's impact criteria during the peak hour shown below with the addition of ambient growth, related projects traffic, and project-related traffic:

- Int. No. 4: El Molino Avenue/Colorado Boulevard

  PM peak hour *v/c* ratio increase of 0.054 [to 0.813 (LOS D) from 0.759 (LOS C)]

Incremental but not significant impacts are noted at the remaining 12 study intersections, as presented in *Table 8–5*. Recommended traffic mitigation measures expected to reduce the forecast project-related impact to less than significant levels are described in Section 11.0 herein. The future with Project Alternative 4 (existing, ambient growth, related projects and project) traffic volumes at the study intersections during the AM and PM peak hours are illustrated in ***Figures 9–8A*** and ***9–8B***, respectively.

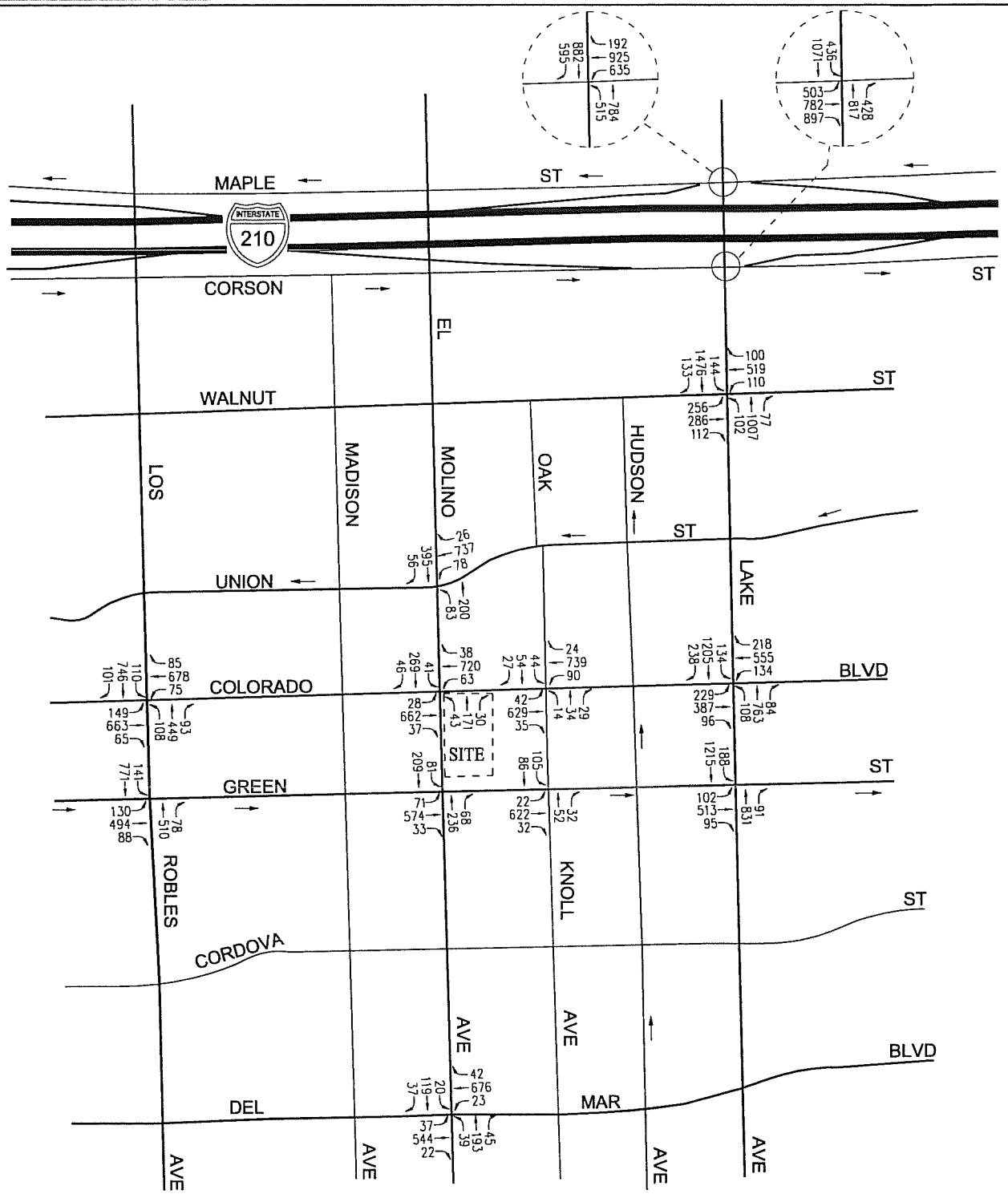

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FIGURE 9-7A
FUTURE WITH PROJECT ALTERNATIVE 3
TRAFFIC VOLUMES
AM PEAK HOUR

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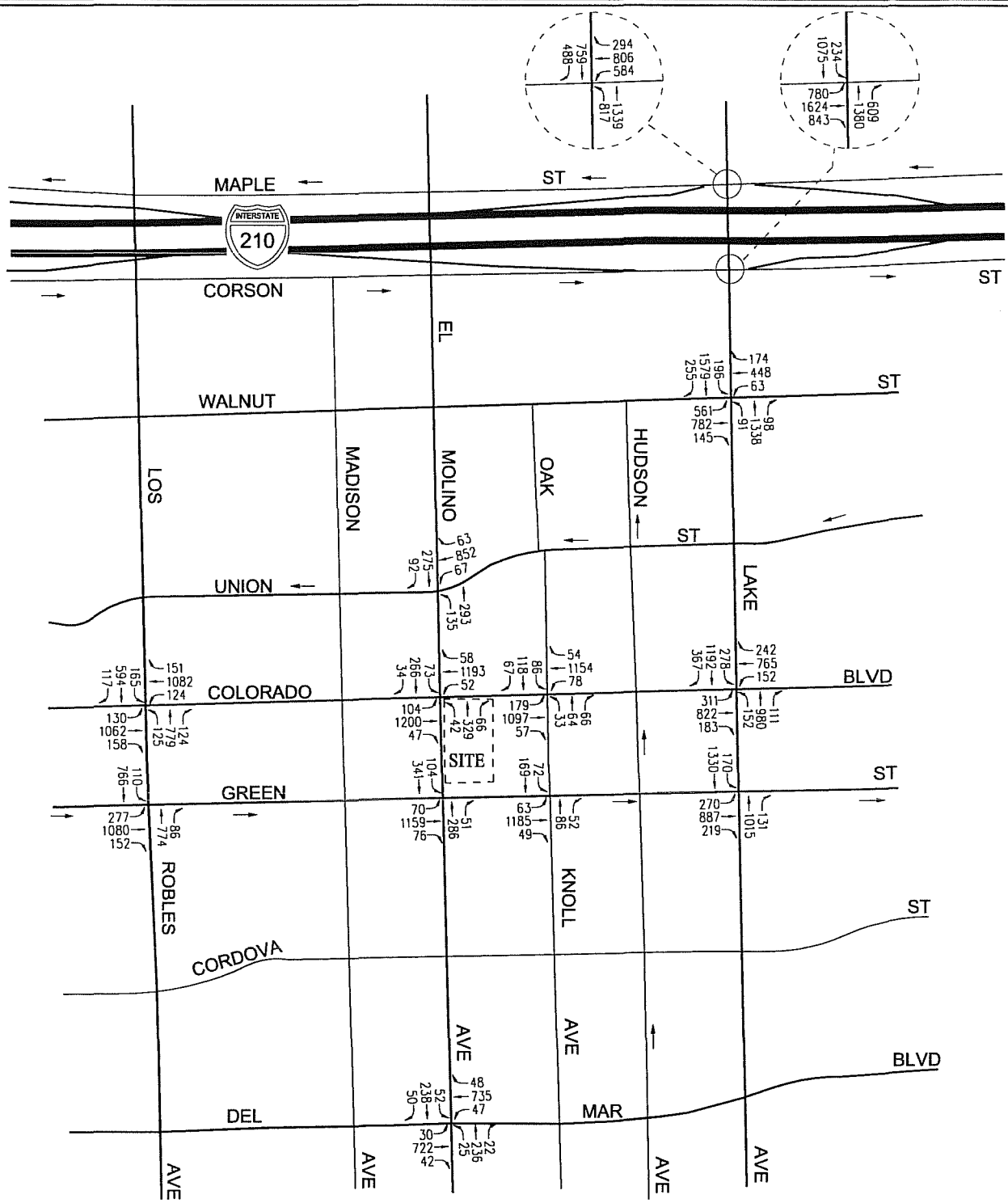

NOT TO SCALE

FIGURE 9-7B
FUTURE WITH PROJECT ALTERNATIVE 3
TRAFFIC VOLUMES
PM PEAK HOUR

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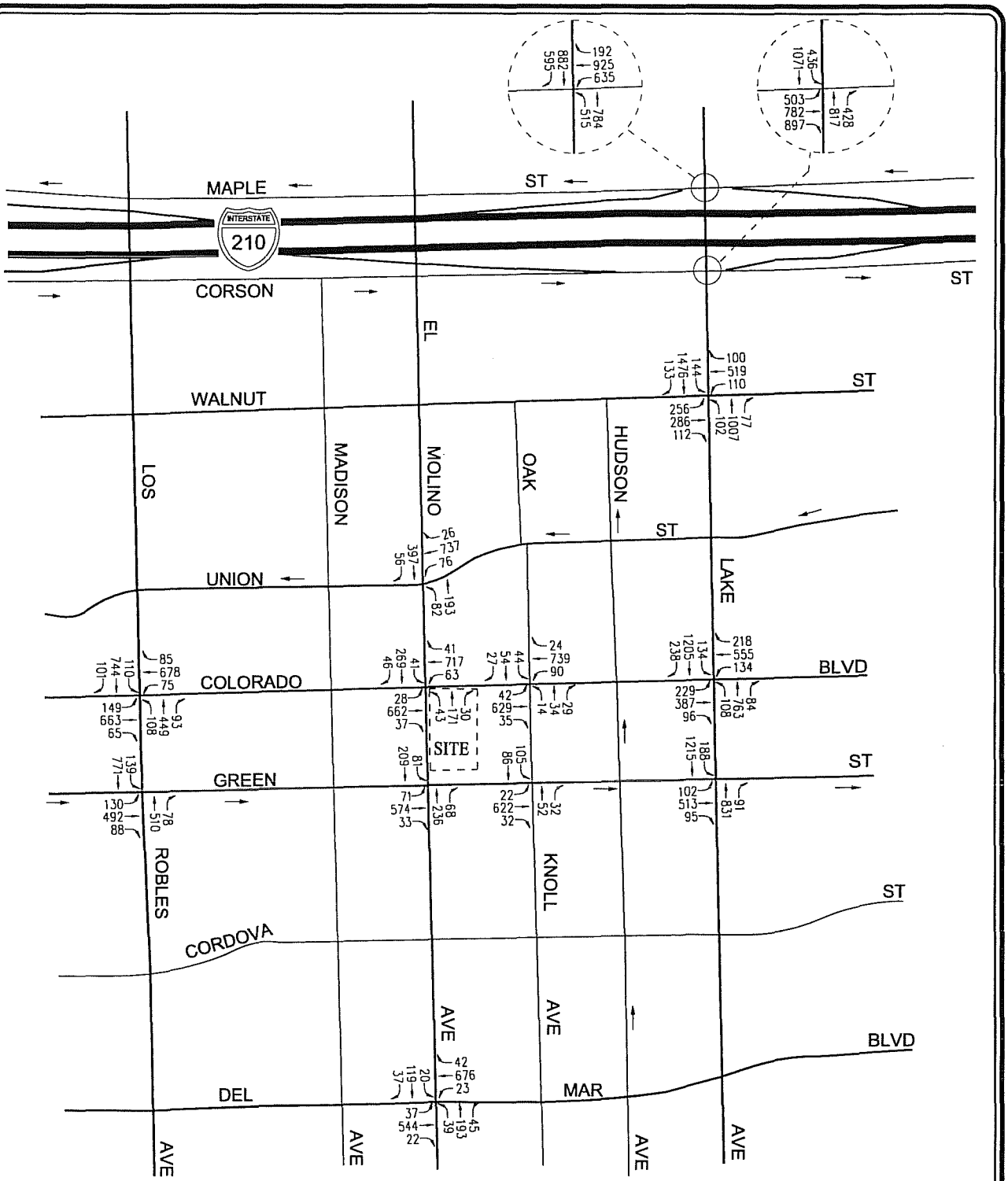

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FIGURE 9-8A
FUTURE WITH PROJECT ALTERNATIVE 4
TRAFFIC VOLUMES
AM PEAK HOUR

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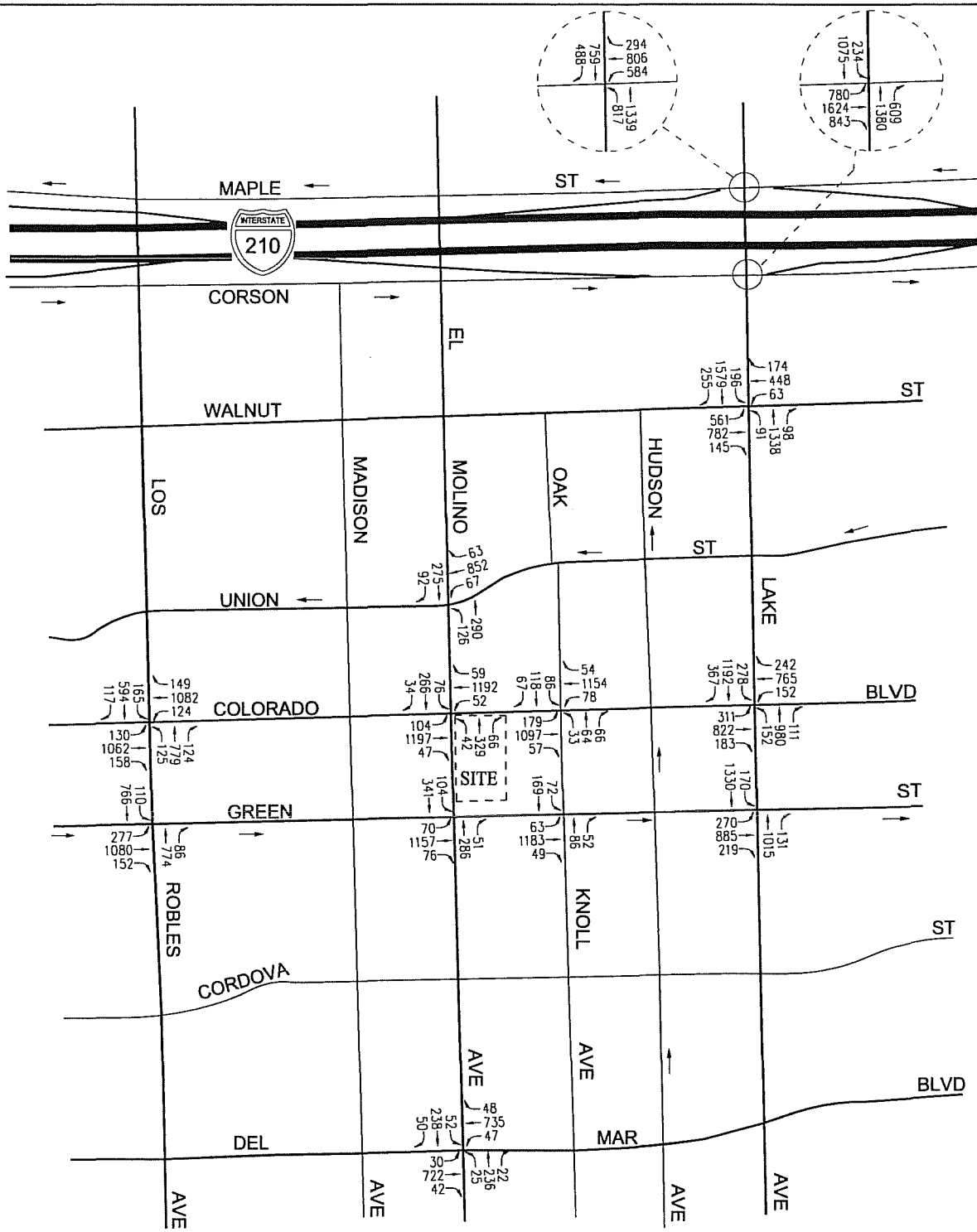

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FIGURE 9-8B
FUTURE WITH PROJECT ALTERNATIVE 4 TRAFFIC VOLUMES
PM PEAK HOUR

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10.0 STREET SEGMENT ANALYSIS

As required by City of Pasadena traffic study guidelines, existing and existing with project Average Daily Traffic (ADT) volumes were determined at five street segment locations in the vicinity of the proposed Playhouse Plaza project. The City of Pasadena ADT impact threshold criteria for street segments are listed in ***Table 10–1***.

Table 10–1
CITY OF PASADENA
STREET SEGMENT IMPACT THRESHOLD CRITERIA

ADT Growth on Street Segment	Required Traffic Mitigation
0.0-2.4% ADT Growth Project Review and Initial Study	Staff Review and Conditions
2.5-4.9% ADT Growth Examined by Initial Study Focused Traffic Study	Soft Mitigation Required TDM, Rideshare, etc.
5.0-7.4% ADT Growth Examined by Initial Study Full Traffic Study Required	Soft Mitigation Required Physical Mitigation Required Project Alternatives Considered
7.5% + ADT Growth Examined by Initial Study Full Traffic Study Required	Soft Mitigation Required Extensive Physical Mitigation Required Project Alternatives Considered

The following five street segment locations were identified for analysis by City of Pasadena staff for inclusion in the ADT analysis:

1. El Molino Avenue south of Colorado Boulevard (between Colorado Boulevard and Playhouse Alley).

2. Oak Knoll Avenue south of Colorado Boulevard (between Colorado Boulevard and Green Street).

3. Colorado Boulevard east of Hudson Avenue (between Hudson Avenue and Lake Avenue).

4. Green Street east of El Molino Avenue (between El Molino Avenue and Arcade Alley).

5. Green Street east of Hudson Avenue (between Hudson Avenue and Lake Avenue).

Automatic 24-hour machine traffic counts of the study street segments were obtained from the draft traffic impact study for the 680 East Colorado Boulevard Project prepared by Willdan Associates. Based on discussions with PasDOT staff, the existing traffic volumes for the above referenced study street segments were increased at an annual rate of one and one-half percent (1.5%) per year to reflect year 2008 existing conditions. The existing ADT volume at the study location is displayed in ***Figure 10–1***. Copies of the current 24-hour machine traffic counts for the study street segment locations are contained in ***Appendix C***.

The existing and forecast existing with Project Alternatives 1, 2, 3 and 4 ADT volumes at the street segment study locations are summarized in ***Tables 10–2***, ***10–3***, ***10–4*** and ***10–5***, respectively. The existing ADT volume is shown in column [1]. The forecast project distribution percentages for the project alternatives and project ADT volume at the study locations are shown in columns [2] and [3], respectively. In addition, the forecast existing with project alternatives ADT volume for the study locations are presented in column [4]. Finally, the project-related percent increase in ADT growth for the analyzed street segments are presented in column [5]. The existing with Project Alternatives 1, 2, 3 and 4 ADT volume at the street segment study locations are displayed in ***Figures 10–2***, ***10–3***, ***10–4*** and ***10–5***, respectively.

10.1 Project Alternative 1 Summary of Street Segment Analysis

Application of the City's threshold criteria to the "Existing With Project Alternative 1" scenario indicates that Project Alternative 1 is expected to create a significant impact at one of the five study street segments. As indicated in *Table 10–2*, Project Alternative 1 is forecast to increase ADT volumes on study street segment number 1 (El Molino Avenue between Colorado Boulevard and Playhouse Alley) by approximately 12.3 percent, which requires both physical (e.g., roadway improvements, traffic signal upgrades, etc.) and soft mitigation measures (e.g., transportation demand management measures). Increases of less than 2.5 percent in ADT volumes are forecast for the remaining four study street segments due to Project Alternative 1, which require staff review and conditions.

10.2 Project Alternative 2 Summary of Street Segment Analysis

Application of the City's threshold criteria to the "Existing With Project Alternative 2" scenario indicates that Project Alternative 2 is expected to create a significant impact at one of the five study street segments. As indicated in *Table 10–3*, Project Alternative 2 is forecast to increase ADT volumes on study street segment number 1 (El Molino Avenue between Colorado Boulevard and Playhouse Alley) by approximately 12.3 percent, which requires both physical (e.g., roadway improvements, traffic signal upgrades, etc.) and soft mitigation measures (e.g., transportation demand management measures). Increases of less than 2.5 percent in ADT volumes are forecast for the remaining four study street segments due to Project Alternative 2, which require staff review and conditions.

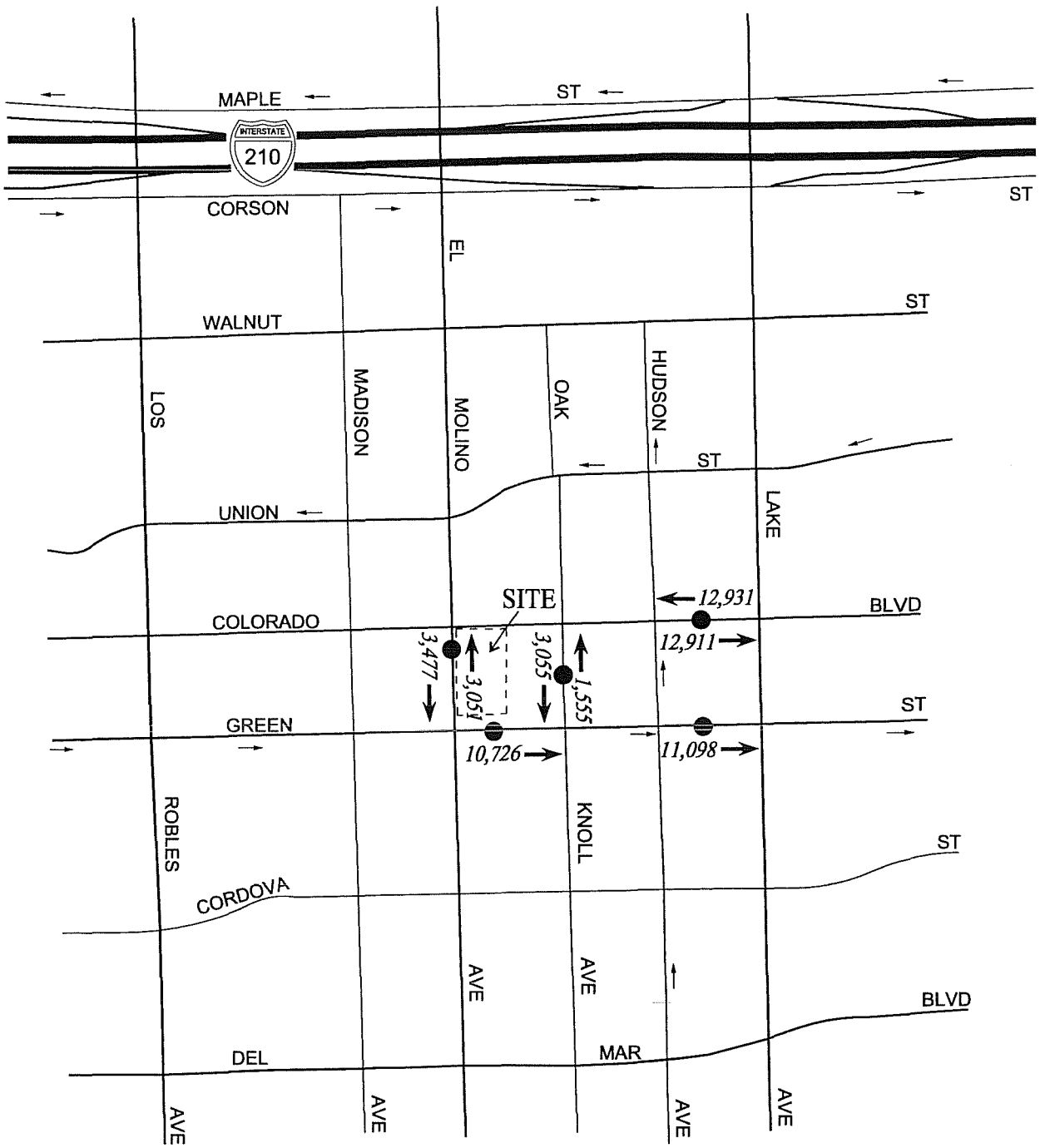

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FIGURE 10-1
EXISTING ADT VOLUMES

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Table 10-2
PROJECT ALTERNATIVE 1: ALL PARKING ON-SITE/ONE SITE ACCESS POINT
SUMMARY OF STREET SEGMENT ANALYSIS

03-Jul-2008

Location	Dir.	[1] Existing Weekday ADT Volume	Proposed Project Alt. 1 [2] Total Project Dist.	Proposed Project Alt. 1 [3] Daily Project Trip Ends	[4] Existing W/Project ADT Volume ([1]+[3])	[5] Percent ADT Growth ([3]/[4])
1 El Molino Avenue between Colorado Boulevard and Playhouse Alley	NB SB	3,051 3,477	60.0% Out 55.0% In	476 436	3,527 3,913	13.5% 11.1%
Total Location 1		6,528	----	912	7,440	12.3%
2 Oak Knoll Avenue between Colorado Boulevard and Green Street	NB SB	1,555 3,055	0.0% -- 0.0% --	0 0	1,555 3,055	0.0% 0.0%
Total Location 2		4,610	----	0	4,610	0.0%
3 Colorado Boulevard between Hudson Avenue and Lake Avenue	EB WB	12,911 12,931	15.0% Out 15.0% In	119 119	13,030 13,050	0.9% 0.9%
Total Location 3		25,842	----	238	26,080	0.9%
4 Green Street between El Molino Avenue and Arcade Alley	EB	10,726	25.0% Out	198	10,924	1.8%
Total Location 4		10,726	----	198	10,924	1.8%
5 Green Street between Hudson Avenue and Lake Avenue	EB	11,098	25.0% Out	198	11,296	1.8%
Total Location 5		11,098	----	198	11,296	1.8%

[1] Based on direction from PasDOT staff, the ADT volumes were obtained from the Draft Traffic Impact Study for the 680 E. Colorado Boulevard project prepared by Willdan Associates, June 2007. Year 2007 traffic counts were adjusted by a 1.5 percent (1.5%) ambient growth factor to reflect year 2008 existing conditions. Copies of the summary data worksheets of the 24-hour traffic count are provided in Appendix E.
[2] Total distribution of inbound and outbound daily project traffic at the analyzed street segment.
[3] Daily project volume includes inbound and outbound trips based on the proposed project net increase of 1,585 daily trip ends (approximately 793 inbound trips and 793 outbound trips).
[4] Total of columns [1] and [3].
[5] Column [3] divided by column [4].

City of Pasadena ADT impact thresholds for street segments are as follows:

ADT Growth on Street Segment	Review	Required Mitigation
0.0 - 2.4% ADT Growth	Project review/initial study	Staff review and conditions
2.5 - 4.9% ADT Growth	Initial study/focused traffic study	Soft mitigation (TDM, etc.)
5.0 - 7.4% ADT Growth	Initial study/full traffic study	Soft/physical mitigation; alternatives
7.5% + ADT Growth	Initial study/full traffic study	Soft/physical mitigation; alternatives

Table 10-3
PROJECT ALTERNATIVE 2: ALL PARKING ON-SITE/TWO SITE ACCESS POINTS
SUMMARY OF STREET SEGMENT ANALYSIS

03-Jul-2008

Location	Dir.	[1] Existing Weekday ADT Volume	Proposed Project Alt. 2 [2] Total Project Dist.	Proposed Project Alt. 2 [3] Daily Project Trip Ends	[4] Existing W/Project ADT Volume ([1]+[3])	[5] Percent ADT Growth ([3]/[4])
1 El Molino Avenue between Colorado Boulevard and Playhouse Alley	NB	3,051	60.0% Out	476	3,527	13.5%
	SB	3,477	55.0% In	436	3,913	11.1%
Total Location 1		6,528	----	912	7,440	12.3%
2 Oak Knoll Avenue between Colorado Boulevard and Green Street	NB	1,555	0.0% --	0	1,555	0.0%
	SB	3,055	0.0% --	0	3,055	0.0%
Total Location 2		4,610	----	0	4,610	0.0%
3 Colorado Boulevard between Hudson Avenue and Lake Avenue	EB	12,911	15.0% Out	119	13,030	0.9%
	WB	12,931	15.0% In	119	13,050	0.9%
Total Location 3		25,842	----	238	26,080	0.9%
4 Green Street between El Molino Avenue and Arcade Alley	EB	10,726	30.0% In	238	10,964	2.2%
Total Location 4		10,726	----	238	10,964	2.2%
5 Green Street between Hudson Avenue and Lake Avenue	EB	11,098	20.0% Out	159	11,257	1.4%
Total Location 5		11,098	----	159	11,257	1.4%

[1] Based on direction from PasDOT staff, the ADT volumes were obtained from the Draft Traffic Impact Study for the 680 E. Colorado Boulevard project prepared by Willdan Associates, June 2007. Year 2007 traffic counts were adjusted by a 1.5 percent (1.5%) ambient growth factor to reflect year 2008 existing conditions. Copies of the summary data worksheets of the 24-hour traffic count are provided in Appendix E.

[2] Total distribution of inbound and outbound daily project traffic at the analyzed street segment.

[3] Daily project volume includes inbound and outbound trips based on the proposed project net increase of 1,585 daily trip ends (approximately 793 inbound trips and 793 outbound trips).

[4] Total of columns [1] and [3].

[5] Column [3] divided by column [4].

City of Pasadena ADT impact thresholds for street segments are as follows:

ADT Growth on Street Segment	Review	Required Mitigation
0.0 - 2.4% ADT Growth	Project review/initial study	Staff review and conditions
2.5 - 4.9% ADT Growth	Initial study/focused traffic study	Soft mitigation (TDM, etc.)
5.0 - 7.4% ADT Growth	Initial study/full traffic study	Soft/physical mitigation; alternatives
7.5% + ADT Growth	Initial study/full traffic study	Soft/physical mitigation; alternatives

Table 10-4
PROJECT ALTERNATIVE 3: PARKING ON-SITE AND AT THE MADISON AVENUE STRUCTURE
PROJECT ALTERNATIVE 3 SUMMARY OF STREET SEGMENT ANALYSIS

03-Jul-2008

Location	Dir.	[1] Existing Weekday ADT Volume	Proposed Project Alternative 3 [2] Total Project Site Dist.	[3] Subtotal Daily Site Trip Ends	[4] Total Project Off-Site Dist.	[5] Subtotal Daily Off-Site Dist.	[6] Total Daily Project Trip Ends	[7] Existing W/Project ADT Volume ([1]+[6])	[8] Percent ADT Growth ([6]/[7])
1 El Molino Avenue between Colorado Boulevard and Playhouse Alley	NB	3,051	60.0% Out	395	0.0% --	0	395	3,446	11.5%
	SB	3,477	55.0% In	362	0.0% --	0	362	3,839	9.4%
Total Location 1		6,528	----	757	----	0	757	7,285	10.4%
2 Oak Knoll Avenue between Colorado Boulevard and Green Street	NB	1,555	0.0% --	0	0.0% --	0	0	1,555	0.0%
	SB	3,055	0.0% --	0	0.0% --	0	0	3,055	0.0%
Total Location 2		4,610	----	0	----	0	0	4,610	0.0%
3 Colorado Boulevard between Hudson Avenue and Lake Avenue	EB	12,911	15.0% Out	99	10.0% Out	13	112	13,023	0.8%
	WB	12,931	15.0% In	99	10.0% In	13	112	13,043	0.8%
Total Location 3		25,842	----	198	----	26	224	26,066	0.8%
4 Green Street between El Molino Avenue and Arcade Alley	EB	10,726	25.0% Out	165	5.0% Out	7 Out	172	10,898	1.5%
Total Location 4		10,726	----	165	----	7	172	10,898	1.5%
5 Green Street between Hudson Avenue and Lake Avenue	EB	11,098	20.0% Out	132	5.0% Out	7 Out	139	11,237	1.2%
Total Location 5		11,098	----	132	----	7	139	11,237	1.2%

[1] Based on direction from PasDOT staff, the ADT volumes were obtained from the Draft Traffic Impact Study for the 680 E. Colorado Boulevard project prepared by Willdan Associates, June 2007. Year 2007 traffic counts were adjusted by a 1.5 percent (1.5%) ambient growth factor to reflect year 2008 existing conditions. Copies of the summary data worksheets of the 24-hour traffic count are provided in Appendix E.
[2] Total distribution of inbound and outbound daily project traffic at the analyzed street segment.
[3] Daily project volume includes inbound and outbound trips based on the proposed project net increase of 1,585 daily trip ends (approximately 793 inbound trips and 793 outbound trips).
[4] Total of columns [1] and [3].
[5] Column [3] divided by column [4].

City of Pasadena ADT impact thresholds for street segments are as follows:

ADT Growth on Street Segment	Review	Required Mitigation
0.0 - 2.4% ADT Growth	Project review/initial study	Staff review and conditions
2.5 - 4.9% ADT Growth	Initial study/focused traffic study	Soft mitigation (TDM, etc.)
5.0 - 7.4% ADT Growth	Initial study/full traffic study	Soft/physical mitigation; alternatives
7.5% + ADT Growth	Initial study/full traffic study	Soft/physical mitigation; alternatives

Table 10-5
PROJECT ALTERNATIVE 4: PARKING ON-SITE AND AT 621 E. COLORADO BOULEVARD
SUMMARY OF STREET SEGMENT ANALYSIS

03-Jul-2008

Location	Dir.	[1] Existing Weekday ADT Volume	Proposed Project Alternative 4 [2] Total Project Site Dist.	[3] Subtotal Daily Site Trip Ends	[4] Total Project Off-Site Dist.	[5] Subtotal Daily Off-Site Trip Ends	[6] Total Daily Project Trip Ends	[7] Existing W/Project ADT Volume ([1]+[6])	[8] Percent ADT Growth ([6]/[7])
1 El Molino Avenue between Colorado Boulevard and Playhouse Alley	NB	3,051	60.0% Out	395	0.0% --	0	395	3,446	11.5%
	SB	3,477	55.0% In	362	0.0% --	0	362	3,839	9.4%
Total Location 1		6,528	----	757	----	0	757	7,285	10.4%
2 Oak Knoll Avenue between Colorado Boulevard and Green Street	NB	1,555	0.0% --	0	0.0% --	0	0	1,555	0.0%
	SB	3,055	0.0% --	0	0.0% --	0	0	3,055	0.0%
Total Location 2		4,610	----	0	----	0	0	4,610	0.0%
3 Colorado Boulevard between Hudson Avenue and Lake Avenue	EB	12,911	15.0% Out	99	10.0% Out	13	112	13,023	0.8%
	WB	12,931	15.0% In	99	10.0% In	13	112	13,043	0.8%
Total Location 3		25,842	----	198	----	26	224	26,066	0.8%
4 Green Street between El Molino Avenue and Arcade Alley	EB	10,726	25.0% Out	165	5.0% Out	7 Out	172	10,898	1.5%
Total Location 4		10,726	----	165	----	7	172	10,898	1.5%
5 Green Street between Hudson Avenue and Lake Avenue	EB	11,098	20.0% Out	132	5.0% Out	7 Out	139	11,237	1.2%
Total Location 5		11,098	----	132	----	7	139	11,237	1.2%

[1] Based on direction from PasDOT staff, the ADT volumes were obtained from the Draft Traffic Impact Study for the 680 E. Colorado Boulevard project prepared by Willdan Associates, June 2007. Year 2007 traffic counts were adjusted by a 1.5 percent (1.5%) ambient growth factor to reflect year 2008 existing conditions. Copies of the summary data worksheets of the 24-hour traffic count are provided in Appendix E.

[2] Total distribution of inbound and outbound daily project traffic at the analyzed street segment.

[3] Daily project volume includes inbound and outbound trips based on the proposed project net increase of 1,585 daily trip ends (approximately 793 inbound trips and 793 outbound trips).

[4] Total of columns [1] and [3].

[5] Column [3] divided by column [4].

City of Pasadena ADT impact thresholds for street segments are as follows:

ADT Growth on Street Segment	Review	Required Mitigation
0.0 - 2.4% ADT Growth	Project review/initial study	Staff review and conditions
2.5 - 4.9% ADT Growth	Initial study/focused traffic study	Soft mitigation (TDM, etc.)
5.0 - 7.4% ADT Growth	Initial study/full traffic study	Soft/physical mitigation; alternatives
7.5% + ADT Growth	Initial study/full traffic study	Soft/physical mitigation; alternatives

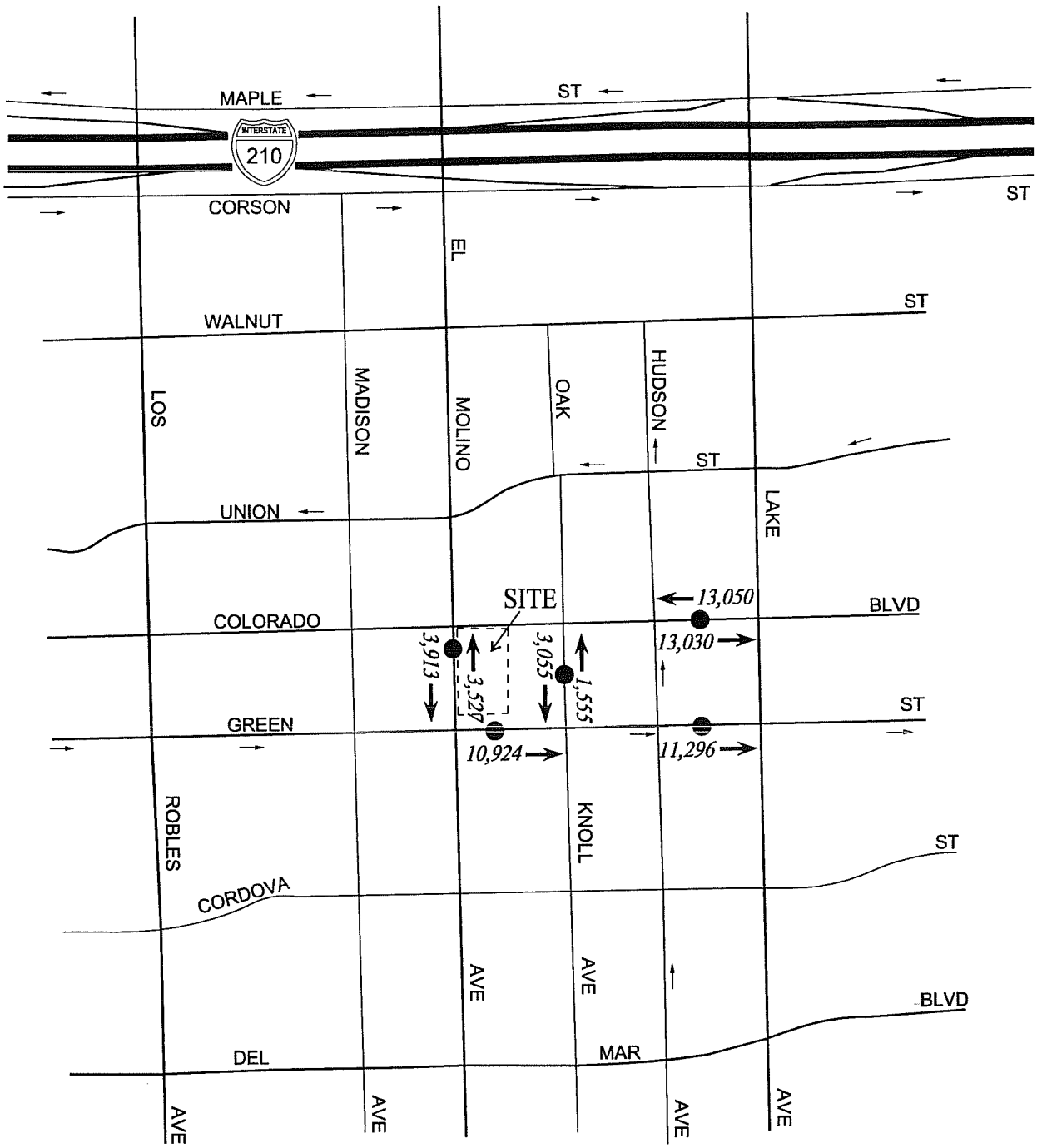

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FIGURE 10-2
EXISTING WITH PROJECT ALTERNATIVE 1
ADT VOLUMES

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PLAYHOUSE PLAZA PROJECT

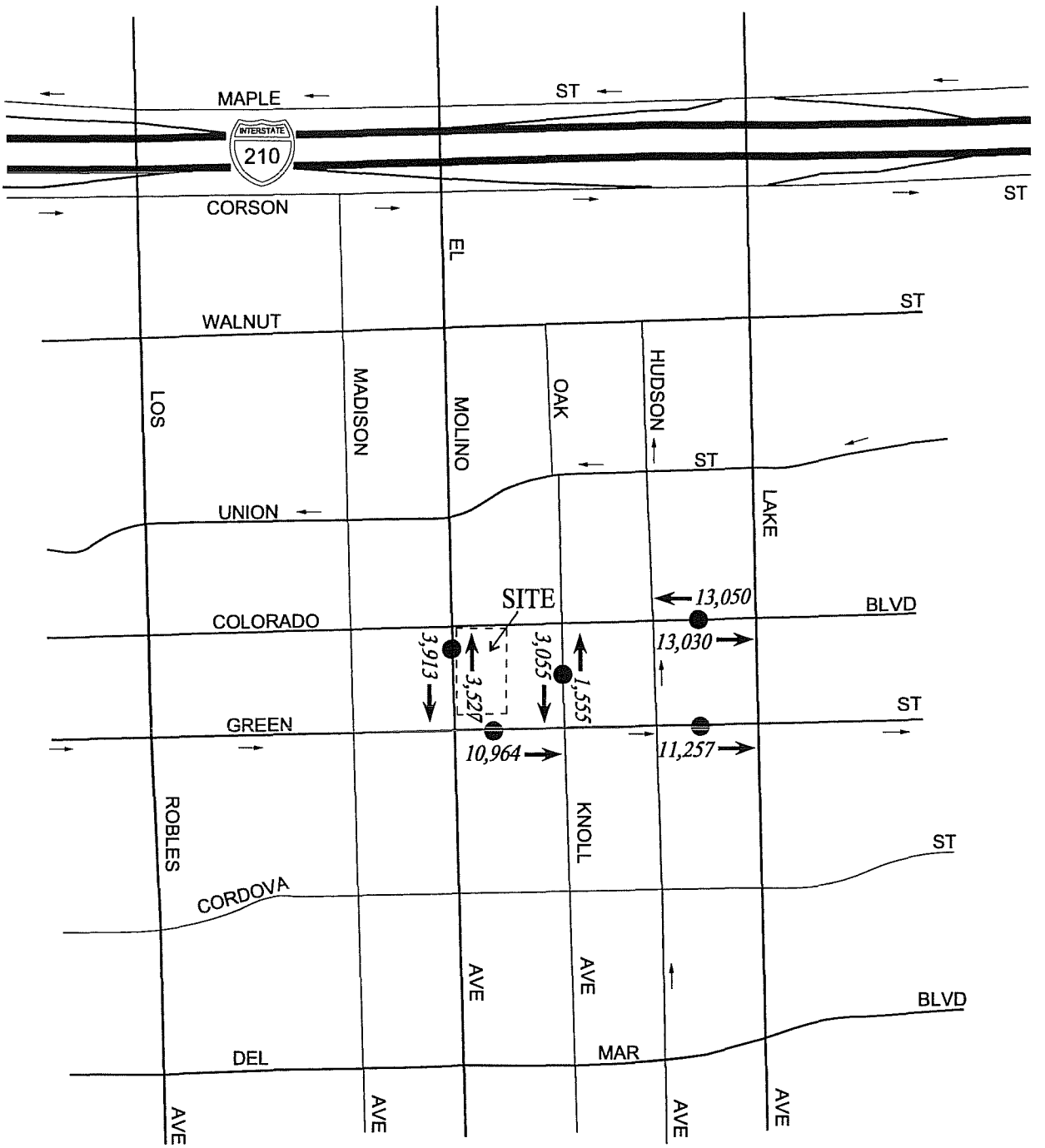

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FIGURE 10-3
EXISTING WITH PROJECT ALTERNATIVE 2
ADT VOLUMES

LINSCOTT, LAW & GREENSPAN, engineers

PLAYHOUSE PLAZA PROJECT

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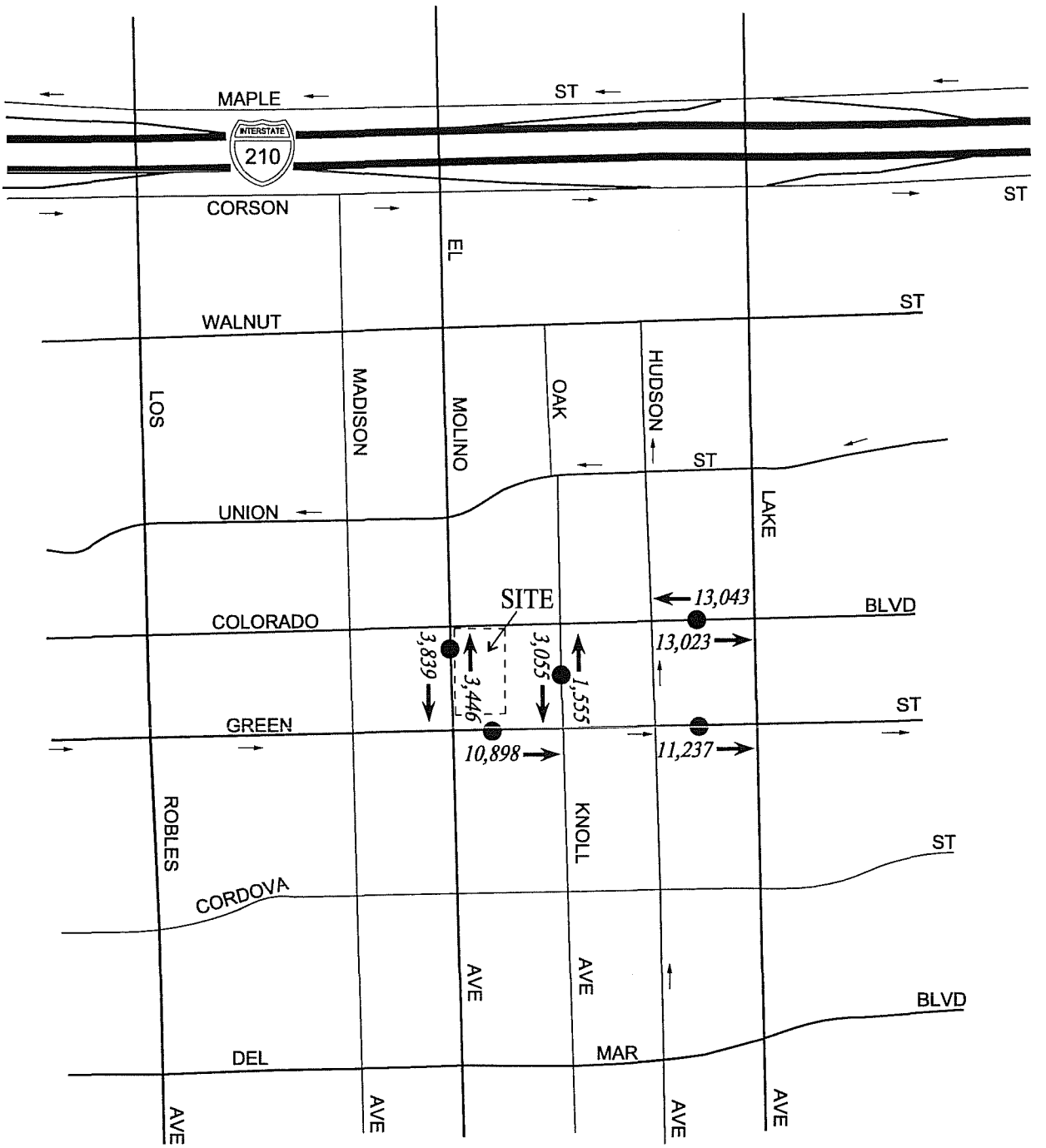

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FIGURE 10-4
EXISTING WITH PROJECT ALTERNATIVE 3
ADT VOLUMES

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PLAYHOUSE PLAZA PROJECT

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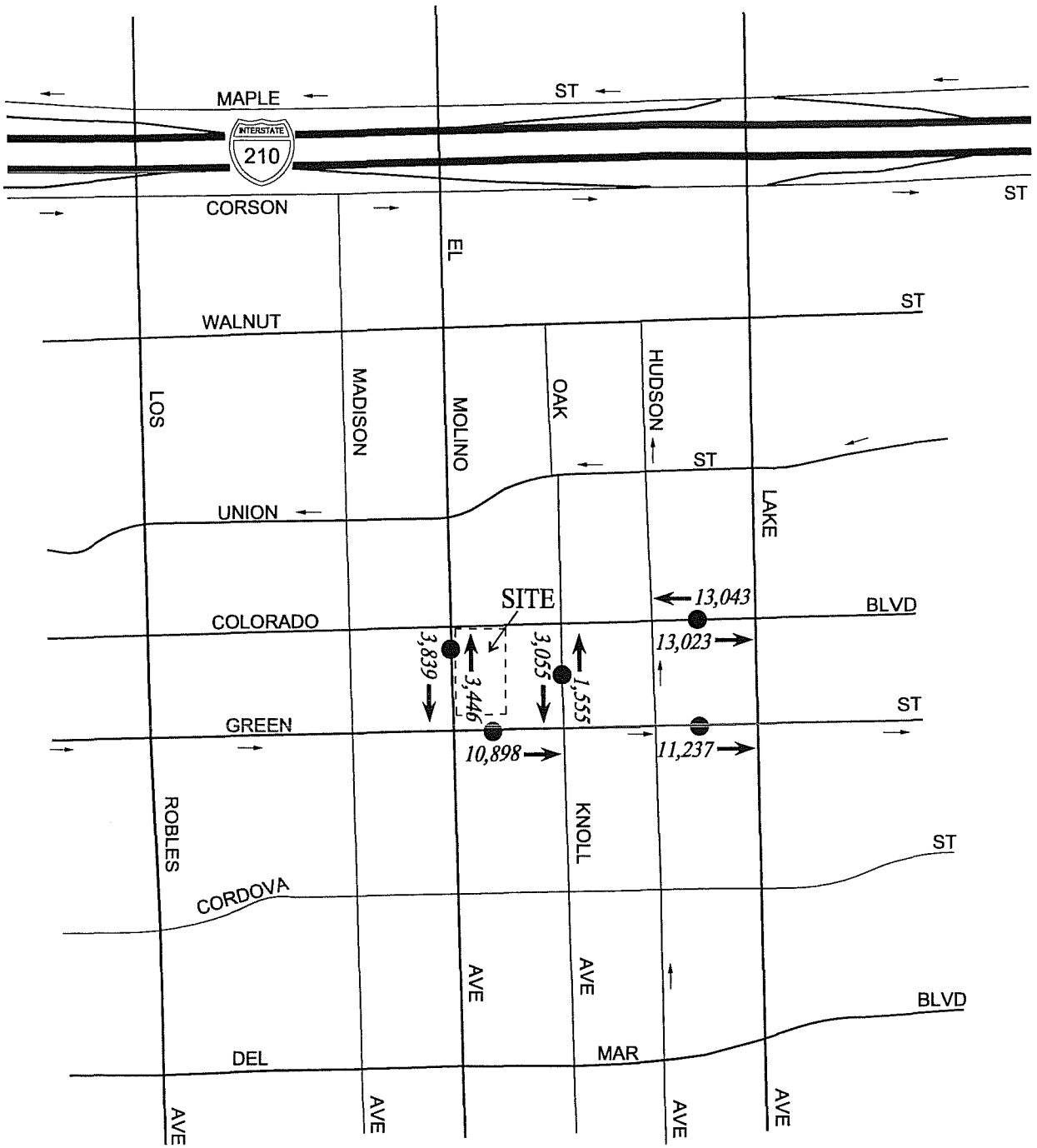

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FIGURE 10-5
EXISTING WITH PROJECT ALTERNATIVE 4
ADT VOLUMES

LINSCOTT, LAW & GREENSPAN, engineers

PLAYHOUSE PLAZA PROJECT

10.3 Project Alternative 3 Summary of Street Segment Analysis

Application of the City's threshold criteria to the "Existing With Project Alternative 3" scenario indicates that Project Alternative 3 is expected to create a significant impact at one of the five study street segments. As indicated in *Table 10–4*, Project Alternative 3 is forecast to increase ADT volumes on study street segment number 1 (El Molino Avenue between Colorado Boulevard and Playhouse Alley) by approximately 10.4 percent, which requires both physical (e.g., roadway improvements, traffic signal upgrades, etc.) and soft mitigation measures (e.g., transportation demand management measures). Increases of less than 2.5 percent in ADT volumes are forecast for the remaining four study street segments due to Project Alternative 3, which require staff review and conditions.

10.4 Project Alternative 4 Summary of Street Segment Analysis

Application of the City's threshold criteria to the "Existing With Project Alternative 4" scenario indicates that Project Alternative 4 is expected to create a significant impact at one of the five study street segments. As indicated in *Table 10–5*, Project Alternative 4 is forecast to increase ADT volumes on study street segment number 1 (El Molino Avenue between Colorado Boulevard and Playhouse Alley) by approximately 10.4 percent, which requires both physical (e.g., roadway improvements, traffic signal upgrades, etc.) and soft mitigation measures (e.g., transportation demand management measures). Increases of less than 2.5 percent in ADT volumes are forecast for the remaining four study street segments due to Project Alternative 4, which require staff review and conditions.

11.0 TRANSPORTATION IMPROVEMENT MEASURES

The following sections provide an overview of transportation improvement measures that are anticipated to address impacts to the local roadway network associated with the proposed project alternatives. It is important to note that the traffic analysis has been based on a conservative approach with respect to the analysis of potential project-related impacts.

11.1 Summary of Intersection Improvement Measures

As summarized in the Future With Project Conditions section (refer to Subsection 9.4) herein, application of the City's threshold criteria to the "With Proposed Project" scenario indicates that all of the project alternatives are anticipated to create significant impacts at the following study intersection:

- Int. No. 3: El Molino Avenue/Colorado Boulevard

The following transportation mitigation measures are recommended to reduce the forecast significant transportation impacts at the subject study intersection to less than significant levels.

- Prohibit left-turn movements at the northbound and southbound approaches on El Molino Avenue at the Colorado Boulevard intersection.

- Install a left-turn pocket at the northbound approach on El Molino Avenue at the Union Street intersection. Restripe the northbound and southbound approaches on El Molino Avenue to accommodate the installation of the northbound left-turn pocket. The resultant lane configurations at the northbound approach to the intersection would be one exclusive left-turn lane and one combination through lane/right-turn only lane. Modify the traffic signal at the El Molino Avenue/Union Street intersection (Int. No. 3) to provide northbound left-turn phasing.

- Install a left-turn pocket at the southbound approach on El Molino Avenue at the Green Street intersection. Restripe the northbound and southbound approaches on El Molino Avenue to accommodate the installation of the southbound left-turn pocket. The resultant lane configurations at the southbound approach to the intersection would be one exclusive left-turn lane and one combination through lane/right-turn only lane. Modify the traffic signal at the El Molino Avenue/Green Street intersection (Int. No. 5) to provide southbound left-turn phasing. This improvement measure may require removal of on-street parking along El Molino Avenue north and south of the subject intersection.

Existing and forecast future traffic volumes at the El Molino Avenue/Colorado Boulevard intersection and nearby intersections will be affected by the recommendation to restrict left-turns at the northbound and southbound approaches on El Molino Avenue at the Colorado Boulevard intersection. As such, the forecast future with project traffic volumes at the study intersections have been adjusted to reflect anticipated shifts in volumes due to the prohibition of left-turns at the subject study intersection. The forecast future with project mitigation traffic volumes under the project alternatives are referenced in the following paragraphs.

As indicated in *Table 8–2*, this measure is anticipated to reduce the potentially significant Project Alternative 1-related impact to less than significant levels. The improvement is expected to improve operations to 0.780 (LOS C) from 0.822 (LOS D) with Project Alternative 1 during the PM peak hour. The forecast future with Project Alternative 1 mitigation (existing, ambient growth, related projects, project and project mitigation) traffic volumes at the study intersections during the AM and PM peak hours are illustrated in ***Figures 11–1A*** and ***11–1B***, respectively.

As indicated in *Table 8–3*, this measure is anticipated to reduce the potentially significant Project Alternative 2-related impact to less than significant levels. The improvement is expected to improve operations to 0.780 (LOS C) from 0.822 (LOS D) with Project Alternative 2 during the PM peak hour. The forecast future with Project Alternative 2 mitigation (existing, ambient growth, related projects, project and project mitigation) traffic volumes at the study intersections during the AM and PM peak hours are illustrated in ***Figures 11–2A*** and ***11–2B***, respectively.

As indicated in *Table 8–4*, this measure is anticipated to reduce the potentially significant Project Alternative 3-related impact to less than significant levels. The improvement is expected to improve operations to 0.769 (LOS C) from 0.812 (LOS D) with Project Alternative 3 during the PM peak hour. The forecast future with Project Alternative 3 mitigation (existing, ambient growth, related projects, project and project mitigation) traffic volumes at the study intersections during the AM and PM peak hours are illustrated in ***Figures 11–3A*** and ***11–3B***, respectively.

As indicated in *Table 8–5*, this measure is anticipated to reduce the potentially significant Project Alternative 4-related impact to less than significant levels. The improvement is expected to improve operations to 0.769 (LOS C) from 0.813 (LOS D) with Project Alternative 4 during the PM peak hour. The forecast future with Project Alternative 4 mitigation (existing, ambient growth, related projects, project and project mitigation) traffic volumes at the study intersections during the AM and PM peak hours are illustrated in ***Figures 11–4A*** and ***11–4B***, respectively.

11.2 Traffic Reduction and Transportation Improvement Fee

The City of Pasadena has established the Traffic Reduction and Transportation Improvement Fee (TR-TIF) program consistent with the General Plan and Government Code Section 66477. The purpose of the fee is to promote the general health, safety and welfare of the residents of the City of Pasadena through assurance that an adequate level of service on the City's transportation system can be maintained through the implementation of the street and transit improvements identified in the Mobility Element. Revenues from the TR-TIF program will be used to fund key intersection improvements, complete roadway extension projects identified in the Mobility Element and fund improvements to manage traffic on designated multimodal corridors. Additionally, approximately one-half of the funds collected through the program will be allocated towards improvements to the ARTS system and to provide significant enhancements to the local transit service encouraging non-automobile travel throughout the City.

The TR-TIF program is based on the *Traffic Reduction and Transportation Improvement Fee Report* prepared for the City by Kaku Associates and presented to the City Council on July 17, 2006. The Traffic Reduction and Transportation Improvement Fee program is applicable to new

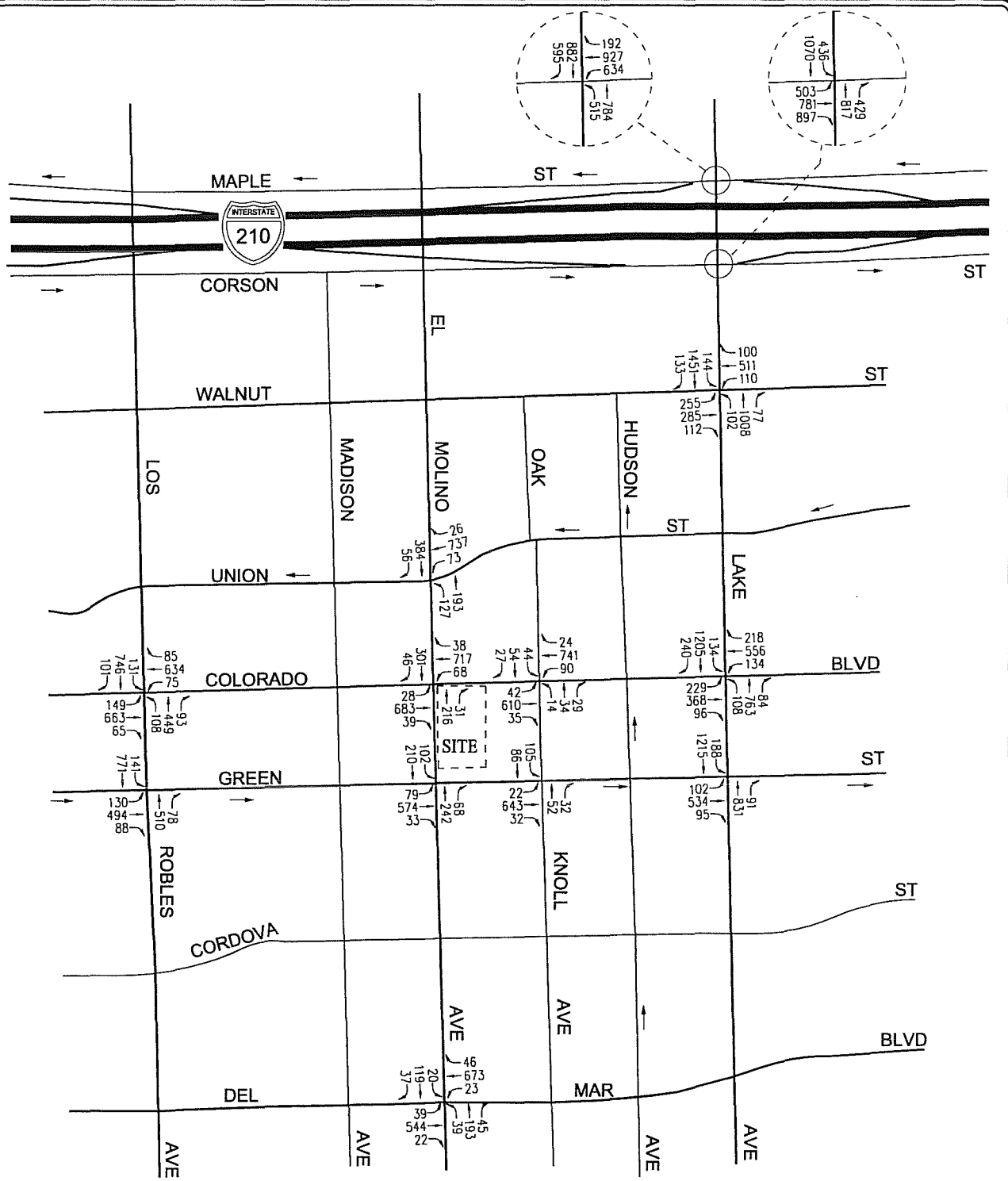

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FIGURE 11-1A
FUTURE WITH PROJECT ALTERNATIVE 1
MITIGATION TRAFFIC VOLUMES
AM PEAK HOUR

LINSCOTT, LAW & GREENSPAN, engineers

PLAYHOUSE PLAZA PROJECT

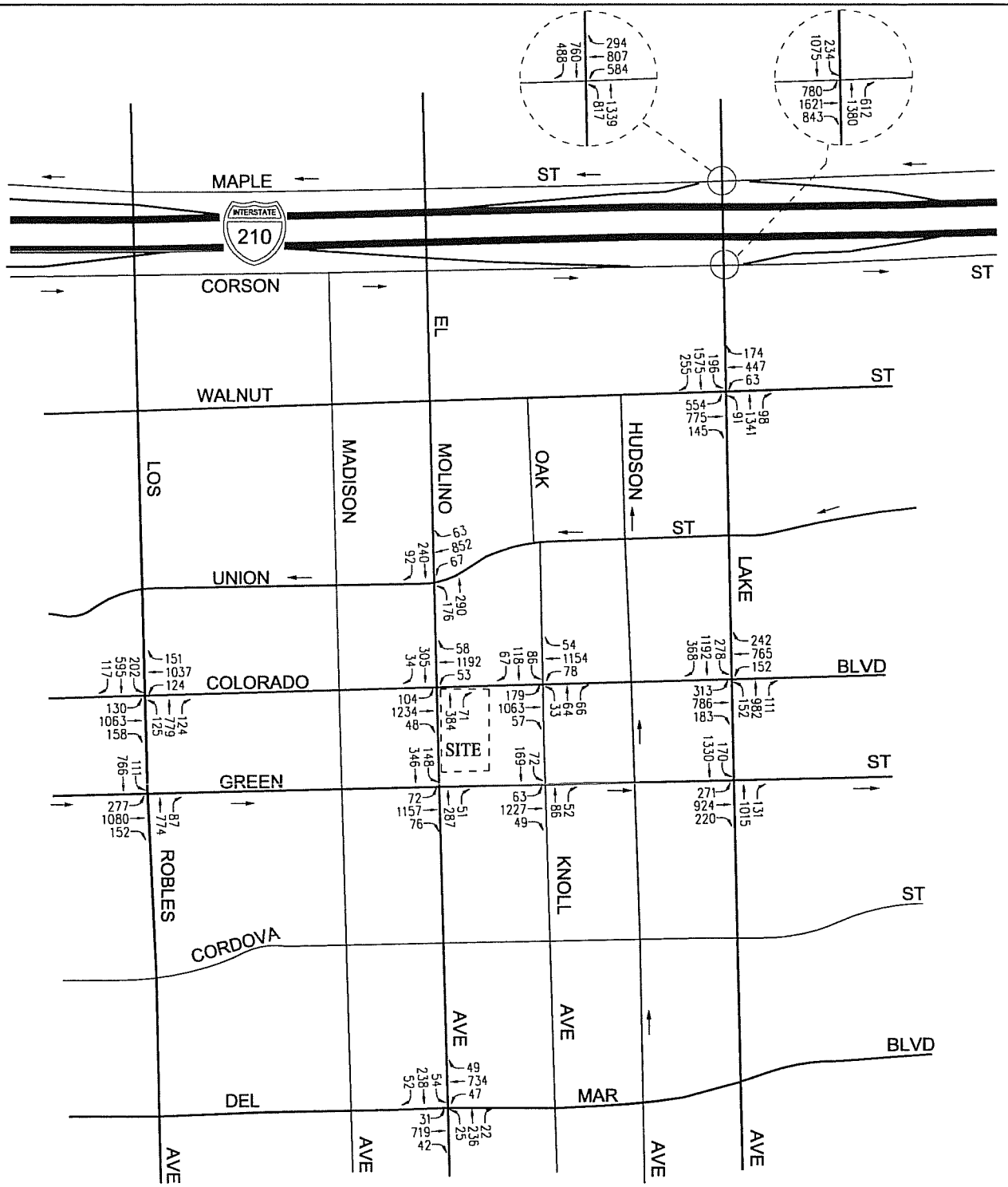

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FIGURE 11-1B
FUTURE WITH PROJECT ALTERNATIVE 1 MITIGATION TRAFFIC VOLUMES
PM PEAK HOUR
PLAYHOUSE PLAZA PROJECT

LINSCOTT, LAW & GREENSPAN, engineers

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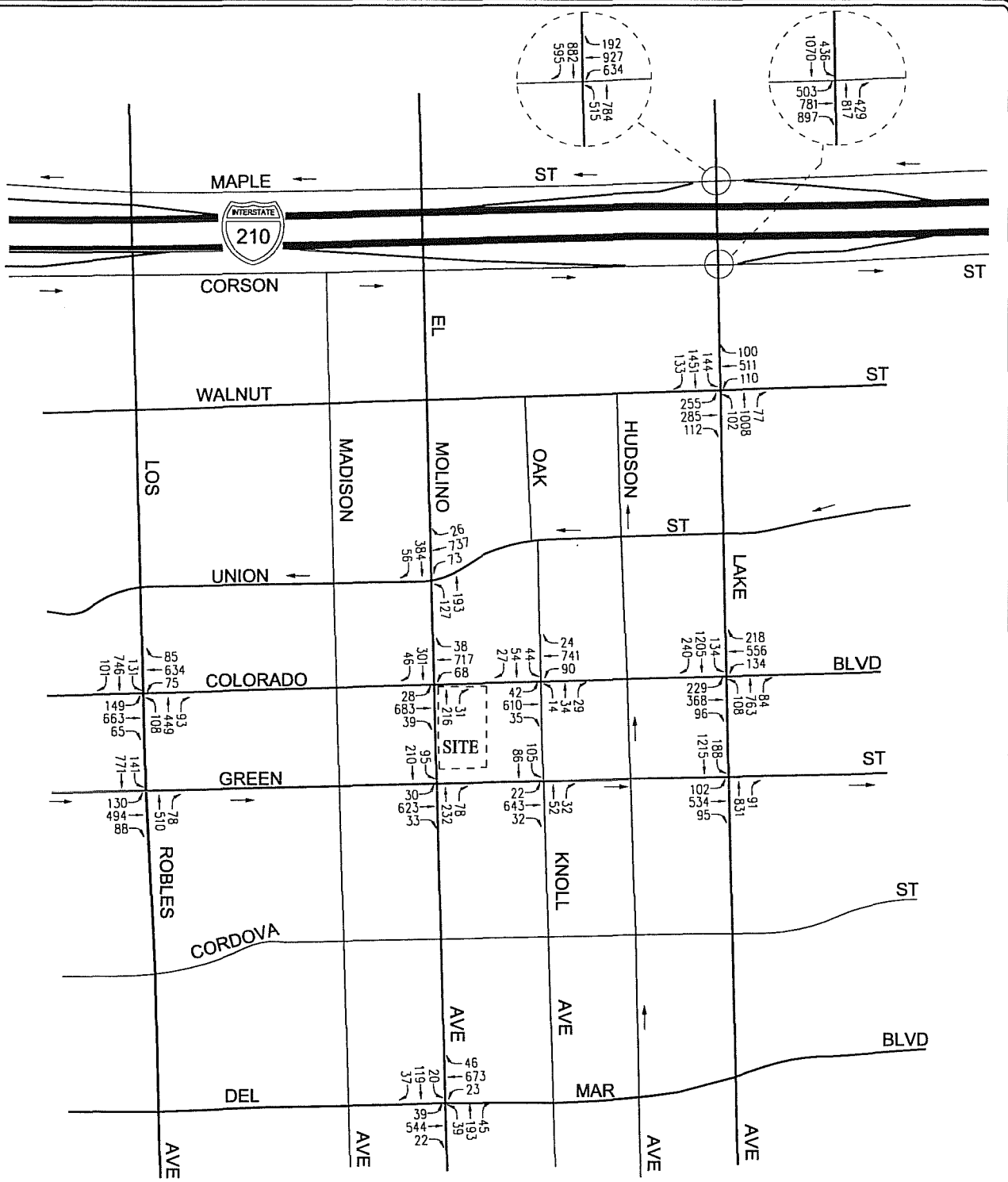

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FIGURE 11-2A
FUTURE WITH PROJECT ALTERNATIVE 2
MITIGATION TRAFFIC VOLUMES
AM PEAK HOUR
PLAYHOUSE PLAZA PROJECT

LINSCOTT, LAW & GREENSPAN, engineers

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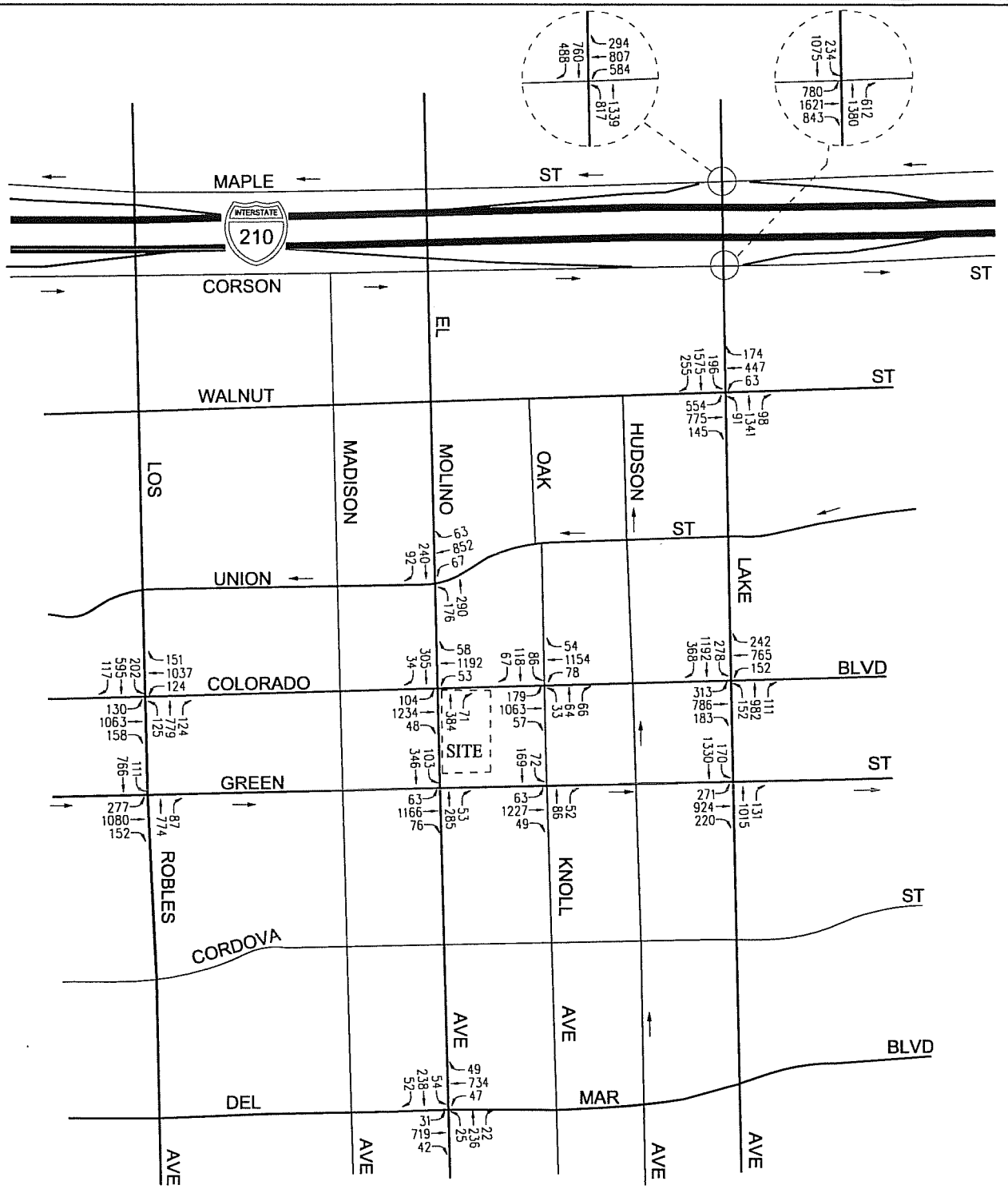

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FIGURE 11-2B
FUTURE WITH PROJECT ALTERNATIVE 2 MITIGATION TRAFFIC VOLUMES
PM PEAK HOUR

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PLAYHOUSE PLAZA PROJECT

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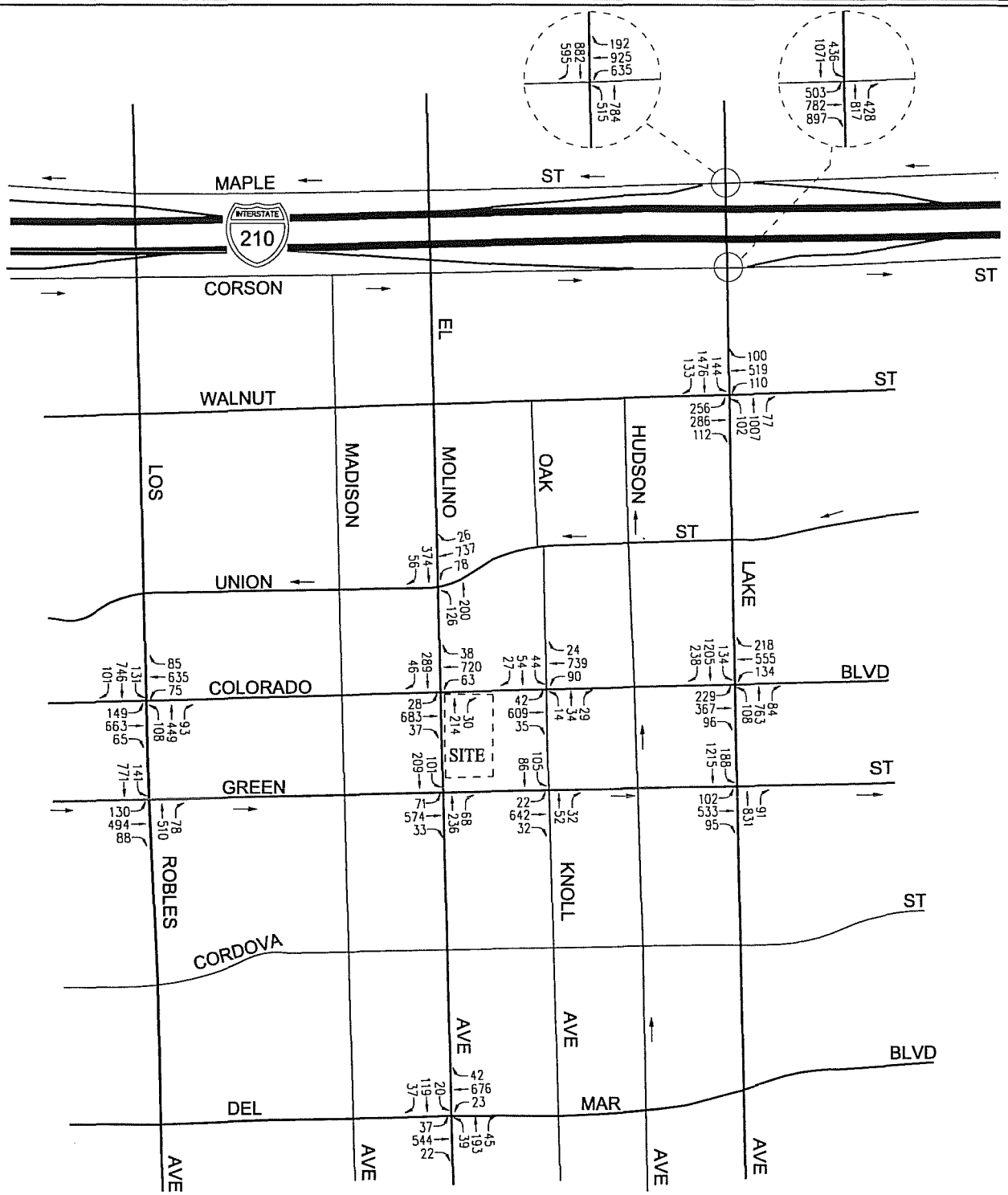

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FIGURE 11-3A
FUTURE WITH PROJECT ALTERNATIVE 3
MITIGATION TRAFFIC VOLUMES
AM PEAK HOUR

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PLAYHOUSE PLAZA PROJECT

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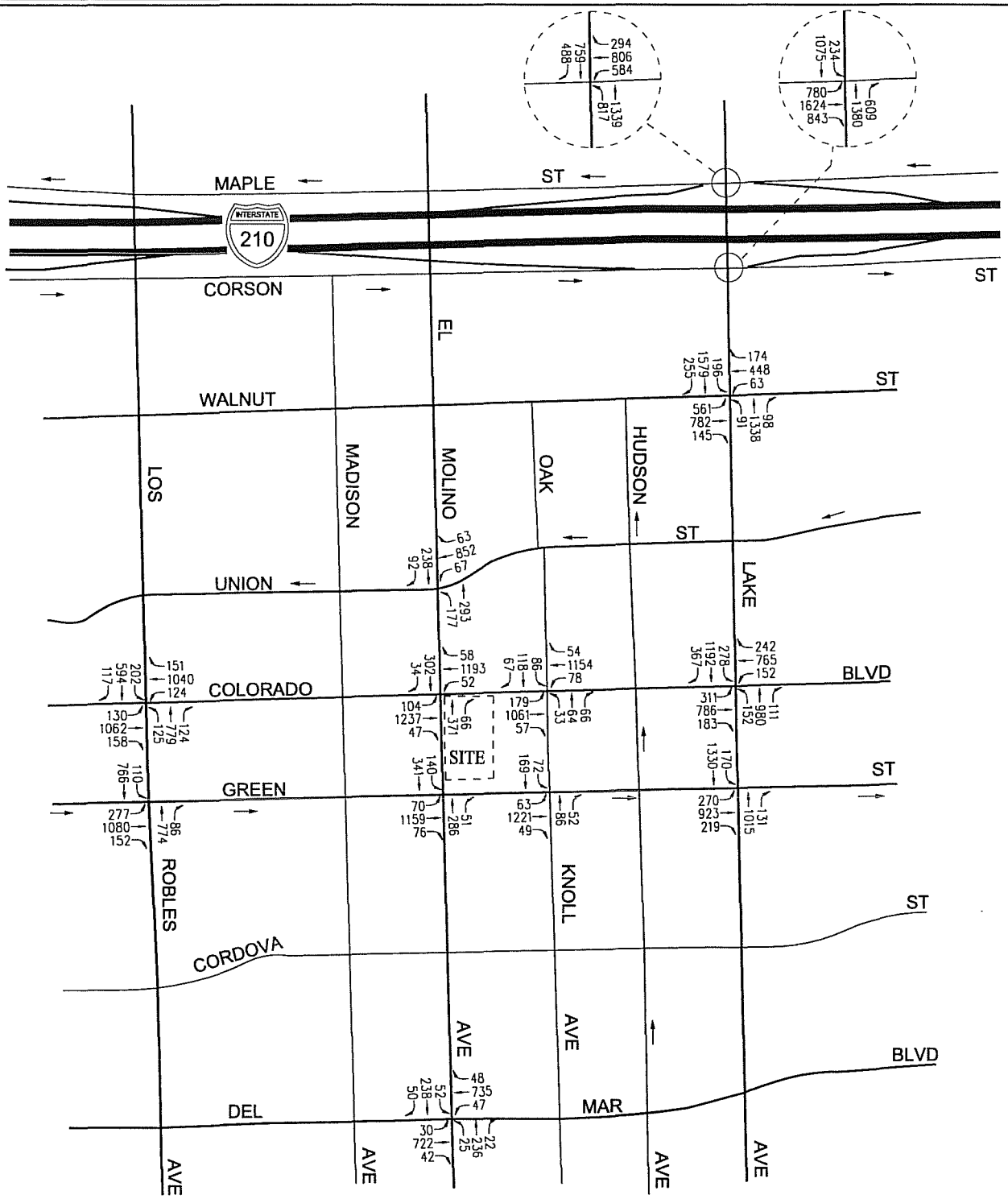

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FIGURE 11-3B
FUTURE WITH PROJECT ALTERNATIVE 3 MITIGATION TRAFFIC VOLUMES

PM PEAK HOUR

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PLAYHOUSE PLAZA PROJECT

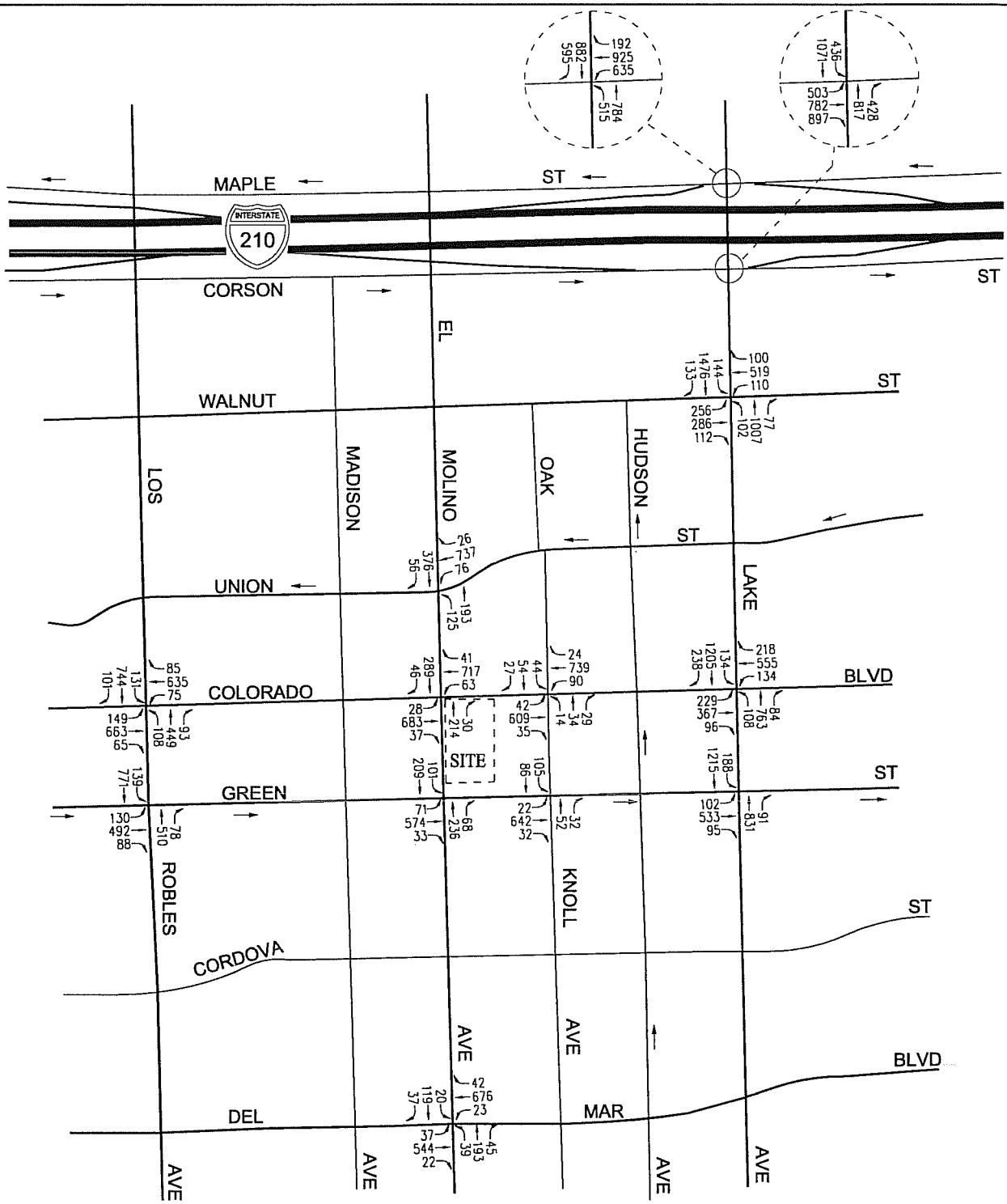

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FIGURE 11-4A
FUTURE WITH PROJECT ALTERNATIVE 4
MITIGATION TRAFFIC VOLUMES
AM PEAK HOUR
PLAYHOUSE PLAZA PROJECT

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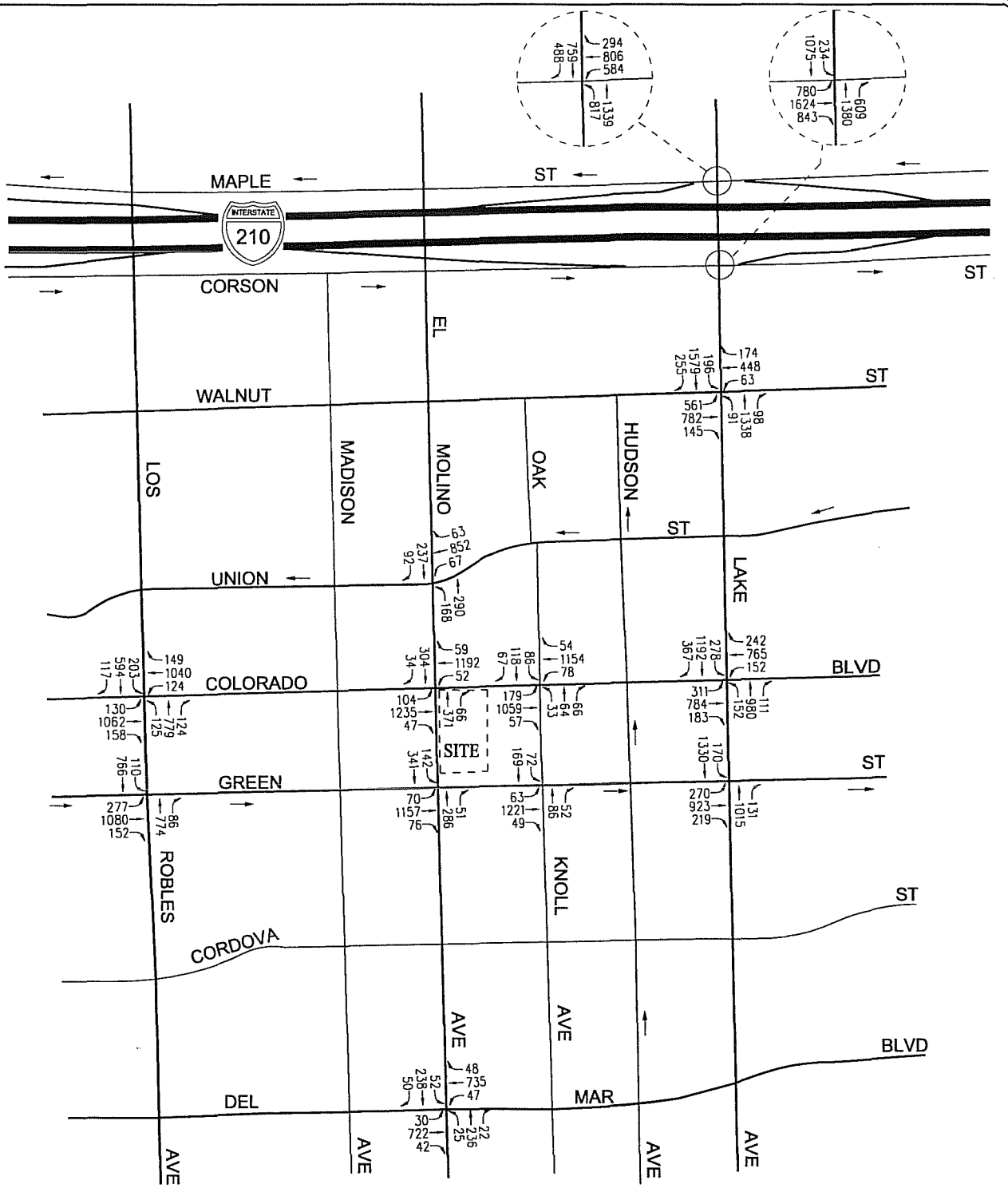

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FIGURE 11-4B
FUTURE WITH PROJECT ALTERNATIVE 4 MITIGATION TRAFFIC VOLUMES
PM PEAK HOUR
PLAYHOUSE PLAZA PROJECT

LINSCOTT, LAW & GREENSPAN, engineers

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industrial, office, retail and residential development. The fee schedule for the land uses are as follows:

- Industrial use: $3.10 per square-foot of net new space
- Office use: $3.72 per square-foot of net new space
- Retail use: $8.62 per square-foot of net new space
- Residential use: $2,480 per net new residential unit

11.3 Transportation Demand Management

In accordance with the City of Pasadena Trip Reduction Ordinance (No. 6573) and the City's traffic study guidelines, it is recommended that the proposed project implement a TDM program. The TDM measures implemented as part of the project should be aimed at decreasing the number of vehicular trips generated by persons traveling to the site by offering specific facilities, services and actions designed to increase the use of alternative transportation modes (e.g., transit, rail, walking, bicycling, carpool, etc.). The TDM measures are above and beyond those incorporated into the trip generation forecast to account for the proximity to the nearby Metro Gold Line stations.

The TDM strategies will identify opportunities to reduce parking demand and automobile dependency, as well as to promote alternative travel modes, with the focus on the office component of the proposed project. The final TDM program for the proposed project will be developed in conjunction with the City of Pasadena.

11.4 Summary of Street Segment Improvement Measures

Based on the City's street segment significance criteria the net increase in ADT volumes for study Street Segment No. 1, El Molino Avenue between Colorado Boulevard and Playhouse Alley, requires both physical (e.g., roadway improvements, traffic signal upgrades, etc.) and soft mitigation measures (e.g., transportation demand management measures). The project trips from all four scenarios are expected to significantly impact El Molino Street, a de-emphasized street, by increasing the traffic between 10.4% and 12.3%.

The 2004 General Plan Mobility Element defines de-emphasized streets as "routes where efforts will be made to limit future increases in traffic. No transportation capital or operational improvements to increase traffic capacity will be implemented on these corridors." PasDOT has determined that there are no feasible mitigation measures to reduce the impacts of the project on El Molino Street to below levels of significance. As such, forecast significant project-related impacts are expected to remain. If the project is expected to be entitled by overriding considerations, PasDOT recommends that the following mitigation measures be considered as project conditions:

- Contribute funds toward a pedestrian safety study in the vicinity of the project. The plan will study measures such as mid-block signals, curb extensions, pedestrian countdown signals, etc., to improve walking safety and convenience to and from parking structures/businesses in the area.

- Provide pedestrian lighting to and from the project to the nearest transit stops within a quarter mile radius.

- Offer unbundled parking option with lease.

- Contribute funds to the Pasadena ARTS program.

- Provide Metro Corporate Transit Passes to employees of this project site.

12.0 CONGESTION MANAGEMENT PROGRAM TRAFFIC IMPACT ASSESSMENT

The Congestion Management Program (CMP) is a state-mandated program that was enacted by the State Legislature with the passage of Proposition 111 in 1990. The program is intended to address the impact of local growth on the regional transportation system.

As required by the 2004 Congestion Management Program for Los Angeles County, a Traffic Impact Assessment (TIA) has been prepared to determine the potential impacts on designated monitoring locations on the CMP highway system. The analysis has been prepared in accordance with procedures outlined in the *2004 Congestion Management Program for Los Angeles County*, County of Los Angeles Metropolitan Transportation Authority, July 2004.

12.1 Intersections

The following CMP intersection monitoring location in the project vicinity has been identified:

- CMP Station Intersection

  No. 121 Rosemead Boulevard/Foothill Boulevard

The CMP TIA guidelines require that intersection monitoring locations must be examined if the proposed project will add 50 or more trips during either the AM or PM weekday peak periods. The proposed project will not add 50 or more trips, during the AM or PM peak hours at the CMP monitoring intersection, which is the threshold for preparing a traffic impact assessment, as stated in the CMP manual. Therefore, no further review of potential impacts to intersection monitoring locations that are part of the CMP highway system is required.

12.2 Freeways

The following CMP freeway monitoring location in the project vicinity has been identified:

- CMP Station Segment

  No. 1061 I-210 Freeway at Rosemead Boulevard

The CMP TIA guidelines require that freeway monitoring locations must be examined if the proposed project will add 150 or more trips (in either direction) during either the AM or PM weekday peak periods. The proposed project will not add 150 or more trips (in either direction), during either the AM or PM weekday peak hours to the CMP freeway monitoring location, which is the threshold for preparing a traffic impact assessment, as stated in the CMP manual. Therefore, no further review of potential impacts to freeway monitoring locations that are part of the CMP highway system is required.

12.3 Transit Impact Review

As required by the *2004 Congestion Management Program for Los Angeles County*, a review has been made of the CMP transit service. As previously discussed, existing transit service is provided in the vicinity of the proposed Playhouse Plaza project.

The project trip generation, as shown in *Table 6–1*, was adjusted by values set forth in the CMP (i.e., person trips equal 1.4 times vehicle trips, and transit trips equal 3.5 percent of the total person trips) to estimate transit trip generation. Pursuant to the CMP guidelines, the proposed project is forecast to generate demand for 11 transit trips (10 inbound trips and 1 outbound trip) during the weekday AM peak hour. During the weekday PM peak hour, the proposed project is anticipated to generate demand for 10 transit trips (2 inbound trips and 8 outbound trips). Over a 24-hour period, the proposed project is forecast to generate demand for 78 daily transit trips. The calculations are as follows:

- AM Peak Hour = 223 × 1.4 × 0.035 = 11 Transit Trips
- PM Peak Hour = 214 × 1.4 × 0.035 = 10 Transit Trips
- Daily Trips = 1,585 × 1.4 × 0.035 = 78 Transit Trips

It is anticipated that the existing transit service in the project area will adequately accommodate the project-generated transit trips. Thus, based on the calculated number of generated transit trips, no project impacts on existing or future transit services in the project area are expected to occur as a result of the proposed project.

13.0 CONCLUSIONS

It is concluded that each of the four project alternatives will create a potentially significant impacts to the following two locations:

- Intersection No. 3, El Molino Avenue/Colorado Boulevard
- El Molino Avenue between Colorado Boulevard and Playhouse Alley

The following subsections summarize the project requirements and improvements measures for the proposed Playhouse Plaza project.

13.1 Project Requirements

- Contribute funds toward the Trip Reduction/ Traffic Improvement Fee.
- Participate in the funding of the Citywide Transportation Performance Monitoring Program, as determined in consultation with PasDOT staff.

By participating in the above-mentioned transportation measures, the project's responsible contribution to resolve the potential impact to Intersection No. 3, El Molino Avenue/Colorado Boulevard would be satisfied.

13.2 Intersection Improvement Measures

The following operational improvements are required to mitigate the impacted intersection to less than significant levels:

- Prohibit left-turn movements at the northbound and southbound approaches on El Molino Avenue at the Colorado Boulevard intersection.
- Install a left-turn pocket at the northbound approach on El Molino Avenue at the Union Street intersection. Restripe the northbound and southbound approaches on El Molino Avenue to accommodate the installation of the northbound left-turn pocket. Modify the traffic signal at the El Molino Avenue/Union Street intersection (Int. No. 3) to provide northbound left-turn phasing.
- Install a left-turn pocket at the southbound approach on El Molino Avenue at the Green Street intersection. Restripe the northbound and southbound approaches on El Molino Avenue to accommodate the installation of the southbound left-turn pocket. Modify the traffic signal at the El Molino Avenue/ Green Street intersection (Int. No. 5) to provide southbound left-turn phasing.

13.3 Transportation Demand Management

The project shall also comply with the City's Trip Reduction ordinance as listed below:

- All nonresidential development projects, and the nonresidential portion of mixed-use projects which fall below the 25,000 square feet of gross floor area, shall provide preferential carpool/vanpool spaces equivalent to 10% of employee parking, bicycle parking and a transportation display bulletin board.

- All nonresidential developments, which exceed 25,000 square feet of gross floor area, shall provide a commuter matching service for all employees on an annual basis, and for all new employees upon hiring. All nonresidential development projects and the non-residential portion of mixed-use development projects, which exceed 100,000 square feet of gross floor area, shall provide a plan for a Transportation Systems Management Program (TSM). The TSM Program shall be reviewed and approved by the director of transportation prior to the issuance of a building permit and shall be reviewed and approved annually for the life of the project. The TSM Program may include but is not limited to the following strategies:

    - Pay parking for employees
    - Guaranteed Ride Home
    - Transit pass and vanpool fare subsidies
    - Private vanpool operations
    - Bikeway linkages to established routes
    - Reduced-parking fees for non-solo drivers
    - Provision of a certified Employee Transportation Coordinator
    - Provide Metro Corporate Transit Passes to employees of this project site

- Nonresidential development projects and the nonresidential portion of mixed-use development projects, which exceed 100,000 square feet of gross floor area, shall meet the requirements of the preceding subsection and the following mitigation strategies:

    - a. Carpool and Vanpool Loading Area. A passenger loading area for carpool and vanpool vehicles shall be provided on site. At a minimum the area shall be of sufficient size to accommodate the number of waiting vehicles equivalent to 10% of the required number of carpool and vanpool spaces.

- b. Connecting Sidewalks. Designated pedestrian sidewalks or paths shall be provided on the development site between the external pedestrian system and each building in the development.

- c. Bus Stop Improvements. Capital improvements, including bus pullouts, bus pads and right of way for bus shelters may be required as mitigation measures if a proposed development will have substantial traffic impacts.

Upon submittal of a TSM Program for review and approval, the owner/developer shall place a deposit based on the current General Fee Schedule with the Department of Transportation prior to the issuance of a building permit. This deposit is subject to a refund or an additional billing in the event that the deposit amount is not sufficient to cover the cost of the review. The developer shall pay an annual Transportation Demand Management status report review fee based on the current General Fee Schedule, in compliance with the requirements of the Trip Reduction Ordinance.

13.4 Street Segment Improvement Measures

Based on the City's street segment significance criteria the net increase in ADT volumes for study Street Segment No. 1, El Molino Avenue between Colorado Boulevard and Playhouse Alley, requires both physical (e.g., roadway improvements, traffic signal upgrades, etc.) and soft mitigation measures (e.g., transportation demand management measures). The project trips from all four scenarios are expected to significantly impact El Molino Street, a de-emphasized street, by increasing the traffic between 10.4% and 12.3%.

The 2004 General Plan Mobility Element defines de-emphasized streets as "routes where efforts will be made to limit future increases in traffic. No transportation capital or operational improvements to increase traffic capacity will be implemented on these corridors." PasDOT has determined that there are no feasible mitigation measures to reduce the impacts of the project on El Molino Street to below levels of significance. As such, forecast significant project-related impacts are expected to remain. If the project is expected to be entitled by overriding considerations, PasDOT recommends that the following mitigation measures be considered as project conditions:

- Contribute funds toward a pedestrian safety study in the vicinity of the project. The plan will study measures such as mid-block signals, curb extensions, pedestrian countdown signals, etc to improve walking safety and convenience to and from parking structures/businesses in the area.

- Provide pedestrian lighting to and from the project to the nearest transit stops within a quarter mile radius.

- Offer unbundled parking option with lease.

- Contribute funds to the Pasadena ARTS program.

- Provide Metro Corporate Transit Passes to employees of this project site.

APPENDIX A

MANUAL TRAFFIC COUNTS

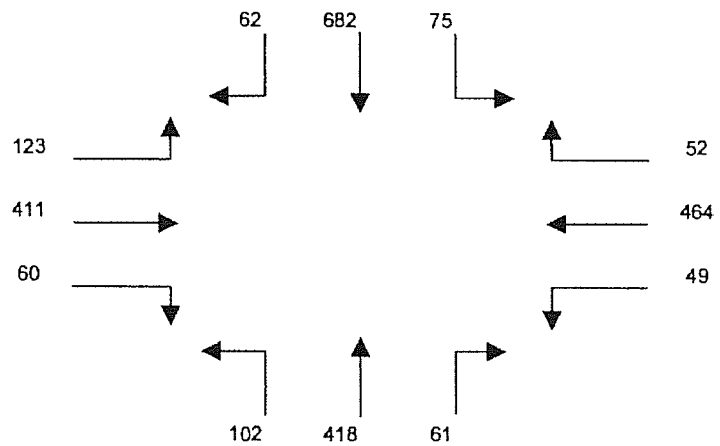
INTERSECTION TURNING MOVEMENT COUNT SUMMARY

CLIENT: WILLDAN
PROJECT: CITY OF PASADENA
DATE: TUESDAY, APRIL 17,2007
PERIOD: 07:00 AM TO 09:00 AM
INTERSECTION N/S LOS ROBLES AVENUE
E/W COLORADO BOULEVARD
FILE NUMBER: 11-AM

15 MINUTE TOTALS	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT
700-715	15	111	8	11	97	5	7	68	6	8	48	19
715-730	10	115	11	10	99	6	10	75	9	12	63	21
730-745	11	140	11	6	100	13	19	72	12	17	75	25
745-800	11	152	10	10	89	10	12	105	19	14	91	25
800-815	18	197	14	13	108	10	14	119	26	16	130	33
815-830	13	185	21	12	108	14	11	123	29	18	99	34
830-845	19	130	17	11	120	16	19	95	27	15	100	32
845-900	12	170	23	16	128	9	17	81	20	11	82	24

1 HOUR TOTALS	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTALS
700-800	47	518	40	37	385	34	48	320	46	51	277	90	1893
715-815	50	604	46	39	396	39	55	371	66	59	359	104	2168
730-830	53	674	56	41	405	47	56	419	86	65	395	117	2414
745-845	61	664	62	46	425	50	56	442	101	63	420	124	2514
800-900	62	682	75	52	464	49	61	418	102	60	411	123	2559

A.M. PEAK HOUR
0800-0900



THE TRAFFIC SOLUTION
329 DIAMOND STREET
ARCADIA, CALIFORNIA 91006
626.446.7978

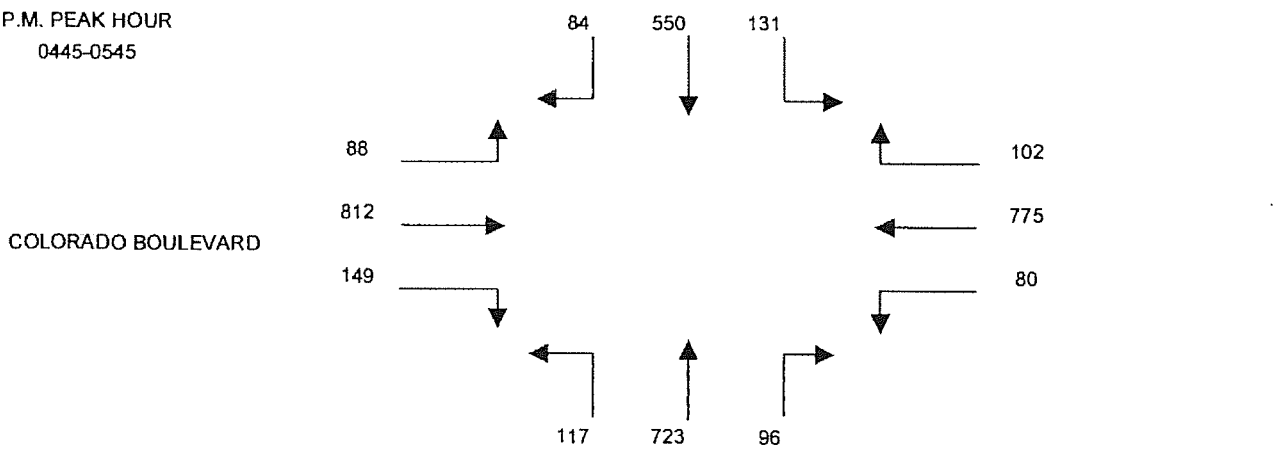
INTERSECTION TURNING MOVEMENT COUNT SUMMARY

CLIENT: WILLDAN
PROJECT: CITY OF PASADENA
DATE: TUESDAY, APRIL 17, 2007
PERIOD: 04:00 PM TO 06:00 PM
INTERSECTION N/S LOS ROBLES AVENUE
E/W COLORADO BOULEVARD
FILE NUMBER: 11-PM

15 MINUTE TOTALS	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT
400-415	20	124	26	21	180	13	28	129	32	28	197	21
415-430	25	122	33	17	191	12	23	146	23	20	174	17
430-445	27	114	24	24	180	15	18	163	32	30	175	25
445-500	15	127	26	20	198	19	26	179	39	29	226	28
500-515	24	149	28	31	196	21	20	206	27	43	184	20
515-530	20	153	38	26	193	22	28	150	20	33	190	18
530-545	25	121	39	25	188	18	22	188	31	44	212	22
545-600	24	134	30	22	176	15	25	191	37	39	203	26

1 HOUR TOTALS	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTALS
400-500	87	487	109	82	749	59	95	617	126	107	772	91	3381
415-515	91	512	111	92	765	67	87	694	121	122	759	90	3511
430-530	86	543	116	101	767	77	92	698	118	135	775	91	3599
445-545	84	550	131	102	775	80	96	723	117	149	812	88	3707
500-600	93	557	135	104	753	76	95	735	115	159	789	86	3697

P.M. PEAK HOUR
0445-0545



THE TRAFFIC SOLUTION
329 DIAMOND STREET
ARCADIA, CALIFORNIA 91006
626.446.7978

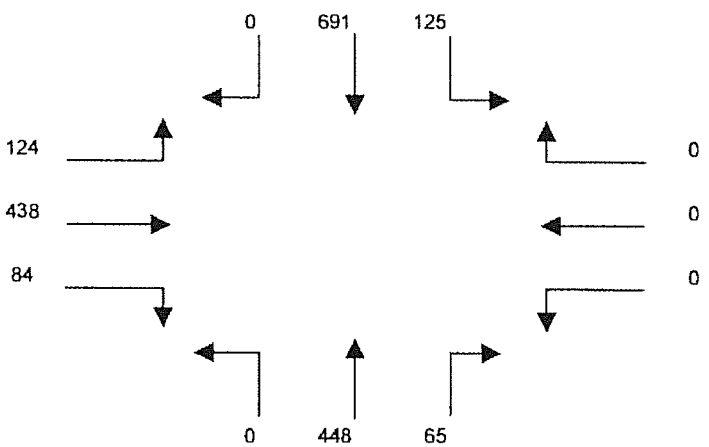
INTERSECTION TURNING MOVEMENT COUNT SUMMARY

CLIENT: WILLDAN
PROJECT: CITY OF PASADENA
DATE: TUESDAY, APRIL 17,2007
PERIOD: 07:00 AM TO 09:00 AM
INTERSECTION N/S LOS ROBLES AVENUE
E/W GREEN STREET
FILE NUMBER: 12-AM

15 MINUTE TOTALS	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT
700-715	0	95	11	0	0	0	5	76	0	16	70	20
715-730	0	134	12	0	0	0	9	80	0	11	86	22
730-745	0	147	28	0	0	0	14	86	0	11	90	26
745-800	0	180	30	0	0	0	14	106	0	18	94	23
800-815	0	169	36	0	0	0	19	108	0	19	109	31
815-830	0	187	30	0	0	0	15	119	0	24	98	36
830-845	0	155	29	0	0	0	17	115	0	23	137	34
845-900	0	173	24	0	0	0	21	100	0	17	85	26

1 HOUR TOTALS	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTALS
700-800	0	556	81	0	0	0	42	348	0	56	340	91	1514
715-815	0	630	106	0	0	0	56	380	0	59	379	102	1712
730-830	0	683	124	0	0	0	62	419	0	72	391	116	1867
745-845	0	691	125	0	0	0	65	448	0	84	438	124	1975
800-900	0	684	119	0	0	0	72	442	0	83	429	127	1956

A.M. PEAK HOUR
0745-0845



GREEN STREET

LOS ROBLES AVENUE

THE TRAFFIC SOLUTION
329 DIAMOND STREET
ARCADIA, CALIFORNIA 91006
626.446.7978

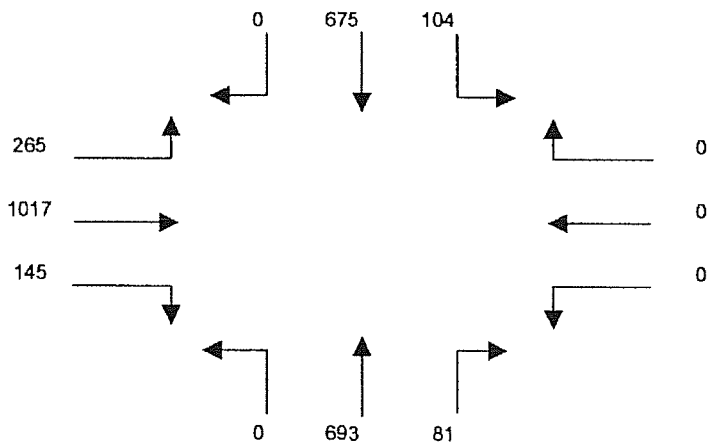
INTERSECTION TURNING MOVEMENT COUNT SUMMARY

CLIENT: WILLDAN
PROJECT: CITY OF PASADENA
DATE: TUESDAY, APRIL 17, 2007
PERIOD: 04:00 PM TO 06:00 PM
INTERSECTION N/S LOS ROBLES AVENUE
E/W GREEN STREET
FILE NUMBER: 12-PM

15 MINUTE TOTALS	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT
400-415	0	139	20	0	0	0	16	141	0	30	218	51
415-430	0	135	23	0	0	0	14	147	0	27	215	66
430-445	0	141	27	0	0	0	21	157	0	36	231	53
445-500	0	160	24	0	0	0	17	149	0	20	216	52
500-515	0	195	21	0	0	0	21	196	0	37	240	68
515-530	0	154	25	0	0	0	20	153	0	38	260	50
530-545	0	152	35	0	0	0	24	174	0	44	291	77
545-600	0	174	23	0	0	0	16	170	0	26	226	70

1 HOUR TOTALS	1 SBRT	2 SBTH	3 SBLT	4 WBRT	5 WBTH	6 WBLT	7 NBRT	8 NBTH	9 NBLT	10 EBRT	11 EBTH	12 EBLT	TOTALS
400-500	0	575	94	0	0	0	68	594	0	113	880	222	2546
415-515	0	631	95	0	0	0	73	649	0	120	902	239	2709
430-530	0	650	97	0	0	0	79	655	0	131	947	223	2782
445-545	0	661	105	0	0	0	82	672	0	139	1007	247	2913
500-600	0	675	104	0	0	0	81	693	0	145	1017	265	2980

P.M. PEAK HOUR
0500-0600



THE TRAFFIC SOLUTION
329 DIAMOND STREET
ARCADIA, CALIFORNIA 91006
626.446.7978

City Traffic Counters
626.256.4171

File Name : ElMUnion
Site Code : 00000000
Start Date : 5/28/2008
Page No : 1

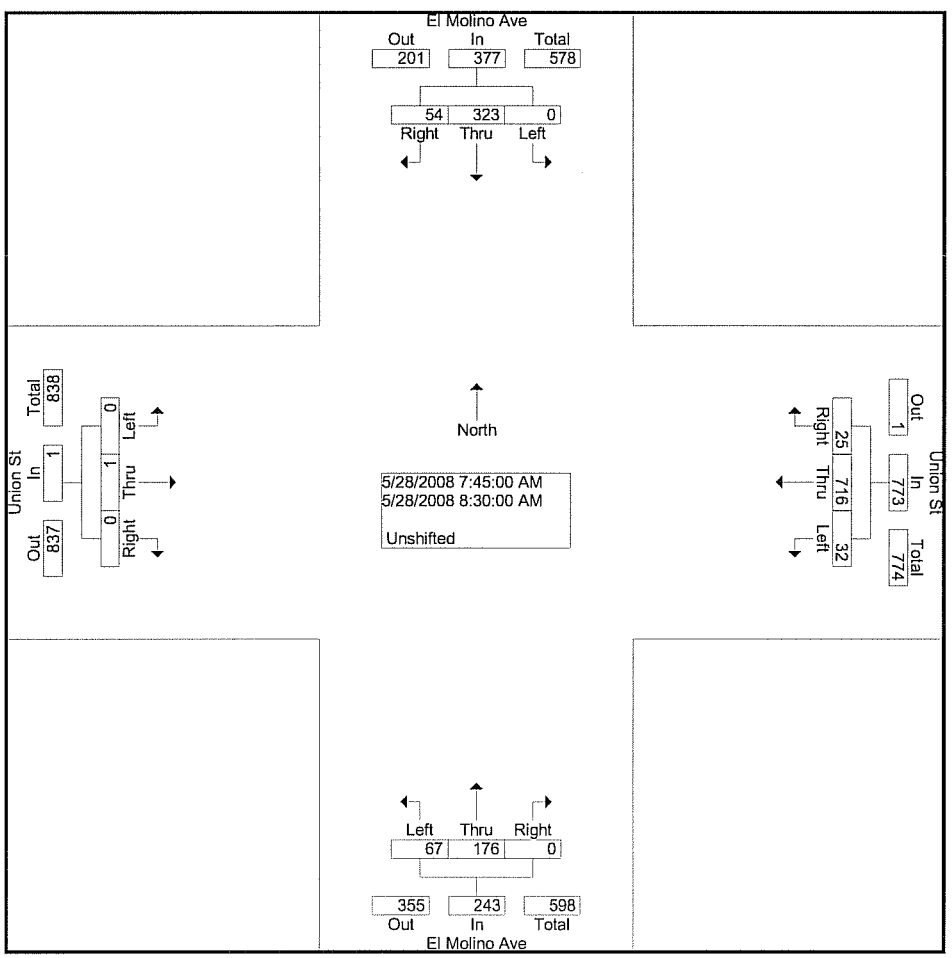
Groups Printed- Unshifted

	El Molino Ave Southbound			Union St Westbound			El Molino Ave Northbound			Union St Eastbound			
Start Time	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Int. Total
Factor	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
07:00 AM	0	30	8	7	60	3	6	15	0	0	0	0	129
07:15 AM	0	43	5	3	98	1	7	19	0	0	0	0	176
07:30 AM	0	59	10	13	117	5	7	27	0	0	0	0	238
07:45 AM	0	77	9	7	177	11	11	50	0	0	0	0	342
Total	0	209	32	30	452	20	31	111	0	0	0	0	885
08:00 AM	0	71	15	11	174	5	17	44	0	0	0	0	337
08:15 AM	0	90	17	5	178	6	24	47	0	0	1	0	368
08:30 AM	0	85	13	9	187	3	15	35	0	0	0	0	347
08:45 AM	0	50	18	12	168	8	15	44	0	0	0	0	315
Total	0	296	63	37	707	22	71	170	0	0	1	0	1367
04:00 PM	0	54	8	11	166	19	11	52	0	0	0	0	321
04:15 PM	0	78	31	5	161	15	21	63	0	0	0	0	374
04:30 PM	0	55	19	6	179	10	18	67	0	0	0	0	354
04:45 PM	0	66	25	8	192	10	13	61	0	0	0	0	375
Total	0	253	83	30	698	54	63	243	0	0	0	0	1424
05:00 PM	0	54	22	11	228	17	15	45	0	0	0	0	392
05:15 PM	0	72	17	11	195	19	13	52	0	0	0	0	379
05:30 PM	0	60	25	14	212	15	11	59	0	0	0	0	396
05:45 PM	0	64	17	10	176	20	17	53	0	0	0	0	357
Total	0	250	81	46	811	71	56	209	0	0	0	0	1524
Grand Total	0	1008	259	143	2668	167	221	733	0	0	1	0	5200
Apprch %	0.0	79.6	20.4	4.8	89.6	5.6	23.2	76.8	0.0	0.0	100.0	0.0	
Total %	0.0	19.4	5.0	2.8	51.3	3.2	4.3	14.1	0.0	0.0	0.0	0.0	

City Traffic Counters
626.256.4171

File Name : ElMUnion
Site Code : 00000000
Start Date : 5/28/2008
Page No : 2

	El Molino Ave Southbound				Union St Westbound				El Molino Ave Northbound				Union St Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour From 07:00 AM to 11:45 AM - Peak 1 of 1																	
Intersection	07:45 AM																
Volume	0	323	54	377	32	716	25	773	67	176	0	243	0	1	0	1	1394
Percent	0.0	85.7	14.3		4.1	92.6	3.2		27.6	72.4	0.0		0.0	100.0	0.0		
08:15 Volume	0	90	17	107	5	178	6	189	24	47	0	71	0	1	0	1	368
Peak Factor																	0.947
High Int.	08:15 AM				08:30 AM				08:15 AM				08:15 AM				
Volume	0	90	17	107	9	187	3	199	24	47	0	71	0	1	0	1	
Peak Factor				0.881				0.971				0.856				0.250	



APPENDIX B

ICU AND LEVELS OF SERVICE EXPLANATION

INTERSECTION CAPACITY UTILIZATION (ICU) DESCRIPTION

Level of Service is a term used to describe prevailing conditions and their effect on traffic. Broadly interpreted, the Levels of Service concept denotes any one of a number of differing combinations of operating conditions which may occur as a roadway is accommodating various traffic volumes. Level of Service is a qualitative measure of the effect of such factors as travel speed, travel time, traffic interruptions, freedom to maneuver, safety, driving comfort and convenience.

Six Levels of Service, A through F, have been defined in the 1965 *Highway Capacity Manual*, published by the Transportation Research Board. Level of Service A describes a condition of free flow, with low traffic volumes and relatively high speeds, while Level of Service F describes forced traffic flow at low speeds with jammed conditions and queues which cannot clear during the green phases.

The Intersection Capacity Utilization (ICU) method of intersection capacity analysis has been used in our studies. It directly relates traffic demand and available capacity for key intersection movements, regardless of present signal timing, The capacity per hour of green time for each approach is calculated based on the methods of the *Highway Capacity Manual*. The proportion of total signal time needed by each key movement is determined and compared to the total time available (100 percent of the hour). The result of summing the requirements of the conflicting key movements plus an allowance for clearance times is expressed as a decimal fraction. Conflicting key traffic movements are those opposing movements whose combined green time requirements are greatest.

The resulting ICU represents the proportion of the total hour required to accommodate intersection demand volumes if the key conflicting traffic movements are operating at capacity. Other movements may be operating near capacity, or may be operating at significantly better levels. The ICU may be translated to a Level of Service as tabulated below.

The Levels of Service (abbreviated from the *Highway Capacity Manual*) are listed here with their corresponding ICU and Load Factor equivalents. Load Factor is that proportion of the signal cycles during the peak hour which are fully loaded; i.e. when all of the vehicles waiting at the beginning of green are not able to clear on that green phase.

Intersection Capacity Utilization Characteristics

Level of Service	Load Factor	Equivalent ICU
A	0.0	0.00 - 0.60
B	0.0 - 0.1	0.61 - 0.70
C	0.1 - 0.3	0.71 - 0.80
D	0.3 - 0.7	0.81 - 0.90
E	0.7 - 1.0	0.91 - 1.00
F	Not Applicable	Not Applicable

SERVICE LEVEL A
There are no loaded cycles and few are even close to loaded at this service level. No approach phase is fully utilized by traffic and no vehicle waits longer than one red indication.

SERVICE LEVEL B
This level represents stable operation where an occasional approach phase is fully utilized and a substantial number are approaching full use. Many drivers begin to feel restricted within platoons of vehicles.

SERVICE LEVEL C
At this level stable operation continues. Loading is still intermittent but more frequent than at Level B. Occasionally drivers may have to wait through more than one red signal indication and backups may develop behind turning vehicles. Most drivers feel somewhat restricted, but not objectionably so.

SERVICE LEVEL D
This level encompasses a zone of increasing restriction approaching instability at the intersection. Delays to approaching vehicles may be substantial during short peaks within the peak hour, but enough cycles with lower demand occur to permit periodic clearance of queues, thus preventing excessive backups. Drivers frequently have to wait through more than one red signal. This level is the lower limit of acceptable operation to most drivers.

SERVICE LEVEL E
This represents near capacity and capacity operation. At capacity (ICU = 1.0) it represents the most vehicles that the particular intersection can accommodate. However, full utilization of every signal cycle is seldom attained no matter how great the demand. At this level all drivers wait through more than one red signal, and frequently through several.

SERVICE LEVEL F
Jammed conditions. Traffic backed up from a downstream location on one of the street restricts or prevents movement of traffic through the intersection under consideration.

APPENDIX B-1

PROJECT ALTERNATIVE 1 ICU DATA WORKSHEETS – AM AND PM PEAK HOURS

LINSCOTT, LAW & GREENSPAN, ENGINEERS
236 N. Chester Avenue, Suite 200, Pasadena CA 91106
(626) 796.2322 Fax (626) 792.0941

INTERSECTION CAPACITY UTILIZATION

N-S St: Los Robles Avenue
E-W St: Colorado Boulevard
Project: Playhouse Plaza Project/1-083727-1
File: ICU-1

Los Robles Avenue @ Colorado Boulevard
Peak hr: AM
Annual Growth: 1.50%

Date: 07/03/2008
Date of Count: 2008
Projection Year: 2010

PROJECT ALTERNATIVE 1: ALL PARKING AT SITE

	2008 EXIST. TRAFFIC			2010 W/AMBIENT GROWTH			2010 W/RELATED PROJECTS [3]				2010 W/PROJECT SITE TRAFFIC				2010 W/PROJECT MITIGATION			
	1		2 V/C	Added	Total	V/C	Added	Total		2 V/C	Added	Total		2 V/C	Volume	Total		2 V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Shift	Volume	Capacity	Ratio
Nb Left	104	1700	0.061 *	3	107	0.063 *	1	108	1700	0.063 *	0	108	1700	0.063 *	0	108	1700	0.063 *
Nb Thru	424	3400	0.125	13	437	0.129	12	449	3400	0.132	0	449	3400	0.132	0	449	3400	0.132
Nb Right	62	1700	0.036	2	64	0.038	29	93	1700	0.055	0	93	1700	0.055	0	93	1700	0.055
Sb Left	76	1700	0.045	2	78	0.046	32	110	1700	0.065	0	110	1700	0.065	21	131	1700	0.077
Sb Thru	692	3400	0.204 *	21	713	0.210 *	23	736	3400	0.216 *	10	746	3400	0.219 *	0	746	3400	0.219 *
Sb Right	63	1700	0.037	2	65	0.038	36	101	1700	0.059	0	101	1700	0.059	0	101	1700	0.059
Eb Left	125	1700	0.073 *	4	129	0.076 *	20	149	1700	0.087 *	0	149	1700	0.087 *	0	149	1700	0.087 *
Eb Thru	417	3400	0.123	13	430	0.126	223	653	3400	0.192	10	663	3400	0.195	0	663	3400	0.195
Eb Right	61	1700	0.036	2	63	0.037	2	65	1700	0.038	0	65	1700	0.038	0	65	1700	0.038
Wb Left	50	1700	0.029	1	51	0.030	24	75	1700	0.044	0	75	1700	0.044	0	75	1700	0.044
Wb Thru	471	3400	0.139 *	14	485	0.143 *	192	677	3400	0.199 *	1	678	3400	0.199 *	-44	634	3400	0.186 *
Wb Right	53	1700	0.031	2	54	0.032	30	84	1700	0.050	1	85	1700	0.050	0	85	1700	0.050
Yellow Allowance:			0.100 *			0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.576			0.591				0.666				0.670				0.657
LOS			A			A				B				B				B

**Key conflicting movement as a part of ICU*
1 Counts conducted by.The Traffic Solution
2 Capacity expressed in veh/hour of green
3 As directed by Pasadena DOT staff, the related projects volumes where obtained from the Draft Traffic Impact Study for 680 E. Colorado Boulevard Mixed Use Project prepared by Willdan Associates, June 2007. Note: Year 2007 manual traffic counts were adjusted by a 1.5 percent (1.5%) ambient growth factor to reflect year 2008 existing conditions.

01:33 PM

LINSCOTT, LAW & GREENSPAN, ENGINEERS
236 N. Chester Avenue, Suite 200, Pasadena CA 91106
(626) 796.2322 Fax (626) 792.0941

INTERSECTION CAPACITY UTILIZATION

N-S St: Los Robles Avenue
E-W St: Colorado Boulevard
Project: Playhouse Plaza Project/1-083727-1
File: ICU-1

Los Robles Avenue @ Colorado Boulevard
Peak hr: PM
Annual Growth: 1.50%

Date: 07/03/2008
Date of Count: 2008
Projection Year: 2010

PROJECT ALTERNATIVE 1: ALL PARKING AT SITE

	2008 EXIST. TRAFFIC			2010 W/AMBIENT GROWTH			2010 W/RELATED PROJECTS [3]				2010 W/PROJECT SITE TRAFFIC				2010 W/PROJECT MITIGATION			
Movement	1 Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Volume Shift	Total Volume	2 Capacity	V/C Ratio
Nb Left	119	1700	0.070	4	122	0.072	3	125	1700	0.074	0	125	1700	0.074	0	125	1700	0.074
Nb Thru	734	3400	0.216 *	22	756	0.222 *	23	779	3400	0.229 *	0	779	3400	0.229 *	0	779	3400	0.229 *
Nb Right	97	1700	0.057	3	100	0.059	24	124	1700	0.073	0	124	1700	0.073	0	124	1700	0.073
Sb Left	133	1700	0.078 *	4	137	0.081 *	28	165	1700	0.097 *	0	165	1700	0.097 *	37	202	1700	0.119 *
Sb Thru	558	3400	0.164	17	575	0.169	18	593	3400	0.174	2	595	3400	0.175	0	595	3400	0.175
Sb Right	85	1700	0.050	3	88	0.052	29	117	1700	0.069	0	117	1700	0.069	0	117	1700	0.069
Eb Left	89	1700	0.053	3	92	0.054	38	130	1700	0.076 *	0	130	1700	0.076 *	0	130	1700	0.076
Eb Thru	824	3400	0.242 *	25	849	0.250 *	212	1061	3400	0.312	2	1063	3400	0.313	0	1063	3400	0.313 *
Eb Right	151	1700	0.089	5	156	0.092	2	158	1700	0.093	0	158	1700	0.093	0	158	1700	0.093
Wb Left	81	1700	0.048 *	2	84	0.049 *	40	124	1700	0.073	0	124	1700	0.073	0	124	1700	0.073 *
Wb Thru	787	3400	0.231	24	810	0.238	263	1073	3400	0.316 *	9	1082	3400	0.318 *	-45	1037	3400	0.305
Wb Right	104	1700	0.061	3	107	0.063	35	142	1700	0.083	9	151	1700	0.089	0	151	1700	0.089
Yellow Allowance:			0.100 *			0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.684			0.702				0.818				0.821				0.833
LOS			B			C				D				D				D

01:33 PM

**Key conflicting movement as a part of ICU*
1 Counts conducted by.The Traffic Solution
2 Capacity expressed in veh/hour of green
3 As directed by Pasadena DOT staff, the related projects volumes where obtained from the Draft Traffic Impact Study for 680 E. Colorado Boulevard Mixed Use Project prepared by Willdan Associates, June 2007. Note: Year 2007 manual traffic counts were adjusted by a 1.5 percent (1.5%) ambient growth factor to reflect year 2008 existing conditions.

LINSCOTT, LAW & GREENSPAN, ENGINEERS
236 N. Chester Avenue, Suite 200, Pasadena CA 91106
(626) 796.2322 Fax (626) 792.0941

INTERSECTION CAPACITY UTILIZATION

N-S St: Los Robles Avenue
E-W St: Green Street
Project: Playhouse Plaza Project/1-083727-1
File: ICU-2

Los Robles Avenue @ Green Street
Peak hr: AM
Annual Growth: 1.50%

Date: 07/03/2008
Date of Count: 2008
Projection Year: 2010

PROJECT ALTERNATIVE 1: ALL PARKING AT SITE

	2008 EXIST. TRAFFIC			2010 W/AMBIENT GROWTH			2010 W/RELATED PROJECTS [3]				2010 W/PROJECT SITE TRAFFIC				2010 W/PROJECT MITIGATION			
	1	2	V/C	Added	Total	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Nb Thru	455	3400	0.153 *	14	468	0.158 *	42	510	3400	0.170 *	0	510	3400	0.173 *	0	510	3400	0.173 *
Nb Right	66	0	-	2	68	-	0	68	0	-	10	78	0	-	0	78	0	-
Sb Left	127	1700	0.075 *	4	131	0.077 *	0	131	1700	0.077 *	10	141	1700	0.083 *	0	141	1700	0.083 *
Sb Thru	701	3400	0.206	21	722	0.212	49	771	3400	0.227	0	771	3400	0.227	0	771	3400	0.227
Sb Right	0	0	-	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Eb Left	126	1700	0.074	4	130	0.076	0	130	1700	0.076	0	130	1700	0.076	0	130	1700	0.076
Eb Thru	445	5100	0.087 *	13	458	0.090 *	7	465	5100	0.091 *	29	494	5100	0.097 *	0	494	5100	0.097 *
Eb Right	85	1700	0.050	3	88	0.052	0	88	1700	0.052	0	88	1700	0.052	0	88	1700	0.052
Wb Left	0	0	0.000 *	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *
Wb Thru	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Wb Right	0	0	-	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Yellow Allowance:			0.100 *			0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.415			0.424				0.438				0.453				0.453
LOS			A			A				A				A				A

01:34 PM

**Key conflicting movement as a part of ICU*
1 Counts conducted by.The Traffic Solution
2 Capacity expressed in veh/hour of green
3 As directed by Pasadena DOT staff, the related projects volumes where obtained from the Draft Traffic Impact Study for 680 E. Colorado Boulevard Mixed Use Project prepared by Willdan Associates, June 2007. Note: Year 2007 manual traffic counts were adjusted by a 1.5 percent (1.5%) ambient growth factor to reflect year 2008 existing conditions.

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INTERSECTION CAPACITY UTILIZATION

N-S St: Los Robles Avenue
E-W St: Green Street
Project: Playhouse Plaza Project/1-083727-1
File: ICU-2

Los Robles Avenue @ Green Street
Peak hr: PM
Annual Growth: 1.50%

Date: 07/03/2008
Date of Count: 2008
Projection Year: 2010

PROJECT ALTERNATIVE 1: ALL PARKING AT SITE

	2008 EXIST. TRAFFIC			2010 W/AMBIENT GROWTH			2010 W/RELATED PROJECTS [3]				2010 W/PROJECT SITE TRAFFIC				2010 W/PROJECT MITIGATION			
Movement	1 Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio
Nb Left	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Nb Thru	703	3400	0.231 *	21	724	0.238 *	50	774	3400	0.253 *	0	774	3400	0.253 *	0	774	3400	0.253 *
Nb Right	82	0	-	2	85	-	0	85	0	-	2	87	0	-	0	87	0	-
Sb Left	106	1700	0.062 *	3	109	0.064 *	0	109	1700	0.064 *	2	111	1700	0.065 *	0	111	1700	0.065 *
Sb Thru	685	3400	0.202	21	706	0.208	60	766	3400	0.225	0	766	3400	0.225	0	766	3400	0.225
Sb Right	0	0	-	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Eb Left	269	1700	0.158	8	277	0.163	0	277	1700	0.163	0	277	1700	0.163	0	277	1700	0.163
Eb Thru	1032	5100	0.202 *	31	1063	0.208 *	12	1075	5100	0.211 *	5	1080	5100	0.212 *	0	1080	5100	0.212 *
Eb Right	147	1700	0.087	4	152	0.089	0	152	1700	0.089	0	152	1700	0.089	0	152	1700	0.089
Wb Left	0	0	0.000 *	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *
Wb Thru	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Wb Right	0	0	-	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Yellow Allowance:			0.100 *			0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.596			0.610				0.627				0.630				0.630
LOS			A			B				B				B				B

01:34 PM

**Key conflicting movement as a part of ICU*
1 Counts conducted by.The Traffic Solution
2 Capacity expressed in veh/hour of green
3 As directed by Pasadena DOT staff, the related projects volumes where obtained from the Draft Traffic Impact Study for 680 E. Colorado Boulevard Mixed Use Project prepared by Willdan Associates, June 2007. Note: Year 2007 manual traffic counts were adjusted by a 1.5 percent (1.5%) ambient growth factor to reflect year 2008 existing conditions.

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INTERSECTION CAPACITY UTILIZATION

N-S St: El Molino Avenue
E-W St: Union Street
Project: Playhouse Plaza Project/1-083727-1
File: ICU-3

El Molino Avenue @ Union Street
Peak hr: AM
Annual Growth: 1.50%

Date: 07/03/2008
Date of Count: 2008
Projection Year: 2010

PROJECT ALTERNATIVE 1: ALL PARKING AT SITE

	2008 EXIST. TRAFFIC			2010 W/AMBIENT GROWTH			2010 W/RELATED PROJECTS [3]				2010 W/PROJECT SITE TRAFFIC				2010 W/PROJECT MITIGATION			
	1	2	V/C	Added	Total	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Volume	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Shift	Volume	Capacity	Ratio
Nb Left	67	0	0.039 *	2	69	0.041 *	10	79	0	0.046 *	4	83	0	0.049 *	44	127	1700	0.075 *
Nb Thru	176	1700	0.143	5	181	0.147	7	188	1700	0.157	5	193	1700	0.163	0	193	1700	0.114
Nb Right	0	0	-	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Sb Left	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Sb Thru	323	1700	0.222 *	10	333	0.228 *	13	346	1700	0.236 *	59	405	1700	0.271 *	-21	384	1700	0.258 *
Sb Right	54	0	-	2	56	-	0	56	0	-	0	56	0	-	0	56	0	-
Eb Left	0	0	0.000 *	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *
Eb Thru	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Eb Right	0	0	-	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Wb Left	32	0	0.006	1	33	0.006	30	63	0	0.012	10	73	0	0.014	0	73	0	0.014
Wb Thru	716	5100	0.152 *	21	737	0.156 *	0	737	5100	0.162 *	0	737	5100	0.164 *	0	737	5100	0.164 *
Wb Right	25	0	-	1	26	-	0	26	0	-	0	26	0	-	0	26	0	-
Yellow Allowance:			0.100 *			0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.513			0.525				0.545				0.584				0.597
LOS			A			A				A				A				A

01:34 PM

**Key conflicting movement as a part of ICU*
1 Counts conducted by.The Traffic Solution
2 Capacity expressed in veh/hour of green
3 As directed by Pasadena DOT staff, the related projects volumes where obtained from the Draft Traffic Impact Study for 680 E. Colorado Boulevard Mixed Use Project prepared by Willdan Associates, June 2007.

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INTERSECTION CAPACITY UTILIZATION

N-S St: El Molino Avenue
E-W St: Union Street
Project: Playhouse Plaza Project/1-083727-1
File: ICU-3

El Molino Avenue @ Union Street
Peak hr: PM
Annual Growth: 1.50%

Date: 07/03/2008
Date of Count: 2008
Projection Year: 2010

PROJECT ALTERNATIVE 1: ALL PARKING AT SITE

	2008 EXIST. TRAFFIC			2010 W/AMBIENT GROWTH			2010 W/RELATED PROJECTS [3]				2010 W/PROJECT SITE TRAFFIC				2010 W/PROJECT MITIGATION			
	1	2	V/C	Added	Total	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Volume	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Shift	Volume	Capacity	Ratio
Nb Left	52	0	0.031 *	2	54	0.032 *	50	104	0	0.061 *	27	131	0	0.077 *	45	176	1700	0.103 *
Nb Thru	217	1700	0.158	7	224	0.163	30	254	1700	0.210	36	290	1700	0.247	0	290	1700	0.170
Nb Right	0	0	-	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Sb Left	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Sb Thru	252	1700	0.201 *	8	260	0.207 *	6	266	1700	0.210 *	11	277	1700	0.217 *	-37	240	1700	0.195 *
Sb Right	89	0	-	3	92	-	0	92	0	-	0	92	0	-	0	92	0	-
Eb Left	0	0	0.000 *	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *
Eb Thru	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Eb Right	0	0	-	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Wb Left	44	0	0.009	1	45	0.009	20	65	0	0.013	2	67	0	0.013	0	67	0	0.013
Wb Thru	827	5100	0.183 *	25	852	0.188 *	0	852	5100	0.192 *	0	852	5100	0.193 *	0	852	5100	0.193 *
Wb Right	61	0	-	2	63	-	0	63	0	-	0	63	0	-	0	63	0	-
Yellow Allowance:			0.100 *			0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.514			0.526				0.563				0.586				0.591
LOS			A			A				A				A				A

01:34 PM

**Key conflicting movement as a part of ICU*
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INTERSECTION CAPACITY UTILIZATION

N-S St: El Molino Avenue
E-W St: Colorado Boulevard
Project: Playhouse Plaza Project/1-083727-1
File: ICU-4

El Molino Avenue @ Colorado Boulevard
Peak hr: AM
Annual Growth: 1.50%

Date: 07/03/2008
Date of Count: 2008
Projection Year: 2010

PROJECT ALTERNATIVE 1: ALL PARKING AT SITE

	2008 EXIST. TRAFFIC			2010 W/AMBIENT GROWTH			2010 W/RELATED PROJECTS [3]				2010 W/PROJECT SITE TRAFFIC				2010 W/PROJECT MITIGATION			
	1	2	V/C	Added	Total	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Volume	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Shift	Volume	Capacity	Ratio
Nb Left	25	0	0.015 *	1	26	0.015 *	15	41	0	0.024 *	3	44	0	0.026 *	-44	0	0	0.000 *
Nb Thru	142	1700	0.114	4	146	0.117	17	163	1700	0.136	9	172	1700	0.146	44	216	1700	0.146
Nb Right	26	0	-	1	27	-	0	27	0	-	4	31	0	-	0	31	0	-
Sb Left	28	0	0.017	1	29	0.017	12	41	0	0.024	0	41	0	0.024	-41	0	0	0.000
Sb Thru	170	1700	0.132 *	5	175	0.136 *	37	212	1700	0.176 *	69	281	1700	0.216 *	20	301	1700	0.204 *
Sb Right	26	0	-	1	27	-	19	46	0	-	0	46	0	-	0	46	0	-
Eb Left	27	1700	0.016 *	1	28	0.017 *	0	28	1700	0.017 *	0	28	1700	0.017	0	28	1700	0.017
Eb Thru	487	3400	0.143	15	502	0.148	160	662	3400	0.195	0	662	3400	0.195 *	21	683	3400	0.201 *
Eb Right	15	1700	0.009	0	16	0.009	13	29	1700	0.017	10	39	1700	0.023	0	39	1700	0.023
Wb Left	38	1700	0.022	1	39	0.023	0	39	1700	0.023	29	68	1700	0.040 *	0	68	1700	0.040 *
Wb Thru	545	3400	0.160 *	16	561	0.165 *	156	717	3400	0.211 *	0	717	3400	0.211	0	717	3400	0.211
Wb Right	37	1700	0.021	1	38	0.022	0	38	1700	0.022	0	38	1700	0.022	0	38	1700	0.022
Yellow Allowance:			0.100 *			0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.423			0.433				0.528				0.577				0.545
LOS			A			A				A				A				A

01:34 PM

**Key conflicting movement as a part of ICU*
1 Counts conducted by.The Traffic Solution
2 Capacity expressed in veh/hour of green
3 As directed by Pasadena DOT staff, the related projects volumes where obtained from the Draft Traffic Impact Study for 680 E. Colorado Boulevard Mixed Use Project prepared by Willdan Associates, June 2007. Note: Year 2007 manual traffic counts were adjusted by a 1.5 percent (1.5%) ambient growth factor to reflect year 2008 existing conditions.

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INTERSECTION CAPACITY UTILIZATION

N-S St: El Molino Avenue
E-W St: Colorado Boulevard
Project: Playhouse Plaza Project/1-083727-1
File: ICU-4

El Molino Avenue @ Colorado Boulevard
Peak hr: PM
Annual Growth: 1.50%

Date: 07/03/2008
Date of Count: 2008
Projection Year: 2010

PROJECT ALTERNATIVE 1: ALL PARKING AT SITE

	2008 EXIST. TRAFFIC			2010 W/AMBIENT GROWTH			2010 W/RELATED PROJECTS [3]				2010 W/PROJECT SITE TRAFFIC				2010 W/PROJECT MITIGATION			
	1	2	V/C	Added	Total	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Volume	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Shift	Volume	Capacity	Ratio
Nb Left	12	0	0.007	0	13	0.007	14	27	0	0.016	18	45	0	0.026	-45	0	0	0.000
Nb Thru	232	1700	0.169 *	7	239	0.174 *	38	277	1700	0.205 *	62	339	1700	0.268 *	45	384	1700	0.268 *
Nb Right	43	0	-	1	44	-	0	44	0	-	27	71	0	-	0	71	0	-
Sb Left	67	0	0.039 *	2	69	0.041 *	4	73	0	0.043 *	0	73	0	0.043 *	-73	0	0	0.000 *
Sb Thru	222	1700	0.187	7	229	0.192	27	256	1700	0.214	13	269	1700	0.221	36	305	1700	0.200
Sb Right	28	0	-	1	29	-	5	34	0	-	0	34	0	-	0	34	0	-
Eb Left	60	1700	0.035	2	62	0.036	42	104	1700	0.061 *	0	104	1700	0.061 *	0	104	1700	0.061 *
Eb Thru	1022	3400	0.301 *	31	1053	0.310 *	144	1197	3400	0.352	0	1197	3400	0.352	37	1234	3400	0.363
Eb Right	28	1700	0.017	1	29	0.017	17	46	1700	0.027	2	48	1700	0.028	0	48	1700	0.028
Wb Left	47	1700	0.027 *	1	48	0.028 *	0	48	1700	0.028	5	53	1700	0.031	0	53	1700	0.031
Wb Thru	971	3400	0.286	29	1000	0.294	192	1192	3400	0.351 *	0	1192	3400	0.351 *	0	1192	3400	0.351 *
Wb Right	42	1700	0.024	1	43	0.025	15	58	1700	0.034	0	58	1700	0.034	0	58	1700	0.034
Yellow Allowance:			0.100 *			0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.636			0.653				0.759				0.822				0.780
LOS			B			B				C				D				C

01:34 PM

**Key conflicting movement as a part of ICU*
1 Counts conducted by.The Traffic Solution
2 Capacity expressed in veh/hour of green
3 As directed by Pasadena DOT staff, the related projects volumes where obtained from the Draft Traffic Impact Study for 680 E. Colorado Boulevard Mixed Use Project prepared by Willdan Associates, June 2007. Note: Year 2007 manual traffic counts were adjusted by a 1.5 percent (1.5%) ambient growth factor to reflect year 2008 existing conditions.

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INTERSECTION CAPACITY UTILIZATION

N-S St: El Molino Avenue
E-W St: Green Street
Project: Playhouse Plaza Project/1-083727-1
File: ICU-5

El Molino Avenue @ Green Street
Peak hr: AM
Annual Growth: 1.50%

Date: 07/03/2008
Date of Count: 2008
Projection Year: 2010

PROJECT ALTERNATIVE 1: ALL PARKING AT SITE

	2008 EXIST. TRAFFIC			2010 W/AMBIENT GROWTH			2010 W/RELATED PROJECTS [3]				2010 W/PROJECT SITE TRAFFIC				2010 W/PROJECT MITIGATION			
Movement	1 Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Volume Shift	Total Volume	2 Capacity	V/C Ratio
Nb Left	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Nb Thru	166	1700	0.137 *	5	171	0.141 *	32	203	1700	0.160 *	39	242	1700	0.183 *	0	242	1700	0.183 *
Nb Right	66	0	-	2	68	-	0	68	0	-	0	68	0	-	0	68	0	-
Sb Left	73	0	0.043 *	2	75	0.044 *	0	75	0	0.044 *	7	82	0	0.048 *	20	102	1700	0.060 *
Sb Thru	151	1700	0.132	5	156	0.136	50	206	1700	0.165	4	210	1700	0.172	0	210	1700	0.123
Sb Right	0	0	-	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Eb Left	29	0	0.006	1	30	0.006	0	30	0	0.006	49	79	0	0.016	0	79	0	0.016
Eb Thru	550	5100	0.120 *	17	567	0.124 *	7	574	5100	0.125 *	0	574	5100	0.135 *	0	574	5100	0.135 *
Eb Right	32	0	-	1	33	-	0	33	0	-	0	33	0	-	0	33	0	-
Wb Left	0	0	0.000 *	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *
Wb Thru	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Wb Right	0	0	-	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Yellow Allowance:			0.100 *			0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.400			0.409				0.429				0.466				0.477
LOS			A			A				A				A				A

01:34 PM

**Key conflicting movement as a part of ICU*
1 Counts conducted by.The Traffic Solution
2 Capacity expressed in veh/hour of green
3 As directed by Pasadena DOT staff, the related projects volumes where obtained from the Draft Traffic Impact Study for 680 E. Colorado Boulevard Mixed Use Project prepared by Willdan Associates, June 2007. Note: Year 2007 manual traffic counts were adjusted by a 1.5 percent (1.5%) ambient growth factor to reflect year 2008 existing conditions.

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INTERSECTION CAPACITY UTILIZATION

N-S St: El Molino Avenue
E-W St: Green Street
Project: Playhouse Plaza Project/1-083727-1
File: ICU-5

El Molino Avenue @ Green Street
Peak hr: PM
Annual Growth: 1.50%

Date: 07/03/2008
Date of Count: 2008
Projection Year: 2010

PROJECT ALTERNATIVE 1: ALL PARKING AT SITE

	2008 EXIST. TRAFFIC			2010 W/AMBIENT GROWTH			2010 W/RELATED PROJECTS [3]				2010 W/PROJECT SITE TRAFFIC				2010 W/PROJECT MITIGATION			
Movement	1 Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Volume Shift	Total Volume	2 Capacity	V/C Ratio
Nb Left	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000 *	0	0	0	0.000
Nb Thru	221	1700	0.159 *	7	228	0.164 *	52	280	1700	0.195 *	7	287	1700	0.199	0	287	1700	0.199 *
Nb Right	50	0	-	1	51	-	0	51	0	-	0	51	0	-	0	51	0	-
Sb Left	65	0	0.038 *	2	67	0.039 *	0	67	0	0.039 *	45	112	0	0.066	36	148	1700	0.087 *
Sb Thru	267	1700	0.195	8	275	0.201	44	319	1700	0.227	27	346	1700	0.269 *	0	346	1700	0.204
Sb Right	0	0	-	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Eb Left	61	0	0.012	2	63	0.012	0	63	0	0.012	9	72	0	0.014	0	72	0	0.014
Eb Thru	1111	5100	0.244 *	33	1145	0.252 *	12	1157	5100	0.254 *	0	1157	5100	0.256 *	0	1157	5100	0.256 *
Eb Right	74	0	-	2	76	-	0	76	0	-	0	76	0	-	0	76	0	-
Wb Left	0	0	0.000 *	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *
Wb Thru	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Wb Right	0	0	-	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Yellow Allowance:			0.100 *			0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.542			0.555				0.588				0.625				0.642
LOS			A			A				A				B				B

01:34 PM

**Key conflicting movement as a part of ICU*
1 Counts conducted by.The Traffic Solution
2 Capacity expressed in veh/hour of green
3 As directed by Pasadena DOT staff, the related projects volumes where obtained from the Draft Traffic Impact Study for 680 E. Colorado Boulevard Mixed Use Project prepared by Willdan Associates, June 2007. Note: Year 2007 manual traffic counts were adjusted by a 1.5 percent (1.5%) ambient growth factor to reflect year 2008 existing conditions.

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INTERSECTION CAPACITY UTILIZATION

N-S St: El Molino Avenue
E-W St: Del Mar Boulevard
Project: Playhouse Plaza Project/1-083727-1
File: ICU-6

El Molino Avenue @ Del Mar Boulevard
Peak hr: AM
Annual Growth: 1.50%

Date: 07/03/2008
Date of Count: 2008
Projection Year: 2010

PROJECT ALTERNATIVE 1: ALL PARKING AT SITE

	2008 EXIST. TRAFFIC			2010 W/AMBIENT GROWTH			2010 W/RELATED PROJECTS [3]				2010 W/PROJECT SITE TRAFFIC				2010 W/PROJECT MITIGATION			
	1	2	V/C	Added	Total	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	38	0	0.022	1	39	0.023	0	39	0	0.023	0	39	0	0.023	0	39	0	0.023
Nb Thru	156	1700	0.140 *	5	161	0.144 *	32	193	1700	0.163 *	0	193	1700	0.163 *	0	193	1700	0.163 *
Nb Right	44	0	-	1	45	-	0	45	0	-	0	45	0	-	0	45	0	-
Sb Left	18	0	0.011 *	1	19	0.011 *	0	19	0	0.011 *	1	20	0	0.012 *	0	20	0	0.012 *
Sb Thru	67	1700	0.070	2	69	0.073	50	119	1700	0.102	0	119	1700	0.103	0	119	1700	0.103
Sb Right	35	0	-	1	36	-	0	36	0	-	1	37	0	-	0	37	0	-
Eb Left	28	1700	0.017 *	1	29	0.017 *	0	29	1700	0.017 *	10	39	1700	0.023 *	0	39	1700	0.023 *
Eb Thru	496	3400	0.152	15	511	0.157	33	544	3400	0.167	0	544	3400	0.167	0	544	3400	0.167
Eb Right	21	0	-	1	22	-	0	22	0	-	0	22	0	-	0	22	0	-
Wb Left	22	1700	0.013	1	23	0.014	0	23	1700	0.014	0	23	1700	0.014	0	23	1700	0.014
Wb Thru	606	3400	0.186 *	18	624	0.191 *	49	673	3400	0.206 *	0	673	3400	0.212 *	0	673	3400	0.212 *
Wb Right	25	0	-	1	26	-	0	26	0	-	20	46	0	-	0	46	0	-
Yellow Allowance:			0.100 *			0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.453			0.463				0.497				0.509				0.509
LOS			A			A				A				A				A

01:33 PM

**Key conflicting movement as a part of ICU*
1 Counts conducted by.The Traffic Solution
2 Capacity expressed in veh/hour of green
3 As directed by Pasadena DOT staff, the related projects volumes where obtained from the Draft Traffic Impact Study for 680 E. Colorado Boulevard Mixed Use Project prepared by Willdan Associates, June 2007. Note: Year 2007 manual traffic counts were adjusted by a 1.5 percent (1.5%) ambient growth factor to reflect year 2008 existing conditions.

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INTERSECTION CAPACITY UTILIZATION

N-S St: El Molino Avenue
E-W St: Del Mar Boulevard
Project: Playhouse Plaza Project/1-083727-1
File: ICU-6

El Molino Avenue @ Del Mar Boulevard
Peak hr: PM
Annual Growth: 1.50%

Date: 07/03/2008
Date of Count: 2008
Projection Year: 2010

PROJECT ALTERNATIVE 1: ALL PARKING AT SITE

	2008 EXIST. TRAFFIC			2010 W/AMBIENT GROWTH			2010 W/RELATED PROJECTS [3]				2010 W/PROJECT SITE TRAFFIC				2010 W/PROJECT MITIGATION			
	1	2	V/C	Added	Total	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	24	0	0.014 *	1	25	0.015 *	0	25	0	0.015 *	0	25	0	0.015 *	0	25	0	0.015 *
Nb Thru	179	1700	0.132	5	184	0.136	52	236	1700	0.166	0	236	1700	0.166	0	236	1700	0.166
Nb Right	21	0	-	1	22	-	0	22	0	-	0	22	0	-	0	22	0	-
Sb Left	44	0	0.026	1	45	0.026	0	45	0	0.026	9	54	0	0.032	0	54	0	0.032
Sb Thru	189	1700	0.161 *	6	194	0.166 *	44	238	1700	0.192 *	0	238	1700	0.203 *	0	238	1700	0.203 *
Sb Right	42	0	-	1	43	-	0	43	0	-	9	52	0	-	0	52	0	-
Eb Left	28	1700	0.017	1	29	0.017	0	29	1700	0.017	2	31	1700	0.018	0	31	1700	0.018
Eb Thru	667	3400	0.208 *	20	687	0.214 *	32	719	3400	0.224 *	0	719	3400	0.224 *	0	719	3400	0.224 *
Eb Right	41	0	-	1	42	-	0	42	0	-	0	42	0	-	0	42	0	-
Wb Left	46	1700	0.027 *	1	47	0.028 *	0	47	1700	0.028 *	0	47	1700	0.028 *	0	47	1700	0.028 *
Wb Thru	697	3400	0.218	21	718	0.224	16	734	3400	0.229	0	734	3400	0.230	0	734	3400	0.230
Wb Right	44	0	-	1	45	-	0	45	0	-	4	49	0	-	0	49	0	-
Yellow Allowance:			0.100 *			0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.510			0.523				0.558				0.569				0.569
LOS			A			A				A				A				A

01:33 PM

**Key conflicting movement as a part of ICU*
1 Counts conducted by.The Traffic Solution
2 Capacity expressed in veh/hour of green
3 As directed by Pasadena DOT staff, the related projects volumes where obtained from the Draft Traffic Impact Study for 680 E. Colorado Boulevard Mixed Use Project prepared by Willdan Associates, June 2007. Note: Year 2007 manual traffic counts were adjusted by a 1.5 percent (1.5%) ambient growth factor to reflect year 2008 existing conditions.

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INTERSECTION CAPACITY UTILIZATION

N-S St: Oak Knoll Avenue
E-W St: Colorado Boulevard
Project: Playhouse Plaza Project/1-083727-1
File: ICU-7

Oak Knoll Avenue @ Colorado Boulevard
Peak hr: AM
Annual Growth: 1.50%

Date: 07/03/2008
Date of Count: 2008
Projection Year: 2010

PROJECT ALTERNATIVE 1: ALL PARKING AT SITE

	2008 EXIST. TRAFFIC			2010 W/AMBIENT GROWTH			2010 W/RELATED PROJECTS [3]				2010 W/PROJECT SITE TRAFFIC				2010 W/PROJECT MITIGATION			
	1	2	V/C	Added	Total	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Volume	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Shift	Volume	Capacity	Ratio
Nb Left	13	0	0.008 *	0	14	0.008 *	0	14	0	0.008 *	0	14	0	0.008 *	0	14	0	0.008 *
Nb Thru	33	1700	0.044	1	34	0.046	0	34	1700	0.046	0	34	1700	0.046	0	34	1700	0.046
Nb Right	28	0	-	1	29	-	0	29	0	-	0	29	0	-	0	29	0	-
Sb Left	43	0	0.025	1	44	0.026	0	44	0	0.026	0	44	0	0.026	0	44	0	0.026
Sb Thru	53	1700	0.072 *	2	54	0.074 *	0	54	1700	0.074 *	0	54	1700	0.074 *	0	54	1700	0.074 *
Sb Right	26	0	-	1	27	-	0	27	0	-	0	27	0	-	0	27	0	-
Eb Left	41	1700	0.024 *	1	42	0.025 *	0	42	1700	0.025	0	42	1700	0.025 *	0	42	1700	0.025 *
Eb Thru	450	3400	0.132	13	463	0.136	163	626	3400	0.184 *	4	630	3400	0.185	-20	610	3400	0.179
Eb Right	25	1700	0.015	1	26	0.015	9	35	1700	0.021	0	35	1700	0.021	0	35	1700	0.021
Wb Left	72	1700	0.042	2	74	0.044	16	90	1700	0.053 *	0	90	1700	0.053	0	90	1700	0.053
Wb Thru	540	3400	0.159 *	16	556	0.164 *	156	712	3400	0.209	29	741	3400	0.218 *	0	741	3400	0.218 *
Wb Right	23	1700	0.014	1	24	0.014	0	24	1700	0.014	0	24	1700	0.014	0	24	1700	0.014
Yellow Allowance:			0.100 *			0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.362			0.370				0.419				0.424				0.424
LOS			A			A				A				A				A

01:33 PM

**Key conflicting movement as a part of ICU*
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INTERSECTION CAPACITY UTILIZATION

N-S St: Oak Knoll Avenue
E-W St: Colorado Boulevard
Project: Playhouse Plaza Project/1-083727-1
File: ICU-7

Oak Knoll Avenue @ Colorado Boulevard
Peak hr: PM
Annual Growth: 1.50%

Date: 07/03/2008
Date of Count: 2008
Projection Year: 2010

PROJECT ALTERNATIVE 1: ALL PARKING AT SITE

	2008 EXIST. TRAFFIC			2010 W/AMBIENT GROWTH			2010 W/RELATED PROJECTS [3]				2010 W/PROJECT SITE TRAFFIC				2010 W/PROJECT MITIGATION			
	1	2	V/C	Added	Total	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Volume	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Shift	Volume	Capacity	Ratio
Nb Left	32	0	0.019 *	1	33	0.020 *	0	33	0	0.020 *	0	33	0	0.020 *	0	33	0	0.020 *
Nb Thru	62	1700	0.093	2	64	0.096	0	64	1700	0.096	0	64	1700	0.096	0	64	1700	0.096
Nb Right	64	0	-	2	66	-	0	66	0	-	0	66	0	-	0	66	0	-
Sb Left	83	0	0.049	2	86	0.050	0	86	0	0.050	0	86	0	0.050	0	86	0	0.050
Sb Thru	115	1700	0.155 *	3	118	0.159 *	0	118	1700	0.159 *	0	118	1700	0.159 *	0	118	1700	0.159 *
Sb Right	65	0	-	2	67	-	0	67	0	-	0	67	0	-	0	67	0	-
Eb Left	174	1700	0.102 *	5	179	0.105 *	0	179	1700	0.105 *	0	179	1700	0.105 *	0	179	1700	0.105 *
Eb Thru	903	3400	0.266	27	930	0.274	142	1072	3400	0.315	27	1099	3400	0.323	-36	1063	3400	0.313
Eb Right	50	1700	0.029	1	51	0.030	6	57	1700	0.034	0	57	1700	0.034	0	57	1700	0.034
Wb Left	65	1700	0.038	2	67	0.039	11	78	1700	0.046	0	78	1700	0.046	0	78	1700	0.046
Wb Thru	915	3400	0.269 *	27	942	0.277 *	207	1149	3400	0.338 *	5	1154	3400	0.339 *	0	1154	3400	0.339 *
Wb Right	53	1700	0.031	2	54	0.032	0	54	1700	0.032	0	54	1700	0.032	0	54	1700	0.032
Yellow Allowance:			0.100 *			0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.645			0.661				0.722				0.724				0.724
LOS			B			B				C				C				C

01:33 PM

**Key conflicting movement as a part of ICU*
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2 Capacity expressed in veh/hour of green
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INTERSECTION CAPACITY UTILIZATION

N-S St: Oak Knoll Avenue
E-W St: Green Street
Project: Playhouse Plaza Project/1-083727-1
File: ICU-8

Oak Knoll Avenue @ Green Street
Peak hr: AM
Annual Growth: 1.50%

Date: 07/03/2008
Date of Count: 2008
Projection Year: 2010

PROJECT ALTERNATIVE 1: ALL PARKING AT SITE

	2008 EXIST. TRAFFIC			2010 W/AMBIENT GROWTH			2010 W/RELATED PROJECTS [3]				2010 W/PROJECT SITE TRAFFIC				2010 W/PROJECT MITIGATION			
	1	2	V/C	Added	Total	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Volume	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Shift	Volume	Capacity	Ratio
Nb Left	0	0	0.000 *	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *
Nb Thru	51	1700	0.044	2	52	0.045	0	52	1700	0.050	0	52	1700	0.050	0	52	1700	0.050
Nb Right	23	0	-	1	24	-	8	32	0	-	0	32	0	-	0	32	0	-
Sb Left	83	0	0.049	2	86	0.050	19	105	0	0.062	0	105	0	0.062	0	105	0	0.062
Sb Thru	78	1700	0.095 *	2	80	0.098 *	6	86	1700	0.112 *	0	86	1700	0.112 *	0	86	1700	0.112 *
Sb Right	0	0	-	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Eb Left	21	0	0.004	1	22	0.004	0	22	0	0.004	0	22	0	0.004	0	22	0	0.004
Eb Thru	592	5100	0.126 *	18	609	0.130 *	7	616	5100	0.132 *	7	623	5100	0.133 *	20	643	5100	0.137 *
Eb Right	31	0	-	1	32	-	0	32	0	-	0	32	0	-	0	32	0	-
Wb Left	0	0	0.000 *	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *
Wb Thru	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Wb Right	0	0	-	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Yellow Allowance:			0.100 *			0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.321			0.328				0.344				0.345				0.349
LOS			A			A				A				A				A

01:33 PM

**Key conflicting movement as a part of ICU*
1 Counts conducted by.The Traffic Solution
2 Capacity expressed in veh/hour of green
3 As directed by Pasadena DOT staff, the related projects volumes where obtained from the Draft Traffic Impact Study for 680 E. Colorado Boulevard Mixed Use Project prepared by Willdan Associates, June 2007. Note: Year 2007 manual traffic counts were adjusted by a 1.5 percent (1.5%) ambient growth factor to reflect year 2008 existing conditions.

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INTERSECTION CAPACITY UTILIZATION

N-S St: Oak Knoll Avenue
E-W St: Green Street
Project: Playhouse Plaza Project/1-083727-1
File: ICU-8

Oak Knoll Avenue @ Green Street
Peak hr: PM
Annual Growth: 1.50%

Date: 07/03/2008
Date of Count: 2008
Projection Year: 2010

PROJECT ALTERNATIVE 1: ALL PARKING AT SITE

	2008 EXIST. TRAFFIC			2010 W/AMBIENT GROWTH			2010 W/RELATED PROJECTS [3]				2010 W/PROJECT SITE TRAFFIC				2010 W/PROJECT MITIGATION			
Movement	1 Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Volume Shift	Total Volume	2 Capacity	V/C Ratio
Nb Left	0	0	0.000 *	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *
Nb Thru	83	1700	0.076	2	86	0.078	0	86	1700	0.081	0	86	1700	0.081	0	86	1700	0.081
Nb Right	46	0	-	1	47	-	5	52	0	-	0	52	0	-	0	52	0	-
Sb Left	57	0	0.033	2	59	0.034	13	72	0	0.042	0	72	0	0.042	0	72	0	0.042
Sb Thru	160	1700	0.128 *	5	165	0.132 *	4	169	1700	0.142 *	0	169	1700	0.142 *	0	169	1700	0.142 *
Sb Right	0	0	-	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Eb Left	61	0	0.012	2	63	0.012	0	63	0	0.012	0	63	0	0.012	0	63	0	0.012
Eb Thru	1101	5100	0.237 *	33	1134	0.244 *	12	1146	5100	0.247 *	45	1191	5100	0.256 *	36	1227	5100	0.263 *
Eb Right	48	0	-	1	49	-	0	49	0	-	0	49	0	-	0	49	0	-
Wb Left	0	0	0.000 *	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *
Wb Thru	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Wb Right	0	0	-	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Yellow Allowance:			0.100 *			0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.465			0.476				0.488				0.497				0.504
LOS			A			A				A				A				A

01:33 PM

**Key conflicting movement as a part of ICU*
1 Counts conducted by.The Traffic Solution
2 Capacity expressed in veh/hour of green
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INTERSECTION CAPACITY UTILIZATION

N-S St: Lake Avenue
E-W St: I-210 Freeway WB Ramps-Maple Street
Project: Playhouse Plaza Project/1-083727-1
File: ICU-9

Lake Avenue @ I-210 Freeway WB Ramps-Maple Street
Peak hr: AM
Annual Growth: 1.50%

PROJECT ALTERNATIVE 1: ALL PARKING AT SITE

Date: 07/03/2008
Date of Count: 2008
Projection Year: 2010

	2008 EXIST. TRAFFIC			2010 W/AMBIENT GROWTH			2010 W/RELATED PROJECTS [3]				2010 W/PROJECT SITE TRAFFIC				2010 W/PROJECT MITIGATION			
	1	2	V/C	Added	Total	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	438	3060	0.143 *	13	452	0.148 *	63	515	3060	0.168 *	0	515	3060	0.168 *	0	515	3060	0.168 *
Nb Thru	751	3400	0.221	23	774	0.228	9	783	3400	0.230	1	784	3400	0.230	0	784	3400	0.230
Nb Right	0	0	-	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Sb Left	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Sb Thru	841	3400	0.247	25	867	0.255	5	872	3400	0.256	10	882	3400	0.259	0	882	3400	0.259
Sb Right	578	1700	0.340 *	17	595	0.350 *	0	595	1700	0.350 *	0	595	1700	0.350 *	0	595	1700	0.350 *
Eb Left	0	0	0.000 *	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *
Eb Thru	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Eb Right	0	0	-	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Wb Left	527	0	0.086	16	543	0.089	81	624	0	0.102	10	634	0	0.104	0	634	0	0.104
Wb Thru	881	6120	0.261 *	26	907	0.268 *	0	907	6120	0.282 *	20	927	6120	0.287 *	0	927	6120	0.287 *
Wb Right	187	0	-	6	192	-	0	192	0	-	0	192	0	-	0	192	0	-
Yellow Allowance:			0.100 *			0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.844			0.866				0.900				0.905				0.905
LOS			D			D				D				E				E

01:33 PM

**Key conflicting movement as a part of ICU*
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2 Capacity expressed in veh/hour of green
3 As directed by Pasadena DOT staff, the related projects volumes where obtained from the Draft Traffic Impact Study for 680 E. Colorado Boulevard Mixed Use Project prepared by Willdan Associates, June 2007. Note: Year 2007 manual traffic counts were adjusted by a 1.5 percent (1.5%) ambient growth factor to reflect year 2008 existing conditions.

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INTERSECTION CAPACITY UTILIZATION

N-S St: Lake Avenue
E-W St: I-210 Freeway WB Ramps-Maple Street
Project: Playhouse Plaza Project/1-083727-1
File: ICU-9

Lake Avenue @ I-210 Freeway WB Ramps-Maple Street
Peak hr: PM
Annual Growth: 1.50%

Date: 07/03/2008
Date of Count: 2008
Projection Year: 2010

PROJECT ALTERNATIVE 1: ALL PARKING AT SITE

	2008 EXIST. TRAFFIC			2010 W/AMBIENT GROWTH			2010 W/RELATED PROJECTS [3]				2010 W/PROJECT SITE TRAFFIC				2010 W/PROJECT MITIGATION			
	1	2	V/C	Added	Total	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	709	3060	0.232 *	21	731	0.239 *	86	817	3060	0.267 *	0	817	3060	0.267 *	0	817	3060	0.267 *
Nb Thru	1278	3400	0.376	38	1316	0.387	14	1330	3400	0.391	9	1339	3400	0.394	0	1339	3400	0.394
Nb Right	0	0	-	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Sb Left	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Sb Thru	731	3400	0.215	22	753	0.221	5	758	3400	0.223	2	760	3400	0.223	0	760	3400	0.223
Sb Right	474	1700	0.279 *	14	488	0.287 *	0	488	1700	0.287 *	0	488	1700	0.287 *	0	488	1700	0.287 *
Eb Left	0	0	0.000 *	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *
Eb Thru	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Eb Right	0	0	-	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Wb Left	481	0	0.079	14	496	0.081	86	582	0	0.095	2	584	0	0.095	0	584	0	0.095
Wb Thru	780	6120	0.253 *	23	803	0.260 *	0	803	6120	0.274 *	4	807	6120	0.275 *	0	807	6120	0.275 *
Wb Right	285	0	-	9	294	-	0	294	0	-	0	294	0	-	0	294	0	-
Yellow Allowance:			0.100 *			0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.863			0.886				0.928				0.929				0.929
LOS			D			D				E				E				E

01:33 PM

**Key conflicting movement as a part of ICU*
1 Counts conducted by.The Traffic Solution
2 Capacity expressed in veh/hour of green
3 As directed by Pasadena DOT staff, the related projects volumes where obtained from the Draft Traffic Impact Study for 680 E. Colorado Boulevard Mixed Use Project prepared by Willdan Associates, June 2007. Note: Year 2007 manual traffic counts were adjusted by a 1.5 percent (1.5%) ambient growth factor to reflect year 2008 existing conditions.

LINSCOTT, LAW & GREENSPAN, ENGINEERS
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INTERSECTION CAPACITY UTILIZATION

N-S St: Lake Avenue
E-W St: I-210 Freeway EB Ramps-Corson Street
Project: Playhouse Plaza Project/1-083727-1
File: ICU-10

Lake Avenue @ I-210 Freeway EB Ramps-Corson Street
Peak hr: AM
Annual Growth: 1.50%

Date: 07/03/2008
Date of Count: 2008
Projection Year: 2010

PROJECT ALTERNATIVE 1: ALL PARKING AT SITE

	2008 EXIST. TRAFFIC			2010 W/AMBIENT GROWTH			2010 W/RELATED PROJECTS [3]				2010 W/PROJECT SITE TRAFFIC				2010 W/PROJECT MITIGATION			
	1	2	V/C	Added	Total	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Nb Thru	723	7650	0.139 *	22	744	0.143 *	72	816	7650	0.162 *	1	817	7650	0.163 *	0	817	7650	0.163 *
Nb Right	343	0	-	10	353	-	73	426	0	-	3	429	0	-	0	429	0	-
Sb Left	423	3060	0.138 *	13	436	0.142 *	0	436	3060	0.142 *	0	436	3060	0.142 *	0	436	3060	0.142 *
Sb Thru	927	5100	0.182	28	954	0.187	96	1050	5100	0.206	20	1070	5100	0.210	0	1070	5100	0.210
Sb Right	0	0	-	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Eb Left	488	0	0.064	15	503	0.066	0	503	0	0.066	0	503	0	0.066	0	503	0	0.066
Eb Thru	754	7650	0.266 *	23	777	0.274 *	3	780	7650	0.285 *	1	781	7650	0.285 *	0	781	7650	0.285 *
Eb Right	790	0	-	24	813	-	84	897	0	-	0	897	0	-	0	897	0	-
Wb Left	0	0	0.000 *	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *
Wb Thru	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Wb Right	0	0	-	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Yellow Allowance:			0.100 *			0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.643			0.660				0.690				0.691				0.691
LOS			B			B				B				B				B

01:34 PM

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INTERSECTION CAPACITY UTILIZATION

N-S St: Lake Avenue
E-W St: I-210 Freeway EB Ramps-Corson Street
Project: Playhouse Plaza Project/1-083727-1
File: ICU-10

Lake Avenue @ I-210 Freeway EB Ramps-Corson Street
Peak hr: PM
Annual Growth: 1.50%

Date: 07/03/2008
Date of Count: 2008
Projection Year: 2010

PROJECT ALTERNATIVE 1: ALL PARKING AT SITE

	2008 EXIST. TRAFFIC			2010 W/AMBIENT GROWTH			2010 W/RELATED PROJECTS [3]				2010 W/PROJECT SITE TRAFFIC				2010 W/PROJECT MITIGATION			
	1	2	V/C	Added	Total	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Nb Thru	1234	7650	0.225 *	37	1271	0.232 *	100	1371	7650	0.257 *	9	1380	7650	0.260 *	0	1380	7650	0.260 *
Nb Right	486	0	-	15	501	-	93	594	0	-	18	612	0	-	0	612	0	-
Sb Left	227	3060	0.074 *	7	234	0.077 *	0	234	3060	0.077 *	0	234	3060	0.077 *	0	234	3060	0.077 *
Sb Thru	951	5100	0.186	29	980	0.192	91	1071	5100	0.210	4	1075	5100	0.211	0	1075	5100	0.211
Sb Right	0	0	-	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Eb Left	757	0	0.099	23	780	0.102	0	780	0	0.102	0	780	0	0.102	0	780	0	0.102
Eb Thru	1562	7650	0.403 *	47	1609	0.416 *	3	1612	7650	0.423 *	9	1621	7650	0.424 *	0	1621	7650	0.424 *
Eb Right	767	0	-	23	790	-	53	843	0	-	0	843	0	-	0	843	0	-
Wb Left	0	0	0.000 *	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *
Wb Thru	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Wb Right	0	0	-	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Yellow Allowance:			0.100 *			0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.803			0.824				0.856				0.861				0.861
LOS			D			D				D				D				D

01:34 PM

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INTERSECTION CAPACITY UTILIZATION

N-S St: Lake Avenue
E-W St: Walnut Street
Project: Playhouse Plaza Project/1-083727-1
File: ICU-11

Lake Avenue @ Walnut Street
Peak hr: AM
Annual Growth: 1.50%

Date: 07/03/2008
Date of Count: 2008
Projection Year: 2010

PROJECT ALTERNATIVE 1: ALL PARKING AT SITE

	2008 EXIST. TRAFFIC			2010 W/AMBIENT GROWTH			2010 W/RELATED PROJECTS [3]				2010 W/PROJECT SITE TRAFFIC				2010 W/PROJECT MITIGATION			
	1	2	V/C	Added	Total	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	83	1700	0.049 *	2	86	0.050 *	16	102	1700	0.060 *	0	102	1700	0.060 *	0	102	1700	0.060 *
Nb Thru	790	5100	0.155	24	813	0.159	192	1005	5100	0.197	3	1008	5100	0.198	0	1008	5100	0.198
Nb Right	75	1700	0.044	2	77	0.046	0	77	1700	0.046	0	77	1700	0.046	0	77	1700	0.046
Sb Left	132	1700	0.078	4	136	0.080	8	144	1700	0.085	0	144	1700	0.085	0	144	1700	0.085
Sb Thru	1287	5100	0.273 *	39	1326	0.281 *	105	1431	5100	0.307 *	20	1451	5100	0.310 *	0	1451	5100	0.310 *
Sb Right	105	0	-	3	108	-	25	133	0	-	0	133	0	-	0	133	0	-
Eb Left	174	3060	0.057 *	5	179	0.058 *	75	254	3060	0.083 *	1	255	3060	0.083 *	0	255	3060	0.083 *
Eb Thru	243	3400	0.096	7	250	0.099	34	284	3400	0.116	1	285	3400	0.117	0	285	3400	0.117
Eb Right	85	0	-	3	88	-	24	112	0	-	0	112	0	-	0	112	0	-
Wb Left	107	1700	0.063	3	110	0.065	0	110	1700	0.065	0	110	1700	0.065	0	110	1700	0.065
Wb Thru	470	3400	0.159 *	14	484	0.164 *	17	501	3400	0.177 *	10	511	3400	0.180 *	0	511	3400	0.180 *
Wb Right	71	0	-	2	73	-	27	100	0	-	0	100	0	-	0	100	0	-
Yellow Allowance:			0.100 *			0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.638			0.654				0.726				0.733				0.733
LOS			B			B				C				C				C

01:34 PM

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INTERSECTION CAPACITY UTILIZATION

N-S St: Lake Avenue
E-W St: Walnut Street
Project: Playhouse Plaza Project/1-083727-1
File: ICU-11

Lake Avenue @ Walnut Street
Peak hr: PM
Annual Growth: 1.50%

Date: 07/03/2008
Date of Count: 2008
Projection Year: 2010

PROJECT ALTERNATIVE 1: ALL PARKING AT SITE

	2008 EXIST. TRAFFIC			2010 W/AMBIENT GROWTH			2010 W/RELATED PROJECTS [3]				2010 W/PROJECT SITE TRAFFIC				2010 W/PROJECT MITIGATION			
	1	2	V/C	Added	Total	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	66	1700	0.039 *	2	68	0.040 *	23	91	1700	0.054 *	0	91	1700	0.054 *	0	91	1700	0.054 *
Nb Thru	1178	5100	0.231	35	1214	0.238	109	1323	5100	0.259	18	1341	5100	0.263	0	1341	5100	0.263
Nb Right	95	1700	0.056	3	98	0.058	0	98	1700	0.058	0	98	1700	0.058	0	98	1700	0.058
Sb Left	163	1700	0.096	5	168	0.099	28	196	1700	0.115	0	196	1700	0.115	0	196	1700	0.115
Sb Thru	1346	5100	0.298 *	40	1386	0.307 *	185	1571	5100	0.358 *	4	1575	5100	0.359 *	0	1575	5100	0.359 *
Sb Right	173	0	-	5	178	-	77	255	0	-	0	255	0	-	0	255	0	-
Eb Left	484	3060	0.158 *	15	499	0.163 *	46	545	3060	0.178 *	9	554	3060	0.181 *	0	554	3060	0.181 *
Eb Thru	719	3400	0.248	22	740	0.255	26	766	3400	0.268	9	775	3400	0.271	0	775	3400	0.271
Eb Right	124	0	-	4	128	-	17	145	0	-	0	145	0	-	0	145	0	-
Wb Left	61	1700	0.036	2	63	0.037	0	63	1700	0.037	0	63	1700	0.037	0	63	1700	0.037
Wb Thru	398	3400	0.164 *	12	410	0.169 *	35	445	3400	0.182 *	2	447	3400	0.183 *	0	447	3400	0.183 *
Wb Right	158	0	-	5	163	-	11	174	0	-	0	174	0	-	0	174	0	-
Yellow Allowance:			0.100 *			0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.758			0.778				0.872				0.876				0.876
LOS			C			C				D				D				D

01:34 PM

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INTERSECTION CAPACITY UTILIZATION

N-S St: Lake Avenue
E-W St: Colorado Boulevard
Project: Playhouse Plaza Project/1-083727-1
File: ICU-12

Lake Avenue @ Colorado Boulevard
Peak hr: AM
Annual Growth: 1.50%

Date: 07/03/2008
Date of Count: 2008
Projection Year: 2010

PROJECT ALTERNATIVE 1: ALL PARKING AT SITE

	2008 EXIST. TRAFFIC			2010 W/AMBIENT GROWTH			2010 W/RELATED PROJECTS				2010 W/PROJECT SITE TRAFFIC				2010 W/PROJECT MITIGATION			
	1	2	V/C	Added	Total	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Volume	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Shift	Volume	Capacity	Ratio
Nb Left	93	1700	0.055 *	3	96	0.057 *	12	108	1700	0.064 *	0	108	1700	0.064 *	0	108	1700	0.064 *
Nb Thru	676	5100	0.145	20	696	0.149	66	762	5100	0.166	1	763	5100	0.166	0	763	5100	0.166
Nb Right	64	0	-	2	66	-	18	84	0	-	0	84	0	-	0	84	0	-
Sb Left	111	1700	0.065	3	114	0.067	20	134	1700	0.079	0	134	1700	0.079	0	134	1700	0.079
Sb Thru	1123	3400	0.330 *	34	1156	0.340 *	49	1205	3400	0.354 *	0	1205	3400	0.354 *	0	1205	3400	0.354 *
Sb Right	165	1700	0.097	5	170	0.100	60	230	1700	0.136	10	240	1700	0.141	0	240	1700	0.141
Eb Left	160	1700	0.094 *	5	165	0.097 *	63	228	1700	0.134 *	1	229	1700	0.135 *	0	229	1700	0.135 *
Eb Thru	289	3400	0.085	9	298	0.088	87	385	3400	0.113	3	388	3400	0.114	-20	368	3400	0.108
Eb Right	93	1700	0.055	3	96	0.057	0	96	1700	0.057	0	96	1700	0.057	0	96	1700	0.057
Wb Left	99	1700	0.059	3	102	0.060	32	134	1700	0.079	0	134	1700	0.079	0	134	1700	0.079
Wb Thru	435	3400	0.128 *	13	448	0.132 *	88	536	3400	0.158 *	20	556	3400	0.164 *	0	556	3400	0.164 *
Wb Right	164	1700	0.097	5	169	0.100	49	218	1700	0.128	0	218	1700	0.128	0	218	1700	0.128
Yellow Allowance:			0.100 *			0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.708			0.726				0.810				0.817				0.817
LOS			C			C				D				D				D

01:34 PM

**Key conflicting movement as a part of ICU*
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INTERSECTION CAPACITY UTILIZATION

N-S St: Lake Avenue
E-W St: Colorado Boulevard
Project: Playhouse Plaza Project/1-083727-1
File: ICU-12

Lake Avenue @ Colorado Boulevard
Peak hr: PM
Annual Growth: 1.50%

Date: 07/03/2008
Date of Count: 2008
Projection Year: 2010

PROJECT ALTERNATIVE 1: ALL PARKING AT SITE

	2008 EXIST. TRAFFIC			2010 W/AMBIENT GROWTH			2010 W/RELATED PROJECTS				2010 W/PROJECT SITE TRAFFIC				2010 W/PROJECT MITIGATION			
	1	2	V/C	Added	Total	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Volume	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Shift	Volume	Capacity	Ratio
Nb Left	141	1700	0.083 *	4	145	0.085 *	7	152	1700	0.090 *	0	152	1700	0.090 *	0	152	1700	0.090 *
Nb Thru	896	5100	0.195	27	923	0.201	50	973	5100	0.213	9	982	5100	0.214	0	982	5100	0.214
Nb Right	99	0	-	3	102	-	9	111	0	-	0	111	0	-	0	111	0	-
Sb Left	248	1700	0.146	7	255	0.150	23	278	1700	0.164	0	278	1700	0.164	0	278	1700	0.164
Sb Thru	1085	3400	0.319 *	33	1118	0.329 *	74	1192	3400	0.350 *	0	1192	3400	0.350 *	0	1192	3400	0.350 *
Sb Right	254	1700	0.149	8	261	0.154	105	366	1700	0.216	2	368	1700	0.217	0	368	1700	0.217
Eb Left	234	1700	0.138 *	7	241	0.142 *	63	304	1700	0.179 *	9	313	1700	0.184 *	0	313	1700	0.184 *
Eb Thru	696	3400	0.205	21	717	0.211	87	804	3400	0.237	18	822	3400	0.242	-36	786	3400	0.231
Eb Right	178	1700	0.104	5	183	0.108	0	183	1700	0.108	0	183	1700	0.108	0	183	1700	0.108
Wb Left	134	1700	0.079	4	138	0.081	14	152	1700	0.089	0	152	1700	0.089	0	152	1700	0.089
Wb Thru	658	3400	0.193 *	20	677	0.199 *	84	761	3400	0.224 *	4	765	3400	0.225 *	0	765	3400	0.225 *
Wb Right	216	1700	0.127	6	223	0.131	19	242	1700	0.142	0	242	1700	0.142	0	242	1700	0.142
Yellow Allowance:			0.100 *			0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.833			0.855				0.943				0.950				0.950
LOS			D			D				E				E				E

01:34 PM

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INTERSECTION CAPACITY UTILIZATION

N-S St: Lake Avenue
E-W St: Green Street
Project: Playhouse Plaza Project/1-083727-1
File: ICU-13

Lake Avenue @ Green Street
Peak hr: AM
Annual Growth: 1.50%

Date: 07/03/2008
Date of Count: 2008
Projection Year: 2010

PROJECT ALTERNATIVE 1: ALL PARKING AT SITE

	2008 EXIST. TRAFFIC			2010 W/AMBIENT GROWTH			2010 W/RELATED PROJECTS [3]				2010 W/PROJECT SITE TRAFFIC				2010 W/PROJECT MITIGATION			
	1	2	V/C	Added	Total	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Volume	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Shift	Volume	Capacity	Ratio
Nb Left	0	0	0.000 *	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *
Nb Thru	720	3400	0.212	22	741	0.218	90	831	3400	0.244	0	831	3400	0.244	0	831	3400	0.244
Nb Right	88	1700	0.052	3	91	0.054	0	91	1700	0.054	0	91	1700	0.054	0	91	1700	0.054
Sb Left	183	1700	0.107	5	188	0.111	0	188	1700	0.111	0	188	1700	0.111	0	188	1700	0.111
Sb Thru	1101	3400	0.324 *	33	1134	0.334 *	81	1215	3400	0.357 *	0	1215	3400	0.357 *	0	1215	3400	0.357 *
Sb Right	0	0	-	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Eb Left	92	1700	0.054	3	95	0.056	6	101	1700	0.059	1	102	1700	0.060	0	102	1700	0.060
Eb Thru	496	5100	0.097 *	15	511	0.100 *	0	511	5100	0.100 *	3	514	5100	0.101 *	20	534	5100	0.105 *
Eb Right	81	1700	0.048	2	84	0.049	10	94	1700	0.055	1	95	1700	0.056	0	95	1700	0.056
Wb Left	0	0	0.000 *	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *
Wb Thru	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Wb Right	0	0	-	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Yellow Allowance:			0.100 *			0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.521			0.534				0.558				0.558				0.562
LOS			A			A				A				A				A

01:34 PM

**Key conflicting movement as a part of ICU*
1 Counts conducted by.The Traffic Solution
2 Capacity expressed in veh/hour of green
3 As directed by Pasadena DOT staff, the related projects volumes where obtained from the Draft Traffic Impact Study for 680 E. Colorado Boulevard Mixed Use Project prepared by Willdan Associates, June 2007. Note: Year 2007 manual traffic counts were adjusted by a 1.5 percent (1.5%) ambient growth factor to reflect year 2008 existing conditions.

LINSCOTT, LAW & GREENSPAN, ENGINEERS
236 N. Chester Avenue, Suite 200, Pasadena CA 91106
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INTERSECTION CAPACITY UTILIZATION

N-S St: Lake Avenue
E-W St: Green Street
Project: Playhouse Plaza Project/1-083727-1
File: ICU-13

Lake Avenue @ Green Street
Peak hr: PM
Annual Growth: 1.50%

Date: 07/03/2008
Date of Count: 2008
Projection Year: 2010

PROJECT ALTERNATIVE 1: ALL PARKING AT SITE

	2008 EXIST. TRAFFIC			2010 W/AMBIENT GROWTH			2010 W/RELATED PROJECTS [3]				2010 W/PROJECT SITE TRAFFIC				2010 W/PROJECT MITIGATION			
Movement	1 Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Volume Shift	Total Volume	2 Capacity	V/C Ratio
Nb Left	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Nb Thru	932	3400	0.274 *	28	960	0.282 *	55	1015	3400	0.298 *	0	1015	3400	0.298 *	0	1015	3400	0.298 *
Nb Right	119	1700	0.070	4	122	0.072	9	131	1700	0.077	0	131	1700	0.077	0	131	1700	0.077
Sb Left	151	1700	0.089 *	5	156	0.092 *	14	170	1700	0.100 *	0	170	1700	0.100 *	0	170	1700	0.100 *
Sb Thru	1219	3400	0.359	37	1256	0.369	74	1330	3400	0.391	0	1330	3400	0.391	0	1330	3400	0.391
Sb Right	0	0	-	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Eb Left	244	1700	0.143	7	251	0.148	11	262	1700	0.154	9	271	1700	0.159	0	271	1700	0.159
Eb Thru	840	5100	0.165 *	25	866	0.170 *	4	870	5100	0.171 *	18	888	5100	0.174 *	36	924	5100	0.181 *
Eb Right	191	1700	0.112	6	197	0.116	14	211	1700	0.124	9	220	1700	0.129	0	220	1700	0.129
Wb Left	0	0	0.000 *	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *
Wb Thru	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Wb Right	0	0	-	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Yellow Allowance:			0.100 *			0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.628			0.644				0.669				0.672				0.679
LOS			B			B				B				B				B

01:34 PM

**Key conflicting movement as a part of ICU*
1 Counts conducted by.The Traffic Solution
2 Capacity expressed in veh/hour of green
3 As directed by Pasadena DOT staff, the related projects volumes where obtained from the Draft Traffic Impact Study for 680 E. Colorado Boulevard Mixed Use Project prepared by Willdan Associates, June 2007. Note: Year 2007 manual traffic counts were adjusted by a 1.5 percent (1.5%) ambient growth factor to reflect year 2008 existing conditions.

APPENDIX B-2

PROJECT ALTERNATIVE 2 ICU DATA WORKSHEETS – AM AND PM PEAK HOURS

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236 N. Chester Avenue, Suite 200, Pasadena CA 91106
(626) 796.2322 Fax (626) 792.0941

INTERSECTION CAPACITY UTILIZATION

N-S St: Los Robles Avenue
E-W St: Colorado Boulevard
Project: Playhouse Plaza Project/1-083727-1
File: ICU-1

Los Robles Avenue @ Colorado Boulevard
Peak hr: AM
Annual Growth: 1.50%

PROJECT ALTERNATIVE 2

Date: 07/03/2008
Date of Count: 2008
Projection Year: 2010

	2008 EXIST. TRAFFIC			2010 W/AMBIENT GROWTH			2010 W/RELATED PROJECTS [3]				2010 W/PROJECT SITE TRAFFIC				2010 W/PROJECT MITIGATION			
	1		2 V/C	Added	Total	V/C	Added	Total		2 V/C	Added	Total		2 V/C	Volume	Total		2 V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Shift	Volume	Capacity	Ratio
Nb Left	104	1700	0.061 *	3	107	0.063 *	1	108	1700	0.063 *	0	108	1700	0.063 *	0	108	1700	0.063 *
Nb Thru	424	3400	0.125	13	437	0.129	12	449	3400	0.132	0	449	3400	0.132	0	449	3400	0.132
Nb Right	62	1700	0.036	2	64	0.038	29	93	1700	0.055	0	93	1700	0.055	0	93	1700	0.055
Sb Left	76	1700	0.045	2	78	0.046	32	110	1700	0.065	0	110	1700	0.065	21	131	1700	0.077
Sb Thru	692	3400	0.204 *	21	713	0.210 *	23	736	3400	0.216 *	10	746	3400	0.219 *	0	746	3400	0.219 *
Sb Right	63	1700	0.037	2	65	0.038	36	101	1700	0.059	0	101	1700	0.059	0	101	1700	0.059
Eb Left	125	1700	0.073 *	4	129	0.076 *	20	149	1700	0.087 *	0	149	1700	0.087 *	0	149	1700	0.087 *
Eb Thru	417	3400	0.123	13	430	0.126	223	653	3400	0.192	10	663	3400	0.195	0	663	3400	0.195
Eb Right	61	1700	0.036	2	63	0.037	2	65	1700	0.038	0	65	1700	0.038	0	65	1700	0.038
Wb Left	50	1700	0.029	1	51	0.030	24	75	1700	0.044	0	75	1700	0.044	0	75	1700	0.044
Wb Thru	471	3400	0.139 *	14	485	0.143 *	192	677	3400	0.199 *	1	678	3400	0.199 *	-44	634	3400	0.186 *
Wb Right	53	1700	0.031	2	54	0.032	30	84	1700	0.050	1	85	1700	0.050	0	85	1700	0.050
Yellow Allowance:			0.100 *			0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.576			0.591				0.666				0.670				0.657
LOS			A			A				B				B				B

01:39 PM

**Key conflicting movement as a part of ICU*
1 Counts conducted by.The Traffic Solution
2 Capacity expressed in veh/hour of green
3 As directed by Pasadena DOT staff, the related projects volumes where obtained from the Draft Traffic Impact Study for 680 E. Colorado Boulevard Mixed Use Project prepared by Willdan Associates, June 2007. Note: Year 2007 manual traffic counts were adjusted by a 1.5 percent (1.5%) ambient growth factor to reflect year 2008 existing conditions.

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INTERSECTION CAPACITY UTILIZATION

N-S St: Los Robles Avenue
E-W St: Colorado Boulevard
Project: Playhouse Plaza Project/1-083727-1
File: ICU-1

Los Robles Avenue @ Colorado Boulevard
Peak hr: PM
Annual Growth: 1.50%

PROJECT ALTERNATIVE 2

Date: 07/03/2008
Date of Count: 2008
Projection Year: 2010

	2008 EXIST. TRAFFIC			2010 W/AMBIENT GROWTH			2010 W/RELATED PROJECTS [3]				2010 W/PROJECT SITE TRAFFIC				2010 W/PROJECT MITIGATION			
	1		2 V/C	Added	Total	V/C	Added	Total		2 V/C	Added	Total		2 V/C	Volume	Total		2 V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Shift	Volume	Capacity	Ratio
Nb Left	119	1700	0.070	4	122	0.072	3	125	1700	0.074	0	125	1700	0.074	0	125	1700	0.074
Nb Thru	734	3400	0.216 *	22	756	0.222 *	23	779	3400	0.229 *	0	779	3400	0.229 *	0	779	3400	0.229 *
Nb Right	97	1700	0.057	3	100	0.059	24	124	1700	0.073	0	124	1700	0.073	0	124	1700	0.073
Sb Left	133	1700	0.078 *	4	137	0.081 *	28	165	1700	0.097 *	0	165	1700	0.097 *	37	202	1700	0.119 *
Sb Thru	558	3400	0.164	17	575	0.169	18	593	3400	0.174	2	595	3400	0.175	0	595	3400	0.175
Sb Right	85	1700	0.050	3	88	0.052	29	117	1700	0.069	0	117	1700	0.069	0	117	1700	0.069
Eb Left	89	1700	0.053	3	92	0.054	38	130	1700	0.076 *	0	130	1700	0.076 *	0	130	1700	0.076
Eb Thru	824	3400	0.242 *	25	849	0.250 *	212	1061	3400	0.312	2	1063	3400	0.313	0	1063	3400	0.313 *
Eb Right	151	1700	0.089	5	156	0.092	2	158	1700	0.093	0	158	1700	0.093	0	158	1700	0.093
Wb Left	81	1700	0.048 *	2	84	0.049 *	40	124	1700	0.073	0	124	1700	0.073	0	124	1700	0.073 *
Wb Thru	787	3400	0.231	24	810	0.238	263	1073	3400	0.316 *	9	1082	3400	0.318 *	-45	1037	3400	0.305
Wb Right	104	1700	0.061	3	107	0.063	35	142	1700	0.083	9	151	1700	0.089	0	151	1700	0.089
Yellow Allowance:			0.100 *			0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.684			0.702				0.818				0.821				0.833
LOS			B			C				D				D				D

**Key conflicting movement as a part of ICU*
1 Counts conducted by.The Traffic Solution
2 Capacity expressed in veh/hour of green
3 As directed by Pasadena DOT staff, the related projects volumes where obtained from the Draft Traffic Impact Study for 680 E. Colorado Boulevard Mixed Use Project prepared by Willdan Associates, June 2007. Note: Year 2007 manual traffic counts were adjusted by a 1.5 percent (1.5%) ambient growth factor to reflect year 2008 existing conditions.

01:39 PM

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INTERSECTION CAPACITY UTILIZATION

N-S St: Los Robles Avenue
E-W St: Green Street
Project: Playhouse Plaza Project/1-083727-1
File: ICU-2

Los Robles Avenue @ Green Street
Peak hr: AM
Annual Growth: 1.50%

PROJECT ALTERNATIVE 2

Date: 07/03/2008
Date of Count: 2008
Projection Year: 2010

	2008 EXIST. TRAFFIC			2010 W/AMBIENT GROWTH			2010 W/RELATED PROJECTS [3]				2010 W/PROJECT SITE TRAFFIC				2010 W/PROJECT MITIGATION			
	1	2	V/C	Added	Total	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Nb Thru	455	3400	0.153 *	14	468	0.158 *	42	510	3400	0.170 *	0	510	3400	0.173 *	0	510	3400	0.173 *
Nb Right	66	0	-	2	68	-	0	68	0	-	10	78	0	-	0	78	0	-
Sb Left	127	1700	0.075 *	4	131	0.077 *	0	131	1700	0.077 *	10	141	1700	0.083 *	0	141	1700	0.083 *
Sb Thru	701	3400	0.206	21	722	0.212	49	771	3400	0.227	0	771	3400	0.227	0	771	3400	0.227
Sb Right	0	0	-	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Eb Left	126	1700	0.074	4	130	0.076	0	130	1700	0.076	0	130	1700	0.076	0	130	1700	0.076
Eb Thru	445	5100	0.087 *	13	458	0.090 *	7	465	5100	0.091 *	29	494	5100	0.097 *	0	494	5100	0.097 *
Eb Right	85	1700	0.050	3	88	0.052	0	88	1700	0.052	0	88	1700	0.052	0	88	1700	0.052
Wb Left	0	0	0.000 *	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *
Wb Thru	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Wb Right	0	0	-	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Yellow Allowance:			0.100 *			0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.415			0.424				0.438				0.453				0.453
LOS			A			A				A				A				A

01:40 PM

**Key conflicting movement as a part of ICU*
1 Counts conducted by.The Traffic Solution
2 Capacity expressed in veh/hour of green
3 As directed by Pasadena DOT staff, the related projects volumes where obtained from the Draft Traffic Impact Study for 680 E. Colorado Boulevard Mixed Use Project prepared by Willdan Associates, June 2007. Note: Year 2007 manual traffic counts were adjusted by a 1.5 percent (1.5%) ambient growth factor to reflect year 2008 existing conditions.

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INTERSECTION CAPACITY UTILIZATION

N-S St: Los Robles Avenue
E-W St: Green Street
Project: Playhouse Plaza Project/1-083727-1
File: ICU-2

Los Robles Avenue @ Green Street
Peak hr: PM
Annual Growth: 1.50%

PROJECT ALTERNATIVE 2

Date: 07/03/2008
Date of Count: 2008
Projection Year: 2010

	2008 EXIST. TRAFFIC			2010 W/AMBIENT GROWTH			2010 W/RELATED PROJECTS [3]				2010 W/PROJECT SITE TRAFFIC				2010 W/PROJECT MITIGATION			
Movement	1 Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio
Nb Left	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Nb Thru	703	3400	0.231 *	21	724	0.238 *	50	774	3400	0.253 *	0	774	3400	0.253 *	0	774	3400	0.253 *
Nb Right	82	0	-	2	85	-	0	85	0	-	2	87	0	-	0	87	0	-
Sb Left	106	1700	0.062 *	3	109	0.064 *	0	109	1700	0.064 *	2	111	1700	0.065 *	0	111	1700	0.065 *
Sb Thru	685	3400	0.202	21	706	0.208	60	766	3400	0.225	0	766	3400	0.225	0	766	3400	0.225
Sb Right	0	0	-	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Eb Left	269	1700	0.158	8	277	0.163	0	277	1700	0.163	0	277	1700	0.163	0	277	1700	0.163
Eb Thru	1032	5100	0.202 *	31	1063	0.208 *	12	1075	5100	0.211 *	5	1080	5100	0.212 *	0	1080	5100	0.212 *
Eb Right	147	1700	0.087	4	152	0.089	0	152	1700	0.089	0	152	1700	0.089	0	152	1700	0.089
Wb Left	0	0	0.000 *	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *
Wb Thru	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Wb Right	0	0	-	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Yellow Allowance:			0.100 *			0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.596			0.610				0.627				0.630				0.630
LOS			A			B				B				B				B

01:40 PM

**Key conflicting movement as a part of ICU*
1 Counts conducted by.The Traffic Solution
2 Capacity expressed in veh/hour of green
3 As directed by Pasadena DOT staff, the related projects volumes where obtained from the Draft Traffic Impact Study for 680 E. Colorado Boulevard Mixed Use Project prepared by Willdan Associates, June 2007. Note: Year 2007 manual traffic counts were adjusted by a 1.5 percent (1.5%) ambient growth factor to reflect year 2008 existing conditions.

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INTERSECTION CAPACITY UTILIZATION

N-S St: El Molino Avenue
E-W St: Union Street
Project: Playhouse Plaza Project/1-083727-1
File: ICU-3

El Molino Avenue @ Union Street
Peak hr: AM
Annual Growth: 1.50%

PROJECT ALTERNATIVE 2

Date: 07/03/2008
Date of Count: 2008
Projection Year: 2010

	2008 EXIST. TRAFFIC			2010 W/AMBIENT GROWTH			2010 W/RELATED PROJECTS [3]				2010 W/PROJECT SITE TRAFFIC				2010 W/PROJECT MITIGATION			
	1	2	V/C	Added	Total	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Volume	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Shift	Volume	Capacity	Ratio
Nb Left	67	0	0.039 *	2	69	0.041 *	10	79	0	0.046 *	4	83	0	0.049 *	44	127	1700	0.075 *
Nb Thru	176	1700	0.143	5	181	0.147	7	188	1700	0.157	5	193	1700	0.163	0	193	1700	0.114
Nb Right	0	0	-	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Sb Left	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Sb Thru	323	1700	0.222 *	10	333	0.228 *	13	346	1700	0.236 *	59	405	1700	0.271 *	-21	384	1700	0.258 *
Sb Right	54	0	-	2	56	-	0	56	0	-	0	56	0	-	0	56	0	-
Eb Left	0	0	0.000 *	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *
Eb Thru	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Eb Right	0	0	-	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Wb Left	32	0	0.006	1	33	0.006	30	63	0	0.012	10	73	0	0.014	0	73	0	0.014
Wb Thru	716	5100	0.152 *	21	737	0.156 *	0	737	5100	0.162 *	0	737	5100	0.164 *	0	737	5100	0.164 *
Wb Right	25	0	-	1	26	-	0	26	0	-	0	26	0	-	0	26	0	-
Yellow Allowance:			0.100 *			0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.513			0.525				0.545				0.584				0.597
LOS			A			A				A				A				A

01:40 PM

**Key conflicting movement as a part of ICU*
1 Counts conducted by.The Traffic Solution
2 Capacity expressed in veh/hour of green
3 As directed by Pasadena DOT staff, the related projects volumes where obtained from the Draft Traffic Impact Study for 680 E. Colorado Boulevard Mixed Use Project prepared by Willdan Associates, June 2007.

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INTERSECTION CAPACITY UTILIZATION

N-S St: El Molino Avenue
E-W St: Union Street
Project: Playhouse Plaza Project/1-083727-1
File: ICU-3

El Molino Avenue @ Union Street
Peak hr: PM
Annual Growth: 1.50%

PROJECT ALTERNATIVE 2

Date: 07/03/2008
Date of Count: 2008
Projection Year: 2010

	2008 EXIST. TRAFFIC			2010 W/AMBIENT GROWTH			2010 W/RELATED PROJECTS [3]				2010 W/PROJECT SITE TRAFFIC				2010 W/PROJECT MITIGATION			
	1	2	V/C	Added	Total	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Volume	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Shift	Volume	Capacity	Ratio
Nb Left	52	0	0.031 *	2	54	0.032 *	50	104	0	0.061 *	27	131	0	0.077 *	45	176	1700	0.103 *
Nb Thru	217	1700	0.158	7	224	0.163	30	254	1700	0.210	36	290	1700	0.247	0	290	1700	0.170
Nb Right	0	0	-	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Sb Left	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Sb Thru	252	1700	0.201 *	8	260	0.207 *	6	266	1700	0.210 *	11	277	1700	0.217 *	-37	240	1700	0.195 *
Sb Right	89	0	-	3	92	-	0	92	0	-	0	92	0	-	0	92	0	-
Eb Left	0	0	0.000 *	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *
Eb Thru	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Eb Right	0	0	-	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Wb Left	44	0	0.009	1	45	0.009	20	65	0	0.013	2	67	0	0.013	0	67	0	0.013
Wb Thru	827	5100	0.183 *	25	852	0.188 *	0	852	5100	0.192 *	0	852	5100	0.193 *	0	852	5100	0.193 *
Wb Right	61	0	-	2	63	-	0	63	0	-	0	63	0	-	0	63	0	-
Yellow Allowance:			0.100 *			0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.514			0.526				0.563				0.586				0.591
LOS			A			A				A				A				A

01:40 PM

**Key conflicting movement as a part of ICU*
1 Counts conducted by.The Traffic Solution
2 Capacity expressed in veh/hour of green
3 As directed by Pasadena DOT staff, the related projects volumes where obtained from the Draft Traffic Impact Study for 680 E. Colorado Boulevard Mixed Use Project prepared by Willdan Associates, June 2007.

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INTERSECTION CAPACITY UTILIZATION

N-S St: El Molino Avenue
E-W St: Colorado Boulevard
Project: Playhouse Plaza Project/1-083727-1
File: ICU-4

El Molino Avenue @ Colorado Boulevard
Peak hr: AM
Annual Growth: 1.50%

PROJECT ALTERNATIVE 2

Date: 07/03/2008
Date of Count: 2008
Projection Year: 2010

	2008 EXIST. TRAFFIC			2010 W/AMBIENT GROWTH			2010 W/RELATED PROJECTS [3]				2010 W/PROJECT SITE TRAFFIC				2010 W/PROJECT MITIGATION			
	1	2	V/C	Added	Total	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Volume	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Shift	Volume	Capacity	Ratio
Nb Left	25	0	0.015 *	1	26	0.015 *	15	41	0	0.024 *	3	44	0	0.026 *	-44	0	1700	0.000 *
Nb Thru	142	1700	0.114	4	146	0.117	17	163	1700	0.136	9	172	1700	0.146	44	216	1700	0.146
Nb Right	26	0	-	1	27	-	0	27	0	-	4	31	0	-	0	31	0	-
Sb Left	28	0	0.017	1	29	0.017	12	41	0	0.024	0	41	0	0.024	-41	0	1700	0.000
Sb Thru	170	1700	0.132 *	5	175	0.136 *	37	212	1700	0.176 *	69	281	1700	0.216 *	20	301	1700	0.204 *
Sb Right	26	0	-	1	27	-	19	46	0	-	0	46	0	-	0	46	0	-
Eb Left	27	1700	0.016 *	1	28	0.017 *	0	28	1700	0.017 *	0	28	1700	0.017	0	28	1700	0.017
Eb Thru	487	3400	0.143	15	502	0.148	160	662	3400	0.195	0	662	3400	0.195 *	21	683	3400	0.201 *
Eb Right	15	1700	0.009	0	16	0.009	13	29	1700	0.017	10	39	1700	0.023	0	39	1700	0.023
Wb Left	38	1700	0.022	1	39	0.023	0	39	1700	0.023	29	68	1700	0.040 *	0	68	1700	0.040 *
Wb Thru	545	3400	0.160 *	16	561	0.165 *	156	717	3400	0.211 *	0	717	3400	0.211	0	717	3400	0.211
Wb Right	37	1700	0.021	1	38	0.022	0	38	1700	0.022	0	38	1700	0.022	0	38	1700	0.022
Yellow Allowance:			0.100 *			0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.423			0.433				0.528				0.577				0.545
LOS			A			A				A				A				A

01:40 PM

**Key conflicting movement as a part of ICU*
1 Counts conducted by The Traffic Solution
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3 As directed by Pasadena DOT staff, the related projects volumes where obtained from the Draft Traffic Impact Study for 680 E. Colorado Boulevard Mixed Use Project prepared by Willdan Associates, June 2007. Note: Year 2007 manual traffic counts were adjusted by a 1.5 percent (1.5%) ambient growth factor to reflect year 2008 existing conditions.

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INTERSECTION CAPACITY UTILIZATION

N-S St: El Molino Avenue
E-W St: Colorado Boulevard
Project: Playhouse Plaza Project/1-083727-1
File: ICU-4

El Molino Avenue @ Colorado Boulevard
Peak hr: PM
Annual Growth: 1.50%

PROJECT ALTERNATIVE 2

Date: 07/03/2008
Date of Count: 2008
Projection Year: 2010

	2008 EXIST. TRAFFIC			2010 W/AMBIENT GROWTH			2010 W/RELATED PROJECTS [3]				2010 W/PROJECT SITE TRAFFIC				2010 W/PROJECT MITIGATION			
	1		2 V/C	Added	Total	V/C	Added	Total		2 V/C	Added	Total		2 V/C	Volume	Total		2 V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Shift	Volume	Capacity	Ratio
Nb Left	12	0	0.007	0	13	0.007	14	27	0	0.016	18	45	0	0.026	-45	0	1700	0.000
Nb Thru	232	1700	0.169 *	7	239	0.174 *	38	277	1700	0.205 *	62	339	1700	0.268 *	45	384	1700	0.268 *
Nb Right	43	0	-	1	44	-	0	44	0	-	27	71	0	-	0	71	0	-
Sb Left	67	0	0.039 *	2	69	0.041 *	4	73	0	0.043 *	0	73	0	0.043 *	-73	0	1700	0.000 *
Sb Thru	222	1700	0.187	7	229	0.192	27	256	1700	0.214	13	269	1700	0.221	36	305	1700	0.200
Sb Right	28	0	-	1	29	-	5	34	0	-	0	34	0	-	0	34	0	-
Eb Left	60	1700	0.035	2	62	0.036	42	104	1700	0.061 *	0	104	1700	0.061 *	0	104	1700	0.061 *
Eb Thru	1022	3400	0.301 *	31	1053	0.310 *	144	1197	3400	0.352	0	1197	3400	0.352	37	1234	3400	0.363
Eb Right	28	1700	0.017	1	29	0.017	17	46	1700	0.027	2	48	1700	0.028	0	48	1700	0.028
Wb Left	47	1700	0.027 *	1	48	0.028 *	0	48	1700	0.028	5	53	1700	0.031	0	53	1700	0.031
Wb Thru	971	3400	0.286	29	1000	0.294	192	1192	3400	0.351 *	0	1192	3400	0.351 *	0	1192	3400	0.351 *
Wb Right	42	1700	0.024	1	43	0.025	15	58	1700	0.034	0	58	1700	0.034	0	58	1700	0.034
Yellow Allowance:			0.100 *			0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.636			0.653				0.759				0.822				0.780
LOS			B			B				C				D				C

01:40 PM

**Key conflicting movement as a part of ICU*
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INTERSECTION CAPACITY UTILIZATION

N-S St: El Molino Avenue
E-W St: Green Street
Project: Playhouse Plaza Project/1-083727-1
File: ICU-5

El Molino Avenue @ Green Street
Peak hr: AM
Annual Growth: 1.50%

PROJECT ALTERNATIVE 2

Date: 07/03/2008
Date of Count: 2008
Projection Year: 2010

	2008 EXIST. TRAFFIC			2010 W/AMBIENT GROWTH			2010 W/RELATED PROJECTS [3]				2010 W/PROJECT SITE TRAFFIC				2010 W/PROJECT MITIGATION			
	1		2 V/C	Added	Total	V/C	Added	Total		2 V/C	Added	Total		2 V/C	Volume	Total		2 V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Shift	Volume	Capacity	Ratio
Nb Left	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Nb Thru	166	1700	0.137 *	5	171	0.141 *	32	203	1700	0.160 *	29	232	1700	0.183 *	0	232	1700	0.183 *
Nb Right	66	0	-	2	68	-	0	68	0	-	10	78	0	-	0	78	0	-
Sb Left	73	0	0.043 *	2	75	0.044 *	0	75	0	0.044 *	0	75	0	0.044 *	20	95	1700	0.056 *
Sb Thru	151	1700	0.132	5	156	0.136	50	206	1700	0.165	4	210	1700	0.168	0	210	1700	0.123
Sb Right	0	0	-	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Eb Left	29	0	0.006	1	30	0.006	0	30	0	0.006	0	30	0	0.006	0	30	0	0.006
Eb Thru	550	5100	0.120 *	17	567	0.124 *	7	574	5100	0.125 *	49	623	5100	0.135 *	0	623	5100	0.135 *
Eb Right	32	0	-	1	33	-	0	33	0	-	0	33	0	-	0	33	0	-
Wb Left	0	0	0.000 *	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *
Wb Thru	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Wb Right	0	0	-	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Yellow Allowance:			0.100 *			0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.400			0.409				0.429				0.461				0.473
LOS			A			A				A				A				A

01:40 PM

**Key conflicting movement as a part of ICU*
1 Counts conducted by The Traffic Solution
2 Capacity expressed in veh/hour of green
3 As directed by Pasadena DOT staff, the related projects volumes where obtained from the Draft Traffic Impact Study for 680 E. Colorado Boulevard Mixed Use Project prepared by Willdan Associates, June 2007. Note: Year 2007 manual traffic counts were adjusted by a 1.5 percent (1.5%) ambient growth factor to reflect year 2008 existing conditions.

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INTERSECTION CAPACITY UTILIZATION

N-S St: El Molino Avenue
E-W St: Green Street
Project: Playhouse Plaza Project/1-083727-1
File: ICU-5

El Molino Avenue @ Green Street
Peak hr: PM
Annual Growth: 1.50%

PROJECT ALTERNATIVE 2

Date: 07/03/2008
Date of Count: 2008
Projection Year: 2010

	2008 EXIST. TRAFFIC			2010 W/AMBIENT GROWTH			2010 W/RELATED PROJECTS [3]				2010 W/PROJECT SITE TRAFFIC				2010 W/PROJECT MITIGATION			
Movement	1 Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Volume Shift	Total Volume	2 Capacity	V/C Ratio
Nb Left	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000 *	0	0	0	0.000
Nb Thru	221	1700	0.159 *	7	228	0.164 *	52	280	1700	0.195 *	5	285	1700	0.199	0	285	1700	0.199 *
Nb Right	50	0	-	1	51	-	0	51	0	-	2	53	0	-	0	53	0	-
Sb Left	65	0	0.038 *	2	67	0.039 *	0	67	0	0.039 *	0	67	0	0.039	36	103	1700	0.061 *
Sb Thru	267	1700	0.195	8	275	0.201	44	319	1700	0.227	27	346	1700	0.243 *	0	346	1700	0.204
Sb Right	0	0	-	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Eb Left	61	0	0.012	2	63	0.012	0	63	0	0.012	0	63	0	0.012	0	63	0	0.012
Eb Thru	1111	5100	0.244 *	33	1145	0.252 *	12	1157	5100	0.254 *	9	1166	5100	0.256 *	0	1166	5100	0.256 *
Eb Right	74	0	-	2	76	-	0	76	0	-	0	76	0	-	0	76	0	-
Wb Left	0	0	0.000 *	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *
Wb Thru	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Wb Right	0	0	-	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Yellow Allowance:			0.100 *			0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.542			0.555				0.588				0.599				0.615
LOS			A			A				A				A				B

01:40 PM

**Key conflicting movement as a part of ICU*
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2 Capacity expressed in veh/hour of green
3 As directed by Pasadena DOT staff, the related projects volumes where obtained from the Draft Traffic Impact Study for 680 E. Colorado Boulevard Mixed Use Project prepared by Willdan Associates, June 2007. Note: Year 2007 manual traffic counts were adjusted by a 1.5 percent (1.5%) ambient growth factor to reflect year 2008 existing conditions.

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INTERSECTION CAPACITY UTILIZATION

N-S St: El Molino Avenue
E-W St: Del Mar Boulevard
Project: Playhouse Plaza Project/1-083727-1
File: ICU-6

El Molino Avenue @ Del Mar Boulevard
Peak hr: AM
Annual Growth: 1.50%

PROJECT ALTERNATIVE 2

Date: 07/03/2008
Date of Count: 2008
Projection Year: 2010

	2008 EXIST. TRAFFIC			2010 W/AMBIENT GROWTH			2010 W/RELATED PROJECTS [3]				2010 W/PROJECT SITE TRAFFIC				2010 W/PROJECT MITIGATION			
	1	2	V/C	Added	Total	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	38	0	0.022	1	39	0.023	0	39	0	0.023	0	39	0	0.023	0	39	0	0.023
Nb Thru	156	1700	0.140 *	5	161	0.144 *	32	193	1700	0.163 *	0	193	1700	0.163 *	0	193	1700	0.163 *
Nb Right	44	0	-	1	45	-	0	45	0	-	0	45	0	-	0	45	0	-
Sb Left	18	0	0.011 *	1	19	0.011 *	0	19	0	0.011 *	1	20	0	0.012 *	0	20	0	0.012 *
Sb Thru	67	1700	0.070	2	69	0.073	50	119	1700	0.102	0	119	1700	0.103	0	119	1700	0.103
Sb Right	35	0	-	1	36	-	0	36	0	-	1	37	0	-	0	37	0	-
Eb Left	28	1700	0.017 *	1	29	0.017 *	0	29	1700	0.017 *	10	39	1700	0.023 *	0	39	1700	0.023 *
Eb Thru	496	3400	0.152	15	511	0.157	33	544	3400	0.167	0	544	3400	0.167	0	544	3400	0.167
Eb Right	21	0	-	1	22	-	0	22	0	-	0	22	0	-	0	22	0	-
Wb Left	22	1700	0.013	1	23	0.014	0	23	1700	0.014	0	23	1700	0.014	0	23	1700	0.014
Wb Thru	606	3400	0.186 *	18	624	0.191 *	49	673	3400	0.206 *	0	673	3400	0.212 *	0	673	3400	0.212 *
Wb Right	25	0	-	1	26	-	0	26	0	-	20	46	0	-	0	46	0	-
Yellow Allowance:			0.100 *			0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.453			0.463				0.497				0.509				0.509
LOS			A			A				A				A				A

01:40 PM

**Key conflicting movement as a part of ICU*
1 Counts conducted by.The Traffic Solution
2 Capacity expressed in veh/hour of green
3 As directed by Pasadena DOT staff, the related projects volumes where obtained from the Draft Traffic Impact Study for 680 E. Colorado Boulevard Mixed Use Project prepared by Willdan Associates, June 2007. Note: Year 2007 manual traffic counts were adjusted by a 1.5 percent (1.5%) ambient growth factor to reflect year 2008 existing conditions.

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INTERSECTION CAPACITY UTILIZATION

N-S St: El Molino Avenue
E-W St: Del Mar Boulevard
Project: Playhouse Plaza Project/1-083727-1
File: ICU-6

El Molino Avenue @ Del Mar Boulevard
Peak hr: PM
Annual Growth: 1.50%

PROJECT ALTERNATIVE 2

Date: 07/03/2008
Date of Count: 2008
Projection Year: 2010

	2008 EXIST. TRAFFIC			2010 W/AMBIENT GROWTH			2010 W/RELATED PROJECTS [3]				2010 W/PROJECT SITE TRAFFIC				2010 W/PROJECT MITIGATION			
Movement	1 Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio
Nb Left	24	0	0.014 *	1	25	0.015 *	0	25	0	0.015 *	0	25	0	0.015 *	0	25	0	0.015 *
Nb Thru	179	1700	0.132	5	184	0.136	52	236	1700	0.166	0	236	1700	0.166	0	236	1700	0.166
Nb Right	21	0	-	1	22	-	0	22	0	-	0	22	0	-	0	22	0	-
Sb Left	44	0	0.026	1	45	0.026	0	45	0	0.026	9	54	0	0.032	0	54	0	0.032
Sb Thru	189	1700	0.161 *	6	194	0.166 *	44	238	1700	0.192 *	0	238	1700	0.203 *	0	238	1700	0.203 *
Sb Right	42	0	-	1	43	-	0	43	0	-	9	52	0	-	0	52	0	-
Eb Left	28	1700	0.017	1	29	0.017	0	29	1700	0.017	2	31	1700	0.018	0	31	1700	0.018
Eb Thru	667	3400	0.208 *	20	687	0.214 *	32	719	3400	0.224 *	0	719	3400	0.224 *	0	719	3400	0.224 *
Eb Right	41	0	-	1	42	-	0	42	0	-	0	42	0	-	0	42	0	-
Wb Left	46	1700	0.027 *	1	47	0.028 *	0	47	1700	0.028 *	0	47	1700	0.028 *	0	47	1700	0.028 *
Wb Thru	697	3400	0.218	21	718	0.224	16	734	3400	0.229	0	734	3400	0.230	0	734	3400	0.230
Wb Right	44	0	-	1	45	-	0	45	0	-	4	49	0	-	0	49	0	-
Yellow Allowance:			0.100 *			0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.510			0.523				0.558				0.569				0.569
LOS			A			A				A				A				A

01:40 PM

**Key conflicting movement as a part of ICU*
1 Counts conducted by.The Traffic Solution
2 Capacity expressed in veh/hour of green
3 As directed by Pasadena DOT staff, the related projects volumes where obtained from the Draft Traffic Impact Study for 680 E. Colorado Boulevard Mixed Use Project prepared by Willdan Associates, June 2007. Note: Year 2007 manual traffic counts were adjusted by a 1.5 percent (1.5%) ambient growth factor to reflect year 2008 existing conditions.

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INTERSECTION CAPACITY UTILIZATION

N-S St: Oak Knoll Avenue
E-W St: Colorado Boulevard
Project: Playhouse Plaza Project/1-083727-1
File: ICU-7

Oak Knoll Avenue @ Colorado Boulevard
Peak hr: AM
Annual Growth: 1.50%

PROJECT ALTERNATIVE 2

Date: 07/03/2008
Date of Count: 2008
Projection Year: 2010

	2008 EXIST. TRAFFIC			2010 W/AMBIENT GROWTH			2010 W/RELATED PROJECTS [3]				2010 W/PROJECT SITE TRAFFIC				2010 W/PROJECT MITIGATION			
Movement	1 Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Volume Shift	Total Volume	2 Capacity	V/C Ratio
Nb Left	13	0	0.008 *	0	14	0.008 *	0	14	0	0.008 *	0	14	0	0.008 *	0	14	0	0.008 *
Nb Thru	33	1700	0.044	1	34	0.046	0	34	1700	0.046	0	34	1700	0.046	0	34	1700	0.046
Nb Right	28	0	-	1	29	-	0	29	0	-	0	29	0	-	0	29	0	-
Sb Left	43	0	0.025	1	44	0.026	0	44	0	0.026	0	44	0	0.026	0	44	0	0.026
Sb Thru	53	1700	0.072 *	2	54	0.074 *	0	54	1700	0.074 *	0	54	1700	0.074 *	0	54	1700	0.074 *
Sb Right	26	0	-	1	27	-	0	27	0	-	0	27	0	-	0	27	0	-
Eb Left	41	1700	0.024 *	1	42	0.025 *	0	42	1700	0.025	0	42	1700	0.025 *	0	42	1700	0.025 *
Eb Thru	450	3400	0.132	13	463	0.136	163	626	3400	0.184 *	4	630	3400	0.185	-20	610	3400	0.179
Eb Right	25	1700	0.015	1	26	0.015	9	35	1700	0.021	0	35	1700	0.021	0	35	1700	0.021
Wb Left	72	1700	0.042	2	74	0.044	16	90	1700	0.053 *	0	90	1700	0.053	0	90	1700	0.053
Wb Thru	540	3400	0.159 *	16	556	0.164 *	156	712	3400	0.209	29	741	3400	0.218 *	0	741	3400	0.218 *
Wb Right	23	1700	0.014	1	24	0.014	0	24	1700	0.014	0	24	1700	0.014	0	24	1700	0.014
Yellow Allowance:			0.100 *			0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.362			0.370				0.419				0.424				0.424
LOS			A			A				A				A				A

01:40 PM

**Key conflicting movement as a part of ICU*
1 Counts conducted by.The Traffic Solution
2 Capacity expressed in veh/hour of green
3 As directed by Pasadena DOT staff, the related projects volumes where obtained from the Draft Traffic Impact Study for 680 E. Colorado Boulevard Mixed Use Project prepared by Willdan Associates, June 2007. Note: Year 2007 manual traffic counts were adjusted by a 1.5 percent (1.5%) ambient growth factor to reflect year 2008 existing conditions.

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INTERSECTION CAPACITY UTILIZATION

N-S St: Oak Knoll Avenue
E-W St: Colorado Boulevard
Project: Playhouse Plaza Project/1-083727-1
File: ICU-7

Oak Knoll Avenue @ Colorado Boulevard
Peak hr: PM
Annual Growth: 1.50%

PROJECT ALTERNATIVE 2

Date: 07/03/2008
Date of Count: 2008
Projection Year: 2010

	2008 EXIST. TRAFFIC			2010 W/AMBIENT GROWTH			2010 W/RELATED PROJECTS [3]				2010 W/PROJECT SITE TRAFFIC				2010 W/PROJECT MITIGATION			
Movement	1 Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Volume Shift	Total Volume	2 Capacity	V/C Ratio
Nb Left	32	0	0.019 *	1	33	0.020 *	0	33	0	0.020 *	0	33	0	0.020 *	0	33	0	0.020 *
Nb Thru	62	1700	0.093	2	64	0.096	0	64	1700	0.096	0	64	1700	0.096	0	64	1700	0.096
Nb Right	64	0	-	2	66	-	0	66	0	-	0	66	0	-	0	66	0	-
Sb Left	83	0	0.049	2	86	0.050	0	86	0	0.050	0	86	0	0.050	0	86	0	0.050
Sb Thru	115	1700	0.155 *	3	118	0.159 *	0	118	1700	0.159 *	0	118	1700	0.159 *	0	118	1700	0.159 *
Sb Right	65	0	-	2	67	-	0	67	0	-	0	67	0	-	0	67	0	-
Eb Left	174	1700	0.102 *	5	179	0.105 *	0	179	1700	0.105 *	0	179	1700	0.105 *	0	179	1700	0.105 *
Eb Thru	903	3400	0.266	27	930	0.274	142	1072	3400	0.315	27	1099	3400	0.323	-36	1063	3400	0.313
Eb Right	50	1700	0.029	1	51	0.030	6	57	1700	0.034	0	57	1700	0.034	0	57	1700	0.034
Wb Left	65	1700	0.038	2	67	0.039	11	78	1700	0.046	0	78	1700	0.046	0	78	1700	0.046
Wb Thru	915	3400	0.269 *	27	942	0.277 *	207	1149	3400	0.338 *	5	1154	3400	0.339 *	0	1154	3400	0.339 *
Wb Right	53	1700	0.031	2	54	0.032	0	54	1700	0.032	0	54	1700	0.032	0	54	1700	0.032
Yellow Allowance:			0.100 *			0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.645			0.661				0.722				0.724				0.724
LOS			B			B				C				C				C

01:40 PM

**Key conflicting movement as a part of ICU*
1 Counts conducted by.The Traffic Solution
2 Capacity expressed in veh/hour of green
3 As directed by Pasadena DOT staff, the related projects volumes where obtained from the Draft Traffic Impact Study for 680 E. Colorado Boulevard Mixed Use Project prepared by Willdan Associates, June 2007. Note: Year 2007 manual traffic counts were adjusted by a 1.5 percent (1.5%) ambient growth factor to reflect year 2008 existing conditions.

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INTERSECTION CAPACITY UTILIZATION

N-S St: Oak Knoll Avenue
E-W St: Green Street
Project: Playhouse Plaza Project/1-083727-1
File: ICU-8

Oak Knoll Avenue @ Green Street
Peak hr: AM
Annual Growth: 1.50%

PROJECT ALTERNATIVE 2

Date: 07/03/2008
Date of Count: 2008
Projection Year: 2010

	2008 EXIST. TRAFFIC			2010 W/AMBIENT GROWTH			2010 W/RELATED PROJECTS [3]				2010 W/PROJECT SITE TRAFFIC				2010 W/PROJECT MITIGATION			
	1	2	V/C	Added	Total	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Volume	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Shift	Volume	Capacity	Ratio
Nb Left	0	0	0.000 *	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *
Nb Thru	51	1700	0.044	2	52	0.045	0	52	1700	0.050	0	52	1700	0.050	0	52	1700	0.050
Nb Right	23	0	-	1	24	-	8	32	0	-	0	32	0	-	0	32	0	-
Sb Left	83	0	0.049	2	86	0.050	19	105	0	0.062	0	105	0	0.062	0	105	0	0.062
Sb Thru	78	1700	0.095 *	2	80	0.098 *	6	86	1700	0.112 *	0	86	1700	0.112 *	0	86	1700	0.112 *
Sb Right	0	0	-	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Eb Left	21	0	0.004	1	22	0.004	0	22	0	0.004	0	22	0	0.004	0	22	0	0.004
Eb Thru	592	5100	0.126 *	18	609	0.130 *	7	616	5100	0.132 *	7	623	5100	0.133 *	20	643	5100	0.137 *
Eb Right	31	0	-	1	32	-	0	32	0	-	0	32	0	-	0	32	0	-
Wb Left	0	0	0.000 *	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *
Wb Thru	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Wb Right	0	0	-	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Yellow Allowance:			0.100 *			0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.321			0.328				0.344				0.345				0.349
LOS			A			A				A				A				A

01:40 PM

**Key conflicting movement as a part of ICU*
1 Counts conducted by.The Traffic Solution
2 Capacity expressed in veh/hour of green
3 As directed by Pasadena DOT staff, the related projects volumes where obtained from the Draft Traffic Impact Study for 680 E. Colorado Boulevard Mixed Use Project prepared by Willdan Associates, June 2007. Note: Year 2007 manual traffic counts were adjusted by a 1.5 percent (1.5%) ambient growth factor to reflect year 2008 existing conditions.

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INTERSECTION CAPACITY UTILIZATION

N-S St: Oak Knoll Avenue
E-W St: Green Street
Project: Playhouse Plaza Project/1-083727-1
File: ICU-8

Oak Knoll Avenue @ Green Street
Peak hr: PM
Annual Growth: 1.50%

PROJECT ALTERNATIVE 2

Date: 07/03/2008
Date of Count: 2008
Projection Year: 2010

	2008 EXIST. TRAFFIC			2010 W/AMBIENT GROWTH			2010 W/RELATED PROJECTS [3]				2010 W/PROJECT SITE TRAFFIC				2010 W/PROJECT MITIGATION			
Movement	1 Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Volume Shift	Total Volume	2 Capacity	V/C Ratio
Nb Left	0	0	0.000 *	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *
Nb Thru	83	1700	0.076	2	86	0.078	0	86	1700	0.081	0	86	1700	0.081	0	86	1700	0.081
Nb Right	46	0	-	1	47	-	5	52	0	-	0	52	0	-	0	52	0	-
Sb Left	57	0	0.033	2	59	0.034	13	72	0	0.042	0	72	0	0.042	0	72	0	0.042
Sb Thru	160	1700	0.128 *	5	165	0.132 *	4	169	1700	0.142 *	0	169	1700	0.142 *	0	169	1700	0.142 *
Sb Right	0	0	-	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Eb Left	61	0	0.012	2	63	0.012	0	63	0	0.012	0	63	0	0.012	0	63	0	0.012
Eb Thru	1101	5100	0.237 *	33	1134	0.244 *	12	1146	5100	0.247 *	45	1191	5100	0.256 *	36	1227	5100	0.263 *
Eb Right	48	0	-	1	49	-	0	49	0	-	0	49	0	-	0	49	0	-
Wb Left	0	0	0.000 *	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *
Wb Thru	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Wb Right	0	0	-	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Yellow Allowance:			0.100 *			0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.465			0.476				0.488				0.497				0.504
LOS			A			A				A				A				A

01:40 PM

**Key conflicting movement as a part of ICU*
1 Counts conducted by.The Traffic Solution
2 Capacity expressed in veh/hour of green
3 As directed by Pasadena DOT staff, the related projects volumes where obtained from the Draft Traffic Impact Study for 680 E. Colorado Boulevard Mixed Use Project prepared by Willdan Associates, June 2007. Note: Year 2007 manual traffic counts were adjusted by a 1.5 percent (1.5%) ambient growth factor to reflect year 2008 existing conditions.

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INTERSECTION CAPACITY UTILIZATION

N-S St: Lake Avenue
E-W St: I-210 Freeway WB Ramps-Maple Street
Project: Playhouse Plaza Project/1-083727-1
File: ICU-9

Lake Avenue @ I-210 Freeway WB Ramps-Maple Street
Peak hr: AM
Annual Growth: 1.50%

PROJECT ALTERNATIVE 2

Date: 07/03/2008
Date of Count: 2008
Projection Year: 2010

	2008 EXIST. TRAFFIC			2010 W/AMBIENT GROWTH			2010 W/RELATED PROJECTS [3]				2010 W/PROJECT SITE TRAFFIC				2010 W/PROJECT MITIGATION			
Movement	1 Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio
Nb Left	438	3060	0.143 *	13	452	0.148 *	63	515	3060	0.168 *	0	515	3060	0.168 *	0	515	3060	0.168 *
Nb Thru	751	3400	0.221	23	774	0.228	9	783	3400	0.230	1	784	3400	0.230	0	784	3400	0.230
Nb Right	0	0	-	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Sb Left	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Sb Thru	841	3400	0.247	25	867	0.255	5	872	3400	0.256	10	882	3400	0.259	0	882	3400	0.259
Sb Right	578	1700	0.340 *	17	595	0.350 *	0	595	1700	0.350 *	0	595	1700	0.350 *	0	595	1700	0.350 *
Eb Left	0	0	0.000 *	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *
Eb Thru	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Eb Right	0	0	-	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Wb Left	527	0	0.086	16	543	0.089	81	624	0	0.102	10	634	0	0.104	0	634	0	0.104
Wb Thru	881	6120	0.261 *	26	907	0.268 *	0	907	6120	0.282 *	20	927	6120	0.287 *	0	927	6120	0.287 *
Wb Right	187	0	-	6	192	-	0	192	0	-	0	192	0	-	0	192	0	-
Yellow Allowance:			0.100 *			0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.844			0.866				0.900				0.905				0.905
LOS			D			D				D				E				E

01:40 PM

**Key conflicting movement as a part of ICU*
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2 Capacity expressed in veh/hour of green
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INTERSECTION CAPACITY UTILIZATION

N-S St: Lake Avenue
E-W St: I-210 Freeway WB Ramps-Maple Street
Project: Playhouse Plaza Project/1-083727-1
File: ICU-9

Lake Avenue @ I-210 Freeway WB Ramps-Maple Street
Peak hr: PM
Annual Growth: 1.50%

PROJECT ALTERNATIVE 2

Date: 07/03/2008
Date of Count: 2008
Projection Year: 2010

	2008 EXIST. TRAFFIC			2010 W/AMBIENT GROWTH			2010 W/RELATED PROJECTS [3]				2010 W/PROJECT SITE TRAFFIC				2010 W/PROJECT MITIGATION			
Movement	1 Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio
Nb Left	709	3060	0.232 *	21	731	0.239 *	86	817	3060	0.267 *	0	817	3060	0.267 *	0	817	3060	0.267 *
Nb Thru	1278	3400	0.376	38	1316	0.387	14	1330	3400	0.391	9	1339	3400	0.394	0	1339	3400	0.394
Nb Right	0	0	-	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Sb Left	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Sb Thru	731	3400	0.215	22	753	0.221	5	758	3400	0.223	2	760	3400	0.223	0	760	3400	0.223
Sb Right	474	1700	0.279 *	14	488	0.287 *	0	488	1700	0.287 *	0	488	1700	0.287 *	0	488	1700	0.287 *
Eb Left	0	0	0.000 *	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *
Eb Thru	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Eb Right	0	0	-	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Wb Left	481	0	0.079	14	496	0.081	86	582	0	0.095	2	584	0	0.095	0	584	0	0.095
Wb Thru	780	6120	0.253 *	23	803	0.260 *	0	803	6120	0.274 *	4	807	6120	0.275 *	0	807	6120	0.275 *
Wb Right	285	0	-	9	294	-	0	294	0	-	0	294	0	-	0	294	0	-
Yellow Allowance:			0.100 *			0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.863			0.886				0.928				0.929				0.929
LOS			D			D				E				E				E

01:40 PM

**Key conflicting movement as a part of ICU*
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2 Capacity expressed in veh/hour of green
3 As directed by Pasadena DOT staff, the related projects volumes where obtained from the Draft Traffic Impact Study for 680 E. Colorado Boulevard Mixed Use Project prepared by Willdan Associates, June 2007. Note: Year 2007 manual traffic counts were adjusted by a 1.5 percent (1.5%) ambient growth factor to reflect year 2008 existing conditions.

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INTERSECTION CAPACITY UTILIZATION

N-S St: Lake Avenue
E-W St: I-210 Freeway EB Ramps-Corson Street
Project: Playhouse Plaza Project/1-083727-1
File: ICU-10

Lake Avenue @ I-210 Freeway EB Ramps-Corson Street
Peak hr: AM
Annual Growth: 1.50%

PROJECT ALTERNATIVE 2

Date: 07/03/2008
Date of Count: 2008
Projection Year: 2010

	2008 EXIST. TRAFFIC			2010 W/AMBIENT GROWTH			2010 W/RELATED PROJECTS [3]				2010 W/PROJECT SITE TRAFFIC				2010 W/PROJECT MITIGATION			
	1	2	V/C	Added	Total	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Nb Thru	723	7650	0.139 *	22	744	0.143 *	72	816	7650	0.162 *	1	817	7650	0.163 *	0	817	7650	0.163 *
Nb Right	343	0	-	10	353	-	73	426	0	-	3	429	0	-	0	429	0	-
Sb Left	423	3060	0.138 *	13	436	0.142 *	0	436	3060	0.142 *	0	436	3060	0.142 *	0	436	3060	0.142 *
Sb Thru	927	5100	0.182	28	954	0.187	96	1050	5100	0.206	20	1070	5100	0.210	0	1070	5100	0.210
Sb Right	0	0	-	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Eb Left	488	0	0.064	15	503	0.066	0	503	0	0.066	0	503	0	0.066	0	503	0	0.066
Eb Thru	754	7650	0.266 *	23	777	0.274 *	3	780	7650	0.285 *	1	781	7650	0.285 *	0	781	7650	0.285 *
Eb Right	790	0	-	24	813	-	84	897	0	-	0	897	0	-	0	897	0	-
Wb Left	0	0	0.000 *	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *
Wb Thru	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Wb Right	0	0	-	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Yellow Allowance:			0.100 *			0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.643			0.660				0.690				0.691				0.691
LOS			B			B				B				B				B

01:41 PM

**Key conflicting movement as a part of ICU*
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INTERSECTION CAPACITY UTILIZATION

N-S St: Lake Avenue
E-W St: I-210 Freeway EB Ramps-Corson Street
Project: Playhouse Plaza Project/1-083727-1
File: ICU-10

Lake Avenue @ I-210 Freeway EB Ramps-Corson Street
Peak hr: PM
Annual Growth: 1.50%

PROJECT ALTERNATIVE 2

Date: 07/03/2008
Date of Count: 2008
Projection Year: 2010

	2008 EXIST. TRAFFIC			2010 W/AMBIENT GROWTH			2010 W/RELATED PROJECTS [3]				2010 W/PROJECT SITE TRAFFIC				2010 W/PROJECT MITIGATION			
Movement	1 Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio
Nb Left	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Nb Thru	1234	7650	0.225 *	37	1271	0.232 *	100	1371	7650	0.257 *	9	1380	7650	0.260 *	0	1380	7650	0.260 *
Nb Right	486	0	-	15	501	-	93	594	0	-	18	612	0	-	0	612	0	-
Sb Left	227	3060	0.074 *	7	234	0.077 *	0	234	3060	0.077 *	0	234	3060	0.077 *	0	234	3060	0.077 *
Sb Thru	951	5100	0.186	29	980	0.192	91	1071	5100	0.210	4	1075	5100	0.211	0	1075	5100	0.211
Sb Right	0	0	-	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Eb Left	757	0	0.099	23	780	0.102	0	780	0	0.102	0	780	0	0.102	0	780	0	0.102
Eb Thru	1562	7650	0.403 *	47	1609	0.416 *	3	1612	7650	0.423 *	9	1621	7650	0.424 *	0	1621	7650	0.424 *
Eb Right	767	0	-	23	790	-	53	843	0	-	0	843	0	-	0	843	0	-
Wb Left	0	0	0.000 *	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *
Wb Thru	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Wb Right	0	0	-	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Yellow Allowance:			0.100 *			0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.803			0.824				0.856				0.861				0.861
LOS			D			D				D				D				D

01:41 PM

**Key conflicting movement as a part of ICU*
1 Counts conducted by.The Traffic Solution
2 Capacity expressed in veh/hour of green
3 As directed by Pasadena DOT staff, the related projects volumes where obtained from the Draft Traffic Impact Study for 680 E. Colorado Boulevard Mixed Use Project prepared by Willdan Associates, June 2007. Note: Year 2007 manual traffic counts were adjusted by a 1.5 percent (1.5%) ambient growth factor to reflect year 2008 existing conditions.

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INTERSECTION CAPACITY UTILIZATION

N-S St: Lake Avenue
E-W St: Walnut Street
Project: Playhouse Plaza Project/1-083727-1
File: ICU-11

Lake Avenue @ Walnut Street
Peak hr: AM
Annual Growth: 1.50%

PROJECT ALTERNATIVE 2

Date: 07/03/2008
Date of Count: 2008
Projection Year: 2010

	2008 EXIST. TRAFFIC			2010 W/AMBIENT GROWTH			2010 W/RELATED PROJECTS [3]				2010 W/PROJECT SITE TRAFFIC				2010 W/PROJECT MITIGATION			
	1	2	V/C	Added	Total	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	83	1700	0.049 *	2	86	0.050 *	16	102	1700	0.060 *	0	102	1700	0.060 *	0	102	1700	0.060 *
Nb Thru	790	5100	0.155	24	813	0.159	192	1005	5100	0.197	3	1008	5100	0.198	0	1008	5100	0.198
Nb Right	75	1700	0.044	2	77	0.046	0	77	1700	0.046	0	77	1700	0.046	0	77	1700	0.046
Sb Left	132	1700	0.078	4	136	0.080	8	144	1700	0.085	0	144	1700	0.085	0	144	1700	0.085
Sb Thru	1287	5100	0.273 *	39	1326	0.281 *	105	1431	5100	0.307 *	20	1451	5100	0.310 *	0	1451	5100	0.310 *
Sb Right	105	0	-	3	108	-	25	133	0	-	0	133	0	-	0	133	0	-
Eb Left	174	3060	0.057 *	5	179	0.058 *	75	254	3060	0.083 *	1	255	3060	0.083 *	0	255	3060	0.083 *
Eb Thru	243	3400	0.096	7	250	0.099	34	284	3400	0.116	1	285	3400	0.117	0	285	3400	0.117
Eb Right	85	0	-	3	88	-	24	112	0	-	0	112	0	-	0	112	0	-
Wb Left	107	1700	0.063	3	110	0.065	0	110	1700	0.065	0	110	1700	0.065	0	110	1700	0.065
Wb Thru	470	3400	0.159 *	14	484	0.164 *	17	501	3400	0.177 *	10	511	3400	0.180 *	0	511	3400	0.180 *
Wb Right	71	0	-	2	73	-	27	100	0	-	0	100	0	-	0	100	0	-
Yellow Allowance:			0.100 *			0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.638			0.654				0.726				0.733				0.733
LOS			B			B				C				C				C

01:40 PM

**Key conflicting movement as a part of ICU*
1 Counts conducted by.The Traffic Solution
2 Capacity expressed in veh/hour of green
3 As directed by Pasadena DOT staff, the related projects volumes where obtained from the Draft Traffic Impact Study for 680 E. Colorado Boulevard Mixed Use Project prepared by Willdan Associates, June 2007. Note: Year 2007 manual traffic counts were adjusted by a 1.5 percent (1.5%) ambient growth factor to reflect year 2008 existing conditions.

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INTERSECTION CAPACITY UTILIZATION

N-S St: Lake Avenue
E-W St: Walnut Street
Project: Playhouse Plaza Project/1-083727-1
File: ICU-11

Lake Avenue @ Walnut Street
Peak hr: PM
Annual Growth: 1.50%

PROJECT ALTERNATIVE 2

Date: 07/03/2008
Date of Count: 2008
Projection Year: 2010

	2008 EXIST. TRAFFIC			2010 W/AMBIENT GROWTH			2010 W/RELATED PROJECTS [3]				2010 W/PROJECT SITE TRAFFIC				2010 W/PROJECT MITIGATION			
Movement	1 Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio
Nb Left	66	1700	0.039 *	2	68	0.040 *	23	91	1700	0.054 *	0	91	1700	0.054 *	0	91	1700	0.054 *
Nb Thru	1178	5100	0.231	35	1214	0.238	109	1323	5100	0.259	18	1341	5100	0.263	0	1341	5100	0.263
Nb Right	95	1700	0.056	3	98	0.058	0	98	1700	0.058	0	98	1700	0.058	0	98	1700	0.058
Sb Left	163	1700	0.096	5	168	0.099	28	196	1700	0.115	0	196	1700	0.115	0	196	1700	0.115
Sb Thru	1346	5100	0.298 *	40	1386	0.307 *	185	1571	5100	0.358 *	4	1575	5100	0.359 *	0	1575	5100	0.359 *
Sb Right	173	0	-	5	178	-	77	255	0	-	0	255	0	-	0	255	0	-
Eb Left	484	3060	0.158 *	15	499	0.163 *	46	545	3060	0.178 *	9	554	3060	0.181 *	0	554	3060	0.181 *
Eb Thru	719	3400	0.248	22	740	0.255	26	766	3400	0.268	9	775	3400	0.271	0	775	3400	0.271
Eb Right	124	0	-	4	128	-	17	145	0	-	0	145	0	-	0	145	0	-
Wb Left	61	1700	0.036	2	63	0.037	0	63	1700	0.037	0	63	1700	0.037	0	63	1700	0.037
Wb Thru	398	3400	0.164 *	12	410	0.169 *	35	445	3400	0.182 *	2	447	3400	0.183 *	0	447	3400	0.183 *
Wb Right	158	0	-	5	163	-	11	174	0	-	0	174	0	-	0	174	0	-
Yellow Allowance:			0.100 *			0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.758			0.778				0.872				0.876				0.876
LOS			C			C				D				D				D

01:40 PM

**Key conflicting movement as a part of ICU*
1 Counts conducted by.The Traffic Solution
2 Capacity expressed in veh/hour of green
3 As directed by Pasadena DOT staff, the related projects volumes where obtained from the Draft Traffic Impact Study for 680 E. Colorado Boulevard Mixed Use Project prepared by Willdan Associates, June 2007. Note: Year 2007 manual traffic counts were adjusted by a 1.5 percent (1.5%) ambient growth factor to reflect year 2008 existing conditions.

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INTERSECTION CAPACITY UTILIZATION

N-S St: Lake Avenue
E-W St: Colorado Boulevard
Project: Playhouse Plaza Project/1-083727-1
File: ICU-12

Lake Avenue @ Colorado Boulevard
Peak hr: AM
Annual Growth: 1.50%

PROJECT ALTERNATIVE 2

Date: 07/03/2008
Date of Count: 2008
Projection Year: 2010

	2008 EXIST. TRAFFIC			2010 W/AMBIENT GROWTH			2010 W/RELATED PROJECTS				2010 W/PROJECT SITE TRAFFIC				2010 W/PROJECT MITIGATION			
	1		2 V/C	Added	Total	V/C	Added	Total		2 V/C	Added	Total		2 V/C	Volume	Total		2 V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Shift	Volume	Capacity	Ratio
Nb Left	93	1700	0.055 *	3	96	0.057 *	12	108	1700	0.064 *	0	108	1700	0.064 *	0	108	1700	0.064 *
Nb Thru	676	5100	0.145	20	696	0.149	66	762	5100	0.166	1	763	5100	0.166	0	763	5100	0.166
Nb Right	64	0	-	2	66	-	18	84	0	-	0	84	0	-	0	84	0	-
Sb Left	111	1700	0.065	3	114	0.067	20	134	1700	0.079	0	134	1700	0.079	0	134	1700	0.079
Sb Thru	1123	3400	0.330 *	34	1156	0.340 *	49	1205	3400	0.354 *	0	1205	3400	0.354 *	0	1205	3400	0.354 *
Sb Right	165	1700	0.097	5	170	0.100	60	230	1700	0.136	10	240	1700	0.141	0	240	1700	0.141
Eb Left	160	1700	0.094 *	5	165	0.097 *	63	228	1700	0.134 *	1	229	1700	0.135 *	0	229	1700	0.135 *
Eb Thru	289	3400	0.085	9	298	0.088	87	385	3400	0.113	3	388	3400	0.114	-20	368	3400	0.108
Eb Right	93	1700	0.055	3	96	0.057	0	96	1700	0.057	0	96	1700	0.057	0	96	1700	0.057
Wb Left	99	1700	0.059	3	102	0.060	32	134	1700	0.079	0	134	1700	0.079	0	134	1700	0.079
Wb Thru	435	3400	0.128 *	13	448	0.132 *	88	536	3400	0.158 *	20	556	3400	0.164 *	0	556	3400	0.164 *
Wb Right	164	1700	0.097	5	169	0.100	49	218	1700	0.128	0	218	1700	0.128	0	218	1700	0.128
Yellow Allowance:			0.100 *			0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.708			0.726				0.810				0.817				0.817
LOS			C			C				D				D				D

01:40 PM

**Key conflicting movement as a part of ICU*
1 Counts conducted by.The Traffic Solution
2 Capacity expressed in veh/hour of green
3 As directed by Pasadena DOT staff, the related projects volumes where obtained from the Draft Traffic Impact Study for 680 E. Colorado Boulevard Mixed Use Project prepared by Willdan Associates, June 2007. Note: Year 2007 manual traffic counts were adjusted by a 1.5 percent (1.5%) ambient growth factor to reflect year 2008 existing conditions.

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INTERSECTION CAPACITY UTILIZATION

N-S St: Lake Avenue
E-W St: Colorado Boulevard
Project: Playhouse Plaza Project/1-083727-1
File: ICU-12

Lake Avenue @ Colorado Boulevard
Peak hr: PM
Annual Growth: 1.50%

PROJECT ALTERNATIVE 2

Date: 07/03/2008
Date of Count: 2008
Projection Year: 2010

	2008 EXIST. TRAFFIC			2010 W/AMBIENT GROWTH			2010 W/RELATED PROJECTS				2010 W/PROJECT SITE TRAFFIC				2010 W/PROJECT MITIGATION			
	1		2 V/C	Added	Total	V/C	Added	Total		2 V/C	Added	Total		2 V/C	Volume	Total		2 V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Shift	Volume	Capacity	Ratio
Nb Left	141	1700	0.083 *	4	145	0.085 *	7	152	1700	0.090 *	0	152	1700	0.090 *	0	152	1700	0.090 *
Nb Thru	896	5100	0.195	27	923	0.201	50	973	5100	0.213	9	982	5100	0.214	0	982	5100	0.214
Nb Right	99	0	-	3	102	-	9	111	0	-	0	111	0	-	0	111	0	-
Sb Left	248	1700	0.146	7	255	0.150	23	278	1700	0.164	0	278	1700	0.164	0	278	1700	0.164
Sb Thru	1085	3400	0.319 *	33	1118	0.329 *	74	1192	3400	0.350 *	0	1192	3400	0.350 *	0	1192	3400	0.350 *
Sb Right	254	1700	0.149	8	261	0.154	105	366	1700	0.216	2	368	1700	0.217	0	368	1700	0.217
Eb Left	234	1700	0.138 *	7	241	0.142 *	63	304	1700	0.179 *	9	313	1700	0.184 *	0	313	1700	0.184 *
Eb Thru	696	3400	0.205	21	717	0.211	87	804	3400	0.237	18	822	3400	0.242	-36	786	3400	0.231
Eb Right	178	1700	0.104	5	183	0.108	0	183	1700	0.108	0	183	1700	0.108	0	183	1700	0.108
Wb Left	134	1700	0.079	4	138	0.081	14	152	1700	0.089	0	152	1700	0.089	0	152	1700	0.089
Wb Thru	658	3400	0.193 *	20	677	0.199 *	84	761	3400	0.224 *	4	765	3400	0.225 *	0	765	3400	0.225 *
Wb Right	216	1700	0.127	6	223	0.131	19	242	1700	0.142	0	242	1700	0.142	0	242	1700	0.142
Yellow Allowance:			0.100 *			0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.833			0.855				0.943				0.950				0.950
LOS			D			D				E				E				E

01:40 PM

**Key conflicting movement as a part of ICU*
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INTERSECTION CAPACITY UTILIZATION

N-S St: Lake Avenue
E-W St: Green Street
Project: Playhouse Plaza Project/1-083727-1
File: ICU-13

Lake Avenue @ Green Street
Peak hr: AM
Annual Growth: 1.50%

PROJECT ALTERNATIVE 2

Date: 07/03/2008
Date of Count: 2008
Projection Year: 2010

	2008 EXIST. TRAFFIC			2010 W/AMBIENT GROWTH			2010 W/RELATED PROJECTS [3]				2010 W/PROJECT SITE TRAFFIC				2010 W/PROJECT MITIGATION			
	1		2 V/C	Added	Total	V/C	Added	Total		2 V/C	Added	Total		2 V/C	Volume	Total		2 V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Shift	Volume	Capacity	Ratio
Nb Left	0	0	0.000 *	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *
Nb Thru	720	3400	0.212	22	741	0.218	90	831	3400	0.244	0	831	3400	0.244	0	831	3400	0.244
Nb Right	88	1700	0.052	3	91	0.054	0	91	1700	0.054	0	91	1700	0.054	0	91	1700	0.054
Sb Left	183	1700	0.107	5	188	0.111	0	188	1700	0.111	0	188	1700	0.111	0	188	1700	0.111
Sb Thru	1101	3400	0.324 *	33	1134	0.334 *	81	1215	3400	0.357 *	0	1215	3400	0.357 *	0	1215	3400	0.357 *
Sb Right	0	0	-	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Eb Left	92	1700	0.054	3	95	0.056	6	101	1700	0.059	1	102	1700	0.060	0	102	1700	0.060
Eb Thru	496	5100	0.097 *	15	511	0.100 *	0	511	5100	0.100 *	3	514	5100	0.101 *	20	534	5100	0.105 *
Eb Right	81	1700	0.048	2	84	0.049	10	94	1700	0.055	1	95	1700	0.056	0	95	1700	0.056
Wb Left	0	0	0.000 *	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *
Wb Thru	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Wb Right	0	0	-	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Yellow Allowance:			0.100 *			0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.521			0.534				0.558				0.558				0.562
LOS			A			A				A				A				A

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**Key conflicting movement as a part of ICU*
1 Counts conducted by.The Traffic Solution
2 Capacity expressed in veh/hour of green
3 As directed by Pasadena DOT staff, the related projects volumes where obtained from the Draft Traffic Impact Study for 680 E. Colorado Boulevard Mixed Use Project prepared by Willdan Associates, June 2007. Note: Year 2007 manual traffic counts were adjusted by a 1.5 percent (1.5%) ambient growth factor to reflect year 2008 existing conditions.

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INTERSECTION CAPACITY UTILIZATION

N-S St: Lake Avenue
E-W St: Green Street
Project: Playhouse Plaza Project/1-083727-1
File: ICU-13

Lake Avenue @ Green Street
Peak hr: PM
Annual Growth: 1.50%

PROJECT ALTERNATIVE 2

Date: 07/03/2008
Date of Count: 2008
Projection Year: 2010

	2008 EXIST. TRAFFIC			2010 W/AMBIENT GROWTH			2010 W/RELATED PROJECTS [3]				2010 W/PROJECT SITE TRAFFIC				2010 W/PROJECT MITIGATION			
Movement	1 Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Volume Shift	Total Volume	2 Capacity	V/C Ratio
Nb Left	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Nb Thru	932	3400	0.274 *	28	960	0.282 *	55	1015	3400	0.298 *	0	1015	3400	0.298 *	0	1015	3400	0.298 *
Nb Right	119	1700	0.070	4	122	0.072	9	131	1700	0.077	0	131	1700	0.077	0	131	1700	0.077
Sb Left	151	1700	0.089 *	5	156	0.092 *	14	170	1700	0.100 *	0	170	1700	0.100 *	0	170	1700	0.100 *
Sb Thru	1219	3400	0.359	37	1256	0.369	74	1330	3400	0.391	0	1330	3400	0.391	0	1330	3400	0.391
Sb Right	0	0	-	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Eb Left	244	1700	0.143	7	251	0.148	11	262	1700	0.154	9	271	1700	0.159	0	271	1700	0.159
Eb Thru	840	5100	0.165 *	25	866	0.170 *	4	870	5100	0.171 *	18	888	5100	0.174 *	36	924	5100	0.181 *
Eb Right	191	1700	0.112	6	197	0.116	14	211	1700	0.124	9	220	1700	0.129	0	220	1700	0.129
Wb Left	0	0	0.000 *	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *
Wb Thru	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Wb Right	0	0	-	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Yellow Allowance:			0.100 *			0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.628			0.644				0.669				0.672				0.679
LOS			B			B				B				B				B

01:40 PM

**Key conflicting movement as a part of ICU*
1 Counts conducted by.The Traffic Solution
2 Capacity expressed in veh/hour of green
3 As directed by Pasadena DOT staff, the related projects volumes where obtained from the Draft Traffic Impact Study for 680 E. Colorado Boulevard Mixed Use Project prepared by Willdan Associates, June 2007. Note: Year 2007 manual traffic counts were adjusted by a 1.5 percent (1.5%) ambient growth factor to reflect year 2008 existing conditions.

APPENDIX B-3

PROJECT ALTERNATIVE 3 ICU DATA WORKSHEETS – AM AND PM PEAK HOURS

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INTERSECTION CAPACITY UTILIZATION

N-S St: Los Robles Avenue
E-W St: Colorado Boulevard
Project: Playhouse Plaza Project/1-083727-1
File: ICU-1

Los Robles Avenue @ Colorado Boulevard
Peak hr: AM
Annual Growth: 1.50%

PROJECT ALTERNATIVE 3

Date: 07/03/2008
Date of Count: 2008
Projection Year: 2010

	2008 EXIST. TRAFFIC			2010 W/AMBIENT GROWTH			2010 W/RELATED PROJECTS [3]				2010 W/PROJECT SITE TRAFFIC				2010 W/PROJECT MITIGATION			
	1		2 V/C	Added	Total	V/C	Added	Total		2 V/C	Added	Total		2 V/C	Volume	Total		2 V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Shift	Volume	Capacity	Ratio
Nb Left	104	1700	0.061 *	3	107	0.063 *	1	108	1700	0.063 *	0	108	1700	0.063 *	0	108	1700	0.063 *
Nb Thru	424	3400	0.125	13	437	0.129	12	449	3400	0.132	0	449	3400	0.132	0	449	3400	0.132
Nb Right	62	1700	0.036	2	64	0.038	29	93	1700	0.055	0	93	1700	0.055	0	93	1700	0.055
Sb Left	76	1700	0.045	2	78	0.046	32	110	1700	0.065	0	110	1700	0.065	21	131	1700	0.077
Sb Thru	692	3400	0.204 *	21	713	0.210 *	23	736	3400	0.216 *	10	746	3400	0.219 *	0	746	3400	0.219 *
Sb Right	63	1700	0.037	2	65	0.038	36	101	1700	0.059	0	101	1700	0.059	0	101	1700	0.059
Eb Left	125	1700	0.073 *	4	129	0.076 *	20	149	1700	0.087 *	0	149	1700	0.087 *	0	149	1700	0.087 *
Eb Thru	417	3400	0.123	13	430	0.126	223	653	3400	0.192	10	663	3400	0.195	0	663	3400	0.195
Eb Right	61	1700	0.036	2	63	0.037	2	65	1700	0.038	0	65	1700	0.038	0	65	1700	0.038
Wb Left	50	1700	0.029	1	51	0.030	24	75	1700	0.044	0	75	1700	0.044	0	75	1700	0.044
Wb Thru	471	3400	0.139 *	14	485	0.143 *	192	677	3400	0.199 *	1	678	3400	0.199 *	-43	635	3400	0.187 *
Wb Right	53	1700	0.031	2	54	0.032	30	84	1700	0.050	1	85	1700	0.050	0	85	1700	0.050
Yellow Allowance:			0.100 *			0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.576			0.591				0.666				0.670				0.657
LOS			A			A				B				B				B

01:42 PM

**Key conflicting movement as a part of ICU*
1 Counts conducted by.The Traffic Solution
2 Capacity expressed in veh/hour of green
3 As directed by Pasadena DOT staff, the related projects volumes where obtained from the Draft Traffic Impact Study for 680 E. Colorado Boulevard Mixed Use Project prepared by Willdan Associates, June 2007. Note: Year 2007 manual traffic counts were adjusted by a 1.5 percent (1.5%) ambient growth factor to reflect year 2008 existing conditions.

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INTERSECTION CAPACITY UTILIZATION

N-S St: Los Robles Avenue
E-W St: Colorado Boulevard
Project: Playhouse Plaza Project/1-083727-1
File: ICU-1

Los Robles Avenue @ Colorado Boulevard
Peak hr: PM
Annual Growth: 1.50%

PROJECT ALTERNATIVE 3

Date: 07/03/2008
Date of Count: 2008
Projection Year: 2010

	2008 EXIST. TRAFFIC			2010 W/AMBIENT GROWTH			2010 W/RELATED PROJECTS [3]				2010 W/PROJECT SITE TRAFFIC				2010 W/PROJECT MITIGATION			
	1		2 V/C	Added	Total	V/C	Added	Total		2 V/C	Added	Total		2 V/C	Volume	Total		2 V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Shift	Volume	Capacity	Ratio
Nb Left	119	1700	0.070	4	122	0.072	3	125	1700	0.074	0	125	1700	0.074	0	125	1700	0.074
Nb Thru	734	3400	0.216 *	22	756	0.222 *	23	779	3400	0.229 *	0	779	3400	0.229 *	0	779	3400	0.229 *
Nb Right	97	1700	0.057	3	100	0.059	24	124	1700	0.073	0	124	1700	0.073	0	124	1700	0.073
Sb Left	133	1700	0.078 *	4	137	0.081 *	28	165	1700	0.097 *	0	165	1700	0.097 *	37	202	1700	0.119 *
Sb Thru	558	3400	0.164	17	575	0.169	18	593	3400	0.174	1	594	3400	0.175	0	594	3400	0.175
Sb Right	85	1700	0.050	3	88	0.052	29	117	1700	0.069	0	117	1700	0.069	0	117	1700	0.069
Eb Left	89	1700	0.053	3	92	0.054	38	130	1700	0.076 *	0	130	1700	0.076 *	0	130	1700	0.076
Eb Thru	824	3400	0.242 *	25	849	0.250 *	212	1061	3400	0.312	1	1062	3400	0.312	0	1062	3400	0.312 *
Eb Right	151	1700	0.089	5	156	0.092	2	158	1700	0.093	0	158	1700	0.093	0	158	1700	0.093
Wb Left	81	1700	0.048 *	2	84	0.049 *	40	124	1700	0.073	0	124	1700	0.073	0	124	1700	0.073 *
Wb Thru	787	3400	0.231	24	810	0.238	263	1073	3400	0.316 *	9	1082	3400	0.318 *	-42	1040	3400	0.306
Wb Right	104	1700	0.061	3	107	0.063	35	142	1700	0.083	9	151	1700	0.089	0	151	1700	0.089
Yellow Allowance:			0.100 *			0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.684			0.702				0.818				0.821				0.833
LOS			B			C				D				D				D

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**Key conflicting movement as a part of ICU*
1 Counts conducted by.The Traffic Solution
2 Capacity expressed in veh/hour of green
3 As directed by Pasadena DOT staff, the related projects volumes where obtained from the Draft Traffic Impact Study for 680 E. Colorado Boulevard Mixed Use Project prepared by Willdan Associates, June 2007. Note: Year 2007 manual traffic counts were adjusted by a 1.5 percent (1.5%) ambient growth factor to reflect year 2008 existing conditions.

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INTERSECTION CAPACITY UTILIZATION

N-S St: Los Robles Avenue
E-W St: Green Street
Project: Playhouse Plaza Project/1-083727-1
File: ICU-2

Los Robles Avenue @ Green Street
Peak hr: AM
Annual Growth: 1.50%

PROJECT ALTERNATIVE 3

Date: 07/03/2008
Date of Count: 2008
Projection Year: 2010

	2008 EXIST. TRAFFIC			2010 W/AMBIENT GROWTH			2010 W/RELATED PROJECTS [3]				2010 W/PROJECT SITE TRAFFIC				2010 W/PROJECT MITIGATION			
	1		2 V/C	Added	Total	V/C	Added	Total		2 V/C	Added	Total		2 V/C	Added	Total		2 V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Nb Thru	455	3400	0.153 *	14	468	0.158 *	42	510	3400	0.170 *	0	510	3400	0.173 *	0	510	3400	0.173 *
Nb Right	66	0	-	2	68	-	0	68	0	-	10	78	0	-	0	78	0	-
Sb Left	127	1700	0.075 *	4	131	0.077 *	0	131	1700	0.077 *	10	141	1700	0.083 *	0	141	1700	0.083 *
Sb Thru	701	3400	0.206	21	722	0.212	49	771	3400	0.227	0	771	3400	0.227	0	771	3400	0.227
Sb Right	0	0	-	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Eb Left	126	1700	0.074	4	130	0.076	0	130	1700	0.076	0	130	1700	0.076	0	130	1700	0.076
Eb Thru	445	5100	0.087 *	13	458	0.090 *	7	465	5100	0.091 *	29	494	5100	0.097 *	0	494	5100	0.097 *
Eb Right	85	1700	0.050	3	88	0.052	0	88	1700	0.052	0	88	1700	0.052	0	88	1700	0.052
Wb Left	0	0	0.000 *	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *
Wb Thru	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Wb Right	0	0	-	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Yellow Allowance:			0.100 *			0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.415			0.424				0.438				0.453				0.453
LOS			A			A				A				A				A

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**Key conflicting movement as a part of ICU*
1 Counts conducted by.The Traffic Solution
2 Capacity expressed in veh/hour of green
3 As directed by Pasadena DOT staff, the related projects volumes where obtained from the Draft Traffic Impact Study for 680 E. Colorado Boulevard Mixed Use Project prepared by Willdan Associates, June 2007. Note: Year 2007 manual traffic counts were adjusted by a 1.5 percent (1.5%) ambient growth factor to reflect year 2008 existing conditions.

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INTERSECTION CAPACITY UTILIZATION

N-S St: Los Robles Avenue
E-W St: Green Street
Project: Playhouse Plaza Project/1-083727-1
File: ICU-2

Los Robles Avenue @ Green Street
Peak hr: PM
Annual Growth: 1.50%

PROJECT ALTERNATIVE 3

Date: 07/03/2008
Date of Count: 2008
Projection Year: 2010

	2008 EXIST. TRAFFIC			2010 W/AMBIENT GROWTH			2010 W/RELATED PROJECTS [3]				2010 W/PROJECT SITE TRAFFIC				2010 W/PROJECT MITIGATION			
Movement	1 Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio
Nb Left	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Nb Thru	703	3400	0.231 *	21	724	0.238 *	50	774	3400	0.253 *	0	774	3400	0.253 *	0	774	3400	0.253 *
Nb Right	82	0	-	2	85	-	0	85	0	-	1	86	0	-	0	86	0	-
Sb Left	106	1700	0.062 *	3	109	0.064 *	0	109	1700	0.064 *	1	110	1700	0.065 *	0	110	1700	0.065 *
Sb Thru	685	3400	0.202	21	706	0.208	60	766	3400	0.225	0	766	3400	0.225	0	766	3400	0.225
Sb Right	0	0	-	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Eb Left	269	1700	0.158	8	277	0.163	0	277	1700	0.163	0	277	1700	0.163	0	277	1700	0.163
Eb Thru	1032	5100	0.202 *	31	1063	0.208 *	12	1075	5100	0.211 *	5	1080	5100	0.212 *	0	1080	5100	0.212 *
Eb Right	147	1700	0.087	4	152	0.089	0	152	1700	0.089	0	152	1700	0.089	0	152	1700	0.089
Wb Left	0	0	0.000 *	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *
Wb Thru	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Wb Right	0	0	-	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Yellow Allowance:			0.100 *			0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.596			0.610				0.627				0.629				0.629
LOS			A			B				B				B				B

01:43 PM

* *Key conflicting movement as a part of ICU*
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INTERSECTION CAPACITY UTILIZATION

N-S St: El Molino Avenue
E-W St: Union Street
Project: Playhouse Plaza Project/1-083727-1
File: ICU-3

El Molino Avenue @ Union Street
Peak hr: AM
Annual Growth: 1.50%

PROJECT ALTERNATIVE 3

Date: 07/03/2008
Date of Count: 2008
Projection Year: 2010

	2008 EXIST. TRAFFIC			2010 W/AMBIENT GROWTH			2010 W/RELATED PROJECTS [3]				2010 W/PROJECT SITE TRAFFIC				2010 W/PROJECT MITIGATION			
	1	2	V/C	Added	Total	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Volume	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Shift	Volume	Capacity	Ratio
Nb Left	67	0	0.039 *	2	69	0.041 *	10	79	0	0.046 *	4	83	0	0.049 *	43	126	1700	0.074 *
Nb Thru	176	1700	0.143	5	181	0.147	7	188	1700	0.157	12	200	1700	0.167	0	200	1700	0.118
Nb Right	0	0	-	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Sb Left	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Sb Thru	323	1700	0.222 *	10	333	0.228 *	13	346	1700	0.236 *	49	395	1700	0.265 *	-21	374	1700	0.253 *
Sb Right	54	0	-	2	56	-	0	56	0	-	0	56	0	-	0	56	0	-
Eb Left	0	0	0.000 *	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *
Eb Thru	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Eb Right	0	0	-	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Wb Left	32	0	0.006	1	33	0.006	30	63	0	0.012	15	78	0	0.015	0	78	0	0.015
Wb Thru	716	5100	0.152 *	21	737	0.156 *	0	737	5100	0.162 *	0	737	5100	0.165 *	0	737	5100	0.165 *
Wb Right	25	0	-	1	26	-	0	26	0	-	0	26	0	-	0	26	0	-
Yellow Allowance:			0.100 *			0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.513			0.525				0.545				0.579				0.592
LOS			A			A				A				A				A

01:43 PM

**Key conflicting movement as a part of ICU*
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2 Capacity expressed in veh/hour of green
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INTERSECTION CAPACITY UTILIZATION

N-S St: El Molino Avenue
E-W St: Union Street
Project: Playhouse Plaza Project/1-083727-1
File: ICU-3

El Molino Avenue @ Union Street
Peak hr: PM
Annual Growth: 1.50%

PROJECT ALTERNATIVE 3

Date: 07/03/2008
Date of Count: 2008
Projection Year: 2010

	2008 EXIST. TRAFFIC			2010 W/AMBIENT GROWTH			2010 W/RELATED PROJECTS [3]				2010 W/PROJECT SITE TRAFFIC				2010 W/PROJECT MITIGATION			
	1		2 V/C	Added	Total	V/C	Added	Total		2 V/C	Added	Total		2 V/C	Volume	Total		2 V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Shift	Volume	Capacity	Ratio
Nb Left	52	0	0.031 *	2	54	0.032 *	50	104	0	0.061 *	31	135	0	0.079 *	42	177	1700	0.104 *
Nb Thru	217	1700	0.158	7	224	0.163	30	254	1700	0.210	39	293	1700	0.251	0	293	1700	0.172
Nb Right	0	0	-	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Sb Left	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Sb Thru	252	1700	0.201 *	8	260	0.207 *	6	266	1700	0.210 *	9	275	1700	0.215 *	-37	238	1700	0.194 *
Sb Right	89	0	-	3	92	-	0	92	0	-	0	92	0	-	0	92	0	-
Eb Left	0	0	0.000 *	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *
Eb Thru	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Eb Right	0	0	-	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Wb Left	44	0	0.009	1	45	0.009	20	65	0	0.013	2	67	0	0.013	0	67	0	0.013
Wb Thru	827	5100	0.183 *	25	852	0.188 *	0	852	5100	0.192 *	0	852	5100	0.193 *	0	852	5100	0.193 *
Wb Right	61	0	-	2	63	-	0	63	0	-	0	63	0	-	0	63	0	-
Yellow Allowance:			0.100 *			0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.514			0.526				0.563				0.587				0.590
LOS			A			A				A				A				A

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**Key conflicting movement as a part of ICU*
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2 Capacity expressed in veh/hour of green
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INTERSECTION CAPACITY UTILIZATION

N-S St: El Molino Avenue
E-W St: Colorado Boulevard
Project: Playhouse Plaza Project/1-083727-1
File: ICU-4

El Molino Avenue @ Colorado Boulevard
Peak hr: AM
Annual Growth: 1.50%

PROJECT ALTERNATIVE 3

Date: 07/03/2008
Date of Count: 2008
Projection Year: 2010

	2008 EXIST. TRAFFIC			2010 W/AMBIENT GROWTH			2010 W/RELATED PROJECTS [3]				2010 W/PROJECT SITE TRAFFIC				2010 W/PROJECT MITIGATION			
Movement	1 Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Volume Shift	Total Volume	2 Capacity	V/C Ratio
Nb Left	25	0	0.015 *	1	26	0.015 *	15	41	0	0.024 *	2	43	0	0.025 *	-43	0	0	0.000 *
Nb Thru	142	1700	0.114	4	146	0.117	17	163	1700	0.136	8	171	1700	0.144	43	214	1700	0.144
Nb Right	26	0	-	1	27	-	0	27	0	-	3	30	0	-	0	30	0	-
Sb Left	28	0	0.017	1	29	0.017	12	41	0	0.024	0	41	0	0.024	-41	0	0	0.000
Sb Thru	170	1700	0.132 *	5	175	0.136 *	37	212	1700	0.176 *	57	269	1700	0.209 *	20	289	1700	0.197 *
Sb Right	26	0	-	1	27	-	19	46	0	-	0	46	0	-	0	46	0	-
Eb Left	27	1700	0.016 *	1	28	0.017 *	0	28	1700	0.017 *	0	28	1700	0.017	0	28	1700	0.017
Eb Thru	487	3400	0.143	15	502	0.148	160	662	3400	0.195	0	662	3400	0.195 *	21	683	3400	0.201 *
Eb Right	15	1700	0.009	0	16	0.009	13	29	1700	0.017	8	37	1700	0.022	0	37	1700	0.022
Wb Left	38	1700	0.022	1	39	0.023	0	39	1700	0.023	24	63	1700	0.037 *	0	63	1700	0.037 *
Wb Thru	545	3400	0.160 *	16	561	0.165 *	156	717	3400	0.211 *	3	720	3400	0.212	0	720	3400	0.212
Wb Right	37	1700	0.021	1	38	0.022	0	38	1700	0.022	0	38	1700	0.022	0	38	1700	0.022
Yellow Allowance:			0.100 *			0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.423			0.433				0.528				0.566				0.535
LOS			A			A				A				A				A

01:43 PM

**Key conflicting movement as a part of ICU*
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2 Capacity expressed in veh/hour of green
3 As directed by Pasadena DOT staff, the related projects volumes where obtained from the Draft Traffic Impact Study for 680 E. Colorado Boulevard Mixed Use Project prepared by Willdan Associates, June 2007. Note: Year 2007 manual traffic counts were adjusted by a 1.5 percent (1.5%) ambient growth factor to reflect year 2008 existing conditions.

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INTERSECTION CAPACITY UTILIZATION

N-S St: El Molino Avenue
E-W St: Colorado Boulevard
Project: Playhouse Plaza Project/1-083727-1
File: ICU-4

El Molino Avenue @ Colorado Boulevard
Peak hr: PM
Annual Growth: 1.50%

PROJECT ALTERNATIVE 3

Date: 07/03/2008
Date of Count: 2008
Projection Year: 2010

	2008 EXIST. TRAFFIC			2010 W/AMBIENT GROWTH			2010 W/RELATED PROJECTS [3]				2010 W/PROJECT SITE TRAFFIC				2010 W/PROJECT MITIGATION			
Movement	1 Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Volume Shift	Total Volume	2 Capacity	V/C Ratio
Nb Left	12	0	0.007	0	13	0.007	14	27	0	0.016	15	42	0	0.024	-42	0	0	0.000
Nb Thru	232	1700	0.169 *	7	239	0.174 *	38	277	1700	0.205 *	52	329	1700	0.257 *	42	371	1700	0.257 *
Nb Right	43	0	-	1	44	-	0	44	0	-	22	66	0	-	0	66	0	-
Sb Left	67	0	0.039 *	2	69	0.041 *	4	73	0	0.043 *	0	73	0	0.043 *	-73	0	0	0.000 *
Sb Thru	222	1700	0.187	7	229	0.192	27	256	1700	0.214	10	266	1700	0.220	36	302	1700	0.198
Sb Right	28	0	-	1	29	-	5	34	0	-	0	34	0	-	0	34	0	-
Eb Left	60	1700	0.035	2	62	0.036	42	104	1700	0.061 *	0	104	1700	0.061 *	0	104	1700	0.061 *
Eb Thru	1022	3400	0.301 *	31	1053	0.310 *	144	1197	3400	0.352	3	1200	3400	0.353	37	1237	3400	0.364
Eb Right	28	1700	0.017	1	29	0.017	17	46	1700	0.027	1	47	1700	0.028	0	47	1700	0.028
Wb Left	47	1700	0.027 *	1	48	0.028 *	0	48	1700	0.028	4	52	1700	0.031	0	52	1700	0.031
Wb Thru	971	3400	0.286	29	1000	0.294	192	1192	3400	0.351 *	1	1193	3400	0.351 *	0	1193	3400	0.351 *
Wb Right	42	1700	0.024	1	43	0.025	15	58	1700	0.034	0	58	1700	0.034	0	58	1700	0.034
Yellow Allowance:			0.100 *			0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.636			0.653				0.759				0.812				0.769
LOS			B			B				C				D				C

01:43 PM

**Key conflicting movement as a part of ICU*
1 Counts conducted by.The Traffic Solution
2 Capacity expressed in veh/hour of green
3 As directed by Pasadena DOT staff, the related projects volumes where obtained from the Draft Traffic Impact Study for 680 E. Colorado Boulevard Mixed Use Project prepared by Willdan Associates, June 2007. Note: Year 2007 manual traffic counts were adjusted by a 1.5 percent (1.5%) ambient growth factor to reflect year 2008 existing conditions.

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INTERSECTION CAPACITY UTILIZATION

N-S St: El Molino Avenue
E-W St: Green Street
Project: Playhouse Plaza Project/1-083727-1
File: ICU-5

El Molino Avenue @ Green Street
Peak hr: AM
Annual Growth: 1.50%

PROJECT ALTERNATIVE 3

Date: 07/03/2008
Date of Count: 2008
Projection Year: 2010

	2008 EXIST. TRAFFIC			2010 W/AMBIENT GROWTH			2010 W/RELATED PROJECTS [3]				2010 W/PROJECT SITE TRAFFIC				2010 W/PROJECT MITIGATION			
	1	2	V/C	Added	Total	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Volume	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Shift	Volume	Capacity	Ratio
Nb Left	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Nb Thru	166	1700	0.137 *	5	171	0.141 *	32	203	1700	0.160 *	33	236	1700	0.179 *	0	236	1700	0.179 *
Nb Right	66	0	-	2	68	-	0	68	0	-	0	68	0	-	0	68	0	-
Sb Left	73	0	0.043 *	2	75	0.044 *	0	75	0	0.044 *	6	81	0	0.048 *	20	101	1700	0.060 *
Sb Thru	151	1700	0.132	5	156	0.136	50	206	1700	0.165	3	209	1700	0.171	0	209	1700	0.123
Sb Right	0	0	-	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Eb Left	29	0	0.006	1	30	0.006	0	30	0	0.006	41	71	0	0.014	0	71	0	0.014
Eb Thru	550	5100	0.120 *	17	567	0.124 *	7	574	5100	0.125 *	0	574	5100	0.133 *	0	574	5100	0.133 *
Eb Right	32	0	-	1	33	-	0	33	0	-	0	33	0	-	0	33	0	-
Wb Left	0	0	0.000 *	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *
Wb Thru	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Wb Right	0	0	-	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Yellow Allowance:			0.100 *			0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.400			0.409				0.429				0.460				0.472
LOS			A			A				A				A				A

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**Key conflicting movement as a part of ICU*
1 Counts conducted by.The Traffic Solution
2 Capacity expressed in veh/hour of green
3 As directed by Pasadena DOT staff, the related projects volumes where obtained from the Draft Traffic Impact Study for 680 E. Colorado Boulevard Mixed Use Project prepared by Willdan Associates, June 2007. Note: Year 2007 manual traffic counts were adjusted by a 1.5 percent (1.5%) ambient growth factor to reflect year 2008 existing conditions.

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INTERSECTION CAPACITY UTILIZATION

N-S St: El Molino Avenue
E-W St: Green Street
Project: Playhouse Plaza Project/1-083727-1
File: ICU-5

El Molino Avenue @ Green Street
Peak hr: PM
Annual Growth: 1.50%

PROJECT ALTERNATIVE 3

Date: 07/03/2008
Date of Count: 2008
Projection Year: 2010

	2008 EXIST. TRAFFIC			2010 W/AMBIENT GROWTH			2010 W/RELATED PROJECTS [3]				2010 W/PROJECT SITE TRAFFIC				2010 W/PROJECT MITIGATION			
	1	2	V/C	Added	Total	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Volume	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Shift	Volume	Capacity	Ratio
Nb Left	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000 *	0	0	0	0.000
Nb Thru	221	1700	0.159 *	7	228	0.164 *	52	280	1700	0.195 *	6	286	1700	0.198	0	286	1700	0.198 *
Nb Right	50	0	-	1	51	-	0	51	0	-	0	51	0	-	0	51	0	-
Sb Left	65	0	0.038 *	2	67	0.039 *	0	67	0	0.039 *	37	104	0	0.061	36	140	1700	0.082 *
Sb Thru	267	1700	0.195	8	275	0.201	44	319	1700	0.227	22	341	1700	0.262 *	0	341	1700	0.201
Sb Right	0	0	-	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Eb Left	61	0	0.012	2	63	0.012	0	63	0	0.012	7	70	0	0.014	0	70	0	0.014
Eb Thru	1111	5100	0.244 *	33	1145	0.252 *	12	1157	5100	0.254 *	2	1159	5100	0.256 *	0	1159	5100	0.256 *
Eb Right	74	0	-	2	76	-	0	76	0	-	0	76	0	-	0	76	0	-
Wb Left	0	0	0.000 *	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *
Wb Thru	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Wb Right	0	0	-	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Yellow Allowance:			0.100 *			0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.542			0.555				0.588				0.618				0.636
LOS			A			A				A				B				B

01:43 PM

**Key conflicting movement as a part of ICU*
1 Counts conducted by.The Traffic Solution
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INTERSECTION CAPACITY UTILIZATION

N-S St: El Molino Avenue
E-W St: Del Mar Boulevard
Project: Playhouse Plaza Project/1-083727-1
File: ICU-6

El Molino Avenue @ Del Mar Boulevard
Peak hr: AM
Annual Growth: 1.50%

PROJECT ALTERNATIVE 3

Date: 07/03/2008
Date of Count: 2008
Projection Year: 2010

	2008 EXIST. TRAFFIC			2010 W/AMBIENT GROWTH			2010 W/RELATED PROJECTS [3]				2010 W/PROJECT SITE TRAFFIC				2010 W/PROJECT MITIGATION			
	1	2	V/C	Added	Total	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	38	0	0.022	1	39	0.023	0	39	0	0.023	0	39	0	0.023	0	39	0	0.023
Nb Thru	156	1700	0.140 *	5	161	0.144 *	32	193	1700	0.163 *	0	193	1700	0.163 *	0	193	1700	0.163 *
Nb Right	44	0	-	1	45	-	0	45	0	-	0	45	0	-	0	45	0	-
Sb Left	18	0	0.011 *	1	19	0.011 *	0	19	0	0.011 *	1	20	0	0.012 *	0	20	0	0.012 *
Sb Thru	67	1700	0.070	2	69	0.073	50	119	1700	0.102	0	119	1700	0.103	0	119	1700	0.103
Sb Right	35	0	-	1	36	-	0	36	0	-	1	37	0	-	0	37	0	-
Eb Left	28	1700	0.017 *	1	29	0.017 *	0	29	1700	0.017 *	8	37	1700	0.022 *	0	37	1700	0.022 *
Eb Thru	496	3400	0.152	15	511	0.157	33	544	3400	0.167	0	544	3400	0.167	0	544	3400	0.167
Eb Right	21	0	-	1	22	-	0	22	0	-	0	22	0	-	0	22	0	-
Wb Left	22	1700	0.013	1	23	0.014	0	23	1700	0.014	0	23	1700	0.014	0	23	1700	0.014
Wb Thru	606	3400	0.186 *	18	624	0.191 *	49	673	3400	0.206 *	3	676	3400	0.211 *	0	676	3400	0.211 *
Wb Right	25	0	-	1	26	-	0	26	0	-	16	42	0	-	0	42	0	-
Yellow Allowance:			0.100 *			0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.453			0.463				0.497				0.508				0.508
LOS			A			A				A				A				A

01:43 PM

**Key conflicting movement as a part of ICU*
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2 Capacity expressed in veh/hour of green
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INTERSECTION CAPACITY UTILIZATION

N-S St: El Molino Avenue
E-W St: Del Mar Boulevard
Project: Playhouse Plaza Project/1-083727-1
File: ICU-6

El Molino Avenue @ Del Mar Boulevard
Peak hr: PM
Annual Growth: 1.50%

PROJECT ALTERNATIVE 3

Date: 07/03/2008
Date of Count: 2008
Projection Year: 2010

	2008 EXIST. TRAFFIC			2010 W/AMBIENT GROWTH			2010 W/RELATED PROJECTS [3]				2010 W/PROJECT SITE TRAFFIC				2010 W/PROJECT MITIGATION			
	1	2	V/C	Added	Total	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	24	0	0.014 *	1	25	0.015 *	0	25	0	0.015 *	0	25	0	0.015 *	0	25	0	0.015 *
Nb Thru	179	1700	0.132	5	184	0.136	52	236	1700	0.166	0	236	1700	0.166	0	236	1700	0.166
Nb Right	21	0	-	1	22	-	0	22	0	-	0	22	0	-	0	22	0	-
Sb Left	44	0	0.026	1	45	0.026	0	45	0	0.026	7	52	0	0.031	0	52	0	0.031
Sb Thru	189	1700	0.161 *	6	194	0.166 *	44	238	1700	0.192 *	0	238	1700	0.200 *	0	238	1700	0.200 *
Sb Right	42	0	-	1	43	-	0	43	0	-	7	50	0	-	0	50	0	-
Eb Left	28	1700	0.017	1	29	0.017	0	29	1700	0.017	1	30	1700	0.018	0	30	1700	0.018
Eb Thru	667	3400	0.208 *	20	687	0.214 *	32	719	3400	0.224 *	3	722	3400	0.225 *	0	722	3400	0.225 *
Eb Right	41	0	-	1	42	-	0	42	0	-	0	42	0	-	0	42	0	-
Wb Left	46	1700	0.027 *	1	47	0.028 *	0	47	1700	0.028 *	0	47	1700	0.028 *	0	47	1700	0.028 *
Wb Thru	697	3400	0.218	21	718	0.224	16	734	3400	0.229	1	735	3400	0.230	0	735	3400	0.230
Wb Right	44	0	-	1	45	-	0	45	0	-	3	48	0	-	0	48	0	-
Yellow Allowance:			0.100 *			0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.510			0.523				0.558				0.567				0.567
LOS			A			A				A				A				A

01:43 PM

**Key conflicting movement as a part of ICU*
1 Counts conducted by.The Traffic Solution
2 Capacity expressed in veh/hour of green
3 As directed by Pasadena DOT staff, the related projects volumes where obtained from the Draft Traffic Impact Study for 680 E. Colorado Boulevard Mixed Use Project prepared by Willdan Associates, June 2007. Note: Year 2007 manual traffic counts were adjusted by a 1.5 percent (1.5%) ambient growth factor to reflect year 2008 existing conditions.

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INTERSECTION CAPACITY UTILIZATION

N-S St: Oak Knoll Avenue
E-W St: Colorado Boulevard
Project: Playhouse Plaza Project/1-083727-1
File: ICU-7

Oak Knoll Avenue @ Colorado Boulevard
Peak hr: AM
Annual Growth: 1.50%

PROJECT ALTERNATIVE 3

Date: 07/03/2008
Date of Count: 2008
Projection Year: 2010

	2008 EXIST. TRAFFIC			2010 W/AMBIENT GROWTH			2010 W/RELATED PROJECTS [3]				2010 W/PROJECT SITE TRAFFIC				2010 W/PROJECT MITIGATION			
	1	2	V/C	Added	Total	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Volume	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Shift	Volume	Capacity	Ratio
Nb Left	13	0	0.008 *	0	14	0.008 *	0	14	0	0.008 *	0	14	0	0.008 *	0	14	0	0.008 *
Nb Thru	33	1700	0.044	1	34	0.046	0	34	1700	0.046	0	34	1700	0.046	0	34	1700	0.046
Nb Right	28	0	-	1	29	-	0	29	0	-	0	29	0	-	0	29	0	-
Sb Left	43	0	0.025	1	44	0.026	0	44	0	0.026	0	44	0	0.026	0	44	0	0.026
Sb Thru	53	1700	0.072 *	2	54	0.074 *	0	54	1700	0.074 *	0	54	1700	0.074 *	0	54	1700	0.074 *
Sb Right	26	0	-	1	27	-	0	27	0	-	0	27	0	-	0	27	0	-
Eb Left	41	1700	0.024 *	1	42	0.025 *	0	42	1700	0.025	0	42	1700	0.025 *	0	42	1700	0.025 *
Eb Thru	450	3400	0.132	13	463	0.136	163	626	3400	0.184 *	3	629	3400	0.185	-20	609	3400	0.179
Eb Right	25	1700	0.015	1	26	0.015	9	35	1700	0.021	0	35	1700	0.021	0	35	1700	0.021
Wb Left	72	1700	0.042	2	74	0.044	16	90	1700	0.053 *	0	90	1700	0.053	0	90	1700	0.053
Wb Thru	540	3400	0.159 *	16	556	0.164 *	156	712	3400	0.209	27	739	3400	0.217 *	0	739	3400	0.217 *
Wb Right	23	1700	0.014	1	24	0.014	0	24	1700	0.014	0	24	1700	0.014	0	24	1700	0.014
Yellow Allowance:			0.100 *			0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.362			0.370				0.419				0.424				0.424
LOS			A			A				A				A				A

01:42 PM

**Key conflicting movement as a part of ICU*
1 Counts conducted by.The Traffic Solution
2 Capacity expressed in veh/hour of green
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INTERSECTION CAPACITY UTILIZATION

N-S St: Oak Knoll Avenue
E-W St: Colorado Boulevard
Project: Playhouse Plaza Project/1-083727-1
File: ICU-7

Oak Knoll Avenue @ Colorado Boulevard
Peak hr: PM
Annual Growth: 1.50%

PROJECT ALTERNATIVE 3

Date: 07/03/2008
Date of Count: 2008
Projection Year: 2010

	2008 EXIST. TRAFFIC			2010 W/AMBIENT GROWTH			2010 W/RELATED PROJECTS [3]				2010 W/PROJECT SITE TRAFFIC				2010 W/PROJECT MITIGATION			
Movement	1 Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Volume Shift	Total Volume	2 Capacity	V/C Ratio
Nb Left	32	0	0.019 *	1	33	0.020 *	0	33	0	0.020 *	0	33	0	0.020 *	0	33	0	0.020 *
Nb Thru	62	1700	0.093	2	64	0.096	0	64	1700	0.096	0	64	1700	0.096	0	64	1700	0.096
Nb Right	64	0	-	2	66	-	0	66	0	-	0	66	0	-	0	66	0	-
Sb Left	83	0	0.049	2	86	0.050	0	86	0	0.050	0	86	0	0.050	0	86	0	0.050
Sb Thru	115	1700	0.155 *	3	118	0.159 *	0	118	1700	0.159 *	0	118	1700	0.159 *	0	118	1700	0.159 *
Sb Right	65	0	-	2	67	-	0	67	0	-	0	67	0	-	0	67	0	-
Eb Left	174	1700	0.102 *	5	179	0.105 *	0	179	1700	0.105 *	0	179	1700	0.105 *	0	179	1700	0.105 *
Eb Thru	903	3400	0.266	27	930	0.274	142	1072	3400	0.315	25	1097	3400	0.323	-36	1061	3400	0.312
Eb Right	50	1700	0.029	1	51	0.030	6	57	1700	0.034	0	57	1700	0.034	0	57	1700	0.034
Wb Left	65	1700	0.038	2	67	0.039	11	78	1700	0.046	0	78	1700	0.046	0	78	1700	0.046
Wb Thru	915	3400	0.269 *	27	942	0.277 *	207	1149	3400	0.338 *	5	1154	3400	0.339 *	0	1154	3400	0.339 *
Wb Right	53	1700	0.031	2	54	0.032	0	54	1700	0.032	0	54	1700	0.032	0	54	1700	0.032
Yellow Allowance:			0.100 *			0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.645			0.661				0.722				0.724				0.724
LOS			B			B				C				C				C

01:42 PM

**Key conflicting movement as a part of ICU*
1 Counts conducted by.The Traffic Solution
2 Capacity expressed in veh/hour of green
3 As directed by Pasadena DOT staff, the related projects volumes where obtained from the Draft Traffic Impact Study for 680 E. Colorado Boulevard Mixed Use Project prepared by Willdan Associates, June 2007. Note: Year 2007 manual traffic counts were adjusted by a 1.5 percent (1.5%) ambient growth factor to reflect year 2008 existing conditions.

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INTERSECTION CAPACITY UTILIZATION

N-S St: Oak Knoll Avenue
E-W St: Green Street
Project: Playhouse Plaza Project/1-083727-1
File: ICU-8

Oak Knoll Avenue @ Green Street
Peak hr: AM
Annual Growth: 1.50%

PROJECT ALTERNATIVE 3

Date: 07/03/2008
Date of Count: 2008
Projection Year: 2010

	2008 EXIST. TRAFFIC			2010 W/AMBIENT GROWTH			2010 W/RELATED PROJECTS [3]				2010 W/PROJECT SITE TRAFFIC				2010 W/PROJECT MITIGATION			
	1	2	V/C	Added	Total	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Volume	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Shift	Volume	Capacity	Ratio
Nb Left	0	0	0.000 *	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *
Nb Thru	51	1700	0.044	2	52	0.045	0	52	1700	0.050	0	52	1700	0.050	0	52	1700	0.050
Nb Right	23	0	-	1	24	-	8	32	0	-	0	32	0	-	0	32	0	-
Sb Left	83	0	0.049	2	86	0.050	19	105	0	0.062	0	105	0	0.062	0	105	0	0.062
Sb Thru	78	1700	0.095 *	2	80	0.098 *	6	86	1700	0.112 *	0	86	1700	0.112 *	0	86	1700	0.112 *
Sb Right	0	0	-	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Eb Left	21	0	0.004	1	22	0.004	0	22	0	0.004	0	22	0	0.004	0	22	0	0.004
Eb Thru	592	5100	0.126 *	18	609	0.130 *	7	616	5100	0.132 *	6	622	5100	0.133 *	20	642	5100	0.137 *
Eb Right	31	0	-	1	32	-	0	32	0	-	0	32	0	-	0	32	0	-
Wb Left	0	0	0.000 *	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *
Wb Thru	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Wb Right	0	0	-	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Yellow Allowance:			0.100 *			0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.321			0.328				0.344				0.345				0.349
LOS			A			A				A				A				A

01:42 PM

**Key conflicting movement as a part of ICU*
1 Counts conducted by.The Traffic Solution
2 Capacity expressed in veh/hour of green
3 As directed by Pasadena DOT staff, the related projects volumes where obtained from the Draft Traffic Impact Study for 680 E. Colorado Boulevard Mixed Use Project prepared by Willdan Associates, June 2007. Note: Year 2007 manual traffic counts were adjusted by a 1.5 percent (1.5%) ambient growth factor to reflect year 2008 existing conditions.

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INTERSECTION CAPACITY UTILIZATION

N-S St: Oak Knoll Avenue
E-W St: Green Street
Project: Playhouse Plaza Project/1-083727-1
File: ICU-8

Oak Knoll Avenue @ Green Street
Peak hr: PM
Annual Growth: 1.50%

PROJECT ALTERNATIVE 3

Date: 07/03/2008
Date of Count: 2008
Projection Year: 2010

	2008 EXIST. TRAFFIC			2010 W/AMBIENT GROWTH			2010 W/RELATED PROJECTS [3]				2010 W/PROJECT SITE TRAFFIC				2010 W/PROJECT MITIGATION			
Movement	1 Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Volume Shift	Total Volume	2 Capacity	V/C Ratio
Nb Left	0	0	0.000 *	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *
Nb Thru	83	1700	0.076	2	86	0.078	0	86	1700	0.081	0	86	1700	0.081	0	86	1700	0.081
Nb Right	46	0	-	1	47	-	5	52	0	-	0	52	0	-	0	52	0	-
Sb Left	57	0	0.033	2	59	0.034	13	72	0	0.042	0	72	0	0.042	0	72	0	0.042
Sb Thru	160	1700	0.128 *	5	165	0.132 *	4	169	1700	0.142 *	0	169	1700	0.142 *	0	169	1700	0.142 *
Sb Right	0	0	-	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Eb Left	61	0	0.012	2	63	0.012	0	63	0	0.012	0	63	0	0.012	0	63	0	0.012
Eb Thru	1101	5100	0.237 *	33	1134	0.244 *	12	1146	5100	0.247 *	39	1185	5100	0.254 *	36	1221	5100	0.261 *
Eb Right	48	0	-	1	49	-	0	49	0	-	0	49	0	-	0	49	0	-
Wb Left	0	0	0.000 *	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *
Wb Thru	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Wb Right	0	0	-	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Yellow Allowance:			0.100 *			0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.465			0.476				0.488				0.496				0.503
LOS			A			A				A				A				A

01:42 PM

* *Key conflicting movement as a part of ICU*
1 Counts conducted by.The Traffic Solution
2 Capacity expressed in veh/hour of green
3 As directed by Pasadena DOT staff, the related projects volumes where obtained from the Draft Traffic Impact Study for 680 E. Colorado Boulevard Mixed Use Project prepared by Willdan Associates, June 2007. Note: Year 2007 manual traffic counts were adjusted by a 1.5 percent (1.5%) ambient growth factor to reflect year 2008 existing conditions.

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INTERSECTION CAPACITY UTILIZATION

N-S St: Lake Avenue
E-W St: I-210 Freeway WB Ramps-Maple Street
Project: Playhouse Plaza Project/1-083727-1
File: ICU-9

Lake Avenue @ I-210 Freeway WB Ramps-Maple Street
Peak hr: AM
Annual Growth: 1.50%

PROJECT ALTERNATIVE 3

Date: 07/03/2008
Date of Count: 2008
Projection Year: 2010

	2008 EXIST. TRAFFIC			2010 W/AMBIENT GROWTH			2010 W/RELATED PROJECTS [3]				2010 W/PROJECT SITE TRAFFIC				2010 W/PROJECT MITIGATION			
	1		2 V/C	Added	Total	V/C	Added	Total		2 V/C	Added	Total		2 V/C	Added	Total		2 V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	438	3060	0.143 *	13	452	0.148 *	63	515	3060	0.168 *	0	515	3060	0.168 *	0	515	3060	0.168 *
Nb Thru	751	3400	0.221	23	774	0.228	9	783	3400	0.230	1	784	3400	0.230	0	784	3400	0.230
Nb Right	0	0	-	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Sb Left	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Sb Thru	841	3400	0.247	25	867	0.255	5	872	3400	0.256	10	882	3400	0.259	0	882	3400	0.259
Sb Right	578	1700	0.340 *	17	595	0.350 *	0	595	1700	0.350 *	0	595	1700	0.350 *	0	595	1700	0.350 *
Eb Left	0	0	0.000 *	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *
Eb Thru	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Eb Right	0	0	-	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Wb Left	527	0	0.086	16	543	0.089	81	624	0	0.102	11	635	0	0.104	0	635	0	0.104
Wb Thru	881	6120	0.261 *	26	907	0.268 *	0	907	6120	0.282 *	18	925	6120	0.286 *	0	925	6120	0.286 *
Wb Right	187	0	-	6	192	-	0	192	0	-	0	192	0	-	0	192	0	-
Yellow Allowance:			0.100 *			0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.844			0.866				0.900				0.904				0.904
LOS			D			D				D				E				E

01:42 PM

**Key conflicting movement as a part of ICU*
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INTERSECTION CAPACITY UTILIZATION

N-S St: Lake Avenue
E-W St: I-210 Freeway WB Ramps-Maple Street
Project: Playhouse Plaza Project/1-083727-1
File: ICU-9

Lake Avenue @ I-210 Freeway WB Ramps-Maple Street
Peak hr: PM
Annual Growth: 1.50%

PROJECT ALTERNATIVE 3

Date: 07/03/2008
Date of Count: 2008
Projection Year: 2010

	2008 EXIST. TRAFFIC			2010 W/AMBIENT GROWTH			2010 W/RELATED PROJECTS [3]				2010 W/PROJECT SITE TRAFFIC				2010 W/PROJECT MITIGATION			
	1	2	V/C	Added	Total	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	709	3060	0.232 *	21	731	0.239 *	86	817	3060	0.267 *	0	817	3060	0.267 *	0	817	3060	0.267 *
Nb Thru	1278	3400	0.376	38	1316	0.387	14	1330	3400	0.391	9	1339	3400	0.394	0	1339	3400	0.394
Nb Right	0	0	-	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Sb Left	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Sb Thru	731	3400	0.215	22	753	0.221	5	758	3400	0.223	1	759	3400	0.223	0	759	3400	0.223
Sb Right	474	1700	0.279 *	14	488	0.287 *	0	488	1700	0.287 *	0	488	1700	0.287 *	0	488	1700	0.287 *
Eb Left	0	0	0.000 *	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *
Eb Thru	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Eb Right	0	0	-	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Wb Left	481	0	0.079	14	496	0.081	86	582	0	0.095	2	584	0	0.095	0	584	0	0.095
Wb Thru	780	6120	0.253 *	23	803	0.260 *	0	803	6120	0.274 *	3	806	6120	0.275 *	0	806	6120	0.275 *
Wb Right	285	0	-	9	294	-	0	294	0	-	0	294	0	-	0	294	0	-
Yellow Allowance:			0.100 *			0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.863			0.886				0.928				0.929				0.929
LOS			D			D				E				E				E

01:42 PM

**Key conflicting movement as a part of ICU*
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2 Capacity expressed in veh/hour of green
3 As directed by Pasadena DOT staff, the related projects volumes where obtained from the Draft Traffic Impact Study for 680 E. Colorado Boulevard Mixed Use Project prepared by Willdan Associates, June 2007. Note: Year 2007 manual traffic counts were adjusted by a 1.5 percent (1.5%) ambient growth factor to reflect year 2008 existing conditions.

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INTERSECTION CAPACITY UTILIZATION

N-S St: Lake Avenue
E-W St: I-210 Freeway EB Ramps-Corson Street
Project: Playhouse Plaza Project/1-083727-1
File: ICU-10

Lake Avenue @ I-210 Freeway EB Ramps-Corson Street
Peak hr: AM
Annual Growth: 1.50%

PROJECT ALTERNATIVE 3

Date: 07/03/2008
Date of Count: 2008
Projection Year: 2010

	2008 EXIST. TRAFFIC			2010 W/AMBIENT GROWTH			2010 W/RELATED PROJECTS [3]				2010 W/PROJECT SITE TRAFFIC				2010 W/PROJECT MITIGATION			
	1	2	V/C	Added	Total	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Nb Thru	723	7650	0.139 *	22	744	0.143 *	72	816	7650	0.162 *	1	817	7650	0.163 *	0	817	7650	0.163 *
Nb Right	343	0	-	10	353	-	73	426	0	-	2	428	0	-	0	428	0	-
Sb Left	423	3060	0.138 *	13	436	0.142 *	0	436	3060	0.142 *	0	436	3060	0.142 *	0	436	3060	0.142 *
Sb Thru	927	5100	0.182	28	954	0.187	96	1050	5100	0.206	21	1071	5100	0.210	0	1071	5100	0.210
Sb Right	0	0	-	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Eb Left	488	0	0.064	15	503	0.066	0	503	0	0.066	0	503	0	0.066	0	503	0	0.066
Eb Thru	754	7650	0.266 *	23	777	0.274 *	3	780	7650	0.285 *	2	782	7650	0.285 *	0	782	7650	0.285 *
Eb Right	790	0	-	24	813	-	84	897	0	-	0	897	0	-	0	897	0	-
Wb Left	0	0	0.000 *	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *
Wb Thru	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Wb Right	0	0	-	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Yellow Allowance:			0.100 *			0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.643			0.660				0.690				0.691				0.691
LOS			B			B				B				B				B

01:43 PM

**Key conflicting movement as a part of ICU*
1 Counts conducted by.The Traffic Solution
2 Capacity expressed in veh/hour of green
3 As directed by Pasadena DOT staff, the related projects volumes where obtained from the Draft Traffic Impact Study for 680 E. Colorado Boulevard Mixed Use Project prepared by Willdan Associates, June 2007. Note: Year 2007 manual traffic counts were adjusted by a 1.5 percent (1.5%) ambient growth factor to reflect year 2008 existing conditions.

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INTERSECTION CAPACITY UTILIZATION

N-S St: Lake Avenue
E-W St: I-210 Freeway EB Ramps-Corson Street
Project: Playhouse Plaza Project/1-083727-1
File: ICU-10

Lake Avenue @ I-210 Freeway EB Ramps-Corson Street
Peak hr: PM
Annual Growth: 1.50%

PROJECT ALTERNATIVE 3

Date: 07/03/2008
Date of Count: 2008
Projection Year: 2010

	2008 EXIST. TRAFFIC			2010 W/AMBIENT GROWTH			2010 W/RELATED PROJECTS [3]				2010 W/PROJECT SITE TRAFFIC				2010 W/PROJECT MITIGATION			
Movement	1 Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio
Nb Left	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Nb Thru	1234	7650	0.225 *	37	1271	0.232 *	100	1371	7650	0.257 *	9	1380	7650	0.260 *	0	1380	7650	0.260 *
Nb Right	486	0	-	15	501	-	93	594	0	-	15	609	0	-	0	609	0	-
Sb Left	227	3060	0.074 *	7	234	0.077 *	0	234	3060	0.077 *	0	234	3060	0.077 *	0	234	3060	0.077 *
Sb Thru	951	5100	0.186	29	980	0.192	91	1071	5100	0.210	4	1075	5100	0.211	0	1075	5100	0.211
Sb Right	0	0	-	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Eb Left	757	0	0.099	23	780	0.102	0	780	0	0.102	0	780	0	0.102	0	780	0	0.102
Eb Thru	1562	7650	0.403 *	47	1609	0.416 *	3	1612	7650	0.423 *	12	1624	7650	0.424 *	0	1624	7650	0.424 *
Eb Right	767	0	-	23	790	-	53	843	0	-	0	843	0	-	0	843	0	-
Wb Left	0	0	0.000 *	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *
Wb Thru	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Wb Right	0	0	-	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Yellow Allowance:			0.100 *			0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.803			0.824				0.856				0.861				0.861
LOS			D			D				D				D				D

01:43 PM

**Key conflicting movement as a part of ICU*
1 Counts conducted by.The Traffic Solution
2 Capacity expressed in veh/hour of green
3 As directed by Pasadena DOT staff, the related projects volumes where obtained from the Draft Traffic Impact Study for 680 E. Colorado Boulevard Mixed Use Project prepared by Willdan Associates, June 2007. Note: Year 2007 manual traffic counts were adjusted by a 1.5 percent (1.5%) ambient growth factor to reflect year 2008 existing conditions.

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INTERSECTION CAPACITY UTILIZATION

N-S St: Lake Avenue
E-W St: Walnut Street
Project: Playhouse Plaza Project/1-083727-1
File: ICU-11

Lake Avenue @ Walnut Street
Peak hr: AM
Annual Growth: 1.50%

PROJECT ALTERNATIVE 3

Date: 07/03/2008
Date of Count: 2008
Projection Year: 2010

	2008 EXIST. TRAFFIC			2010 W/AMBIENT GROWTH			2010 W/RELATED PROJECTS [3]				2010 W/PROJECT SITE TRAFFIC				2010 W/PROJECT MITIGATION			
	1	2	V/C	Added	Total	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	83	1700	0.049 *	2	86	0.050 *	16	102	1700	0.060 *	0	102	1700	0.060 *	0	102	1700	0.060 *
Nb Thru	790	5100	0.155	24	813	0.159	192	1005	5100	0.197	2	1007	5100	0.198	0	1007	5100	0.198
Nb Right	75	1700	0.044	2	77	0.046	0	77	1700	0.046	0	77	1700	0.046	0	77	1700	0.046
Sb Left	132	1700	0.078	4	136	0.080	8	144	1700	0.085	0	144	1700	0.085	0	144	1700	0.085
Sb Thru	1287	5100	0.273 *	39	1326	0.281 *	105	1431	5100	0.307 *	45	1476	5100	0.315 *	0	1476	5100	0.315 *
Sb Right	105	0	-	3	108	-	25	133	0	-	0	133	0	-	0	133	0	-
Eb Left	174	3060	0.057 *	5	179	0.058 *	75	254	3060	0.083 *	2	256	3060	0.084 *	0	256	3060	0.084 *
Eb Thru	243	3400	0.096	7	250	0.099	34	284	3400	0.116	2	286	3400	0.117	0	286	3400	0.117
Eb Right	85	0	-	3	88	-	24	112	0	-	0	112	0	-	0	112	0	-
Wb Left	107	1700	0.063	3	110	0.065	0	110	1700	0.065	0	110	1700	0.065	0	110	1700	0.065
Wb Thru	470	3400	0.159 *	14	484	0.164 *	17	501	3400	0.177 *	18	519	3400	0.182 *	0	519	3400	0.182 *
Wb Right	71	0	-	2	73	-	27	100	0	-	0	100	0	-	0	100	0	-
Yellow Allowance:			0.100 *			0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.638			0.654				0.726				0.741				0.741
LOS			B			B				C				C				C

01:43 PM

**Key conflicting movement as a part of ICU*
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2 Capacity expressed in veh/hour of green
3 As directed by Pasadena DOT staff, the related projects volumes where obtained from the Draft Traffic Impact Study for 680 E. Colorado Boulevard Mixed Use Project prepared by Willdan Associates, June 2007. Note: Year 2007 manual traffic counts were adjusted by a 1.5 percent (1.5%) ambient growth factor to reflect year 2008 existing conditions.

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INTERSECTION CAPACITY UTILIZATION

N-S St: Lake Avenue
E-W St: Walnut Street
Project: Playhouse Plaza Project/1-083727-1
File: ICU-11

Lake Avenue @ Walnut Street
Peak hr: PM
Annual Growth: 1.50%

PROJECT ALTERNATIVE 3

Date: 07/03/2008
Date of Count: 2008
Projection Year: 2010

	2008 EXIST. TRAFFIC			2010 W/AMBIENT GROWTH			2010 W/RELATED PROJECTS [3]				2010 W/PROJECT SITE TRAFFIC				2010 W/PROJECT MITIGATION			
Movement	1 Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio
Nb Left	66	1700	0.039 *	2	68	0.040 *	23	91	1700	0.054 *	0	91	1700	0.054 *	0	91	1700	0.054 *
Nb Thru	1178	5100	0.231	35	1214	0.238	109	1323	5100	0.259	15	1338	5100	0.262	0	1338	5100	0.262
Nb Right	95	1700	0.056	3	98	0.058	0	98	1700	0.058	0	98	1700	0.058	0	98	1700	0.058
Sb Left	163	1700	0.096	5	168	0.099	28	196	1700	0.115	0	196	1700	0.115	0	196	1700	0.115
Sb Thru	1346	5100	0.298 *	40	1386	0.307 *	185	1571	5100	0.358 *	8	1579	5100	0.360 *	0	1579	5100	0.360 *
Sb Right	173	0	-	5	178	-	77	255	0	-	0	255	0	-	0	255	0	-
Eb Left	484	3060	0.158 *	15	499	0.163 *	46	545	3060	0.178 *	16	561	3060	0.183 *	0	561	3060	0.183 *
Eb Thru	719	3400	0.248	22	740	0.255	26	766	3400	0.268	16	782	3400	0.273	0	782	3400	0.273
Eb Right	124	0	-	4	128	-	17	145	0	-	0	145	0	-	0	145	0	-
Wb Left	61	1700	0.036	2	63	0.037	0	63	1700	0.037	0	63	1700	0.037	0	63	1700	0.037
Wb Thru	398	3400	0.164 *	12	410	0.169 *	35	445	3400	0.182 *	3	448	3400	0.183 *	0	448	3400	0.183 *
Wb Right	158	0	-	5	163	-	11	174	0	-	0	174	0	-	0	174	0	-
Yellow Allowance:			0.100 *			0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.758			0.778				0.872				0.879				0.879
LOS			C			C				D				D				D

01:43 PM

**Key conflicting movement as a part of ICU*
1 Counts conducted by.The Traffic Solution
2 Capacity expressed in veh/hour of green
3 As directed by Pasadena DOT staff, the related projects volumes where obtained from the Draft Traffic Impact Study for 680 E. Colorado Boulevard Mixed Use Project prepared by Willdan Associates, June 2007. Note: Year 2007 manual traffic counts were adjusted by a 1.5 percent (1.5%) ambient growth factor to reflect year 2008 existing conditions.

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INTERSECTION CAPACITY UTILIZATION

N-S St: Lake Avenue
E-W St: Colorado Boulevard
Project: Playhouse Plaza Project/1-083727-1
File: ICU-12

Lake Avenue @ Colorado Boulevard
Peak hr: AM
Annual Growth: 1.50%

PROJECT ALTERNATIVE 3

Date: 07/03/2008
Date of Count: 2008
Projection Year: 2010

	2008 EXIST. TRAFFIC			2010 W/AMBIENT GROWTH			2010 W/RELATED PROJECTS				2010 W/PROJECT SITE TRAFFIC				2010 W/PROJECT MITIGATION			
	1		2 V/C	Added	Total	V/C	Added	Total		2 V/C	Added	Total		2 V/C	Volume	Total		2 V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Shift	Volume	Capacity	Ratio
Nb Left	93	1700	0.055 *	3	96	0.057 *	12	108	1700	0.064 *	0	108	1700	0.064 *	0	108	1700	0.064 *
Nb Thru	676	5100	0.145	20	696	0.149	66	762	5100	0.166	1	763	5100	0.166	0	763	5100	0.166
Nb Right	64	0	-	2	66	-	18	84	0	-	0	84	0	-	0	84	0	-
Sb Left	111	1700	0.065	3	114	0.067	20	134	1700	0.079	0	134	1700	0.079	0	134	1700	0.079
Sb Thru	1123	3400	0.330 *	34	1156	0.340 *	49	1205	3400	0.354 *	0	1205	3400	0.354 *	0	1205	3400	0.354 *
Sb Right	165	1700	0.097	5	170	0.100	60	230	1700	0.136	8	238	1700	0.140	0	238	1700	0.140
Eb Left	160	1700	0.094 *	5	165	0.097 *	63	228	1700	0.134 *	1	229	1700	0.135 *	0	229	1700	0.135 *
Eb Thru	289	3400	0.085	9	298	0.088	87	385	3400	0.113	2	387	3400	0.114	-20	367	3400	0.108
Eb Right	93	1700	0.055	3	96	0.057	0	96	1700	0.057	0	96	1700	0.057	0	96	1700	0.057
Wb Left	99	1700	0.059	3	102	0.060	32	134	1700	0.079	0	134	1700	0.079	0	134	1700	0.079
Wb Thru	435	3400	0.128 *	13	448	0.132 *	88	536	3400	0.158 *	19	555	3400	0.163 *	0	555	3400	0.163 *
Wb Right	164	1700	0.097	5	169	0.100	49	218	1700	0.128	0	218	1700	0.128	0	218	1700	0.128
Yellow Allowance:			0.100 *			0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.708			0.726				0.810				0.816				0.816
LOS			C			C				D				D				D

01:43 PM

**Key conflicting movement as a part of ICU*
1 Counts conducted by.The Traffic Solution
2 Capacity expressed in veh/hour of green
3 As directed by Pasadena DOT staff, the related projects volumes where obtained from the Draft Traffic Impact Study for 680 E. Colorado Boulevard Mixed Use Project prepared by Willdan Associates, June 2007. Note: Year 2007 manual traffic counts were adjusted by a 1.5 percent (1.5%) ambient growth factor to reflect year 2008 existing conditions.

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INTERSECTION CAPACITY UTILIZATION

N-S St: Lake Avenue
E-W St: Colorado Boulevard
Project: Playhouse Plaza Project/1-083727-1
File: ICU-12

Lake Avenue @ Colorado Boulevard
Peak hr: PM
Annual Growth: 1.50%

PROJECT ALTERNATIVE 3

Date: 07/03/2008
Date of Count: 2008
Projection Year: 2010

	2008 EXIST. TRAFFIC			2010 W/AMBIENT GROWTH			2010 W/RELATED PROJECTS				2010 W/PROJECT SITE TRAFFIC				2010 W/PROJECT MITIGATION			
	1	2	V/C	Added	Total	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Volume	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Shift	Volume	Capacity	Ratio
Nb Left	141	1700	0.083 *	4	145	0.085 *	7	152	1700	0.090 *	0	152	1700	0.090 *	0	152	1700	0.090 *
Nb Thru	896	5100	0.195	27	923	0.201	50	973	5100	0.213	7	980	5100	0.214	0	980	5100	0.214
Nb Right	99	0	-	3	102	-	9	111	0	-	0	111	0	-	0	111	0	-
Sb Left	248	1700	0.146	7	255	0.150	23	278	1700	0.164	0	278	1700	0.164	0	278	1700	0.164
Sb Thru	1085	3400	0.319 *	33	1118	0.329 *	74	1192	3400	0.350 *	0	1192	3400	0.350 *	0	1192	3400	0.350 *
Sb Right	254	1700	0.149	8	261	0.154	105	366	1700	0.216	1	367	1700	0.216	0	367	1700	0.216
Eb Left	234	1700	0.138 *	7	241	0.142 *	63	304	1700	0.179 *	7	311	1700	0.183 *	0	311	1700	0.183 *
Eb Thru	696	3400	0.205	21	717	0.211	87	804	3400	0.237	18	822	3400	0.242	-36	786	3400	0.231
Eb Right	178	1700	0.104	5	183	0.108	0	183	1700	0.108	0	183	1700	0.108	0	183	1700	0.108
Wb Left	134	1700	0.079	4	138	0.081	14	152	1700	0.089	0	152	1700	0.089	0	152	1700	0.089
Wb Thru	658	3400	0.193 *	20	677	0.199 *	84	761	3400	0.224 *	4	765	3400	0.225 *	0	765	3400	0.225 *
Wb Right	216	1700	0.127	6	223	0.131	19	242	1700	0.142	0	242	1700	0.142	0	242	1700	0.142
Yellow Allowance:			0.100 *			0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.833			0.855				0.943				0.948				0.948
LOS			D			D				E				E				E

01:43 PM

**Key conflicting movement as a part of ICU*
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2 Capacity expressed in veh/hour of green
3 As directed by Pasadena DOT staff, the related projects volumes where obtained from the Draft Traffic Impact Study for 680 E. Colorado Boulevard Mixed Use Project prepared by Willdan Associates, June 2007. Note: Year 2007 manual traffic counts were adjusted by a 1.5 percent (1.5%) ambient growth factor to reflect year 2008 existing conditions.

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INTERSECTION CAPACITY UTILIZATION

N-S St: Lake Avenue
E-W St: Green Street
Project: Playhouse Plaza Project/1-083727-1
File: ICU-13

Lake Avenue @ Green Street
Peak hr: AM
Annual Growth: 1.50%

PROJECT ALTERNATIVE 3

Date: 07/03/2008
Date of Count: 2008
Projection Year: 2010

	2008 EXIST. TRAFFIC			2010 W/AMBIENT GROWTH			2010 W/RELATED PROJECTS [3]				2010 W/PROJECT SITE TRAFFIC				2010 W/PROJECT MITIGATION			
	1	2	V/C	Added	Total	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Volume	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Shift	Volume	Capacity	Ratio
Nb Left	0	0	0.000 *	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *
Nb Thru	720	3400	0.212	22	741	0.218	90	831	3400	0.244	0	831	3400	0.244	0	831	3400	0.244
Nb Right	88	1700	0.052	3	91	0.054	0	91	1700	0.054	0	91	1700	0.054	0	91	1700	0.054
Sb Left	183	1700	0.107	5	188	0.111	0	188	1700	0.111	0	188	1700	0.111	0	188	1700	0.111
Sb Thru	1101	3400	0.324 *	33	1134	0.334 *	81	1215	3400	0.357 *	0	1215	3400	0.357 *	0	1215	3400	0.357 *
Sb Right	0	0	-	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Eb Left	92	1700	0.054	3	95	0.056	6	101	1700	0.059	1	102	1700	0.060	0	102	1700	0.060
Eb Thru	496	5100	0.097 *	15	511	0.100 *	0	511	5100	0.100 *	2	513	5100	0.101 *	20	533	5100	0.105 *
Eb Right	81	1700	0.048	2	84	0.049	10	94	1700	0.055	1	95	1700	0.056	0	95	1700	0.056
Wb Left	0	0	0.000 *	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *
Wb Thru	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Wb Right	0	0	-	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Yellow Allowance:			0.100 *			0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.521			0.534				0.558				0.558				0.562
LOS			A			A				A				A				A

01:43 PM

**Key conflicting movement as a part of ICU*
1 Counts conducted by.The Traffic Solution
2 Capacity expressed in veh/hour of green
3 As directed by Pasadena DOT staff, the related projects volumes where obtained from the Draft Traffic Impact Study for 680 E. Colorado Boulevard Mixed Use Project prepared by Willdan Associates, June 2007. Note: Year 2007 manual traffic counts were adjusted by a 1.5 percent (1.5%) ambient growth factor to reflect year 2008 existing conditions.

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INTERSECTION CAPACITY UTILIZATION

N-S St: Lake Avenue
E-W St: Green Street
Project: Playhouse Plaza Project/1-083727-1
File: ICU-13

Lake Avenue @ Green Street
Peak hr: PM
Annual Growth: 1.50%

PROJECT ALTERNATIVE 3

Date: 07/03/2008
Date of Count: 2008
Projection Year: 2010

	2008 EXIST. TRAFFIC			2010 W/AMBIENT GROWTH			2010 W/RELATED PROJECTS [3]				2010 W/PROJECT SITE TRAFFIC				2010 W/PROJECT MITIGATION			
Movement	1 Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Volume Shift	Total Volume	2 Capacity	V/C Ratio
Nb Left	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Nb Thru	932	3400	0.274 *	28	960	0.282 *	55	1015	3400	0.298 *	0	1015	3400	0.298 *	0	1015	3400	0.298 *
Nb Right	119	1700	0.070	4	122	0.072	9	131	1700	0.077	0	131	1700	0.077	0	131	1700	0.077
Sb Left	151	1700	0.089 *	5	156	0.092 *	14	170	1700	0.100 *	0	170	1700	0.100 *	0	170	1700	0.100 *
Sb Thru	1219	3400	0.359	37	1256	0.369	74	1330	3400	0.391	0	1330	3400	0.391	0	1330	3400	0.391
Sb Right	0	0	-	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Eb Left	244	1700	0.143	7	251	0.148	11	262	1700	0.154	8	270	1700	0.159	0	270	1700	0.159
Eb Thru	840	5100	0.165 *	25	866	0.170 *	4	870	5100	0.171 *	17	887	5100	0.174 *	36	923	5100	0.181 *
Eb Right	191	1700	0.112	6	197	0.116	14	211	1700	0.124	8	219	1700	0.129	0	219	1700	0.129
Wb Left	0	0	0.000 *	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *
Wb Thru	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Wb Right	0	0	-	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Yellow Allowance:			0.100 *			0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.628			0.644				0.669				0.672				0.679
LOS			B			B				B				B				B

01:43 PM

**Key conflicting movement as a part of ICU*
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2 Capacity expressed in veh/hour of green
3 As directed by Pasadena DOT staff, the related projects volumes where obtained from the Draft Traffic Impact Study for 680 E. Colorado Boulevard Mixed Use Project prepared by Willdan Associates, June 2007. Note: Year 2007 manual traffic counts were adjusted by a 1.5 percent (1.5%) ambient growth factor to reflect year 2008 existing conditions.

APPENDIX B-4

PROJECT ALTERNATIVE 4 ICU DATA WORKSHEETS – AM AND PM PEAK HOURS

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INTERSECTION CAPACITY UTILIZATION

N-S St: Los Robles Avenue
E-W St: Colorado Boulevard
Project: Playhouse Plaza Project/1-083727-1
File: ICU-1

Los Robles Avenue @ Colorado Boulevard
Peak hr: AM
Annual Growth: 1.50%

PROJECT ALTERNATIVE 4

Date: 07/03/2008
Date of Count: 2008
Projection Year: 2010

	2008 EXIST. TRAFFIC			2010 W/AMBIENT GROWTH			2010 W/RELATED PROJECTS [3]				2010 W/PROJECT SITE TRAFFIC				2010 W/PROJECT MITIGATION			
	1	2	V/C	Added	Total	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Volume	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Shift	Volume	Capacity	Ratio
Nb Left	104	1700	0.061 *	3	107	0.063 *	1	108	1700	0.063 *	0	108	1700	0.063 *	0	108	1700	0.063 *
Nb Thru	424	3400	0.125	13	437	0.129	12	449	3400	0.132	0	449	3400	0.132	0	449	3400	0.132
Nb Right	62	1700	0.036	2	64	0.038	29	93	1700	0.055	0	93	1700	0.055	0	93	1700	0.055
Sb Left	76	1700	0.045	2	78	0.046	32	110	1700	0.065	0	110	1700	0.065	21	131	1700	0.077
Sb Thru	692	3400	0.204 *	21	713	0.210 *	23	736	3400	0.216 *	8	744	3400	0.219 *	0	744	3400	0.219 *
Sb Right	63	1700	0.037	2	65	0.038	36	101	1700	0.059	0	101	1700	0.059	0	101	1700	0.059
Eb Left	125	1700	0.073 *	4	129	0.076 *	20	149	1700	0.087 *	0	149	1700	0.087 *	0	149	1700	0.087 *
Eb Thru	417	3400	0.123	13	430	0.126	223	653	3400	0.192	10	663	3400	0.195	0	663	3400	0.195
Eb Right	61	1700	0.036	2	63	0.037	2	65	1700	0.038	0	65	1700	0.038	0	65	1700	0.038
Wb Left	50	1700	0.029	1	51	0.030	24	75	1700	0.044	0	75	1700	0.044	0	75	1700	0.044
Wb Thru	471	3400	0.139 *	14	485	0.143 *	192	677	3400	0.199 *	1	678	3400	0.199 *	-43	635	3400	0.187 *
Wb Right	53	1700	0.031	2	54	0.032	30	84	1700	0.050	1	85	1700	0.050	0	85	1700	0.050
Yellow Allowance:			0.100 *			0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.576			0.591				0.666				0.669				0.656
LOS			A			A				B				B				B

01:47 PM

**Key conflicting movement as a part of ICU*
1 Counts conducted by.The Traffic Solution
2 Capacity expressed in veh/hour of green
3 As directed by Pasadena DOT staff, the related projects volumes where obtained from the Draft Traffic Impact Study for 680 E. Colorado Boulevard Mixed Use Project prepared by Willdan Associates, June 2007. Note: Year 2007 manual traffic counts were adjusted by a 1.5 percent (1.5%) ambient growth factor to reflect year 2008 existing conditions.

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INTERSECTION CAPACITY UTILIZATION

N-S St: Los Robles Avenue
E-W St: Colorado Boulevard
Project: Playhouse Plaza Project/1-083727-1
File: ICU-1

Los Robles Avenue @ Colorado Boulevard
Peak hr: PM
Annual Growth: 1.50%

PROJECT ALTERNATIVE 4

Date: 07/03/2008
Date of Count: 2008
Projection Year: 2010

	2008 EXIST. TRAFFIC			2010 W/AMBIENT GROWTH			2010 W/RELATED PROJECTS [3]				2010 W/PROJECT SITE TRAFFIC				2010 W/PROJECT MITIGATION			
	1		2 V/C	Added	Total	V/C	Added	Total		2 V/C	Added	Total		2 V/C	Volume	Total		2 V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Shift	Volume	Capacity	Ratio
Nb Left	119	1700	0.070	4	122	0.072	3	125	1700	0.074	0	125	1700	0.074	0	125	1700	0.074
Nb Thru	734	3400	0.216 *	22	756	0.222 *	23	779	3400	0.229 *	0	779	3400	0.229 *	0	779	3400	0.229 *
Nb Right	97	1700	0.057	3	100	0.059	24	124	1700	0.073	0	124	1700	0.073	0	124	1700	0.073
Sb Left	133	1700	0.078 *	4	137	0.081 *	28	165	1700	0.097 *	0	165	1700	0.097 *	38	203	1700	0.119 *
Sb Thru	558	3400	0.164	17	575	0.169	18	593	3400	0.174	1	594	3400	0.175	0	594	3400	0.175
Sb Right	85	1700	0.050	3	88	0.052	29	117	1700	0.069	0	117	1700	0.069	0	117	1700	0.069
Eb Left	89	1700	0.053	3	92	0.054	38	130	1700	0.076 *	0	130	1700	0.076 *	0	130	1700	0.076
Eb Thru	824	3400	0.242 *	25	849	0.250 *	212	1061	3400	0.312	1	1062	3400	0.312	0	1062	3400	0.312 *
Eb Right	151	1700	0.089	5	156	0.092	2	158	1700	0.093	0	158	1700	0.093	0	158	1700	0.093
Wb Left	81	1700	0.048 *	2	84	0.049 *	40	124	1700	0.073	0	124	1700	0.073	0	124	1700	0.073 *
Wb Thru	787	3400	0.231	24	810	0.238	263	1073	3400	0.316 *	9	1082	3400	0.318 *	-42	1040	3400	0.306
Wb Right	104	1700	0.061	3	107	0.063	35	142	1700	0.083	7	149	1700	0.087	0	149	1700	0.087
Yellow Allowance:			0.100 *			0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.684			0.702				0.818				0.821				0.834
LOS			B			C				D				D				D

01:47 PM

**Key conflicting movement as a part of ICU*
1 Counts conducted by.The Traffic Solution
2 Capacity expressed in veh/hour of green
3 As directed by Pasadena DOT staff, the related projects volumes where obtained from the Draft Traffic Impact Study for 680 E. Colorado Boulevard Mixed Use Project prepared by Willdan Associates, June 2007. Note: Year 2007 manual traffic counts were adjusted by a 1.5 percent (1.5%) ambient growth factor to reflect year 2008 existing conditions.

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INTERSECTION CAPACITY UTILIZATION

N-S St: Los Robles Avenue
E-W St: Green Street
Project: Playhouse Plaza Project/1-083727-1
File: ICU-2

Los Robles Avenue @ Green Street
Peak hr: AM
Annual Growth: 1.50%

PROJECT ALTERNATIVE 4

Date: 07/03/2008
Date of Count: 2008
Projection Year: 2010

	2008 EXIST. TRAFFIC			2010 W/AMBIENT GROWTH			2010 W/RELATED PROJECTS [3]				2010 W/PROJECT SITE TRAFFIC				2010 W/PROJECT MITIGATION			
	1	2	V/C	Added	Total	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Nb Thru	455	3400	0.153 *	14	468	0.158 *	42	510	3400	0.170 *	0	510	3400	0.173 *	0	510	3400	0.173 *
Nb Right	66	0	-	2	68	-	0	68	0	-	10	78	0	-	0	78	0	-
Sb Left	127	1700	0.075 *	4	131	0.077 *	0	131	1700	0.077 *	8	139	1700	0.082 *	0	139	1700	0.082 *
Sb Thru	701	3400	0.206	21	722	0.212	49	771	3400	0.227	0	771	3400	0.227	0	771	3400	0.227
Sb Right	0	0	-	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Eb Left	126	1700	0.074	4	130	0.076	0	130	1700	0.076	0	130	1700	0.076	0	130	1700	0.076
Eb Thru	445	5100	0.087 *	13	458	0.090 *	7	465	5100	0.091 *	27	492	5100	0.096 *	0	492	5100	0.096 *
Eb Right	85	1700	0.050	3	88	0.052	0	88	1700	0.052	0	88	1700	0.052	0	88	1700	0.052
Wb Left	0	0	0.000 *	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *
Wb Thru	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Wb Right	0	0	-	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Yellow Allowance:			0.100 *			0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.415			0.424				0.438				0.451				0.451
LOS			A			A				A				A				A

01:48 PM

**Key conflicting movement as a part of ICU*
1 Counts conducted by.The Traffic Solution
2 Capacity expressed in veh/hour of green
3 As directed by Pasadena DOT staff, the related projects volumes where obtained from the Draft Traffic Impact Study for 680 E. Colorado Boulevard Mixed Use Project prepared by Willdan Associates, June 2007. Note: Year 2007 manual traffic counts were adjusted by a 1.5 percent (1.5%) ambient growth factor to reflect year 2008 existing conditions.

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INTERSECTION CAPACITY UTILIZATION

N-S St: Los Robles Avenue
E-W St: Green Street
Project: Playhouse Plaza Project/1-083727-1
File: ICU-2

Los Robles Avenue @ Green Street
Peak hr: PM
Annual Growth: 1.50%

PROJECT ALTERNATIVE 4

Date: 07/03/2008
Date of Count: 2008
Projection Year: 2010

	2008 EXIST. TRAFFIC			2010 W/AMBIENT GROWTH			2010 W/RELATED PROJECTS [3]				2010 W/PROJECT SITE TRAFFIC				2010 W/PROJECT MITIGATION			
Movement	1 Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio
Nb Left	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Nb Thru	703	3400	0.231 *	21	724	0.238 *	50	774	3400	0.253 *	0	774	3400	0.253 *	0	774	3400	0.253 *
Nb Right	82	0	-	2	85	-	0	85	0	-	1	86	0	-	0	86	0	-
Sb Left	106	1700	0.062 *	3	109	0.064 *	0	109	1700	0.064 *	1	110	1700	0.065 *	0	110	1700	0.065 *
Sb Thru	685	3400	0.202	21	706	0.208	60	766	3400	0.225	0	766	3400	0.225	0	766	3400	0.225
Sb Right	0	0	-	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Eb Left	269	1700	0.158	8	277	0.163	0	277	1700	0.163	0	277	1700	0.163	0	277	1700	0.163
Eb Thru	1032	5100	0.202 *	31	1063	0.208 *	12	1075	5100	0.211 *	5	1080	5100	0.212 *	0	1080	5100	0.212 *
Eb Right	147	1700	0.087	4	152	0.089	0	152	1700	0.089	0	152	1700	0.089	0	152	1700	0.089
Wb Left	0	0	0.000 *	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *
Wb Thru	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Wb Right	0	0	-	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Yellow Allowance:			0.100 *			0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.596			0.610				0.627				0.629				0.629
LOS			A			B				B				B				B

01:48 PM

**Key conflicting movement as a part of ICU*
1 Counts conducted by.The Traffic Solution
2 Capacity expressed in veh/hour of green
3 As directed by Pasadena DOT staff, the related projects volumes where obtained from the Draft Traffic Impact Study for 680 E. Colorado Boulevard Mixed Use Project prepared by Willdan Associates, June 2007. Note: Year 2007 manual traffic counts were adjusted by a 1.5 percent (1.5%) ambient growth factor to reflect year 2008 existing conditions.

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INTERSECTION CAPACITY UTILIZATION

N-S St: El Molino Avenue
E-W St: Union Street
Project: Playhouse Plaza Project/1-083727-1
File: ICU-3

El Molino Avenue @ Union Street
Peak hr: AM
Annual Growth: 1.50%

PROJECT ALTERNATIVE 4

Date: 07/03/2008
Date of Count: 2008
Projection Year: 2010

	2008 EXIST. TRAFFIC			2010 W/AMBIENT GROWTH			2010 W/RELATED PROJECTS [3]				2010 W/PROJECT SITE TRAFFIC				2010 W/PROJECT MITIGATION			
	1	2	V/C	Added	Total	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Volume	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Shift	Volume	Capacity	Ratio
Nb Left	67	0	0.039 *	2	69	0.041 *	10	79	0	0.046 *	3	82	0	0.048 *	43	125	1700	0.074 *
Nb Thru	176	1700	0.143	5	181	0.147	7	188	1700	0.157	5	193	1700	0.162	0	193	1700	0.114
Nb Right	0	0	-	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Sb Left	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Sb Thru	323	1700	0.222 *	10	333	0.228 *	13	346	1700	0.236 *	51	397	1700	0.266 *	-21	376	1700	0.254 *
Sb Right	54	0	-	2	56	-	0	56	0	-	0	56	0	-	0	56	0	-
Eb Left	0	0	0.000 *	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *
Eb Thru	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Eb Right	0	0	-	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Wb Left	32	0	0.006	1	33	0.006	30	63	0	0.012	13	76	0	0.015	0	76	0	0.015
Wb Thru	716	5100	0.152 *	21	737	0.156 *	0	737	5100	0.162 *	0	737	5100	0.165 *	0	737	5100	0.165 *
Wb Right	25	0	-	1	26	-	0	26	0	-	0	26	0	-	0	26	0	-
Yellow Allowance:			0.100 *			0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.513			0.525				0.545				0.579				0.592
LOS			A			A				A				A				A

01:48 PM

**Key conflicting movement as a part of ICU*
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INTERSECTION CAPACITY UTILIZATION

N-S St: El Molino Avenue
E-W St: Union Street
Project: Playhouse Plaza Project/1-083727-1
File: ICU-3

El Molino Avenue @ Union Street
Peak hr: PM
Annual Growth: 1.50%

PROJECT ALTERNATIVE 4

Date: 07/03/2008
Date of Count: 2008
Projection Year: 2010

	2008 EXIST. TRAFFIC			2010 W/AMBIENT GROWTH			2010 W/RELATED PROJECTS [3]				2010 W/PROJECT SITE TRAFFIC				2010 W/PROJECT MITIGATION			
Movement	1 Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Volume Shift	Total Volume	2 Capacity	V/C Ratio
Nb Left	52	0	0.031 *	2	54	0.032 *	50	104	0	0.061 *	22	126	0	0.074 *	42	168	1700	0.099 *
Nb Thru	217	1700	0.158	7	224	0.163	30	254	1700	0.210	36	290	1700	0.244	0	290	1700	0.170
Nb Right	0	0	-	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Sb Left	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Sb Thru	252	1700	0.201 *	8	260	0.207 *	6	266	1700	0.210 *	9	275	1700	0.215 *	-38	237	1700	0.193 *
Sb Right	89	0	-	3	92	-	0	92	0	-	0	92	0	-	0	92	0	-
Eb Left	0	0	0.000 *	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *
Eb Thru	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Eb Right	0	0	-	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Wb Left	44	0	0.009	1	45	0.009	20	65	0	0.013	2	67	0	0.013	0	67	0	0.013
Wb Thru	827	5100	0.183 *	25	852	0.188 *	0	852	5100	0.192 *	0	852	5100	0.193 *	0	852	5100	0.193 *
Wb Right	61	0	-	2	63	-	0	63	0	-	0	63	0	-	0	63	0	-
Yellow Allowance:			0.100 *			0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.514			0.526				0.563				0.582				0.584
LOS			A			A				A				A				A

01:48 PM

**Key conflicting movement as a part of ICU*
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INTERSECTION CAPACITY UTILIZATION

N-S St: El Molino Avenue
E-W St: Colorado Boulevard
Project: Playhouse Plaza Project/1-083727-1
File: ICU-4

El Molino Avenue @ Colorado Boulevard
Peak hr: AM
Annual Growth: 1.50%

PROJECT ALTERNATIVE 4

Date: 07/03/2008
Date of Count: 2008
Projection Year: 2010

	2008 EXIST. TRAFFIC			2010 W/AMBIENT GROWTH			2010 W/RELATED PROJECTS [3]				2010 W/PROJECT SITE TRAFFIC				2010 W/PROJECT MITIGATION			
	1	2	V/C	Added	Total	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Volume	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Shift	Volume	Capacity	Ratio
Nb Left	25	0	0.015 *	1	26	0.015 *	15	41	0	0.024 *	2	43	0	0.025 *	-43	0	0	0.000 *
Nb Thru	142	1700	0.114	4	146	0.117	17	163	1700	0.136	8	171	1700	0.144	43	214	1700	0.144
Nb Right	26	0	-	1	27	-	0	27	0	-	3	30	0	-	0	30	0	-
Sb Left	28	0	0.017	1	29	0.017	12	41	0	0.024	0	41	0	0.024	-41	0	0	0.000
Sb Thru	170	1700	0.132 *	5	175	0.136 *	37	212	1700	0.176 *	57	269	1700	0.209 *	20	289	1700	0.197 *
Sb Right	26	0	-	1	27	-	19	46	0	-	0	46	0	-	0	46	0	-
Eb Left	27	1700	0.016 *	1	28	0.017 *	0	28	1700	0.017 *	0	28	1700	0.017	0	28	1700	0.017
Eb Thru	487	3400	0.143	15	502	0.148	160	662	3400	0.195	0	662	3400	0.195 *	21	683	3400	0.201 *
Eb Right	15	1700	0.009	0	16	0.009	13	29	1700	0.017	8	37	1700	0.022	0	37	1700	0.022
Wb Left	38	1700	0.022	1	39	0.023	0	39	1700	0.023	24	63	1700	0.037 *	0	63	1700	0.037 *
Wb Thru	545	3400	0.160 *	16	561	0.165 *	156	717	3400	0.211 *	0	717	3400	0.211	0	717	3400	0.211
Wb Right	37	1700	0.021	1	38	0.022	0	38	1700	0.022	3	41	1700	0.024	0	41	1700	0.024
Yellow Allowance:			0.100 *			0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.423			0.433				0.528				0.566				0.535
LOS			A			A				A				A				A

01:47 PM

**Key conflicting movement as a part of ICU*
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2 Capacity expressed in veh/hour of green
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INTERSECTION CAPACITY UTILIZATION

N-S St: El Molino Avenue
E-W St: Colorado Boulevard
Project: Playhouse Plaza Project/1-083727-1
File: ICU-4

El Molino Avenue @ Colorado Boulevard
Peak hr: PM
Annual Growth: 1.50%

PROJECT ALTERNATIVE 4

Date: 07/03/2008
Date of Count: 2008
Projection Year: 2010

	2008 EXIST. TRAFFIC			2010 W/AMBIENT GROWTH			2010 W/RELATED PROJECTS [3]				2010 W/PROJECT SITE TRAFFIC				2010 W/PROJECT MITIGATION			
	1	2	V/C	Added	Total	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Volume	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Shift	Volume	Capacity	Ratio
Nb Left	12	0	0.007	0	13	0.007	14	27	0	0.016	15	42	0	0.024	-42	0	0	0.000
Nb Thru	232	1700	0.169 *	7	239	0.174 *	38	277	1700	0.205 *	52	329	1700	0.257 *	42	371	1700	0.257 *
Nb Right	43	0	-	1	44	-	0	44	0	-	22	66	0	-	0	66	0	-
Sb Left	67	0	0.039 *	2	69	0.041 *	4	73	0	0.043 *	3	76	0	0.045 *	-76	0	0	0.000 *
Sb Thru	222	1700	0.187	7	229	0.192	27	256	1700	0.214	10	266	1700	0.221	38	304	1700	0.199
Sb Right	28	0	-	1	29	-	5	34	0	-	0	34	0	-	0	34	0	-
Eb Left	60	1700	0.035	2	62	0.036	42	104	1700	0.061 *	0	104	1700	0.061 *	0	104	1700	0.061 *
Eb Thru	1022	3400	0.301 *	31	1053	0.310 *	144	1197	3400	0.352	0	1197	3400	0.352	38	1235	3400	0.363
Eb Right	28	1700	0.017	1	29	0.017	17	46	1700	0.027	1	47	1700	0.028	0	47	1700	0.028
Wb Left	47	1700	0.027 *	1	48	0.028 *	0	48	1700	0.028	4	52	1700	0.031	0	52	1700	0.031
Wb Thru	971	3400	0.286	29	1000	0.294	192	1192	3400	0.351 *	0	1192	3400	0.351 *	0	1192	3400	0.351 *
Wb Right	42	1700	0.024	1	43	0.025	15	58	1700	0.034	1	59	1700	0.035	0	59	1700	0.035
Yellow Allowance:			0.100 *			0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.636			0.653				0.759				0.813				0.769
LOS			B			B				C				D				C

01:47 PM

**Key conflicting movement as a part of ICU*
1 Counts conducted by.The Traffic Solution
2 Capacity expressed in veh/hour of green
3 As directed by Pasadena DOT staff, the related projects volumes where obtained from the Draft Traffic Impact Study for 680 E. Colorado Boulevard Mixed Use Project prepared by Willdan Associates, June 2007. Note: Year 2007 manual traffic counts were adjusted by a 1.5 percent (1.5%) ambient growth factor to reflect year 2008 existing conditions.

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INTERSECTION CAPACITY UTILIZATION

N-S St: El Molino Avenue
E-W St: Green Street
Project: Playhouse Plaza Project/1-083727-1
File: ICU-5

El Molino Avenue @ Green Street
Peak hr: AM
Annual Growth: 1.50%

PROJECT ALTERNATIVE 4

Date: 07/03/2008
Date of Count: 2008
Projection Year: 2010

	2008 EXIST. TRAFFIC			2010 W/AMBIENT GROWTH			2010 W/RELATED PROJECTS [3]				2010 W/PROJECT SITE TRAFFIC				2010 W/PROJECT MITIGATION			
	1	2	V/C	Added	Total	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Volume	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Shift	Volume	Capacity	Ratio
Nb Left	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Nb Thru	166	1700	0.137 *	5	171	0.141 *	32	203	1700	0.160 *	33	236	1700	0.179 *	0	236	1700	0.179 *
Nb Right	66	0	-	2	68	-	0	68	0	-	0	68	0	-	0	68	0	-
Sb Left	73	0	0.043 *	2	75	0.044 *	0	75	0	0.044 *	6	81	0	0.048 *	20	101	1700	0.060 *
Sb Thru	151	1700	0.132	5	156	0.136	50	206	1700	0.165	3	209	1700	0.171	0	209	1700	0.123
Sb Right	0	0	-	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Eb Left	29	0	0.006	1	30	0.006	0	30	0	0.006	41	71	0	0.014	0	71	0	0.014
Eb Thru	550	5100	0.120 *	17	567	0.124 *	7	574	5100	0.125 *	0	574	5100	0.133 *	0	574	5100	0.133 *
Eb Right	32	0	-	1	33	-	0	33	0	-	0	33	0	-	0	33	0	-
Wb Left	0	0	0.000 *	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *
Wb Thru	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Wb Right	0	0	-	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Yellow Allowance:			0.100 *			0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.400			0.409				0.429				0.460				0.472
LOS			A			A				A				A				A

01:47 PM

**Key conflicting movement as a part of ICU*
1 Counts conducted by.The Traffic Solution
2 Capacity expressed in veh/hour of green
3 As directed by Pasadena DOT staff, the related projects volumes where obtained from the Draft Traffic Impact Study for 680 E. Colorado Boulevard Mixed Use Project prepared by Willdan Associates, June 2007. Note: Year 2007 manual traffic counts were adjusted by a 1.5 percent (1.5%) ambient growth factor to reflect year 2008 existing conditions.

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INTERSECTION CAPACITY UTILIZATION

N-S St: El Molino Avenue
E-W St: Green Street
Project: Playhouse Plaza Project/1-083727-1
File: ICU-5

El Molino Avenue @ Green Street
Peak hr: PM
Annual Growth: 1.50%

PROJECT ALTERNATIVE 4

Date: 07/03/2008
Date of Count: 2008
Projection Year: 2010

	2008 EXIST. TRAFFIC			2010 W/AMBIENT GROWTH			2010 W/RELATED PROJECTS [3]				2010 W/PROJECT SITE TRAFFIC				2010 W/PROJECT MITIGATION			
Movement	1 Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Volume Shift	Total Volume	2 Capacity	V/C Ratio
Nb Left	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000 *	0	0	0	0.000
Nb Thru	221	1700	0.159 *	7	228	0.164 *	52	280	1700	0.195 *	6	286	1700	0.198	0	286	1700	0.198 *
Nb Right	50	0	-	1	51	-	0	51	0	-	0	51	0	-	0	51	0	-
Sb Left	65	0	0.038 *	2	67	0.039 *	0	67	0	0.039 *	37	104	0	0.061	38	142	1700	0.083 *
Sb Thru	267	1700	0.195	8	275	0.201	44	319	1700	0.227	22	341	1700	0.262 *	0	341	1700	0.201
Sb Right	0	0	-	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Eb Left	61	0	0.012	2	63	0.012	0	63	0	0.012	7	70	0	0.014	0	70	0	0.014
Eb Thru	1111	5100	0.244 *	33	1145	0.252 *	12	1157	5100	0.254 *	0	1157	5100	0.255 *	0	1157	5100	0.255 *
Eb Right	74	0	-	2	76	-	0	76	0	-	0	76	0	-	0	76	0	-
Wb Left	0	0	0.000 *	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *
Wb Thru	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Wb Right	0	0	-	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Yellow Allowance:			0.100 *			0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.542			0.555				0.588				0.617				0.637
LOS			A			A				A				B				B

01:47 PM

**Key conflicting movement as a part of ICU*
1 Counts conducted by.The Traffic Solution
2 Capacity expressed in veh/hour of green
3 As directed by Pasadena DOT staff, the related projects volumes where obtained from the Draft Traffic Impact Study for 680 E. Colorado Boulevard Mixed Use Project prepared by Willdan Associates, June 2007. Note: Year 2007 manual traffic counts were adjusted by a 1.5 percent (1.5%) ambient growth factor to reflect year 2008 existing conditions.

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INTERSECTION CAPACITY UTILIZATION

N-S St: El Molino Avenue
E-W St: Del Mar Boulevard
Project: Playhouse Plaza Project/1-083727-1
File: ICU-6

El Molino Avenue @ Del Mar Boulevard
Peak hr: AM
Annual Growth: 1.50%

PROJECT ALTERNATIVE 4

Date: 07/03/2008
Date of Count: 2008
Projection Year: 2010

	2008 EXIST. TRAFFIC			2010 W/AMBIENT GROWTH			2010 W/RELATED PROJECTS [3]				2010 W/PROJECT SITE TRAFFIC				2010 W/PROJECT MITIGATION			
	1	2	V/C	Added	Total	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	38	0	0.022	1	39	0.023	0	39	0	0.023	0	39	0	0.023	0	39	0	0.023
Nb Thru	156	1700	0.140 *	5	161	0.144 *	32	193	1700	0.163 *	0	193	1700	0.163 *	0	193	1700	0.163 *
Nb Right	44	0	-	1	45	-	0	45	0	-	0	45	0	-	0	45	0	-
Sb Left	18	0	0.011 *	1	19	0.011 *	0	19	0	0.011 *	1	20	0	0.012 *	0	20	0	0.012 *
Sb Thru	67	1700	0.070	2	69	0.073	50	119	1700	0.102	0	119	1700	0.103	0	119	1700	0.103
Sb Right	35	0	-	1	36	-	0	36	0	-	1	37	0	-	0	37	0	-
Eb Left	28	1700	0.017 *	1	29	0.017 *	0	29	1700	0.017 *	8	37	1700	0.022 *	0	37	1700	0.022 *
Eb Thru	496	3400	0.152	15	511	0.157	33	544	3400	0.167	0	544	3400	0.167	0	544	3400	0.167
Eb Right	21	0	-	1	22	-	0	22	0	-	0	22	0	-	0	22	0	-
Wb Left	22	1700	0.013	1	23	0.014	0	23	1700	0.014	0	23	1700	0.014	0	23	1700	0.014
Wb Thru	606	3400	0.186 *	18	624	0.191 *	49	673	3400	0.206 *	3	676	3400	0.211 *	0	676	3400	0.211 *
Wb Right	25	0	-	1	26	-	0	26	0	-	16	42	0	-	0	42	0	-
Yellow Allowance:			0.100 *			0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.453			0.463				0.497				0.508				0.508
LOS			A			A				A				A				A

01:47 PM

**Key conflicting movement as a part of ICU*
1 Counts conducted by.The Traffic Solution
2 Capacity expressed in veh/hour of green
3 As directed by Pasadena DOT staff, the related projects volumes where obtained from the Draft Traffic Impact Study for 680 E. Colorado Boulevard Mixed Use Project prepared by Willdan Associates, June 2007. Note: Year 2007 manual traffic counts were adjusted by a 1.5 percent (1.5%) ambient growth factor to reflect year 2008 existing conditions.

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INTERSECTION CAPACITY UTILIZATION

N-S St: El Molino Avenue
E-W St: Del Mar Boulevard
Project: Playhouse Plaza Project/1-083727-1
File: ICU-6

El Molino Avenue @ Del Mar Boulevard
Peak hr: PM
Annual Growth: 1.50%

PROJECT ALTERNATIVE 4

Date: 07/03/2008
Date of Count: 2008
Projection Year: 2010

	2008 EXIST. TRAFFIC			2010 W/AMBIENT GROWTH			2010 W/RELATED PROJECTS [3]				2010 W/PROJECT SITE TRAFFIC				2010 W/PROJECT MITIGATION			
Movement	1 Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio
Nb Left	24	0	0.014 *	1	25	0.015 *	0	25	0	0.015 *	0	25	0	0.015 *	0	25	0	0.015 *
Nb Thru	179	1700	0.132	5	184	0.136	52	236	1700	0.166	0	236	1700	0.166	0	236	1700	0.166
Nb Right	21	0	-	1	22	-	0	22	0	-	0	22	0	-	0	22	0	-
Sb Left	44	0	0.026	1	45	0.026	0	45	0	0.026	7	52	0	0.031	0	52	0	0.031
Sb Thru	189	1700	0.161 *	6	194	0.166 *	44	238	1700	0.192 *	0	238	1700	0.200 *	0	238	1700	0.200 *
Sb Right	42	0	-	1	43	-	0	43	0	-	7	50	0	-	0	50	0	-
Eb Left	28	1700	0.017	1	29	0.017	0	29	1700	0.017	1	30	1700	0.018	0	30	1700	0.018
Eb Thru	667	3400	0.208 *	20	687	0.214 *	32	719	3400	0.224 *	3	722	3400	0.225 *	0	722	3400	0.225 *
Eb Right	41	0	-	1	42	-	0	42	0	-	0	42	0	-	0	42	0	-
Wb Left	46	1700	0.027 *	1	47	0.028 *	0	47	1700	0.028 *	0	47	1700	0.028 *	0	47	1700	0.028 *
Wb Thru	697	3400	0.218	21	718	0.224	16	734	3400	0.229	1	735	3400	0.230	0	735	3400	0.230
Wb Right	44	0	-	1	45	-	0	45	0	-	3	48	0	-	0	48	0	-
Yellow Allowance:			0.100 *			0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.510			0.523				0.558				0.567				0.567
LOS			A			A				A				A				A

01:47 PM

**Key conflicting movement as a part of ICU*
1 Counts conducted by.The Traffic Solution
2 Capacity expressed in veh/hour of green
3 As directed by Pasadena DOT staff, the related projects volumes where obtained from the Draft Traffic Impact Study for 680 E. Colorado Boulevard Mixed Use Project prepared by Willdan Associates, June 2007. Note: Year 2007 manual traffic counts were adjusted by a 1.5 percent (1.5%) ambient growth factor to reflect year 2008 existing conditions.

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INTERSECTION CAPACITY UTILIZATION

N-S St: Oak Knoll Avenue
E-W St: Colorado Boulevard
Project: Playhouse Plaza Project/1-083727-1
File: ICU-7

Oak Knoll Avenue @ Colorado Boulevard
Peak hr: AM
Annual Growth: 1.50%

PROJECT ALTERNATIVE 4

Date: 07/03/2008
Date of Count: 2008
Projection Year: 2010

	2008 EXIST. TRAFFIC			2010 W/AMBIENT GROWTH			2010 W/RELATED PROJECTS [3]				2010 W/PROJECT SITE TRAFFIC				2010 W/PROJECT MITIGATION			
Movement	1 Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Volume Shift	Total Volume	2 Capacity	V/C Ratio
Nb Left	13	0	0.008 *	0	14	0.008 *	0	14	0	0.008 *	0	14	0	0.008 *	0	14	0	0.008 *
Nb Thru	33	1700	0.044	1	34	0.046	0	34	1700	0.046	0	34	1700	0.046	0	34	1700	0.046
Nb Right	28	0	-	1	29	-	0	29	0	-	0	29	0	-	0	29	0	-
Sb Left	43	0	0.025	1	44	0.026	0	44	0	0.026	0	44	0	0.026	0	44	0	0.026
Sb Thru	53	1700	0.072 *	2	54	0.074 *	0	54	1700	0.074 *	0	54	1700	0.074 *	0	54	1700	0.074 *
Sb Right	26	0	-	1	27	-	0	27	0	-	0	27	0	-	0	27	0	-
Eb Left	41	1700	0.024 *	1	42	0.025 *	0	42	1700	0.025	0	42	1700	0.025 *	0	42	1700	0.025 *
Eb Thru	450	3400	0.132	13	463	0.136	163	626	3400	0.184 *	3	629	3400	0.185	-20	609	3400	0.179
Eb Right	25	1700	0.015	1	26	0.015	9	35	1700	0.021	0	35	1700	0.021	0	35	1700	0.021
Wb Left	72	1700	0.042	2	74	0.044	16	90	1700	0.053 *	0	90	1700	0.053	0	90	1700	0.053
Wb Thru	540	3400	0.159 *	16	556	0.164 *	156	712	3400	0.209	27	739	3400	0.217 *	0	739	3400	0.217 *
Wb Right	23	1700	0.014	1	24	0.014	0	24	1700	0.014	0	24	1700	0.014	0	24	1700	0.014
Yellow Allowance:			0.100 *			0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.362			0.370				0.419				0.424				0.424
LOS			A			A				A				A				A

01:47 PM

**Key conflicting movement as a part of ICU*
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INTERSECTION CAPACITY UTILIZATION

N-S St: Oak Knoll Avenue
E-W St: Colorado Boulevard
Project: Playhouse Plaza Project/1-083727-1
File: ICU-7

Oak Knoll Avenue @ Colorado Boulevard
Peak hr: PM
Annual Growth: 1.50%

PROJECT ALTERNATIVE 4

Date: 07/03/2008
Date of Count: 2008
Projection Year: 2010

	2008 EXIST. TRAFFIC			2010 W/AMBIENT GROWTH			2010 W/RELATED PROJECTS [3]				2010 W/PROJECT SITE TRAFFIC				2010 W/PROJECT MITIGATION			
Movement	1 Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Volume Shift	Total Volume	2 Capacity	V/C Ratio
Nb Left	32	0	0.019 *	1	33	0.020 *	0	33	0	0.020 *	0	33	0	0.020 *	0	33	0	0.020 *
Nb Thru	62	1700	0.093	2	64	0.096	0	64	1700	0.096	0	64	1700	0.096	0	64	1700	0.096
Nb Right	64	0	-	2	66	-	0	66	0	-	0	66	0	-	0	66	0	-
Sb Left	83	0	0.049	2	86	0.050	0	86	0	0.050	0	86	0	0.050	0	86	0	0.050
Sb Thru	115	1700	0.155 *	3	118	0.159 *	0	118	1700	0.159 *	0	118	1700	0.159 *	0	118	1700	0.159 *
Sb Right	65	0	-	2	67	-	0	67	0	-	0	67	0	-	0	67	0	-
Eb Left	174	1700	0.102 *	5	179	0.105 *	0	179	1700	0.105 *	0	179	1700	0.105 *	0	179	1700	0.105 *
Eb Thru	903	3400	0.266	27	930	0.274	142	1072	3400	0.315	25	1097	3400	0.323	-38	1059	3400	0.312
Eb Right	50	1700	0.029	1	51	0.030	6	57	1700	0.034	0	57	1700	0.034	0	57	1700	0.034
Wb Left	65	1700	0.038	2	67	0.039	11	78	1700	0.046	0	78	1700	0.046	0	78	1700	0.046
Wb Thru	915	3400	0.269 *	27	942	0.277 *	207	1149	3400	0.338 *	5	1154	3400	0.339 *	0	1154	3400	0.339 *
Wb Right	53	1700	0.031	2	54	0.032	0	54	1700	0.032	0	54	1700	0.032	0	54	1700	0.032
Yellow Allowance:			0.100 *			0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.645			0.661				0.722				0.724				0.724
LOS			B			B				C				C				C

01:47 PM

**Key conflicting movement as a part of ICU*
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INTERSECTION CAPACITY UTILIZATION

N-S St: Oak Knoll Avenue
E-W St: Green Street
Project: Playhouse Plaza Project/1-083727-1
File: ICU-8

Oak Knoll Avenue @ Green Street
Peak hr: AM
Annual Growth: 1.50%

PROJECT ALTERNATIVE 4

Date: 07/03/2008
Date of Count: 2008
Projection Year: 2010

	2008 EXIST. TRAFFIC			2010 W/AMBIENT GROWTH			2010 W/RELATED PROJECTS [3]				2010 W/PROJECT SITE TRAFFIC				2010 W/PROJECT MITIGATION			
Movement	1 Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Volume Shift	Total Volume	2 Capacity	V/C Ratio
Nb Left	0	0	0.000 *	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *
Nb Thru	51	1700	0.044	2	52	0.045	0	52	1700	0.050	0	52	1700	0.050	0	52	1700	0.050
Nb Right	23	0	-	1	24	-	8	32	0	-	0	32	0	-	0	32	0	-
Sb Left	83	0	0.049	2	86	0.050	19	105	0	0.062	0	105	0	0.062	0	105	0	0.062
Sb Thru	78	1700	0.095 *	2	80	0.098 *	6	86	1700	0.112 *	0	86	1700	0.112 *	0	86	1700	0.112 *
Sb Right	0	0	-	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Eb Left	21	0	0.004	1	22	0.004	0	22	0	0.004	0	22	0	0.004	0	22	0	0.004
Eb Thru	592	5100	0.126 *	18	609	0.130 *	7	616	5100	0.132 *	6	622	5100	0.133 *	20	642	5100	0.137 *
Eb Right	31	0	-	1	32	-	0	32	0	-	0	32	0	-	0	32	0	-
Wb Left	0	0	0.000 *	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *
Wb Thru	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Wb Right	0	0	-	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Yellow Allowance:			0.100 *			0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.321			0.328				0.344				0.345				0.349
LOS			A			A				A				A				A

01:47 PM

**Key conflicting movement as a part of ICU*
1 Counts conducted by.The Traffic Solution
2 Capacity expressed in veh/hour of green
3 As directed by Pasadena DOT staff, the related projects volumes where obtained from the Draft Traffic Impact Study for 680 E. Colorado Boulevard Mixed Use Project prepared by Willdan Associates, June 2007. Note: Year 2007 manual traffic counts were adjusted by a 1.5 percent (1.5%) ambient growth factor to reflect year 2008 existing conditions.

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INTERSECTION CAPACITY UTILIZATION

N-S St: Oak Knoll Avenue
E-W St: Green Street
Project: Playhouse Plaza Project/1-083727-1
File: ICU-8

Oak Knoll Avenue @ Green Street
Peak hr: PM
Annual Growth: 1.50%

PROJECT ALTERNATIVE 4

Date: 07/03/2008
Date of Count: 2008
Projection Year: 2010

	2008 EXIST. TRAFFIC			2010 W/AMBIENT GROWTH			2010 W/RELATED PROJECTS [3]				2010 W/PROJECT SITE TRAFFIC				2010 W/PROJECT MITIGATION			
Movement	1 Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Volume Shift	Total Volume	2 Capacity	V/C Ratio
Nb Left	0	0	0.000 *	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *
Nb Thru	83	1700	0.076	2	86	0.078	0	86	1700	0.081	0	86	1700	0.081	0	86	1700	0.081
Nb Right	46	0	-	1	47	-	5	52	0	-	0	52	0	-	0	52	0	-
Sb Left	57	0	0.033	2	59	0.034	13	72	0	0.042	0	72	0	0.042	0	72	0	0.042
Sb Thru	160	1700	0.128 *	5	165	0.132 *	4	169	1700	0.142 *	0	169	1700	0.142 *	0	169	1700	0.142 *
Sb Right	0	0	-	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Eb Left	61	0	0.012	2	63	0.012	0	63	0	0.012	0	63	0	0.012	0	63	0	0.012
Eb Thru	1101	5100	0.237 *	33	1134	0.244 *	12	1146	5100	0.247 *	37	1183	5100	0.254 *	38	1221	5100	0.261 *
Eb Right	48	0	-	1	49	-	0	49	0	-	0	49	0	-	0	49	0	-
Wb Left	0	0	0.000 *	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *
Wb Thru	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Wb Right	0	0	-	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Yellow Allowance:			0.100 *			0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.465			0.476				0.488				0.496				0.503
LOS			A			A				A				A				A

01:47 PM

**Key conflicting movement as a part of ICU*
1 Counts conducted by.The Traffic Solution
2 Capacity expressed in veh/hour of green
3 As directed by Pasadena DOT staff, the related projects volumes where obtained from the Draft Traffic Impact Study for 680 E. Colorado Boulevard Mixed Use Project prepared by Willdan Associates, June 2007. Note: Year 2007 manual traffic counts were adjusted by a 1.5 percent (1.5%) ambient growth factor to reflect year 2008 existing conditions.

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INTERSECTION CAPACITY UTILIZATION

N-S St: Lake Avenue
E-W St: I-210 Freeway WB Ramps-Maple Street
Project: Playhouse Plaza Project/1-083727-1
File: ICU-9

Lake Avenue @ I-210 Freeway WB Ramps-Maple Street
Peak hr: AM
Annual Growth: 1.50%

PROJECT ALTERNATIVE 4

Date: 07/03/2008
Date of Count: 2008
Projection Year: 2010

	2008 EXIST. TRAFFIC			2010 W/AMBIENT GROWTH			2010 W/RELATED PROJECTS [3]				2010 W/PROJECT SITE TRAFFIC				2010 W/PROJECT MITIGATION			
	1	2	V/C	Added	Total	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	438	3060	0.143 *	13	452	0.148 *	63	515	3060	0.168 *	0	515	3060	0.168 *	0	515	3060	0.168 *
Nb Thru	751	3400	0.221	23	774	0.228	9	783	3400	0.230	1	784	3400	0.230	0	784	3400	0.230
Nb Right	0	0	-	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Sb Left	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Sb Thru	841	3400	0.247	25	867	0.255	5	872	3400	0.256	10	882	3400	0.259	0	882	3400	0.259
Sb Right	578	1700	0.340 *	17	595	0.350 *	0	595	1700	0.350 *	0	595	1700	0.350 *	0	595	1700	0.350 *
Eb Left	0	0	0.000 *	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *
Eb Thru	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Eb Right	0	0	-	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Wb Left	527	0	0.086	16	543	0.089	81	624	0	0.102	11	635	0	0.104	0	635	0	0.104
Wb Thru	881	6120	0.261 *	26	907	0.268 *	0	907	6120	0.282 *	18	925	6120	0.286 *	0	925	6120	0.286 *
Wb Right	187	0	-	6	192	-	0	192	0	-	0	192	0	-	0	192	0	-
Yellow Allowance:			0.100 *			0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.844			0.866				0.900				0.904				0.904
LOS			D			D				D				E				E

01:47 PM

**Key conflicting movement as a part of ICU*
1 Counts conducted by.The Traffic Solution
2 Capacity expressed in veh/hour of green
3 As directed by Pasadena DOT staff, the related projects volumes where obtained from the Draft Traffic Impact Study for 680 E. Colorado Boulevard Mixed Use Project prepared by Willdan Associates, June 2007. Note: Year 2007 manual traffic counts were adjusted by a 1.5 percent (1.5%) ambient growth factor to reflect year 2008 existing conditions.

LINSCOTT, LAW & GREENSPAN, ENGINEERS
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INTERSECTION CAPACITY UTILIZATION

N-S St: Lake Avenue
E-W St: I-210 Freeway WB Ramps-Maple Street
Project: Playhouse Plaza Project/1-083727-1
File: ICU-9

Lake Avenue @ I-210 Freeway WB Ramps-Maple Street
Peak hr: PM
Annual Growth: 1.50%

PROJECT ALTERNATIVE 4

Date: 07/03/2008
Date of Count: 2008
Projection Year: 2010

	2008 EXIST. TRAFFIC			2010 W/AMBIENT GROWTH			2010 W/RELATED PROJECTS [3]				2010 W/PROJECT SITE TRAFFIC				2010 W/PROJECT MITIGATION			
	1	2	V/C	Added	Total	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	709	3060	0.232 *	21	731	0.239 *	86	817	3060	0.267 *	0	817	3060	0.267 *	0	817	3060	0.267 *
Nb Thru	1278	3400	0.376	38	1316	0.387	14	1330	3400	0.391	9	1339	3400	0.394	0	1339	3400	0.394
Nb Right	0	0	-	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Sb Left	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Sb Thru	731	3400	0.215	22	753	0.221	5	758	3400	0.223	1	759	3400	0.223	0	759	3400	0.223
Sb Right	474	1700	0.279 *	14	488	0.287 *	0	488	1700	0.287 *	0	488	1700	0.287 *	0	488	1700	0.287 *
Eb Left	0	0	0.000 *	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *
Eb Thru	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Eb Right	0	0	-	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Wb Left	481	0	0.079	14	496	0.081	86	582	0	0.095	2	584	0	0.095	0	584	0	0.095
Wb Thru	780	6120	0.253 *	23	803	0.260 *	0	803	6120	0.274 *	3	806	6120	0.275 *	0	806	6120	0.275 *
Wb Right	285	0	-	9	294	-	0	294	0	-	0	294	0	-	0	294	0	-
Yellow Allowance:			0.100 *			0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.863			0.886				0.928				0.929				0.929
LOS			D			D				E				E				E

01:47 PM

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INTERSECTION CAPACITY UTILIZATION

N-S St: Lake Avenue
E-W St: I-210 Freeway EB Ramps-Corson Street
Project: Playhouse Plaza Project/1-083727-1
File: ICU-10

Lake Avenue @ I-210 Freeway EB Ramps-Corson Street
Peak hr: AM
Annual Growth: 1.50%

PROJECT ALTERNATIVE 4

Date: 07/03/2008
Date of Count: 2008
Projection Year: 2010

	2008 EXIST. TRAFFIC			2010 W/AMBIENT GROWTH			2010 W/RELATED PROJECTS [3]				2010 W/PROJECT SITE TRAFFIC				2010 W/PROJECT MITIGATION			
	1	2	V/C	Added	Total	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Nb Thru	723	7650	0.139 *	22	744	0.143 *	72	816	7650	0.162 *	1	817	7650	0.163 *	0	817	7650	0.163 *
Nb Right	343	0	-	10	353	-	73	426	0	-	2	428	0	-	0	428	0	-
Sb Left	423	3060	0.138 *	13	436	0.142 *	0	436	3060	0.142 *	0	436	3060	0.142 *	0	436	3060	0.142 *
Sb Thru	927	5100	0.182	28	954	0.187	96	1050	5100	0.206	21	1071	5100	0.210	0	1071	5100	0.210
Sb Right	0	0	-	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Eb Left	488	0	0.064	15	503	0.066	0	503	0	0.066	0	503	0	0.066	0	503	0	0.066
Eb Thru	754	7650	0.266 *	23	777	0.274 *	3	780	7650	0.285 *	2	782	7650	0.285 *	0	782	7650	0.285 *
Eb Right	790	0	-	24	813	-	84	897	0	-	0	897	0	-	0	897	0	-
Wb Left	0	0	0.000 *	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *
Wb Thru	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Wb Right	0	0	-	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Yellow Allowance:			0.100 *			0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.643			0.660				0.690				0.691				0.691
LOS			B			B				B				B				B

01:48 PM

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INTERSECTION CAPACITY UTILIZATION

N-S St: Lake Avenue
E-W St: I-210 Freeway EB Ramps-Corson Street
Project: Playhouse Plaza Project/1-083727-1
File: ICU-10

Lake Avenue @ I-210 Freeway EB Ramps-Corson Street
Peak hr: PM
Annual Growth: 1.50%

PROJECT ALTERNATIVE 4

Date: 07/03/2008
Date of Count: 2008
Projection Year: 2010

	2008 EXIST. TRAFFIC			2010 W/AMBIENT GROWTH			2010 W/RELATED PROJECTS [3]				2010 W/PROJECT SITE TRAFFIC				2010 W/PROJECT MITIGATION			
Movement	1 Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio
Nb Left	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Nb Thru	1234	7650	0.225 *	37	1271	0.232 *	100	1371	7650	0.257 *	9	1380	7650	0.260 *	0	1380	7650	0.260 *
Nb Right	486	0	-	15	501	-	93	594	0	-	15	609	0	-	0	609	0	-
Sb Left	227	3060	0.074 *	7	234	0.077 *	0	234	3060	0.077 *	0	234	3060	0.077 *	0	234	3060	0.077 *
Sb Thru	951	5100	0.186	29	980	0.192	91	1071	5100	0.210	4	1075	5100	0.211	0	1075	5100	0.211
Sb Right	0	0	-	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Eb Left	757	0	0.099	23	780	0.102	0	780	0	0.102	0	780	0	0.102	0	780	0	0.102
Eb Thru	1562	7650	0.403 *	47	1609	0.416 *	3	1612	7650	0.423 *	12	1624	7650	0.424 *	0	1624	7650	0.424 *
Eb Right	767	0	-	23	790	-	53	843	0	-	0	843	0	-	0	843	0	-
Wb Left	0	0	0.000 *	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *
Wb Thru	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Wb Right	0	0	-	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Yellow Allowance:			0.100 *			0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.803			0.824				0.856				0.861				0.861
LOS			D			D				D				D				D

01:48 PM

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INTERSECTION CAPACITY UTILIZATION

N-S St: Lake Avenue
E-W St: Walnut Street
Project: Playhouse Plaza Project/1-083727-1
File: ICU-11

Lake Avenue @ Walnut Street
Peak hr: AM
Annual Growth: 1.50%

PROJECT ALTERNATIVE 4

Date: 07/03/2008
Date of Count: 2008
Projection Year: 2010

	2008 EXIST. TRAFFIC			2010 W/AMBIENT GROWTH			2010 W/RELATED PROJECTS [3]				2010 W/PROJECT SITE TRAFFIC				2010 W/PROJECT MITIGATION			
	1	2	V/C	Added	Total	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Added	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio
Nb Left	83	1700	0.049 *	2	86	0.050 *	16	102	1700	0.060 *	0	102	1700	0.060 *	0	102	1700	0.060 *
Nb Thru	790	5100	0.155	24	813	0.159	192	1005	5100	0.197	2	1007	5100	0.198	0	1007	5100	0.198
Nb Right	75	1700	0.044	2	77	0.046	0	77	1700	0.046	0	77	1700	0.046	0	77	1700	0.046
Sb Left	132	1700	0.078	4	136	0.080	8	144	1700	0.085	0	144	1700	0.085	0	144	1700	0.085
Sb Thru	1287	5100	0.273 *	39	1326	0.281 *	105	1431	5100	0.307 *	45	1476	5100	0.315 *	0	1476	5100	0.315 *
Sb Right	105	0	-	3	108	-	25	133	0	-	0	133	0	-	0	133	0	-
Eb Left	174	3060	0.057 *	5	179	0.058 *	75	254	3060	0.083 *	2	256	3060	0.084 *	0	256	3060	0.084 *
Eb Thru	243	3400	0.096	7	250	0.099	34	284	3400	0.116	2	286	3400	0.117	0	286	3400	0.117
Eb Right	85	0	-	3	88	-	24	112	0	-	0	112	0	-	0	112	0	-
Wb Left	107	1700	0.063	3	110	0.065	0	110	1700	0.065	0	110	1700	0.065	0	110	1700	0.065
Wb Thru	470	3400	0.159 *	14	484	0.164 *	17	501	3400	0.177 *	18	519	3400	0.182 *	0	519	3400	0.182 *
Wb Right	71	0	-	2	73	-	27	100	0	-	0	100	0	-	0	100	0	-
Yellow Allowance:			0.100 *			0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.638			0.654				0.726				0.741				0.741
LOS			B			B				C				C				C

01:48 PM

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INTERSECTION CAPACITY UTILIZATION

N-S St: Lake Avenue
E-W St: Walnut Street
Project: Playhouse Plaza Project/1-083727-1
File: ICU-11

Lake Avenue @ Walnut Street
Peak hr: PM
Annual Growth: 1.50%

PROJECT ALTERNATIVE 4

Date: 07/03/2008
Date of Count: 2008
Projection Year: 2010

	2008 EXIST. TRAFFIC			2010 W/AMBIENT GROWTH			2010 W/RELATED PROJECTS [3]				2010 W/PROJECT SITE TRAFFIC				2010 W/PROJECT MITIGATION			
Movement	1 Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio
Nb Left	66	1700	0.039 *	2	68	0.040 *	23	91	1700	0.054 *	0	91	1700	0.054 *	0	91	1700	0.054 *
Nb Thru	1178	5100	0.231	35	1214	0.238	109	1323	5100	0.259	15	1338	5100	0.262	0	1338	5100	0.262
Nb Right	95	1700	0.056	3	98	0.058	0	98	1700	0.058	0	98	1700	0.058	0	98	1700	0.058
Sb Left	163	1700	0.096	5	168	0.099	28	196	1700	0.115	0	196	1700	0.115	0	196	1700	0.115
Sb Thru	1346	5100	0.298 *	40	1386	0.307 *	185	1571	5100	0.358 *	8	1579	5100	0.360 *	0	1579	5100	0.360 *
Sb Right	173	0	-	5	178	-	77	255	0	-	0	255	0	-	0	255	0	-
Eb Left	484	3060	0.158 *	15	499	0.163 *	46	545	3060	0.178 *	16	561	3060	0.183 *	0	561	3060	0.183 *
Eb Thru	719	3400	0.248	22	740	0.255	26	766	3400	0.268	16	782	3400	0.273	0	782	3400	0.273
Eb Right	124	0	-	4	128	-	17	145	0	-	0	145	0	-	0	145	0	-
Wb Left	61	1700	0.036	2	63	0.037	0	63	1700	0.037	0	63	1700	0.037	0	63	1700	0.037
Wb Thru	398	3400	0.164 *	12	410	0.169 *	35	445	3400	0.182 *	3	448	3400	0.183 *	0	448	3400	0.183 *
Wb Right	158	0	-	5	163	-	11	174	0	-	0	174	0	-	0	174	0	-
Yellow Allowance:			0.100 *			0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.758			0.778				0.872				0.879				0.879
LOS			C			C				D				D				D

01:48 PM

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INTERSECTION CAPACITY UTILIZATION

N-S St: Lake Avenue
E-W St: Colorado Boulevard
Project: Playhouse Plaza Project/1-083727-1
File: ICU-12

Lake Avenue @ Colorado Boulevard
Peak hr: AM
Annual Growth: 1.50%

PROJECT ALTERNATIVE 4

Date: 07/03/2008
Date of Count: 2008
Projection Year: 2010

	2008 EXIST. TRAFFIC			2010 W/AMBIENT GROWTH			2010 W/RELATED PROJECTS				2010 W/PROJECT SITE TRAFFIC				2010 W/PROJECT MITIGATION			
	1	2	V/C	Added	Total	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Volume	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Shift	Volume	Capacity	Ratio
Nb Left	93	1700	0.055 *	3	96	0.057 *	12	108	1700	0.064 *	0	108	1700	0.064 *	0	108	1700	0.064 *
Nb Thru	676	5100	0.145	20	696	0.149	66	762	5100	0.166	1	763	5100	0.166	0	763	5100	0.166
Nb Right	64	0	-	2	66	-	18	84	0	-	0	84	0	-	0	84	0	-
Sb Left	111	1700	0.065	3	114	0.067	20	134	1700	0.079	0	134	1700	0.079	0	134	1700	0.079
Sb Thru	1123	3400	0.330 *	34	1156	0.340 *	49	1205	3400	0.354 *	0	1205	3400	0.354 *	0	1205	3400	0.354 *
Sb Right	165	1700	0.097	5	170	0.100	60	230	1700	0.136	8	238	1700	0.140	0	238	1700	0.140
Eb Left	160	1700	0.094 *	5	165	0.097 *	63	228	1700	0.134 *	1	229	1700	0.135 *	0	229	1700	0.135 *
Eb Thru	289	3400	0.085	9	298	0.088	87	385	3400	0.113	2	387	3400	0.114	-20	367	3400	0.108
Eb Right	93	1700	0.055	3	96	0.057	0	96	1700	0.057	0	96	1700	0.057	0	96	1700	0.057
Wb Left	99	1700	0.059	3	102	0.060	32	134	1700	0.079	0	134	1700	0.079	0	134	1700	0.079
Wb Thru	435	3400	0.128 *	13	448	0.132 *	88	536	3400	0.158 *	19	555	3400	0.163 *	0	555	3400	0.163 *
Wb Right	164	1700	0.097	5	169	0.100	49	218	1700	0.128	0	218	1700	0.128	0	218	1700	0.128
Yellow Allowance:			0.100 *			0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.708			0.726				0.810				0.816				0.816
LOS			C			C				D				D				D

01:48 PM

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INTERSECTION CAPACITY UTILIZATION

N-S St: Lake Avenue
E-W St: Colorado Boulevard
Project: Playhouse Plaza Project/1-083727-1
File: ICU-12

Lake Avenue @ Colorado Boulevard
Peak hr: PM
Annual Growth: 1.50%

PROJECT ALTERNATIVE 4

Date: 07/03/2008
Date of Count: 2008
Projection Year: 2010

	2008 EXIST. TRAFFIC			2010 W/AMBIENT GROWTH			2010 W/RELATED PROJECTS				2010 W/PROJECT SITE TRAFFIC				2010 W/PROJECT MITIGATION			
	1		2 V/C	Added	Total	V/C	Added	Total		2 V/C	Added	Total		2 V/C	Volume	Total		2 V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Shift	Volume	Capacity	Ratio
Nb Left	141	1700	0.083 *	4	145	0.085 *	7	152	1700	0.090 *	0	152	1700	0.090 *	0	152	1700	0.090 *
Nb Thru	896	5100	0.195	27	923	0.201	50	973	5100	0.213	7	980	5100	0.214	0	980	5100	0.214
Nb Right	99	0	-	3	102	-	9	111	0	-	0	111	0	-	0	111	0	-
Sb Left	248	1700	0.146	7	255	0.150	23	278	1700	0.164	0	278	1700	0.164	0	278	1700	0.164
Sb Thru	1085	3400	0.319 *	33	1118	0.329 *	74	1192	3400	0.350 *	0	1192	3400	0.350 *	0	1192	3400	0.350 *
Sb Right	254	1700	0.149	8	261	0.154	105	366	1700	0.216	1	367	1700	0.216	0	367	1700	0.216
Eb Left	234	1700	0.138 *	7	241	0.142 *	63	304	1700	0.179 *	7	311	1700	0.183 *	0	311	1700	0.183 *
Eb Thru	696	3400	0.205	21	717	0.211	87	804	3400	0.237	18	822	3400	0.242	-38	784	3400	0.231
Eb Right	178	1700	0.104	5	183	0.108	0	183	1700	0.108	0	183	1700	0.108	0	183	1700	0.108
Wb Left	134	1700	0.079	4	138	0.081	14	152	1700	0.089	0	152	1700	0.089	0	152	1700	0.089
Wb Thru	658	3400	0.193 *	20	677	0.199 *	84	761	3400	0.224 *	4	765	3400	0.225 *	0	765	3400	0.225 *
Wb Right	216	1700	0.127	6	223	0.131	19	242	1700	0.142	0	242	1700	0.142	0	242	1700	0.142
Yellow Allowance:			0.100 *			0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.833			0.855				0.943				0.948				0.948
LOS			D			D				E				E				E

01:48 PM

**Key conflicting movement as a part of ICU*
1 Counts conducted by.The Traffic Solution
2 Capacity expressed in veh/hour of green
3 As directed by Pasadena DOT staff, the related projects volumes where obtained from the Draft Traffic Impact Study for 680 E. Colorado Boulevard Mixed Use Project prepared by Willdan Associates, June 2007. Note: Year 2007 manual traffic counts were adjusted by a 1.5 percent (1.5%) ambient growth factor to reflect year 2008 existing conditions.

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INTERSECTION CAPACITY UTILIZATION

N-S St: Lake Avenue
E-W St: Green Street
Project: Playhouse Plaza Project/1-083727-1
File: ICU-13

Lake Avenue @ Green Street
Peak hr: AM
Annual Growth: 1.50%

PROJECT ALTERNATIVE 4

Date: 07/03/2008
Date of Count: 2008
Projection Year: 2010

	2008 EXIST. TRAFFIC			2010 W/AMBIENT GROWTH			2010 W/RELATED PROJECTS [3]				2010 W/PROJECT SITE TRAFFIC				2010 W/PROJECT MITIGATION			
	1	2	V/C	Added	Total	V/C	Added	Total	2	V/C	Added	Total	2	V/C	Volume	Total	2	V/C
Movement	Volume	Capacity	Ratio	Volume	Volume	Ratio	Volume	Volume	Capacity	Ratio	Volume	Volume	Capacity	Ratio	Shift	Volume	Capacity	Ratio
Nb Left	0	0	0.000 *	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *
Nb Thru	720	3400	0.212	22	741	0.218	90	831	3400	0.244	0	831	3400	0.244	0	831	3400	0.244
Nb Right	88	1700	0.052	3	91	0.054	0	91	1700	0.054	0	91	1700	0.054	0	91	1700	0.054
Sb Left	183	1700	0.107	5	188	0.111	0	188	1700	0.111	0	188	1700	0.111	0	188	1700	0.111
Sb Thru	1101	3400	0.324 *	33	1134	0.334 *	81	1215	3400	0.357 *	0	1215	3400	0.357 *	0	1215	3400	0.357 *
Sb Right	0	0	-	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Eb Left	92	1700	0.054	3	95	0.056	6	101	1700	0.059	1	102	1700	0.060	0	102	1700	0.060
Eb Thru	496	5100	0.097 *	15	511	0.100 *	0	511	5100	0.100 *	2	513	5100	0.101 *	20	533	5100	0.105 *
Eb Right	81	1700	0.048	2	84	0.049	10	94	1700	0.055	1	95	1700	0.056	0	95	1700	0.056
Wb Left	0	0	0.000 *	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *
Wb Thru	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Wb Right	0	0	-	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Yellow Allowance:			0.100 *			0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.521			0.534				0.558				0.558				0.562
LOS			A			A				A				A				A

01:48 PM

**Key conflicting movement as a part of ICU*
1 Counts conducted by.The Traffic Solution
2 Capacity expressed in veh/hour of green
3 As directed by Pasadena DOT staff, the related projects volumes where obtained from the Draft Traffic Impact Study for 680 E. Colorado Boulevard Mixed Use Project prepared by Willdan Associates, June 2007. Note: Year 2007 manual traffic counts were adjusted by a 1.5 percent (1.5%) ambient growth factor to reflect year 2008 existing conditions.

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INTERSECTION CAPACITY UTILIZATION

N-S St: Lake Avenue
E-W St: Green Street
Project: Playhouse Plaza Project/1-083727-1
File: ICU-13

Lake Avenue @ Green Street
Peak hr: PM
Annual Growth: 1.50%

PROJECT ALTERNATIVE 4

Date: 07/03/2008
Date of Count: 2008
Projection Year: 2010

	2008 EXIST. TRAFFIC			2010 W/AMBIENT GROWTH			2010 W/RELATED PROJECTS [3]				2010 W/PROJECT SITE TRAFFIC				2010 W/PROJECT MITIGATION			
Movement	1 Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Added Volume	Total Volume	2 Capacity	V/C Ratio	Volume Shift	Total Volume	2 Capacity	V/C Ratio
Nb Left	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Nb Thru	932	3400	0.274 *	28	960	0.282 *	55	1015	3400	0.298 *	0	1015	3400	0.298 *	0	1015	3400	0.298 *
Nb Right	119	1700	0.070	4	122	0.072	9	131	1700	0.077	0	131	1700	0.077	0	131	1700	0.077
Sb Left	151	1700	0.089 *	5	156	0.092 *	14	170	1700	0.100 *	0	170	1700	0.100 *	0	170	1700	0.100 *
Sb Thru	1219	3400	0.359	37	1256	0.369	74	1330	3400	0.391	0	1330	3400	0.391	0	1330	3400	0.391
Sb Right	0	0	-	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Eb Left	244	1700	0.143	7	251	0.148	11	262	1700	0.154	8	270	1700	0.159	0	270	1700	0.159
Eb Thru	840	5100	0.165 *	25	866	0.170 *	4	870	5100	0.171 *	15	885	5100	0.173 *	38	923	5100	0.181 *
Eb Right	191	1700	0.112	6	197	0.116	14	211	1700	0.124	8	219	1700	0.129	0	219	1700	0.129
Wb Left	0	0	0.000 *	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *	0	0	0	0.000 *
Wb Thru	0	0	0.000	0	0	0.000	0	0	0	0.000	0	0	0	0.000	0	0	0	0.000
Wb Right	0	0	-	0	0	-	0	0	0	-	0	0	0	-	0	0	0	-
Yellow Allowance:			0.100 *			0.100 *				0.100 *				0.100 *				0.100 *
ICU			0.628			0.644				0.669				0.672				0.679
LOS			B			B				B				B				B

01:48 PM

* *Key conflicting movement as a part of ICU*
1 Counts conducted by.The Traffic Solution
2 Capacity expressed in veh/hour of green
3 As directed by Pasadena DOT staff, the related projects volumes where obtained from the Draft Traffic Impact Study for 680 E. Colorado Boulevard Mixed Use Project prepared by Willdan Associates, June 2007. Note: Year 2007 manual traffic counts were adjusted by a 1.5 percent (1.5%) ambient growth factor to reflect year 2008 existing conditions.

APPENDIX C

AUTOMATIC 24-HOUR MACHINE TRAFFIC COUNTS

THE TRAFFIC SOLUTION - ADT WORKSHEET

CLIENT: WILLDAN

PROJECT: CITY OF PASADENA

LOCATION: EL MOLINO AVENUE BTWN COLORADO BOULEVARD & PLAYHOUSE ALLEY

DATE: TUESDAY, APRIL 10, 2007

FILE NO: A-1

DIRECTION:		NORTHBOUND			
TIME	00-15	15-30	30-45	45-60	HOUR TOTALS
00:00	3	2	3	0	8
01:00	1	3	0	2	6
02:00	2	0	2	0	4
03:00	1	0	0	1	2
04:00	0	1	1	4	6
05:00	2	3	5	3	13
06:00	6	7	16	20	49
07:00	30	23	35	65	153
08:00	54	77	53	54	238
09:00	38	40	54	28	160
10:00	38	44	38	33	153
11:00	44	30	50	50	174
12:00	47	44	47	56	194
13:00	34	51	62	55	202
14:00	58	51	42	65	216
15:00	58	75	57	65	255
16:00	59	53	60	62	234
17:00	83	76	52	49	260
18:00	72	59	60	58	249
19:00	55	42	31	41	169
20:00	26	20	23	19	88
21:00	20	19	20	15	74
22:00	13	16	17	14	60
23:00	16	13	6	4	39
				TOTAL	3006

AM PEAK HOUR	07:45-08:45
VOLUME	249
PM PEAK HOUR	16:30-17:30
VOLUME	281

DIRECTION:		SOUTHBOUND			
TIME	00-15	15-30	30-45	45-60	HOUR TOTALS
00:00	5	4	3	0	12
01:00	1	1	2	0	4
02:00	0	0	0	0	0
03:00	0	0	0	0	0
04:00	0	0	0	3	3
05:00	2	1	3	10	16
06:00	7	10	5	18	40
07:00	24	36	54	71	185
08:00	91	77	40	62	270
09:00	57	51	54	48	210
10:00	48	43	43	65	199
11:00	54	41	53	56	204
12:00	53	53	66	70	242
13:00	67	59	60	59	245
14:00	45	51	70	66	232
15:00	69	63	76	71	279
16:00	59	65	77	73	274
17:00	93	75	79	75	322
18:00	69	65	55	62	251
19:00	52	46	44	34	176
20:00	29	28	28	26	111
21:00	17	18	23	16	74
22:00	21	16	11	10	58
23:00	7	3	5	4	19
				TOTAL	3426

AM PEAK HOUR	07:30-08:30
VOLUME	293
PM PEAK HOUR	17:00-18:00
VOLUME	322

TOTAL BI-DIRECTIONAL VOLUME	6432

THE TRAFFIC SOLUTION - ADT WORKSHEET

CLIENT: WILLDAN
PROJECT: CITY OF PASADENA
LOCATION: OAK KNOLL AVENUE BTWN COLORADO BOULEVARD & GREEN STREET
DATE: TUESDAY, MAY 01, 2007
FILE NO: A-1

DIRECTION:	NORTHBOUND				
TIME	00-15	15-30	30-45	45-60	HOUR TOTALS
00:00	0	0	2	0	2
01:00	0	2	0	0	2
02:00	0	0	1	0	1
03:00	0	0	0	0	0
04:00	0	0	1	1	2
05:00	1	0	1	4	6
06:00	1	6	6	7	20
07:00	7	9	14	25	55
08:00	28	26	27	17	98
09:00	24	21	18	14	77
10:00	18	18	18	18	72
11:00	29	25	21	27	102
12:00	29	26	28	37	120
13:00	22	31	32	32	117
14:00	17	20	23	24	84
15:00	40	33	30	30	133
16:00	39	31	33	30	133
17:00	44	40	17	29	130
18:00	34	23	31	31	119
19:00	28	34	27	17	106
20:00	23	12	22	11	68
21:00	17	12	18	9	56
22:00	7	6	4	3	20
23:00	3	3	2	1	9
				TOTAL	1532

AM PEAK HOUR	07:45-08:45
VOLUME	106
PM PEAK HOUR	16:30-17:30
VOLUME	147

DIRECTION:	SOUTHBOUND				
TIME	00-15	15-30	30-45	45-60	HOUR TOTALS
00:00	1	2	2	0	5
01:00	3	1	1	0	5
02:00	0	2	0	0	2
03:00	1	0	1	1	3
04:00	0	0	3	4	7
05:00	3	5	2	3	13
06:00	5	9	14	13	41
07:00	17	31	39	59	146
08:00	46	63	56	44	209
09:00	42	48	42	47	179
10:00	46	47	41	47	181
11:00	50	59	55	50	214
12:00	49	39	55	60	203
13:00	73	52	58	55	238
14:00	52	51	60	68	231
15:00	57	56	59	62	234
16:00	57	42	56	60	215
17:00	65	91	63	55	274
18:00	50	65	45	33	193
19:00	42	31	42	28	143
20:00	38	28	29	31	126
21:00	18	22	16	20	76
22:00	16	12	8	14	50
23:00	9	3	4	6	22
				TOTAL	3010

AM PEAK HOUR	07:45-08:45
VOLUME	224
PM PEAK HOUR	16:45-17:45
VOLUME	279

TOTAL BI-DIRECTIONAL VOLUME	4542

THE TRAFFIC SOLUTION - ADT WORKSHEET

CLIENT: WILLDAN

PROJECT: CITY OF PASADENA

LOCATION: COLORADO BOULEVARD BTWN HUDSON AVENUE & LAKE AVENUE

DATE: TUESDAY, APRIL 10, 2007

FILE NO: A-4

DIRECTION		WESTBOUND			
TIME	00-15	15-30	30-45	45-60	HOUR TOTALS
00:00	30	17	17	13	77
01:00	17	9	9	4	39
02:00	16	8	5	6	35
03:00	8	8	5	8	29
04:00	9	15	6	26	56
05:00	31	35	69	80	215
06:00	65	82	77	103	327
07:00	119	151	157	188	615
08:00	208	212	222	178	820
09:00	175	175	158	175	683
10:00	17	196	164	196	573
11:00	199	211	208	216	834
12:00	215	235	259	252	961
13:00	276	255	211	238	980
14:00	233	223	229	235	920
15:00	222	225	226	228	901
16:00	236	218	200	235	889
17:00	226	260	226	221	933
18:00	195	193	193	181	762
19:00	196	207	172	151	726
20:00	160	152	131	129	572
21:00	117	92	101	82	392
22:00	64	81	54	51	250
23:00	40	36	40	35	151
				TOTAL	12740

AM PEAK HOUR	07:45-08:45
VOLUME	830
PM PEAK HOUR	12:30-13:30
VOLUME	1042

DIRECTION:		EASTBOUND			
TIME	00-15	15-30	30-45	45-60	HOUR TOTALS
00:00	43	26	33	28	130
01:00	15	22	20	17	74
02:00	14	11	9	5	39
03:00	14	1	6	6	27
04:00	11	7	4	10	32
05:00	12	16	17	22	67
06:00	30	30	52	75	187
07:00	90	85	103	102	380
08:00	129	125	139	137	530
09:00	120	145	153	159	577
10:00	165	181	200	197	743
11:00	213	186	221	227	847
12:00	227	261	261	233	982
13:00	229	241	203	224	897
14:00	242	200	212	228	882
15:00	234	237	222	228	921
16:00	273	242	246	249	1010
17:00	263	291	265	268	1087
18:00	228	218	231	166	843
19:00	201	202	183	166	752
20:00	154	164	132	130	580
21:00	140	141	115	124	520
22:00	118	101	91	87	397
23:00	73	64	47	32	216
				TOTAL	12720

AM PEAK HOUR	11:00-12:00
VOLUME	847
PM PEAK HOUR	17:00-18:00
VOLUME	1087

TOTAL BI-DIRECTIONAL VOLUME	25460

THE TRAFFIC SOLUTION - ADT WORKSHEET

CLIENT: WILLDAN
PROJECT: CITY OF PASADENA
LOCATION: GREEN STREET BTWN EL MOLINO AVENUE & ARCADE ALLEY
DATE: TUESDAY, APRIL 10, 2007
FILE NO: A-2

DIRECTION:		EASTBOUND			
TIME	00-15	15-30	30-45	45-60	HOUR TOTALS
00:00	17	15	14	7	53
01:00	3	8	3	4	18
02:00	4	2	0	3	9
03:00	0	2	0	2	4
04:00	0	4	2	2	8
05:00	3	5	8	16	32
06:00	18	24	43	63	148
07:00	66	85	104	186	441
08:00	159	165	131	171	626
09:00	158	118	134	125	535
10:00	129	131	155	152	567
11:00	141	162	164	162	629
12:00	194	188	163	185	730
13:00	178	170	169	175	692
14:00	148	158	177	192	675
15:00	198	197	194	221	810
16:00	224	213	223	238	898
17:00	265	277	249	265	1056
18:00	227	226	189	187	829
19:00	157	164	157	125	603
20:00	137	121	110	113	481
21:00	122	89	85	64	360
22:00	68	71	48	59	246
23:00	46	27	21	23	117
				TOTAL	10567

AM PEAK HOUR	11:00-12:00
VOLUME	629
PM PEAK HOUR	17:00-18:00
VOLUME	1056

TOTAL DIRECTIONAL VOLUME	10567

THE TRAFFIC SOLUTION - ADT WORKSHEET

CLIENT: WILLDAN

PROJECT: CITY OF PASADENA

LOCATION: GREEN STREET BTWN HUDSON AVENUE & LAKE AVENUE

DATE: TUESDAY, APRIL 10, 2007

FILE NO: A-5

DIRECTION		EASTBOUND			
TIME	00-15	15-30	30-45	45-60	HOUR TOTALS
00:00	18	15	12	6	51
01:00	4	11	2	4	21
02:00	5	0	0	3	8
03:00	0	2	0	2	4
04:00	1	6	3	2	12
05:00	3	7	9	16	35
06:00	17	22	42	62	143
07:00	70	80	91	159	400
08:00	131	143	134	158	566
09:00	127	122	133	124	506
10:00	140	133	152	150	575
11:00	136	155	164	175	630
12:00	187	201	170	203	761
13:00	176	172	203	182	733
14:00	168	178	193	201	740
15:00	212	203	212	224	851
16:00	252	248	231	266	997
17:00	303	292	273	279	1147
18:00	249	227	194	205	875
19:00	166	165	169	131	631
20:00	149	113	115	119	496
21:00	134	94	79	71	378
22:00	78	69	47	53	247
23:00	53	28	20	26	127
				TOTAL	10934

AM PEAK HOUR	11:00-12:00
VOLUME	630
PM PEAK HOUR	17:00-18:00
VOLUME	1147

TOTAL BI-DIRECTIONAL VOLUME	10934

Appendix F

Metropolitan Water District Status Update on Five-Year Supply Options

MWD
METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

Report

Water System Operations

• Status Update on Five-Year Supply Actions

Summary

A Five-Year Supply Plan is being prepared to identify the specific resource and conservation actions that would be implemented over the next five years to manage water deliveries under continued drought conditions and court ordered restrictions. Since April 2008, staff has been working with the member agencies through a series of meetings and workshops to develop and implement the Five-Year Supply Plan. The Plan was initiated in response to a number of extraordinary events, such as regulatory actions that reduced water supplies from the State Water Project (SWP) to protect Delta smelt, as well as a record-dry hydrology that will result in about 1.1 million acre-feet of withdrawals from Metropolitan storage from January 2007 through December 2008.

This status update of the five-year supply planning process describes specific actions that are being considered for evaluation and implementation, and provides an estimate of Metropolitan's potential supply volumes and costs resulting from these identified actions. There are numerous specific projects and transactions that have been identified as potential resource options for the next five years. However, most of these options have not been incorporated into Metropolitan's current budget. A more detailed financial assessment, including detailed cost estimates and rate impacts, will be developed. In addition, this analysis should consider the financial impacts of a regional water shortage on the Southern California economy.

Attachments

Attachment 1: Initial 2009 Supply Outlook (Critically Dry-Year)

Attachment 2: Firm Supplies for 2009

Attachment 3: Potential Resource Options for the Next Five Years

Detailed Report

Since April 2008, staff has been working with the member agencies through a series of meetings and workshops to develop and implement a Five-Year Supply Plan. These meetings focused on reviewing current and forecasted conditions, developing an approach and an inventory of specific options to address potential shortfalls in the five-year planning horizon for water supply, and assembling work teams with the member agencies to identify resource opportunities. Staff is reporting these options at this exploratory phase because early identification of potential resource options and the evaluation of their feasibility and cost are key to expediting the implementation of a number of these initiatives that would make additional supplies available within the next five years. These options also identify new areas of supply development for the long-term and will be considered in the 2009 Integrated Resources Plan. Further information and additional details on the progress of the resource options listed will be the subject of a future board information letter.

2009 Supply Situation

The water conditions that we face in 2009 are the result of water supply conditions and resource actions that have occurred over the preceding years, including several extraordinary events, such as:

- An extended 8-year drought in the Colorado River watershed resulted in storage levels in Lake Mead and Lake Powell going below 50 percent of capacity in 2007 and early 2008;
- Record dry hydrology in Southern California dropped groundwater basins and local reservoirs to very low operating levels;
- The federal court order to restrict SWP deliveries due to Delta smelt resulted in the loss of about one-third of the available SWP supplies in 2008, reducing the likelihood that regional storage can be refilled in the near term; and

- The SWP suffered from the driest spring of record this year, leading to forecasts of end of year water supplies in Lake Oroville and San Luis Reservoir at the lowest operating levels since 1976.

These supply conditions, along with increasing firm demands on Metropolitan, have led to significant withdrawals from Metropolitan's storage reserves, including Diamond Valley Lake (DVL), and its groundwater banking and conjunctive use programs to meet all scheduled water deliveries. To illustrate this point, from January 2007 through December 2008, an estimated 1.1 million acre-feet (MAF) of storage reserves will be withdrawn to meet about one quarter of wholesale demands over this two year period.

If these critically dry conditions continue, layered on top of these court-ordered SWP restrictions, the initial supply conditions for 2009 are anticipated to be as follows:

- A 10% - 20% initial SWP allocation (210,000 to 418,000 AF), due to forecasted low SWP reservoir levels leading into 2009;
- About 900,000 acre-feet of Colorado River Aqueduct (CRA) supplies, based on the expected U. S. Bureau of Reclamation (USBR) approved order, leading to a CRA that is about three-quarters full;
- Demands of 2.2 to 2.4 MAF due to significant decreases in local groundwater storage, reservoir storage, and Los Angeles Aqueduct supplies. Demands exclude groundwater replenishment deliveries due to assumed dry conditions;
- Maximum withdrawals from the Central Valley Banking Programs for the third consecutive year, leaving as little as one more year of reserves; and
- One remaining year of dry-year storage reserves in DVL and the Flexible Storage accounts, assuming all emergency storage supplies are maintained.

Under this 2009 scenario, Metropolitan's firm supplies would total 1.7 to 1.9 MAF based on the critically dry SWP allocations and approved order for CRA deliveries, combined with withdrawals from Central Valley Banking Programs, conjunctive use programs, and system reservoirs. The estimates of firm supplies are shown in **Attachment 1**, with a detailed list of firm supplies shown in **Attachment 2**. Compared to demands of 2.2 to 2.4 MAF, the potential shortfall of firm supplies could be as much as 706,000 AF. To meet this potential gap between dry-year supplies and demands, staff has developed an inventory of resource options that can be implemented in 2009.

Resource Options

A set of potential resource options for 2009 has been evaluated based on the feasibility of specific projects and transactions. These options could yield from 520,000 to 1,250,000 acre-feet of additional supplies in 2009, if successfully implemented. The low end of the range, 520,000 acre-feet per year, is used for planning purposes under a critically-dry scenario. The specific resource options are projects or transactions that would be implemented or expedited by Metropolitan and are shown in **Attachment 3,** along with information on their estimated annual supply yield and preliminary ranges of costs that would be incurred by Metropolitan. If these options are selected and successfully implemented, together with the estimated firm supplies, the total amount of available supplies in 2009 would amount to 2.2 to 3.2 MAF. The set of resource options focus on six initiatives: conservation, Colorado River transactions, near-term Delta actions, SWP transactions, groundwater recovery, and local resources. Project feasibility assessments are being conducted and will continue over the next several months.

Conservation

A member agency working group was convened to develop strategies to increase and accelerate conservation savings. The group identified the following elements that work together to increase the use of water efficient devices, affect the water use practices in Southern California, and reduce prohibited uses of water.

- Increased Outreach: Continue to heighten the public messaging campaigns, with an emphasis of coordination and sharing of resources with local agency efforts to increase the awareness of the water supply situation and the ways to decrease water use.
- Support of Local Ordinances and Tiered Pricing: Increase the resources and support for the implementation of water use ordinances and conservation-based tiered rate structures. As a result, Metropolitan has compiled a library of water saving ordinances now available online for member and local agencies, and is planning a regional workshop to provide guidance in creating and enforcing water use ordinances.
- Enhanced Conservation Programs: Accelerate the installation of water efficient devices. This is proposed to be done with two approaches. First, by temporarily increasing the incentives provided under Metropolitan's Conservation Credits Program. Second, by identifying and overcoming the current barriers in the distribution of water efficient devices. This may be done by increased coordination and partnering with the retailer of water efficient devices and potentially by streamlining the process of moving devices from the manufacturers to the end-user.
- Enhanced Public Sector Program: Extend the Public Sector Program, with the authorization of additional funding beyond the current program budget of $15 million. This program reinforces Metropolitan's public messaging efforts to save water by public sector example, and also results in real reductions in potable water use.

Staff estimates that the successful implementation of actions above will result in 200,000 AF to 400,000 AF of annual conservation savings over and above what would have been achieved with the ongoing conservation program.

Colorado River Transactions

These transactions are based on opportunities to gain additional water supplies by enhancing existing programs and pursuing new initiatives. The existing programs that could be enhanced are the Palo Verde Irrigation District (PVID) Land Management Program and purchasing water from the Coachella Valley Water District. Staff is also currently in the preliminary design phase for a project to extract stored groundwater in the Hayfield Basin. Final design and a request for funding for the Hayfield project will be the subject of an upcoming board letter in the near future. Should the project be approved and successfully implemented, it is estimated that 12,000 AF could be produced in 2009. Feasibility investigations are also underway for participation with USBR in the Yuma Desalter that could yield 10,000 AFY. New initiatives could include an advance delivery of the remainder of water stored in the Arizona Groundwater account, a water exchange with Arizona, and a transfer from California Indians.

Should these programs on the Colorado River be successfully implemented, the result would be over 1 MAF of Colorado River Aqueduct supply for 2009, when added to firm Colorado River supplies.

Near-Term Delta Actions

Metropolitan is committed to working within a framework of actions to improve water supply reliability, water quality, and protect fish species with the goal of building a sustainable Delta. Within this framework are near-term Delta actions including the following: (1) developing and implementing measures that protect fish species and reduce supply impacts, such as habitat and hatchery projects, and (2) developing and implementing physical and operational actions with the goal of reducing conflicts between water supply conveyance and the environment.

A near-term Delta action that could have an immediate impact on water supply, while meeting the goals of the framework described above, is the current effort to install the 2-Gate System by early 2009. Although the 2-Gate System is estimated to provide up to 200,000 AFY, a partial year of operations is assumed to yield 100,000 AFY in 2009, if the SWP allocation is greater than about 35%. At lower allocations it is conservatively assumed under these scenarios that the additional water diversions available from the Delta with these improvements would be marginal, since hydrology will be a larger influence on reduced supplies than regulatory restrictions on Delta pumping. This effort is based on Metropolitan and Contra Costa Water District taking the lead in the operational studies; turbidity and smelt monitoring; preparation of mitigated negative declaration, consistency determination for CESA, SWRCB 401 certification, streambed alteration permit, Section 7 Consultation for the Biological Opinion under Federal Endangered Species Act, environmental assessment for NEPA, and Section 404 compliance; acquisition of right-of-way; and completion of design and construction of the gates within the next six months. Assuming Metropolitan's portion of the construction cost is $10 million and an annual yield of 200,000 AF, the estimated cost would be less than $100 per AF for the first full year of operation.

SWP Transactions

The SWP transactions under development include the State Drought Water Bank for transfers in 2009 as well as additional transfers with entities within the Delta. Staff is also investigating the feasibility of crop rotation demonstration projects with Kern County agencies, as well as the return of existing transfers stored in Shasta Lake.

In addition, Metropolitan may benefit from a water transfer between North Kern Water Storage District and Desert Water Agency (DWA) by taking up to 10,000 AF of SWP water in 2009 and returning this water to DWA in small increments over the next 30 years.

Groundwater Recovery

Groundwater that requires treatment and recovery for consumptive use is a resource that has the potential to yield significant amounts of supply. Based on groundwater inventories conducted by Metropolitan and the member agencies, it is estimated that there is over 300,000 AF of groundwater that could be recovered in our service area. The feasibility and cost of groundwater recovery is dependent on the type and concentration of constituents that must be removed. For 2009, between 15,000 to 30,000 AF could be developed by expediting the installation of treatment facilities for Los Angeles Department of Water and Power well fields. Similar efforts with other member agencies to expedite groundwater recovery will be pursued. Additionally, it is estimated that between 5,000 to 20,000 AF could be supplied through the operation of wells in San Bernardino Valley Municipal Water District's (SBVMWD's) service area to deliver water to Metropolitan through the recently completed initial phase of the SBVMWD Central Feeder.

There is more than 300,000 AF of perched groundwater that has resulted from agricultural drainage in San Joaquin Valley. Both the USBR and the State Water Resources Control Board have put agencies within Kern County on notice that this perched groundwater must be cleaned up. If Metropolitan invests in the groundwater treatment facilities, Metropolitan could receive the recovered water.

Local Resources

Metropolitan and the member agencies have convened in two recent working groups and additional follow-up meetings to determine which local resource projects could be expanded and/or accelerated with a potential to be on line within the next five years. Staff requested that the member agencies provide information on the potential yield, cost, and major implementation barriers that could be overcome with Metropolitan's assistance. The potential projects were combined into the following five categories.

- Upfront Funding – Physical Facilities: This category includes requests for the funding of physical components of a project, including connections, treatment and delivery of water
- Upfront Funding – Other: Includes funding for local resource project feasibility studies, design and environmental review, and permitting
- Equity Partnership: Includes requests for Metropolitan to purchase partial ownership of a project through funding of a share of total project cost
- Metropolitan Contracted Supply: Includes requests for Metropolitan to contract for the delivery of a water supply. Funding provided under this category is for the purchase of the contract rights to delivery
- Private Recycled Water Hookups: Includes requests for funding for the completion of hookups to existing recycled water distribution lines. Funding provided under this category would be for the payment of permits, meters, and customer-side plumbing to utilize recycled water

Staff is continuing to coordinate with the member agencies to improve cost estimates and refine implementation barriers for submitted projects. Although the estimated combined yield of all projects submitted for evaluation exceeds 200,000 AF by the 2013 timeframe, approximately 5,000 to 7,000 AF of yield is potentially available in 2009.

Three ocean desalination projects have progressed to the environmental review and regulatory permit phase and have schedules of being on line within the next five years. However, it is not considered feasible to expedite the completion of these projects to provide supply deliveries in 2009. Member agencies have suggested that Metropolitan should become an equity partner in these projects in order to expedite their completion. This would require a shift in current policy and a budget-rate review analysis.

Next Steps

The extraordinary events affecting water supply in the preceding years has demonstrated the value of Metropolitan's diverse regional resource portfolio, which will experience withdrawals of about 1.1 MAF from January 2007 through December 2008. However, another critically-dry year could present challenges that require extraordinary actions including development of the above programs and implementation of the Supply Allocation Plan. Under this five-year supply action plan, numerous projects and transactions have been identified for implementation in 2009 and their continued benefits in improving water supply reliability over the next five years are being assessed. Over the next several months, staff will provide updates on the progress of the Five-Year Supply Actions, continue workshops with the member agencies to develop local resource and conservation actions, and request board actions to implement projects as appropriate.

Initial 2009 Supply Outlook (Critically Dry-Year)

Supply	Yield (in afy)
Firm Supplies	
• Colorado River Supplies	908,000
• SWP (10 – 20% Allocation)	210,000 – 418,000
• Central Valley Banking Programs	118,000
• Regional Surface Reservoirs	351,000
• Conjunctive-Use Programs	77,000
• Multi-Year Transfer	30,000
	1,694,000 - 1,902,000
Resource Options	
• See Attachment 3	517,000 – 1,255,000
Maximum Available Supplies	2,211,000 – 3,157,000

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Firm Supplies for 2009

Colorado River Supplies		
Basic Apportionment		550,000
Present Perfected Rights		(4,000)
Imperial Irrigation District (IID)/MWD Conservation		85,000
Palo Verde Irrigation District Fallowing		118,000
IID/San Diego County Water Authority Transfer		60,000
Coachella Canal Lining		29,000
All American Canal Lining		17,000
Drop 2 Reservoir		34,000
Recovery of Arizona Water		35,000
Lower Colorado Water Supply Project		7,000
Exchange with Coachella Valley Water District		(43,000)
Southern Nevada Water Agency Storage Agreement		20,000
Total CRA Supplies		**908,000**

State Water Project Supplies (Dry-Year)	SWP Allocation	
	10%	20%
MWD Table A	191,000	382,000
Desert Water/Coachella Valley (DWCV) Table A	17,000	34,000
Port Hueneme	2,000	2,000
Total SWP Supplies	**210,000**	**418,000**

Central Valley Banking Programs	
Arvin Edison	40,000
Kern Delta	8,000
Semitropic	70,000
Total Central Valley Banking Programs	**118,000**

Regional Surface Reservoirs	
Diamond Valley Lake	216,000
Flexible Storage - Castaic	75,000
Flexible Storage - Perris	60,000
Total Regional Surface reservoirs	**351,000**

Conjunctive Use Programs	
All operational programs with storage	**77,000**

Multi-Year Transfer	
Yuba	**30,000**

Total Firm Supplies, AF	**1,694,000**	**to**	**1,902,000**

- under 10% and 20% SWP Allocations

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Potential Resource Options for the Next Five Years

Resource Options	2009 Annual Yield (AF/Year)			Estimated Unit Cost $/AF
Conservation				
Ordinances / Tiered Pricing	200,000	–	400,000	0 - 50
Expanded Conservation Program	15,000	–	15,000	200 - 500
Subtotal	215,000	--	415,000	
Colorado River Transactions				
Additional PVID Transfers (Crop Stressing / Fallowing)	40,000	–	40,000	300 - 400
Yuma Desalter	10,000	–	13,500	300 - 400
Arizona Programs	10,000	–	10,000	0
California Indians	10,000	–	10,000	300 - 400
Agreements with CVWD	35,000	–	50,000	300 - 400
Hayfield	12,000	–	12,000	350 - 450
Subtotal	117,000	--	135,500	
Near-Term Delta Actions				
Revised Biological Opinion (Operations, Barriers, Habitat, Permits)	0	–	200,000	20 - 100
Subtotal	0	--	200,000	
SWP Transactions				
Drought Water Bank / NOD Transfer	100,000	–	300,000	250 - 350
In-Delta Transfers	20,000	–	40,000	250 - 350
Kern County Programs	10,000	–	40,000	300 - 400
Shasta Return	10,000	–	38,000	0
North Kern	10,000	–	10,000	0
Subtotal	150,000	--	428,000	
Groundwater Recovery				
LA DWP GW Demo	15,000	–	30,000	200 - 400 *
SBVMWD Central Feeder	5,000	–	20,000	100 - 200
San Joaquin GW Program Demo	10,000	–	20,000	400 - 500
Subtotal	30,000	--	70,000	
Local Resources				
Upfront Funding – Physical Facilities	3,000	–	5,000	300 - 600
Private Recycled Water Hookups	2,000	–	2,000	300 - 600
Subtotal	5,000	--	7,000	
Total	517,000	--	1,255,500	

* These costs would be reimbursable to Metropolitan.

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