

SECTION 3.14
TRANSPORTATION/CIRCULATION AND PARKING

3.14 TRANSPORTATION/CIRCULATION AND PARKING

3.14.1 INTRODUCTION

This section is based on the *Traffic Impact Analysis, SDSU 2007 Campus Master Plan Revision* (June 2007), prepared for the proposed project by Linscott Law & Greenspan, Engineers ("LLG"). The traffic impact analysis is presented in its entirety in **Appendix N** of this EIR.

The purpose of the analysis was to assess the potential impacts of the proposed project on the local transportation and circulation system. In order to assess these impacts, intersection, street segment, ramp meter, and freeway mainline analyses were conducted for the existing, near-term (2012) and project buildout scenarios. Significant impacts were determined based on these analyses, and appropriate mitigation measures are recommended. A separate parking analysis also was conducted to determine the existing supply and potential future demand for parking spaces on the SDSU campus.

The traffic analysis presented in this section addresses each of the following subjects:

- Project Description
- Analysis Approach and Methodology
- Existing Conditions Description
- Analysis of Existing Conditions
- Significance Criteria
- Cumulative Projects Traffic
- Project Traffic Generation, Distribution & Assignment
- Analysis of Near-Term Scenarios
- Analysis of Long-Term Scenarios
- Intersection Lane Vehicles (ILV) Analysis
- Congestion Management Program Compliance (CMP)
- Parking Analysis
- Significant Impacts and Mitigation Measures
- Post Mitigation Operations

3.14.2 PROJECT LOCATION AND DESCRIPTION

3.14.2.1 Project Location

The SDSU campus is located south and north of the Interstate 8 freeway ("I-8"), between the Waring Road and Lake Murray Boulevard interchanges, east and west of College Avenue in the

City of San Diego. **Figure 1-1, Vicinity Map**, shows the project vicinity, and **Figure 1-2, Project Area Map**, illustrates, in more detail, the site location. The campus is bisected on its north-south axis by College Avenue, and bound, generally, by Del Cerro Boulevard to the north and Montezuma Road to the south.

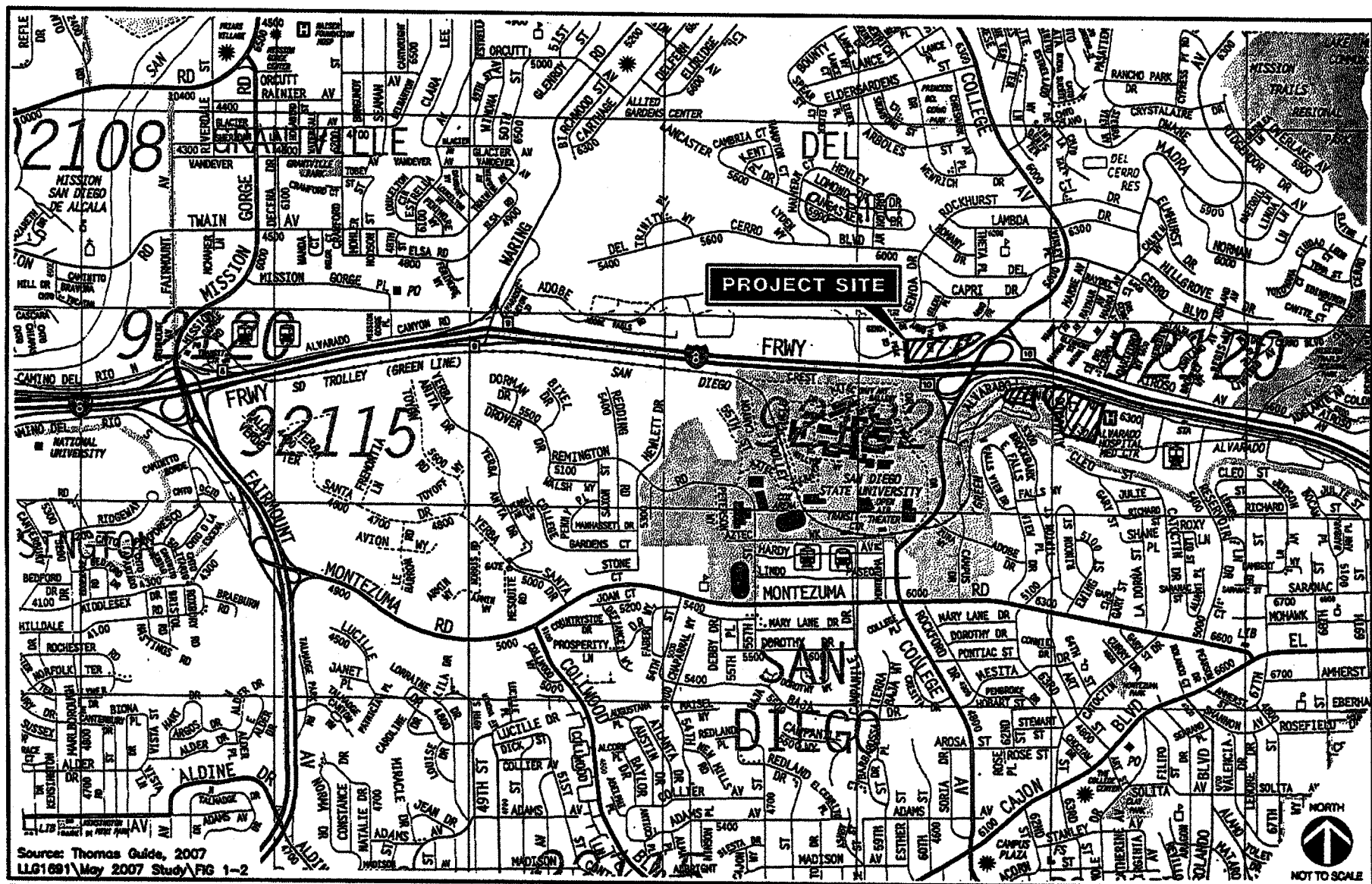
3.14.2.2 Project Description

As discussed in EIR Section 1.0, *Project Description*, the proposed project is the adoption and implementation of the SDSU 2007 Campus Master Plan Revision. Under the proposed project, the current SDSU student enrollment ceiling would be increased from 25,000 full-time equivalent students ("FTES") to 35,000 FTES. A FTES is a student carrying a full unit credit load of 15 units. Two part-time students, each taking 7.5 credits, would be considered one FTES. SDSU enrollment planning projections estimate that in the 2024-25 academic year, when the 35,000 FTES level is reached, actual campus student enrollment, referred to as the campus "headcount," is projected to be 44,826 students. Accordingly, this traffic analysis is based on a projected enrollment of 44,826 students in 2024/25, an increase of 11,385 students over Fall 2006 enrollment. See **EIR Section 1.0, Project Description, Table 1.0-4**.

The proposed project also includes physical improvements to the SDSU Campus, which will occur as six distinct project components -- Adobe Falls Faculty/Staff Housing, Alvarado Campus, Alvarado Hotel, Campus Conference Center, Student Housing, and the Student Union Expansion. Three of these six project components are expected to impact the traffic volumes and circulation around the campus and, therefore, are the focus of this study. A brief description of these three project components follows.

Adobe Falls Faculty/Staff Housing This project component, which would be developed in two phases, consists of the development of faculty and staff housing on a site approximately 33 acres in size located north of I-8 on land owned by SDSU that is presently undeveloped. The site is bounded by Adobe Falls Drive to the north and the I-8 to the south. The development would consist of an Upper Village and a Lower Village. The Upper Village would be developed in Phase 1, in the near-term following project approval, and would consist of 48 townhomes. The Lower Village, which would be developed long-term, would include between 124 and 300 townhomes and/or condominiums. The total number of housing units ultimately to be developed on the Lower Village site is dependent in part upon available access routes and associated vehicle carrying capacities. An analysis of potential alternate access routes is presented in **EIR Section 5.0, Alternatives**.





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Figure 1-2
Project Area Map

Alvarado Campus This component of the proposed project would be located in the northeast corner of the SDSU Campus on existing Lot D (previously master planned) and the adjacent land to the east presently comprising the Alvarado Medical Center on land owned by the SDSU Research Foundation. This project component consists of the development of new instructional and research buildings, along with a new parking structure for approximately 1800 vehicles. Much of the new construction would replace the existing research medical center and adjacent surface parking lots. The student headcount increase from 33,441 to 44,826 by the 2024/2025 academic year would be partially accommodated in the classroom facilities to be constructed on this site. The remainder of the student increase would utilize classrooms on the existing central portion of the campus. Access to the Alvarado Campus site from the west would be *via* College Avenue to Alvarado Road, or from the east *via* 70th Street to Alvarado Road.

Alvarado Hotel This project component would be located south and east of Alvarado Road on an existing parking lot (Lot C) across from the existing Villa Alvarado Residence Hall. The proposed hotel would include approximately 120 rooms and studio suites, and facilities suitable for accommodating small conferences and business meetings.

3.14.3 METHODOLOGY

3.14.3.1 Study Area

The study area for this traffic impact analysis includes intersections and street segments to which the proposed project would add more than 50 peak hour trips, and, in the case of freeway interchanges, interchanges to which the proposed project would add more than 20 trips, as set forth in the San Diego Traffic Engineering Council (SANTEC) Regional Guidelines. See **EIR Appendix N, Appendix A**. The following are the study area intersections and street segments analyzed in this section:

Signalized Intersections

- Fairmount Avenue / I-8 Westbound ("WB") Off Ramp / Camino del Rio N
- Fairmount Avenue / I-8 Eastbound ("EB") Off Ramp
- 55th Street / Remington Road
- 55th Street / Montezuma Road
- Campanile Drive / Montezuma Road
- College Avenue / Del Cerro Boulevard
- College Avenue / I-8 Westbound Ramps
- College Avenue / I-8 Eastbound Ramps
- College Avenue / Canyon Crest Drive

- College Avenue / Montezuma Road
- Reservoir Drive / Alvarado Road
- Lake Murray Boulevard / Parkway Drive
- 70th Street / Alvarado Road
- I-8 Eastbound Ramps / Alvarado Road

Unsignalized Intersections

- College Avenue / Zura Way
- Alvarado Court / Alvarado Road
- I-8 Westbound Ramps / Parkway Drive

Street Segments

- Alvarado Road: E. Campus Drive to Reservoir Drive
- Alvarado Road: Reservoir Road to 70th Street
- College Avenue: Del Cerro Boulevard to I-8 Eastbound Ramps
- College Avenue: I-8 Eastbound Ramps to Zura Way
- College Avenue: Zura Way to Montezuma Road
- College Avenue: South of Montezuma Road
- Montezuma Road: Fairmount Avenue to Collwood Boulevard
- Montezuma Road: Collwood Boulevard to 55th Street
- Montezuma Road: College Avenue to E. Campus Drive
- Montezuma Road: 55th Street to College Avenue
- Fairmount Avenue: Montezuma Road to I-8
- Adobe Falls Road: North of Genoa Drive
- Arno Drive: Helena Place to Capri Drive
- Capri Drive: East of Arno Drive
- Del Cerro Boulevard: Genoa Drive to Capri Drive
- Del Cerro Boulevard: Capri Drive to College Avenue
- Genoa Drive: Capri Drive to Arno Drive
- Lambda Drive: Rockhurst Drive to College Avenue
- Rockhurst Drive: Lambda Drive to College Avenue

Freeway Segments

- Interstate 8: Fairmount Avenue to Waring Road
- Interstate 8: Waring Road to College Avenue
- Interstate 8: College Avenue to Lake Murray Boulevard / 70th Street
- Interstate 8: Lake Murray Boulevard / 70th Street to Fletcher Parkway

3.14.3.2 Analysis Approach

The traffic analysis presented in this section analyzes the key intersections, street segments, ramp meters, and freeway segments in the project study area under the following scenarios to determine the potential impacts of the proposed project on the surrounding road network:

- Existing conditions
- Existing + buildout project traffic
- Near-Term without project (Year 2012 conditions)
- Near-Term without project + near-term project
- Horizon year without project (Year 2025 conditions)
- Horizon year with buildout project traffic

3.14.3.3 Near-Term Analysis

The Near-Term analysis referenced in this section is based on the Year 2012 scenario. The traffic volumes for the Near-Term without project scenario are based on existing traffic volumes adjusted upward to reflect a growth factor of one and a half percent per year, and the addition of several near-term cumulative projects. The Near-Term project traffic volumes consist of that portion of the project expected to be operational by the year 2012. By the year 2012, SDSU anticipates a student headcount increase of 2,094 students over existing numbers, the completion of construction of 48 Adobe Falls Faculty/Staff housing units, and, the completion of the 120-room hotel Alvarado Hotel. See **EIR Appendix N, Appendix B**). The Near-Term project traffic volumes were then added to the Near-Term without project traffic volumes to determine the volumes for the Near-Term with project scenario.

3.14.3.4 Horizon Year Analysis

The Horizon Year analysis referenced in this section is based on the Year 2025 scenario. The traffic volumes for the Horizon Year without project scenario are based upon the SANDAG Series 10 model. The Horizon Year project traffic volumes are based on full buildout of the proposed project. Buildout traffic volumes were added to the Horizon Year without project traffic volumes to determine the volumes for the Horizon Year with project scenario.

3.14.3.5 Methodology

Level of service ("LOS") is the term used to denote the different operating conditions which occur on a given roadway segment under various traffic volume loads. LOS is a qualitative measure used to describe a quantitative analysis, taking into account factors such as roadway

geometries, signal phasing, speed, travel delay, freedom to maneuver, and safety. LOS provides an index to the operational qualities of a roadway segment or an intersection. LOS designations range from "A" to "F", with LOS A representing the best operating conditions and LOS F representing the worst operating conditions. The LOS designation is reported differently for signalized and unsignalized intersections, as well as for roadway segments.

3.14.3.5.1 Signalized intersections

Signalized intersections within the project study area were analyzed under AM (7:00 AM to 9:00 AM) and PM (4:00 PM to 6:00 PM) peak hour conditions. Average vehicle delay was determined utilizing the methodology found in the 2000 Highway Capacity Manual ("HCM") Chapter 16, with the assistance of the Synchro (version 6) computer software. The delay values (represented in seconds) were qualified with a corresponding intersection LOS. The delay values (represented in seconds) were qualified with a corresponding intersection LOS, as shown in **Table 3.14-1, Level of Service Thresholds for Signalized Intersections**. For example purposes, a 35-55 second wait at a traffic light is representative of LOS "D" conditions.

**Table 3.14-1
Level Of Service Thresholds For Signalized Intersections**

Average Control Delay Per Vehicle (Seconds/Vehicle)			Level Of Service
0.0	≤	10.0	A
10.1	to	20.0	B
21.1	to	35.0	C
35.1	to	55.0	D
55.1	to	80.0	E
	≥	80.0	F

3.14.3.5.2 Unsignalized intersections

Unsignalized intersections also were analyzed under AM and PM peak hour conditions. Average vehicle delay and LOS was determined based upon the procedures found in the 2000 HCM, Chapter 17, with the assistance of the Synchro (version 6) computer software. The delay values (represented in seconds), determined from the minor street left-turn delay, were qualified with a corresponding intersection LOS, as shown in **Table 3.14-2, Level of Service**

Thresholds for Unsignalized Intersections. For example purposes, a 25-35 second wait at an unsignalized intersection (one without a traffic light) is representative of LOS "D" conditions.

Table 3.14-2
Level Of Service Thresholds For Unsignalized Intersections

Average Control Delay Per Vehicle (Seconds/Vehicle)			Level Of Service
0.0	≤	10.0	A
10.1	to	15.0	B
15.1	to	25.0	C
25.1	to	35.0	D
35.1	to	50.0	E
	>	50.1	F

3.14.3.5.2 Intersecting Lane Vehicles

The California Department of Transportation ("Caltrans") requires that State-owned intersections be analyzed using Intersecting Lane Vehicles ("ILV") methodology, as described in Chapter 400, Topic 406 of the Caltrans Highway Design Manual. The ILV methodology is based on the concept that the capacity of intersecting lanes of traffic is 1,500 vehicles per hour. For the typical local street interchange, there is usually a critical intersection of a ramp and the crossroads that establishes the capacity of the interchange. An intersection impact is considered significant using the ILV methodology if the project traffic causes the intersection to operate "over capacity". **Table 3.14-3, ILV Capacities**, summarizes the ILV capacities.

**Table 3.14-3
ILV Capacities**

Under (ILV/hr<1200)	Near (ILV/hr 1200 – 1500)	Over (ILV/hr >1500)
Denotes stable flow with slight but acceptable delay. Occasional signal loading may develop. Free mid-block operations.	Denotes unstable flow with considerable delay. Some vehicles occasionally wait two or more cycles to pass through the intersection. Continuous backup occurs at some approaches.	Denotes stop and go operation with severe delay and heavy congestion. ^a Traffic volume is limited by maximum discharge rates of each phase. Continuous backup in varying degrees occurs on all approaches. Where downstream capacity is restrictive, mainline congestion can impede orderly discharge through the intersection.

Notes:

- a. The amount of congestion depends on how much the ILV/hr value exceeds 1500. Observed flow rates will normally not exceed 1500 ILV/hr and the excess will be delayed in a queue

3.14.3.5.3 Street Segments

Street segment analysis for non-residential roads is based upon the comparison of daily traffic volumes, or average daily trips ("ADT") to the City of City of San Diego's Roadway Classification, Level of Service, and ADT Table. The table provides segment capacities for different street classifications, based on traffic volumes and roadway characteristics. The City San Diego's Roadway Classification, Level of Service, and ADT Table is included in **EIR Appendix N, Appendix C.**

3.14.3.5.4 Residential Roadway Capacity

The significance of neighborhood intrusion impacts related to excess vehicle traffic or vehicle delay is determined on a case-by-case basis because each residential street has unique characteristics. The City of San Diego has a goal to maintain a level of service C or better on local residential streets. The ability to determine LOS on a local street is very difficult for several reasons. Most importantly, each residential street is unique in character. Local streets vary considerably in terms of street width, abutting multi-family versus single family residences, density, presence of schools, day care, senior housing, proximity to major streets, and other factors. Traffic levels that may be perceived as too high on one residential street, may be perceived as acceptable on another. Furthermore, a lane of traffic, carrying the acceptable LOS C

volume on an arterial street, is typically perceived by the residents as far too much traffic on the street.

The proposed Adobe Falls Faculty/Staff Housing portion of the proposed project would add traffic to several residential roadways within the surrounding community. In order to ascertain whether the roadways can accommodate the additional traffic, the design ADT of the residential roadways was estimated. The following is a discussion of the rationale for utilizing the designated capacities for Del Cerro Boulevard and the balance of the Del Cerro residential streets.

A. Del Cerro Boulevard

A "Collector" designation was assigned to Del Cerro Boulevard. This classification was used for multiple reasons, including that the fronting uses on the roadway are both single-family residential and non-residential (e.g. schools and churches), which is indicative of a "Collector" roadway. (City of San Diego Street Design Manual, p 33). Furthermore, Del Cerro Boulevard has a raised median through a portion of the roadway; a raised median serves to increase the capacity of a roadway, by physically separating the two directions of travel, thereby reducing traffic conflicts.

The Navajo Community Plan, which contains the City's circulation element for the Navajo community, classifies Del Cerro Boulevard as a "2-Lane Collector Street". (Navajo Community Plan, Circulation Element, Page 93). The Community Plan defines a collector as distributing traffic from arterial thoroughfares, providing access to abutting property, and providing street crossings at grade, all characteristics of Del Cerro Boulevard. (Community Plan, p. 126). Although the Community Plan provides that collectors are rarely divided, the fact that Del Cerro Boulevard includes a raised median through a portion of the roadway is a characteristic of roadways with higher, rather than lower, capacities. The Community Plan also provides that the maximum desirable ADT for a two-lane collector street is 5,000 vehicles per day. (Circulation Element p. 89).

For these reasons, this traffic impact analysis utilized the lowest Collector capacity available in Table 2 of the City of San Diego Traffic Impact Study Manual for Del Cerro Boulevard -5,000 ADT, Level of Service C. (City of San Diego Traffic Impact Study Manual, p. 8.)

B. Balance of Residential Streets

The other roadways in the Del Cerro community are unclassified on the Navajo Community Plan. For these unclassified roadways, several potential options were considered for a design capacity based on the 2002 City of San Diego Street Design Manual. These options include Low

Volume Residential Street (700 ADT), Residential Local Street (1,500 ADT) and a two-lane Sub-Collector (2,200 ADT).

Based on an extensive field review and corresponding analysis, a Residential Local Street classification was utilized for Rockhurst Drive, Lambda Drive, Genoa Drive, Capri Drive, Arno Drive and Adobe Falls Road. These roadways do not have a specific classification assigned to them by the City; there is no document that states the functional classification of these roadways. Therefore, a custom analysis of these streets was conducted based on a field review of the roadways and the associated driving conditions of each to determine the appropriate classification.

Both the City of San Diego Street Design Manual and City Traffic Impact Study Manual provide various criteria that may be considered in determining the classification of a roadway. According to the City Street Design Manual, factors to be considered include the curb-to-curb width of the roadway and corresponding right of way, the design speed, the maximum grade, the minimum curve radii and the fronting land uses. According to the City Traffic Impact Study Manual, the classification assigned to a particular roadway considers the number of lanes, the curb-to-curb width and corresponding right-of-way width, and the fronting uses.

As explained below, based on an analysis of Del Cerro community roadways utilizing the criteria provided in the City Street Design Manual and Traffic Impact Manual, it was determined that the Del Cerro community roadways (other than Del Cerro Boulevard) closely fit the characteristics of both a Residential Local Street and a Sub-Collector.

The City of San Diego Street Design Manual does not classify roadways, i.e., it does not list specific roadways and assign to them a classification such as "Collector," "Sub-collector," etc. Instead, the Manual provides multiple design characteristics typically associated with each classification. Pages 19 & 31 of the Manual provide characteristics for Low Volume Residential Streets, Residential Local Streets and "Two-Lane Sub-Collectors" classifications. Guidance is given in terms of curb-to-curb width, right of way width, curve radii, and other factors. Based on a consideration of each of these factors, although the roads have the characteristics of both a Residential Local Street and a two-lane Sub-Collector, to be conservative, a design ADT of 1,500 ADT was used for the unclassified roadways.

It should be noted that level of service is not applied to residential streets since the primary purpose of the streets is to serve abutting lots. However, in order to quantitatively assess the

residential roads, a LOS C capacity was estimated. **EIR Appendix N, Appendix C-1**, contains additional detail concerning the analysis that was conducted to determine the most accurate capacity to utilize.

3.14.3.5.5 Freeway Ramp Meters

There are two methods currently accepted by Caltrans to calculate freeway ramp delays and queues: (i) a fixed rate approach; and (ii) a uniform 15-minute maximum delay approach. The fixed rate approach is based solely on the specific time intervals at which the ramp meter is programmed to release traffic. The maximum delay approach is based on the assumption that any demand exceeding 15-minutes will seek an alternative route or will choose to use the ramp during a less busy time period. Effectively, this approach considers the ramp demand to spread out spatially and temporally if the calculated meter delay is greater than 15-minutes.

The fixed rate approach generally tends to produce unrealistic queue lengths and delays since the approach does not take into account driven behavior such as "ramp slopping" or trip diversion. The results are theoretical and based on Caltrans' most restrictive meter rate. Because ramp meter rates are not constant, even within the peak hours, the analysis was conducted using the most restrictive meter rates obtained from Caltrans. Field observations further validate variable ramp meter rates.

The following freeway on-ramps were analyzed as part of this study since the project added more than 20 peak hour trips to each:

- I-8 Eastbound On-Ramp / Southbound Fairmount Avenue - PM peak hour
- I-8 Westbound On-Ramp / Northbound College Avenue - AM peak hour
- I-8 Westbound On-Ramp / Southbound College Avenue - AM peak hour
- I-8 Eastbound On-Ramp / Northbound College Avenue - PM peak hour

Other on-ramps in the area were not analyzed since the project adds less than 20 peak hour trips to these locations. (**EIR Appendix N, Appendix D** contains a copy of the existing ramp meter rates obtained from Caltrans.)

3.14.3.5.6 Freeway Mainline

I-8 freeway segments were analyzed during the AM and PM peak hours based on the methodologies developed by Caltrans District 11. Freeway segment LOS is based on the volume to capacity ratio on the freeway.

The analysis of freeway segment LOS is based on the procedure developed by Caltrans District 11 and the methods described in the Caltrans *Highway Capacity Manual*. The procedure involves comparing the peak hour volume of the mainline segment to the theoretical capacity of the roadway. The procedure for calculating freeway LOS involves the estimation of the volume to capacity ("V/C") ratio using the following equation:

$$V/C = \frac{((AADT \times \text{Peak Hour Percent} \times \text{Directional Factor}) / (\text{Truck Terrain Factor}))}{\text{Lane Capacity}}$$

AADT = Average Annual Daily Traffic

Peak Hour Percent = Percentage of ADT occurring during the peak hour.

Directional Factor = Percentage of peak hour traffic occurring in peak direction.

Truck Factor = Truck/terrain factor to represent influence of heavy vehicles & grades.

Capacity = 2,000 vehicles/lane/hour/lane for mainline, and 1,200 for auxiliary lanes.

The resulting V/C percentage is then compared to accepted ranges of V/C values corresponding to the various LOS for each facility classification, as shown in **Table 3.14-4, Caltrans District 11 Freeway Segment Level of Service Definitions**. The corresponding LOS represents an approximation of existing or anticipated future freeway operating conditions in the peak direction of travel during the peak hour. Freeway mainlines operating at LOS E or F are considered by Caltrans to be operating at unacceptable levels of service. (**EIR Appendix N, Appendix D**, contains the relevant K and D factors listed in the Caltrans Peak Hour Volume Data and the truck factors from the 2005 Annual Average Daily Truck Traffic on the California State Highway System utilized in the analysis.)

Table 3.14-4
Caltrans District 11
Freeway Segment Level Of Service Definitions

LOS	V/C	Congestion/Delay	Traffic Description
Used for Freeways, Expressways and Conventional Highways			
A	<0.41	None	Free flow
B	0.42-0.62	None	Free to stable flow, light to moderate volumes.
C	0.63-0.80	None to minimal	Stable flow, moderate volumes, freedom to maneuver noticeably restricted
D	0.81-0.92	Minimal to substantial	Approaches unstable flow, heavy volumes, very limited freedom to maneuver.
E	0.93-1.00	Significant	Extremely unstable flow, maneuverability and psychological comfort extremely poor.
Used for freeways and expressways			
F(0)	1.01-1.25	Considerable 0-1 hour delay	Forced flow, heavy congestion, long queues form behind breakdown points, stop and go.
F(1)	1.26-1.35	Severe 1-2 hour delay	Very heavy congestion, very long queues.
F(2)	1.36-1.45	Very Severe 2-3 hour delay	Extremely heavy congestion, longer queues, more numerous breakdown points, longer stop periods.
F(3)	>1.46	Extremely Severe 3+ hours of delay	Gridlock

Source: Caltrans District 11

Notes:

LOS = Level of Service

V/C = Volume/Capacity

3.14.4 EXISTING CONDITIONS

The following is a description of the existing street network, and the existing traffic volumes within the project study area.

3.14.4.1 Existing Street Network

The principal roadways in the project study area are described briefly below. Roadway classifications were determined based on a review of the College Area and Navajo Community Plans (an excerpt of which can be found in **EIR Appendix N, Appendix E**), field observations, and information obtained from Caltrans. **Figure 4-1 , Existing Conditions Diagram**, and **Figure 4-2, Existing Traffic Volumes AM/PM Peak Hours & ADT**, illustrate the existing transportation network and traffic volumes.

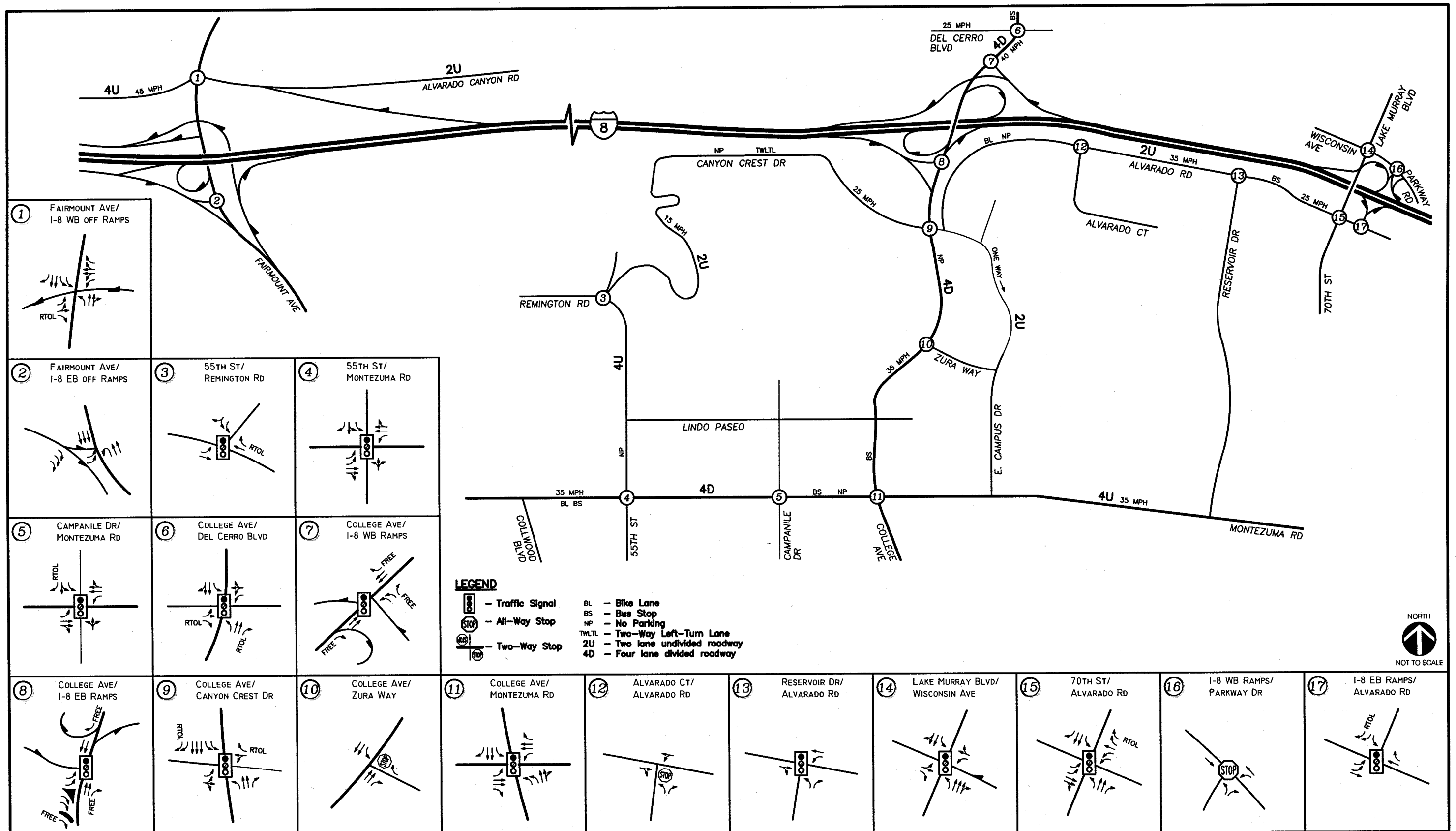
Interstate 8 (I-8) is an interstate freeway operated by Caltrans. I-8 is an east-west facility spanning San Diego and Imperial Counties, and it provides access to the Fairmount Avenue, Waring Road, College Avenue, and Lake Murray / 70th Street interchanges within the project vicinity.

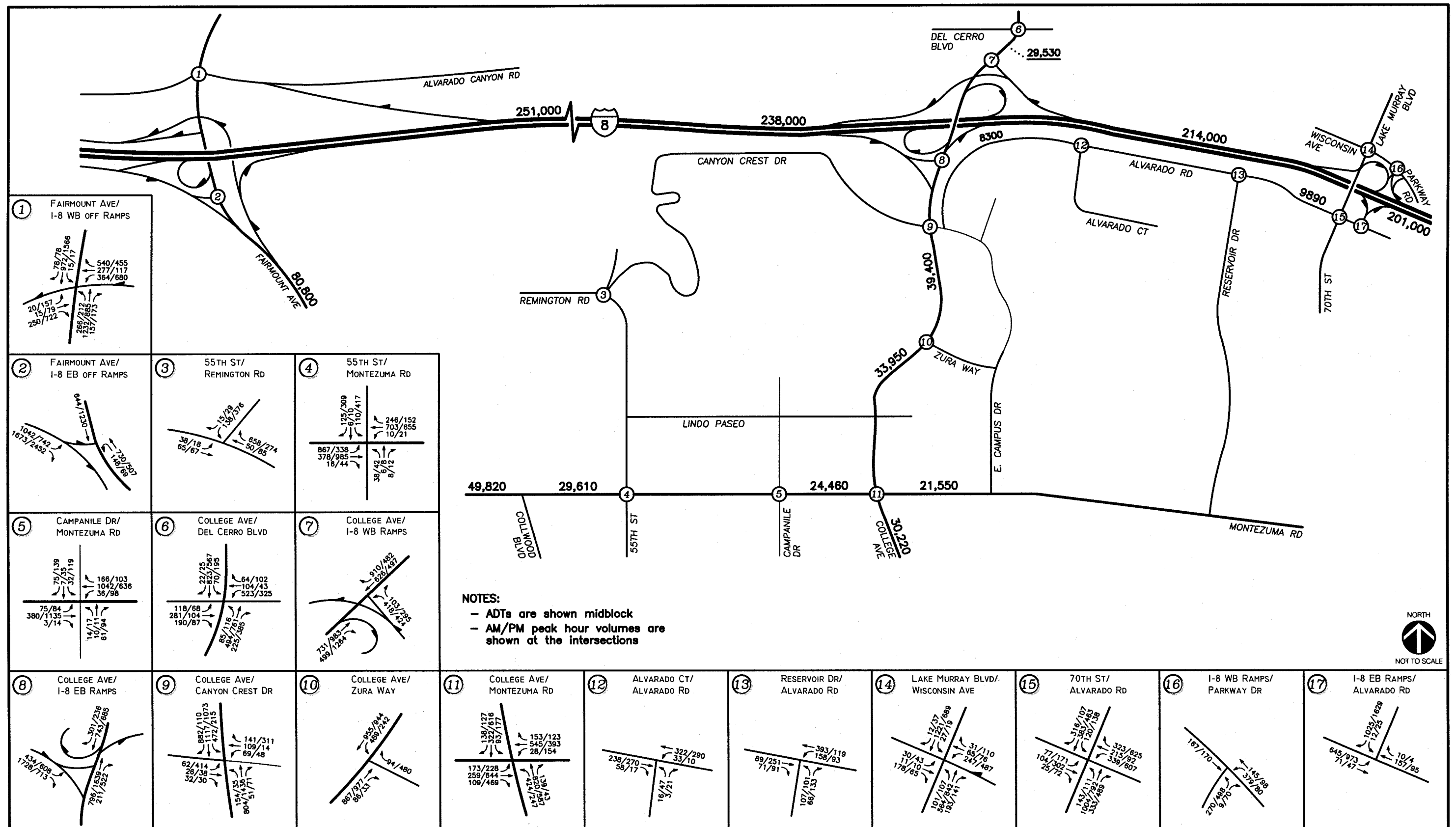
Alvarado Road is classified as a Collector road on the College Area Community Plan, Existing Street Classifications figure. Alvarado Road is an east-west, two-lane, undivided roadway running parallel to I-8. Parking generally 23 is prohibited between East Campus Drive and Reservoir Drive. The posted speed limit is 35 mph and a bike lane is provided within the project vicinity.

Alvarado Court is an unclassified road, and a two-lane undivided roadway south of Alvarado Road.

Campanile Drive is classified as a Collector road according to the College Area Community Plan. Campanile Drive is currently constructed as a two-lane, divided roadway with a northerly termination at the SDSU trolley station. The speed limit is not posted and parking is intermittently limited on the road.

Canyon Crest Drive / East Campus Way is an unclassified roadway, and it is a two- or three-lane, undivided roadway west of College Avenue and a two-lane, one-way (southbound) roadway east of College Avenue and north of Zura Way. East Campus Drive continues south of Zura Way as a two-lane undivided bidirectional roadway. Parking is prohibited on the road and the speed limit is 25 mph.





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Figure 4-2
 Existing Traffic Volumes
 AM/PM Peak Hours & ADT

College Avenue is classified as a Major Arterial according to the College Area Community Plan, Existing Street Classifications and Traffic Volumes. College Avenue is currently constructed as a four-lane, intermittently divided roadway within the project vicinity. The speed limit is generally 35 mph, parking is prohibited on the road and infrequent bus stops are provided.

Montezuma Road is classified as a Major Arterial within the project vicinity according to the College Area Community Plan, Existing Street Classifications and Traffic Volumes. Montezuma Road is a four-lane, divided roadway south of the SDSU Campus. The posted speed limit is 35 mph, bus stops are provided, and curbside parking is permitted along the roadway.

Reservoir Drive is classified as a Collector in the College Area Community Plan, Existing Street Classifications and Traffic Volumes. Reservoir Drive is a two-lane, undivided north-south road terminating at Alvarado Road east of the SDSU Campus. This roadway provides access from Montezuma Road to Alvarado Road.

Zura Way is an unclassified roadway that currently provides one lane of undivided travel in a generally east-west direction. This roadway connects College Avenue with East Campus Drive *via* a series of parking lots. The Zura Way / College Avenue intersection is an unsignalized two-way stop controlled intersection; left turns onto College Avenue are prohibited.

55th Street is classified as a Collector according to the College Area Community Plan, Existing Street Classifications and Traffic Volumes. 55th Street is currently constructed as a north-south, four-lane undivided roadway to the west of the SDSU Campus. Parking is not permitted north of Montezuma Road in the vicinity of the campus, and the posted speed limit is 25 mph.

Adobe Falls Road is a two-lane unclassified roadway with residences abutting the street within the Del Cerro community. Curbside parking is available, however, no bike lanes or bus stops are provided. Outside the Del Cerro community, Adobe Falls Road extends from Waring Road to a termination point at an existing apartment complex. The road serves restaurants and hotels and is generally 48-feet wide. The speed limit is 25 mph and curbside parking is generally allowed.

Arno Road is a two-lane unclassified roadway with residences abutting the street. Curbside parking is available, however, no bike lanes or bus stops are provided.

Capri Drive is a two-lane unclassified roadway with residences abutting the street. Curbside parking is available, however, no bike lanes or bus stops are provided.

Del Cerro Boulevard is classified as a Collector on the Navajo Community Plan and provides one lane of travel in each direction divided by a median. Residential units, a church, and a school front Del Cerro Boulevard. Curbside parking is limited, bus stops are demarcated, and bike lanes are not provided.

Genoa Drive is a two-lane unclassified roadway with residences abutting the street. Curbside parking is available, however, no bike lanes or bus stops are provided.

Lambda Drive is a two-lane unclassified roadway with residences abutting the street. Curbside parking is available, however, no bike lanes or bus stops are provided.

Remington Road is classified as a Collector in the College Area Community Plan, Existing Street Classifications and Traffic Volumes. Remington Road currently provides one travel lane in each direction. Curbside parking is prohibited within the project vicinity.

Rockhurst Drive is a two-lane unclassified roadway with residences abutting the street. Curbside parking is available, however, no bike lanes or bus stops are provided.

3.14.4.2 Existing Traffic Volumes

Traffic counts of the existing AM and PM peak hour traffic volumes were conducted at the study area intersections in September 2006 while all local schools were in session. The existing average daily traffic volumes (ADTs) were measured at the study area roadway segments in September 2006 and February 2007, with the exception of Fairmount Avenue. ADT volumes along Fairmount Avenue were obtained from available traffic counts at the City of San Diego.

Table 3.14-5, College Area Existing Traffic Volumes, and Table 3.14-6, Del Cerro Existing Traffic Volumes, summarize the most recent available ADTs. (EIR Appendix N, Appendix F contains the manual existing traffic volume count sheets.)

**Table 3.14-5
College Area Existing Traffic Volumes**

Street Segment	ADT^a	Date	Source
Alvarado Road			
E. Campus Dr to Reservoir Dr	8,300	Sep. 2006	LLG ^b
Reservoir Dr to 70th St	9,890	Sep. 2006	LLG
College Avenue			
Del Cerro Blvd to I-8 EB Ramps	29,530	Sep. 2006	LLG
I-8 EB Ramps to Zura Way	39,400	Sep. 2006	LLG
Zura Way to Montezuma Rd	33,950	Sep. 2006	LLG
South of Montezuma Rd	30,220	Sep. 2006	LLG
Montezuma Road			
Fairmount Ave to Collwood Blvd	49,820	Sep. 2006	LLG
Collwood Blvd to 55th St	29,610	Sep. 2006	LLG
55th St to College Ave	24,460	Sep. 2006	LLG
College Ave to E. Campus Dr	21,550	Feb. 2007	LLG
Fairmount Avenue			
Montezuma Rd to I-8	80,800	2006 ^c	City of San Diego

Notes:

- a. Average Daily Traffic Volumes (Rounded to nearest 10th)
- b. Linscott, Law & Greenspan Engineers
- c. Year 2005 count with 2% growth factor per year.

Table 3.14-6
Del Cerro Existing Traffic Volumes

Street Segment	ADT ^a	Date	Source
Adobe Falls Rd/Mill Peak Road			
North of Genoa Dr	410	Sep. 2006	LLG ^b
Arno Drive			
Helena Pl to Capri Dr	370	Sep. 2006	LLG
Capri Drive			
East of Arno Dr	720	Sep. 2006	LLG
Del Cerro Boulevard			
Genoa Dr to Capri Dr	3,640	Sep. 2006	LLG
Capri Dr to College Ave	5,170	Sep. 2006	LLG
Genoa Drive			
Capri Dr to Arno Pl	400	Sep. 2006	LLG
Lambda Drive			
Rockhurst Dr to College Ave	600	Sep. 2006	LLG
Rockhurst Drive			
Lambda Dr to College Ave	500	Sep. 2006	LLG

Notes:

- a. Average Daily Traffic Volumes (Rounded to nearest 10th)
- b. Linscott, Law & Greenspan Engineers

3.14.5 ANALYSIS OF EXISTING CONDITIONS

The analysis of existing conditions includes the assessment of the study area intersections, street segments, ramp meters, and freeways using the methodologies described in Section 3.14.3. **EIR Appendix N, Appendix G** contains the existing conditions analysis worksheets.

3.14.5.1 Peak Hour Intersection Levels of Service

Table 3.14-7, Existing Intersection Operations, summarizes the peak hour intersection operations for existing conditions for the study area intersections. As shown on **Table 3.14-7**, all key signalized intersections are calculated to currently operate at LOS D or better with the exception of the following intersections:

- Fairmount Avenue / I-8 WB Off-Ramp / Camino del Rio North (LOS F during the PM peak hour)
- Fairmount Avenue / I-8 EB Off-Ramp (LOS F during the PM peak hour)
- 55th Street / Montezuma Avenue (LOS E during the AM peak hour)
- College Avenue / Del Cerro Boulevard (LOS E during the AM peak hour)
- College Avenue / Canyon Crest Drive (LOS E during the AM and PM peak hours)

The unsignalized intersections in the project study area are calculated to operate at LOS D or better with the exception of the following intersection:

- Zura Way / College Avenue (LOS F for left-turn onto Zura Way during the PM peak hour)

Table 3.14-7
Existing Intersection Operations

Intersection	Control Type	Peak Hour	Existing	
			Delay ^a	LOS ^b
1. Fairmount Ave / I-8 WB Off Ramp / Camino del Rio N	Signal	AM PM	49.0 154.9	D F
2. Fairmount Ave / I-8 EB Off Ramp	Signal	AM PM	38.1 101.2	D F
3. 55th Street / Remington Rd	Signal	AM PM	8.9 8.3	A A
4. 55th Street / Montezuma Rd	Signal	AM PM	73.4 33.7	E C
5. Campanile Dr / Montezuma Rd	Signal	AM PM	31.8 32.2	C C
6. College Ave / Del Cerro Blvd	Signal	AM PM	68.1 40.6	E D
7. College Ave / I-8 WB Ramps	Signal	AM PM	8.9 8.7	A A
8. College Ave / I-8 EB Ramps	Signal	AM PM	40.0 15.3	D B
9. College Ave / Canyon Crest Dr	Signal	AM PM	64.1 62.3	E E
10. College Ave / Zura Way	TWSC ^c	AM PM	14.3 124.2	B F
11. College Ave / Montezuma Rd	Signal	AM PM	38.9 36.5	D D
12. Alvarado Ct / Alvarado Rd	TWSC ^c	AM PM	14.4 13.4	B B
13. Reservoir Dr / Alvarado Rd	Signal	AM PM	17.1 20.8	B C

**Table 3.14-7
Existing Intersection Operations**

Intersection	Control Type	Peak Hour	Existing	
			Delay ^a	LOS ^b
14. Lake Murray Blvd / Parkway Dr	Signal	AM PM	30.8 32.5	C C
15. 70th Street / Alvarado Rd	Signal	AM PM	30.1 39.3	C D
16. I-8 WB Ramps / Parkway Dr	AWSC ^d	AM PM	18.3 31.1	C D
17. I-8 EB Ramps / Alvarado Rd	Signal	AM PM	19.4 16.9	B B

Notes:

- a. Average delay expressed in seconds per vehicle.
- b. Level of Service.
- c. TWSC – Two-Way Stop Controlled intersection.
Minor street approach delay is reported.
- d. AWSC – All-Way Stop Controlled intersection.

SIGNALIZED		UNSIGNALIZED	
DELAY/LOS THRESHOLDS		DELAY/LOS THRESHOLDS	
Delay	LOS	Delay	LOS
0.0 < 10.0	A	0.0 < 10.0	A
10.1 to 20.0	B	10.1 to 15.0	B
20.1 to 35.0	C	15.1 to 25.0	C
35.1 to 55.0	D	25.1 to 35.0	D
55.1 to 80.0	E	35.1 to 50.0	E
> 80.1	F	> 50.1	F

3.14.5.2 Daily Street Segment Levels of Service

Table 3.14-8, Existing College Area Street Segment Operations, and Table 3.14-9, Existing Del Cerro Street Segment Operations, summarize the existing street segment operations within the project study area. As shown on **Tables 3.14-8 and 3.14-9**, all segments in the study area are calculated to operate at LOS D or better with the exception of the following street segments:

- Alvarado Road between Reservoir Drive to 70th Street (LOS E)
- College Avenue between I-8 Eastbound Ramps and Zura Way (LOS E)
- College Avenue south of Montezuma Road (LOS F)
- Montezuma Road between Fairmount Avenue to Collwood Boulevard (LOS F)
- Fairmount Avenue between Montezuma Road and I-8 (LOS F)

**Table 3.14-8
Existing College Area Street Segment Operations**

Street Segment	Capacity (LOS E) ^a	ADT ^b	LOS	V/C
Alvarado Road				
E. Campus Dr to Reservoir Dr	10,000	8,300	D	0.83
Reservoir Dr to 70th St	10,000	9,890	E	0.99
College Avenue				
Del Cerro Blvd to I-8 EB Ramps	40,000	29,530	C	0.74
I-8 EB Ramps to Zura Way	40,000	39,400	E	0.99
Zura Way to Montezuma Rd	40,000	33,950	D	0.85
South of Montezuma Rd	30,000	30,220	F	1.01
Montezuma Road				
Fairmount Ave to Collwood Blvd	40,000	49,820	F	1.25
Collwood Blvd to 55th St	40,000	29,610	C	0.74
55th St to College Ave	30,000	24,460	D	0.82
College Ave to E. Campus Dr	30,000	21,550	D	0.72
Fairmount Avenue				
Montezuma Rd to I-8	60,000	80,800	F	1.347

Notes:

a. Capacities based on City of San Diego Roadway Classification Table.

b. Average Daily Traffic Volumes.

**Table 3.14-9
Existing Del Cerro Street Segment Operations**

Street Segment	Capacity (LOS C) ^a	ADT ^b	LOS
Adobe Falls Rd/Mill Peak Road			
North of Genoa Dr	1,500	410	C+
Arno Drive			
Helena Pl to Capri Dr	1,500	370	C+
Capri Drive			
East of Arno Dr	1,500	720	C+
Del Cerro Boulevard			
Genoa Dr to Capri Dr	5,000	3,640	C
Capri Dr to College Ave	5,000	5,170	D
Genoa Drive			
Capri Dr to Arno Pl	1,500	400	C+
Lambda Drive			
Rockhurst Dr to College Ave	1,500	600	C+
Rockhurst Drive			
Lambda Dr to College Ave	1,500	500	C+

Notes:

- a. Capacities based on City of San Diego Roadway Classification Table. Section 3.5 contains a discussion of the capacity of the residential roadways.
- b. Average Daily Traffic Volumes.

General Notes:

1. C+ equals better than LOS C.

3.14.5.3 Ramp Meter Operations

Table 3.14-10, Existing Ramp Meter Operations, summarizes the existing ramp meter operations for the I-8/College Avenue and the I-8/Fairmount Avenue interchanges. As shown on **Table 3.14-10**, using the fixed rate method, southbound College Avenue on-ramp to westbound I-8 is calculated to operate with a 26-minute delay. The northbound College Avenue on-ramp to the eastbound I-8 is calculated to operate with a 38-minute delay. A ramp meter delay longer than 15 minutes is considered to be operating at unacceptable conditions.

**Table 3.14-10
Existing Ramp Meter Operations**

Location/Scenario	Peak Hour	Peak Hour Demand	Ramp Meter Rate (Flow) ^a	Excess Demand	Delay per Lane ^b	Queue per Lane ^c
Fixed Rate Method						
SB Fairmount Ave to EB I-8	PM	430	492	0	0	0
NB College Avenue to WB I-8	AM	250	318	0	0	0
SB College Avenue to WB I-8	AM	455	318	137	26	3,425
NB College Avenue to EB I-8	PM	522	318	204	38	5,100
Maximum Delay Method						
SB Fairmount Ave to EB I-8	PM	430	492	0	0	0
NB College Avenue to WB I-8	PM	250	318	0	0	0
SB College Avenue to WB I-8	PM	455	318	137	15	3,425
NB College Avenue to EB I-8	PM	522	318	204	15	5,100

Notes:

- a. Meter Rates obtained from Caltrans (see Appendix B).
- b. Delay expressed in minutes per lane.
- c. Queue expressed in feet per lane.

As shown on **Table 3.14-10**, the maximum delay method indicates that with the 15-minute maximum delay, queues of 3,425 feet per lane occur at the southbound College Avenue on-ramp to the westbound I-8. A queue of 5,100 feet per lane would occur at the northbound College Avenue on-ramp to the eastbound I-8.

3.14.5.4 Freeway Mainline Operations

Table 3.14-11, Freeway Mainline Operations Existing Conditions, summarizes the existing freeway mainline operations on I-8. As shown on **Table 3.14-11**, the segment of I-8 between Fairmount Avenue and Waring Road currently operates at LOS E during the AM peak hour in the westbound direction. The segments of I-8 between Waring Road and Lake Murray Boulevard currently operate at LOS F(0) during the AM peak hour in the westbound direction. The segment of I-8 between Lake Murray Boulevard and Fletcher Parkway currently operates at LOS F(1) during the AM peak hour in the westbound direction. The segments of I-8 between Fairmount Avenue and Fletcher Parkway currently operates at LOS F(0) in the PM peak hour in the eastbound direction.

**Table 3.14-11
Freeway Mainline Operations
Existing Conditions**

Freeway Segment	Dir.	# of Lanes	Hourly Capacity ^a	ADT ^b	% K ^c		% D ^c		Truck Factor ^d	Peak Hour Volume ^e		V/C ^f		LOS	
					AM	PM	AM	PM		AM	PM	AM	PM	AM	PM
Interstate 8															
Fairmount Ave to Waring Rd	EB	5	10,000	251,000	0.061	0.077	0.250	0.604	0.965	3,946	12,103	0.395	1.210	A	F(0)
	WB	6	12,000		0.061	0.077	0.751	0.396		11,869	7,925	0.989	0.660	E	C
Waring Rd to College Ave	EB	5	10,000	238,000	0.075	0.074	0.374	0.604	0.965	6,868	10,969	0.687	1.097	C	F(0)
	WB	5	10,000		0.075	0.074	0.626	0.396		11,506	7,183	1.151	0.718	F(0)	C
College Ave to Lake Murray Blvd	EB	4 + 1	9,200	214,000	0.073	0.078	0.330	0.600	0.963	5,313	10,392	0.578	1.130	B	F(0)
	WB	5	10,000		0.073	0.078	0.670	0.400		10,842	6,919	1.084	0.692	F(0)	C
Lake Murray Blvd to Fletcher Pkwy	EB	4 + 1	9,200	201,000	0.073	0.078	0.330	0.600	0.963	4,991	9,761	0.542	1.061	B	F(0)
	WB	4	8,000		0.073	0.078	0.670	0.400		10,184	6,499	1.273	0.812	F(1)	D

Notes:

- Capacity calculated at 2000 vph per lane and 1200 vph per auxiliary lane.
- Existing ADT Volumes from CALTRANS Year 2005 Count Records.
- Peak Hour Percentage (K) and Direction Split (D) from CALTRANS "2005 Traffic Volumes", June 2006
- Truck Factor from "2005 Annual Average Daily Truck Traffic on the California State Highway System", November 2006.
- Peak Hour Volume = ((ADT)(K)(D)/Truck Factor)
- V/C = ((ADT)(K)(D)/Truck Factor/Capacity)

LOS	v/c
A	<0.41
B	0.62
C	0.8
D	0.92
E	1
F(0)	1.25
F(1)	1.35
F(2)	1.45
F(3)	>1.46

3.14.6 THRESHOLDS OF SIGNIFICANCE

According to CEQA Guidelines Appendix G, a project would have a potentially significant impact relating to transportation and circulation if the proposed project would:

- a) Cause an increase in traffic which 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);
- b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways;
- 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;
- d) Substantially increase hazards due to a design feature (*e.g.*, sharp curves or dangerous intersections) or incompatible uses (*e.g.*, farm equipment);
- e) Result in inadequate emergency access;
- f) Result in inadequate parking capacity; or
- g) Conflict with adopted policies, plans, or programs supporting alternative transportation (*e.g.*, bus turnouts, bicycle racks).

According to the City of San Diego's *Significance Determination Thresholds* report dated January 2007, a project would be considered to have a significant impact relative to transportation and circulation if the new project traffic has decreased the operations of surrounding roadways by a City defined threshold. For projects deemed complete on or after January 1, 2007, the City defined threshold by roadway type or intersection is shown in **Table 3.14-12, City of San Diego Traffic Impact Significance Thresholds**. For ramp meters, if either of the two methodologies results in a significant impact, the impact is deemed significant.

**Table 3.14-12
City Of San Diego
Traffic Impact Significant Thresholds**

Level of Service with Project ^b	Allowable Increase Due to Project Impacts ^a					
	Freeways		Roadway Segments		Intersections	Ramp Metering
	V/C	Speed (mph)	V/C	Speed (mph)	Delay (sec.)	Delay (min.)
E	0.010	1.0	0.02	1.0	2.0	2.0 ^c
F	0.005	0.5	0.01	0.5	1.0	1.0 ^c

Notes:

- If a proposed project's traffic causes the values shown in the table to be exceeded, the impacts are determined to be significant. The project applicant shall then identify feasible improvements (within the Traffic Impact Study) that will restore/and maintain the traffic facility at an acceptable LOS. If the LOS with the proposed project becomes unacceptable (see note b), or if the project adds a significant amount of peak-hour trips to cause any traffic queues to exceed on- or off-ramp storage capacities, the project applicant shall be responsible for mitigating the project's direct significant and/or cumulatively considerable traffic impacts.
- All LOS measurements are based upon Highway Capacity Manual procedures for peak-hour conditions. However, V/C ratios for roadway segments are estimated on an ADT/24-hour traffic volume basis (using Table 2 of the City's Traffic Impact Study Manual). The acceptable LOS for freeways, roadways, and intersections is generally "D" ("C" for undeveloped locations). For metered freeway ramps, LOS does not apply. However, ramp meter delays above 15 minutes are considered excessive.
- The impact is only considered significant if the total delay exceeds 15 minutes.

General Notes:

- Delay= Average control delay per vehicle measured in seconds for intersections, or minutes for ramp meters.
- LOS = Level of Service
- V/C = Volume to Capacity Ratio (capacity at LOS E should be used)
- Speed= Arterial speed measured in miles per hour for Congestion Management Program (CMP) analyses

3.14.7 TRIP GENERATION, DISTRIBUTION AND ASSIGNMENT

3.14.7.1 Trip Generation

The proposed project would generate new vehicle trips as a result of three of the project components: (1) the increase in student enrollment authorized by the project; (2) the development of the Adobe Falls Faculty/Staff housing; and (3) operation of the Alvarado Hotel. The following is a description of the trip generating characteristics attributable to each.

3.14.7.1.1 Student Headcount and Faculty/Staff Increase

The increased student enrollment would result in an increase in vehicle trips attributable to the increased students, the additional faculty and staff necessary to serve the increased enrollment, and a corresponding increase in visitor trips (*i.e.*, vendors, etc.).

As previously noted, the proposed project would result in an increased enrollment of 11,385 students by the academic year 2024/25. SDSU projects that of these 11,385 additional students, 2,094 would enroll by the year 2012/2013, with the remaining 9,291 students enrolling during the subsequent years. See EIR **Appendix N, Appendix B**.

Of these additional students, some would be resident, non-commuting students, while the others would be non-resident, commuting students. Based on SDSU student housing projections, by the academic year 2012/13, approximately 32% of enrolled students would either live on campus or within 0.5 miles of campus. SDSU further projects that this number could exceed 40% by the year 2024/25, based on the projected number of available housing units. (See EIR Section 3.12, *Population and Housing*.)

For purposes of this traffic analysis, therefore, it is assumed that by the year 2012/2013, of the additional 2,094 students that would enroll as a result of the proposed project, 30%, or 628, would be resident, non-commuting students, and the remaining 70%, or 1,466 students, would be commuters. Similarly, by the year 2024/25, it is assumed that 35% of the 11,385 additional students, 35%, or 3,984 students, would be resident, non-commuting students, and the remaining 7,401 students would be commuters. **Table 3.14-13, Student Increase - Resident/Non-Residents**, illustrates the projected resident/non-resident student split.

Table 3.14-13
Student Headcount Increase

Variable	Academic Years	
	2006/2007 – 2012/2013	2006-2007 – 2024/2025
Resident Students	628	3,984
Non-Resident Students	1,466	7,401

In determining the trip rate to be applied, the rate utilized for non-resident students is based on actual traffic counts taken at the SDSU campus in November 2006. Road tubes were placed at all entrances/exits to the campus parking areas and the total ADT (66,807) was determined. A five-day count was conducted the week of November 13, 2006, and an average of the five weekdays was utilized. The trip rate for non-resident students was determined by dividing the total campus generated ADT of 66,807 by the 2006/2007 non-resident headcount. Based on these calculations, a trip rate of 2.47 ADT per student was utilized. It should be noted that since the trip rate is based on actual counts of all campus parking areas (including visitors, vendors, faculty and staff), the 2.47 rate accounts for all potential campus-related trips, including visitors, vendors, faculty and staff.

As to the trip rate to be applied to resident students, the rate was determined based on the trip rates utilized in the traffic analyses prepared for the College Community Redevelopment Plan and the University of California at San Diego ("UCSD") Master Plan. Based on the Redevelopment Plan analysis, a trip rate ranging between 0.12 and 0.64 ADT per resident student was derived. In comparison, the UCSD analysis utilized a resident student trip rate of .41 ADT. Based on these sources, a trip rate of 0.64 per resident student was utilized for this analysis. (See **EIR Appendix N**, Section 8.0 for further information regarding the calculation of the resident student trip rate.)

3.14.7.1.2 Adobe Falls Faculty/Staff Housing Component

City of San Diego trip generation rates were utilized for the proposed faculty/staff housing at the Adobe Falls site assuming they would function similar to condominium/apartment units. A rate of 8 ADT per unit was used for the portion with densities under 20 dwelling units/acre and a rate of 6 ADT per unit was used for those densities exceeding this amount.

However, it is likely that the proposed project would generate less ADT than the ones utilized for this study since faculty and staff residing in the housing likely would often generate only 2 ADT (one trip each to and from campus). This conclusion is based on a 5-day traffic count conducted at the Cal State Fullerton faculty housing development located about five miles from campus on Lake Knoll Drive in the City of Buena Park. The Cal State Fullerton facility is similar to that proposed at Adobe Falls. Based on the traffic counts conducted, the trip rate was determined to be 3.75 ADT per unit.

Additionally, it should be noted that as the Adobe Falls Faculty/Staff Housing site is built out, a carpool/shuttle system would be instituted to take residents to and from the development to the main campus. This shuttle is expected to reduce the overall number of vehicle trips generated by

the Adobe Falls development by approximately 10 percent. The shuttle system would be implemented once traffic volumes on the residential roadways warrant.

3.14.7.1.3 Alvarado Hotel

To determine the number of vehicle trips to be generated by the proposed Alvarado Hotel, the analysis utilized the City of San Diego trip rate of 10 ADT per hotel room.

3.14.7.1.4 Transit Ridership

In order to determine the extent to which transit ridership, particularly ridership on the San Diego Trolley, would affect future vehicle trips generated by SDSU, LLG worked extensively with the San Diego Association of Governments ("SANDAG") to obtain existing and projected daily passenger trolley boardings at the SDSU station. The existing number of daily passenger boardings is 5,982. SANDAG forecasts there will be 7,909 daily passenger boardings at the SDSU trolley station in the year 2010, 9,242 boardings in the year 2015, and 17,450 boardings in the year 2030. (See **EIR Appendix N, Appendix H-1.**) Based on these numbers, SANDAG forecasts 8,442 daily passenger boardings in the year 2012/2013, and 14,714 daily passenger boardings for the year 2024/2025.

According to SANDAG, 21% of the boardings at SDSU are transfers and, therefore, passengers not originating travel at SDSU. (See **EIR Appendix N, Appendix H-1.**) Therefore, based on SANDAG projections, 79% of the passenger boardings at the SDSU trolley station are trips originating at SDSU. SANDAG estimates, based on these numbers, that 4,726 SDSU students, faculty and staff members presently ride the trolley to and from campus. (See **EIR Appendix N, Appendix H-1.**)

As shown on **Table 3.14-14A, Year 2012 (Near-Term) Project Trip Generation**, and **Table 3.14-15A, Horizon Year Project Trip Generation**, if the number of SDSU trolley riders were to remain stagnant over the next 20 years, the proposed project would generate an additional 5,607 ADT over existing vehicle trips by interim year 2012, and an additional 23,404 ADT by horizon year 2024-25. However, SANDAG does not project the number of trolley riders to remain stagnant. SANDAG projects that by the year 2012, the number of SDSU trolley riders will increase to 6,669, an increase of 1,943 additional trolley riders. (See **Table 3.14-14B.**) By the year 2024-25, SANDAG projects that the number of SDSU trolley riders will increase over existing ridership by 6,898 trolley riders to 11,624. Therefore, between now and 2024-25, during the same period when the SDSU student headcount will increase from 33,441 to 44,826, SANDAG estimates that trolley ridership will increase by 6,898 SDSU students, faculty and staff over existing numbers. (See **Table 3.14-15B.**)

In order to account for this intermediate- and long-term increase in SDSU related trolley ridership, and the corresponding future shift from vehicle trips to trolley trips that will result in fewer vehicles on the roadways, the 2012 and 2024-25 trip generation projections for the proposed project have been adjusted to account for the reduced vehicle trips due to the increased trolley ridership.

To translate transit usage into vehicle trips, a vehicle occupancy rate of 1.2 people per car was utilized, based on an LLG survey conducted in May 2000. Therefore, by project buildout year 2024/25, the one-way traffic that would shift to the trolley is 5,748 trips ($6,898 \text{ students} \div 1.2 \text{ people/car}$). (See **Table 3.14-15B**.) A five (5) % factor is applied to this amount to account for the fact that some of the shift to the trolley would be from other transit opportunities and not from personal vehicles. (See **Table 3.14-15B**.) Therefore, the one-way traffic that would shift to the trolley by the year 2024/25 is 5,460 trips. (See **Table 3.14-15B**.) This number is multiplied by 2 to convert it to an ADT, which equates to a 10,920 ADT shift by the year 2024/25. (See **Table 3.14-15C**.) A similar calculation was completed for 2012/2013 and the shift to the trolley was calculated to be 3,076 ADT. (See **Table 3.14-14C**.)

As shown on **Tables 3.14-14C** and **3.14-15C**, taking into account the forecasted increase in trolley ridership, the net increase in ADT that would result from the proposed project is 2,531 ADT by the year 2012, and 12,484 ADT by the year 2024-25.

**Table 3.14-14A
Year 2012 (Near-Term) Project Trip Generation**

Trip Generation Project Components	Size	Daily Trip Ends (ADT ^a)		AM Peak Hour				PM Peak Hour			
		Rate	Volume	% of ADT	In:Out	Volume		% of ADT	In:Out	Volume	
					Split	In	Out		Split	In	Out
SDSU Student Headcount Increase											
Non-Resident Student Headcount Increase ^b	1,466 Students	2.47 /Student ^c	3,621	5%	90:10	163	18	7%	30:70	76	177
Resident Student Headcount Increase	628 Students	0.64 /Student ^d	402	5%	90:10	18	2	7%	30:70	8	20
Subtotal	2,094 Students	—	4,023			181	20			84	197
Adobe Falls Faculty/Staff Housing											
Upper Village Townhomes	48 DU	8 /DU ^e	384	8%	20:80	6	25	10%	70:30	27	11
Alvarado Hotel	120 Room	10 /Room ^e	1,200	6%	60:40	43	29	8%	60:40	58	38
Total		—	5,607	—	—	230	74	—	—	169	246

Notes:

- a. Average Daily Traffic
- b. Year 2012 student headcount equals 35,535 compared to the Year 2006 student headcount of 33,441. It should be noted that 70% of the student headcount increase are assumed to consist of non-resident students, and 30% of the student headcount increase will consist of resident students.
- c. SDSU rates are based on actual counts taken in November 2006. This rate includes SDSU faculty, staff, vendors, visitors, and students.
- d. The resident student rate is based on the Community College Redevelopment EIR that assumed 4.4 trips per student dwelling unit (with a reduction of 2.8 trips per DU based on students with new commute but would instead relocate and occupy the on-campus housing).
- e. Rates were taken from the City of San Diego Trip Generation Manual, May 2003.

General Notes:

DU = Dwelling Units

Table 3.14-14B
Shift from Driving To Trolley (Year 2012)

SDSU boardings increase (2006-2025)	2,460 students ^a
79% boardings are not transfers	1,943 students ^b
Vehicle Occupancy Rate	1,620 students ^c
95 % of shift to trolley is from private vehicle	1,538 students ^d
Total ADT diverted from private vehicle to trolley	3,076 (5 % during AM peak = 154 trips and 7 % during PM peak = 215 trips)

Notes:

- a. Source: SANDAG Trolley Boarding Data
- b. Source: SANDAG
- c. Accounts for fact that not all drivers that shift from trolley were driving alone, some carpool.
- d. Accounts for fact that some future users of trolley would shift from other transit opportunities, and not from personal vehicles

Table 3.14-14C
Net Increase in Traffic (Year 2012)

1. Proposed project trips (without any increased trolley usage) = 5,607
2. Future Shift from driving to trolley = 3,076
3. Net increase in traffic = 2,531 (150 AM peak hour trips and 200 PM peak hour trips)

**Table 3.14-15A
Horizon Year Project Trip Generation**

Trip Generation Project Components	Size	Daily Trip Ends (ADT ^a)		AM Peak Hour				PM Peak Hour			
		Rate	Volume	% of ADT	In:Out	Volume		% of ADT	In:Out	Volume	
					Split	In	Out		Split	In	Out
SDSU Student Headcount Increase											
Non-Resident Student Headcount Increase ^b	7,401 Students	2.47 /Student ^c	18,280	5%	90:10	823	91	7%	30:70	384	896
Resident Student Headcount Increase	3,984 Students	0.64 /Student ^d	2,550	5%	90:10	115	13	7%	30:70	54	125
Subtotal	11,385 Students	—	20,830			938	104			438	1,021
Adobe Falls Faculty/Staff Housing											
Upper Village Townhomes	48 DU	8 /DU ^e	384	8%	20:80	6	25	10%	70:30	27	11
Lower Village Townhomes	124 DU	8 /DU ^e	990	8%	20:80	16	63	10%	70:30	66	28
Alvarado Hotel	120 Rooms	10 /Room ^e	1,200	6%	60:40	43	29	8%	60:40	58	38
Total		—	23,404	—	—	1,003	221	—	—	589	1,098

Notes:

- a. Average Daily Traffic
- b. Year 2025 student headcount equals 44,826 compared to the Year 2006 student headcount of 33,441. It should be noted that 65% of the student headcount increase are assumed to consist of non-resident students, and 35% of the student headcount increase will consist of resident students.
- c. SDSU rates are based on actual counts taken in November 2006. This rate includes SDSU faculty, staff, vendors, visitors, and students.
- d. The resident student rate is based on the Community College Redevelopment EIR that assumed 4.4 trips per student dwelling unit (with a reduction of 2.8 trips per DU based on students with new commute but would instead relocate and occupy the on-campus housing).
- e. Rates were taken from the City of San Diego Trip Generation Manual, May 2003.

General Notes:

DU = Dwelling Units

Table 3.14-15B
Shift from Driving To Trolley (Year 2025)

SDSU boardings Increase (2006-2025)	8,732 students ^a
79% boardings are not transfers	6,898 students ^b
Vehicle Occupancy Rate	5,748 students ^c
95 % of shift to trolley is from private vehicle	5,460 students ^d
Total ADT diverted from private vehicle to trolley	10,920 (5 % during AM peak = 546 trips and 7 % during PM peak = 764 trips)

Notes:

- a. Source: SANDAG Trolley Boarding Data
- b. Source: SANDAG
- c. Accounts for fact that not all drivers that shift from trolley were driving along, some carpool.
- d. Accounts for fact that some future users of trolley would shift from other transit opportunities, and not from personal vehicles

Table 3.14-15C
Net Increase in Traffic (Year 2025)

1. Proposed project trips (without any increased trolley usage) = 23,404
2. Future Shift from driving to trolley = 10,920
3. Net increase in traffic = 12,484 (678 AM peak hour trips and 923 PM peak hour trips)

3.14.7.1.5 Trip Generation Summary

Table 3.14-14A shows that the Near-Term total trip generation ADT without assuming a future shift to the trolley is 5,607 ADT. **Table 3.14-14B** shows that the forecasted shift to the trolley is 3,076 ADT based on SANDAG boarding projections as described previously. **Table 3.14-14C** shows the net increase in traffic for the campus at Near-Term Year 2012 would be 2,531 ADT.

With respect to the Horizon Year, **Table 3.14-15A** shows that the Horizon Year total trip generation ADT without assuming a future shift to the trolley is 23,404 ADT. **Table 3.14-15B** shows that the forecasted shift to the trolley is 10,920 ADT based on SANDAG boarding projections as described

previously. **Table 3.14-15C** shows the net increase in traffic for the campus at project buildout would be 12,484 ADT.

3.14.7.2 Trip Distribution & Assignment

The trip distribution and assignment for each component of the project is described below. The Student Headcount increase, Adobe Falls Faculty/Staff Housing, and the Alvarado Hotel each require separate distribution and assignments given the different nature of the uses proposed at each site.

3.14.7.2.1 Student Headcount Increase

As previously discussed, it is expected that a portion of the student headcount increase from 33,441 to 44,826 (*i.e.*, an additional 11,385 students over the next 15-20 years), would be accommodated in classroom facilities to be constructed on the Alvarado Campus site, while the balance of the students would be accommodated in existing SDSU facilities on the central campus. The traffic distribution for the student headcount increase component is based on its proximity to I-8 and the surrounding street network. A Select Zone Assignment for the SDSU Traffic Analysis Zone ("TAZ") was obtained from SANDAG and utilized in determining the project distribution. The majority of the traffic destined for SDSU travels I-8. **Figure 8-1, Student Headcount Increase Project Traffic Distribution**, illustrates this distribution.

All of the near-term project traffic was assigned to the main campus. The horizon-year project traffic was assigned with 50 percent to the main campus and 50 percent to the Alvarado Campus area. The near-term assignment of traffic for the Student Headcount Increase is shown on **Figure 8-2, Student Headcount Increase Project Traffic Assignment (Near-Term) AM/PM Peak Hours & ADT**. The assignment of traffic to the surrounding street system is based on the location of parking structures and lots, specific street characteristics (*e.g.* one-way streets), and the existing traffic conditions within the study area. The horizon year project assignment for the Student Headcount Increase is shown on **Figure 8-3, Student Headcount Increase Project Traffic Assignment (Horizon Year) AM/PM Peak Hours & ADT**.

3.14.7.2.2 Adobe Falls Faculty/Staff Housing

The distribution for the Adobe Falls Faculty/Staff Housing component of the proposed project is based on its proximity to the SDSU campus and the surrounding amenities. Given that this residential development is expected to house faculty and staff affiliated with SDSU, much of the

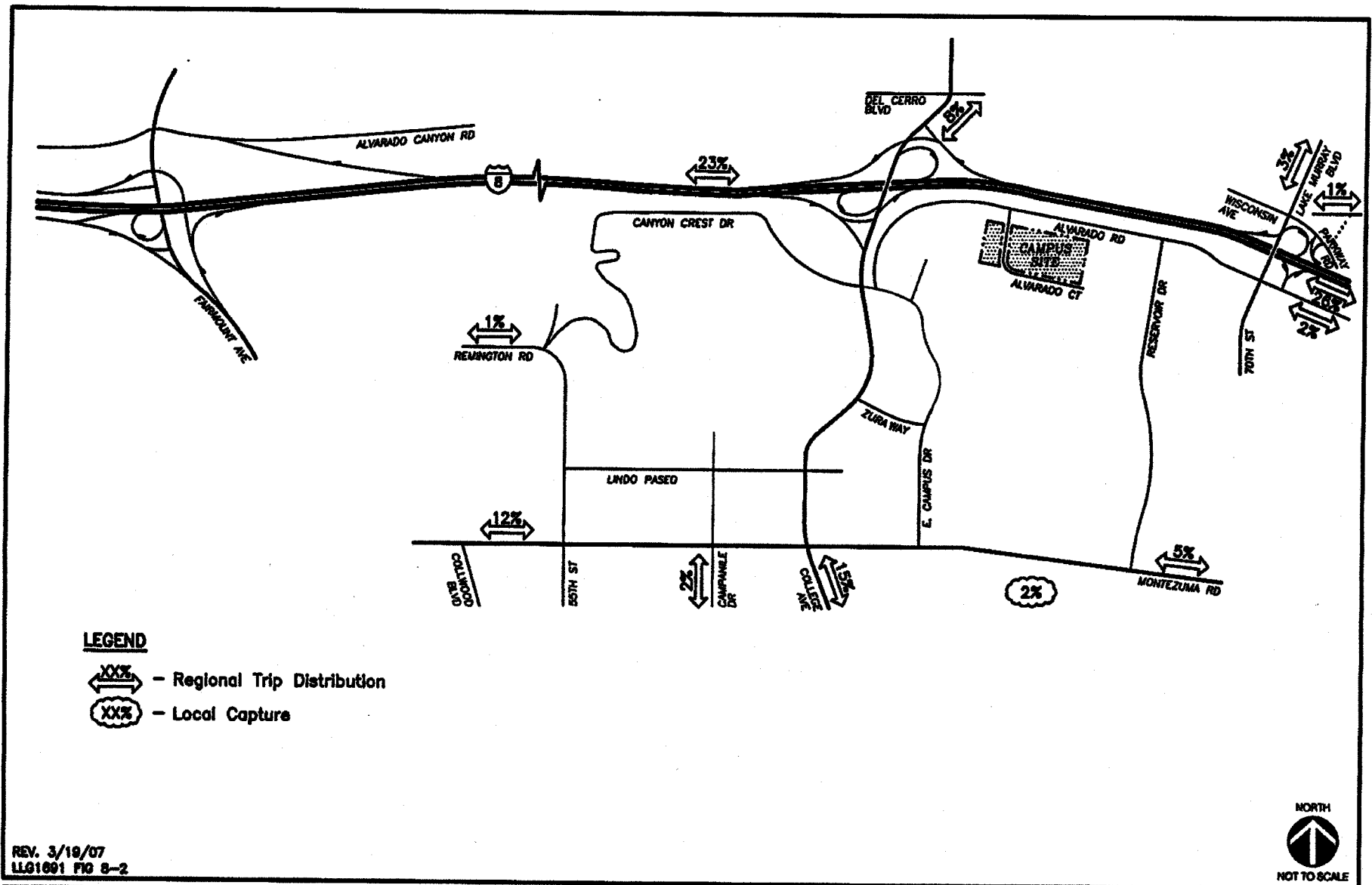


Figure 8-1

**Alvarado Campus Project Traffic Distribution
(Near-Term & Horizon Year)**

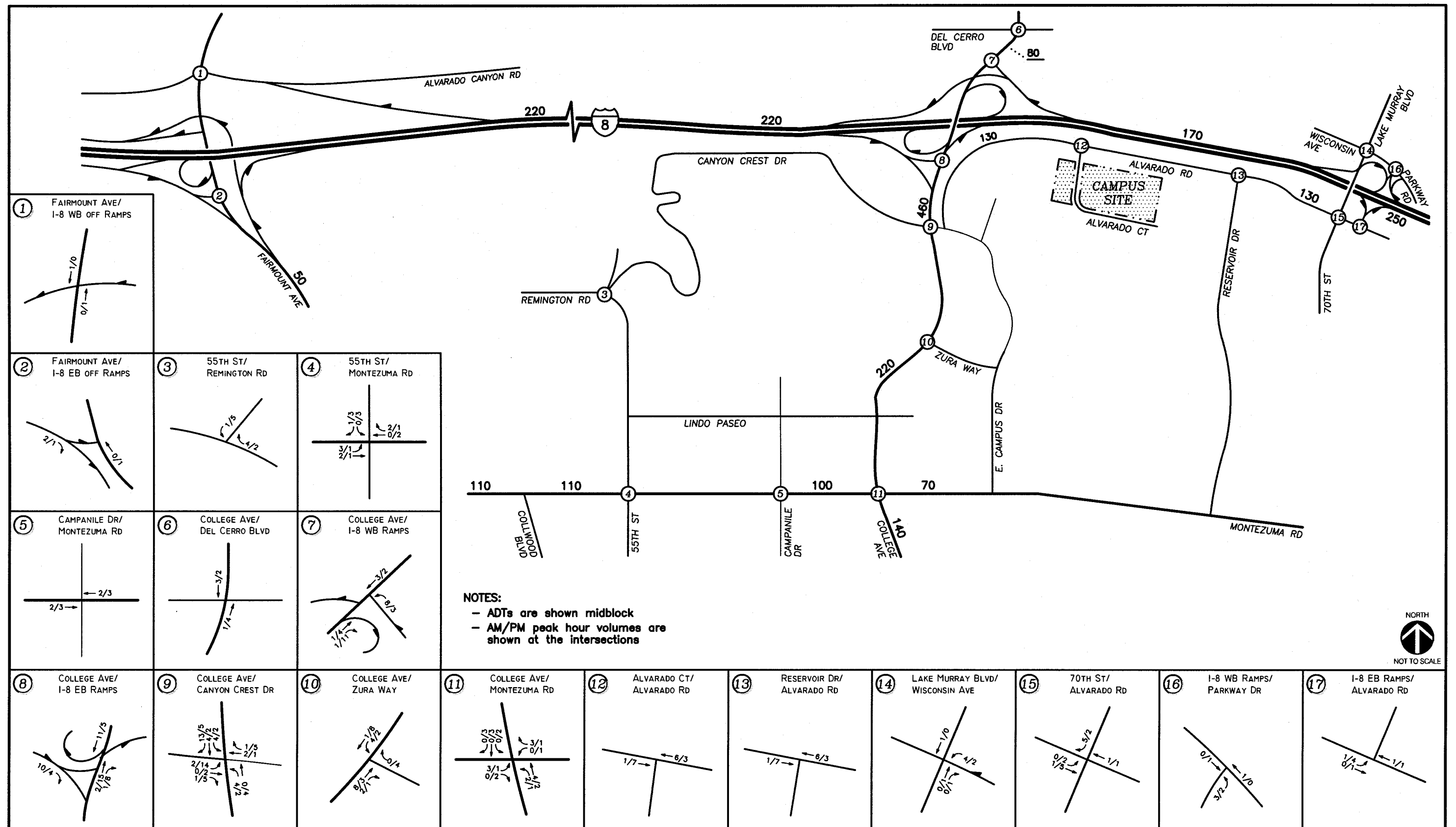
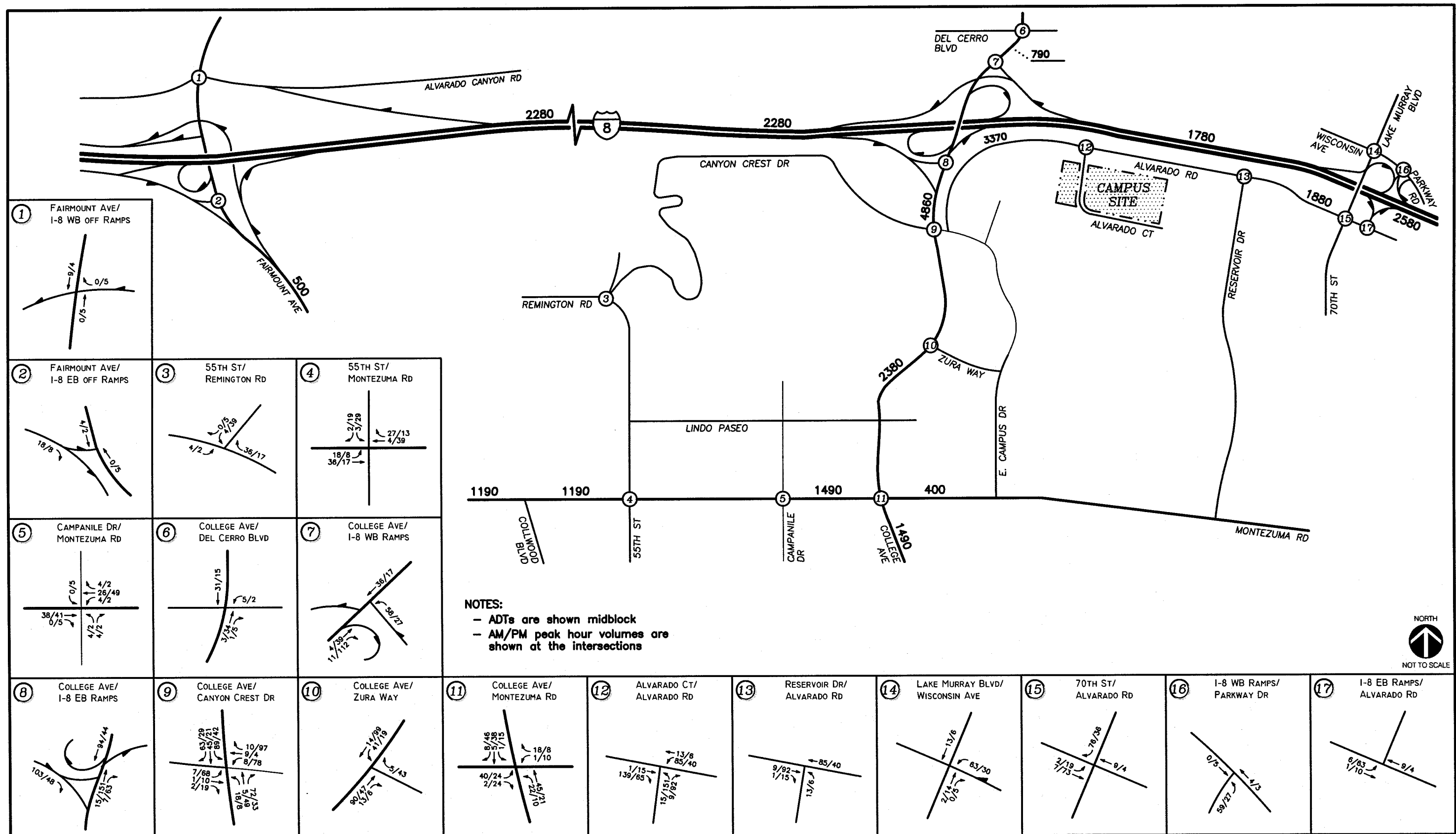


Figure 8-2
Alvarado Campus Project Traffic Assignment (Near-Term)
AM/PM Peak Hours & ADT



traffic is distributed to and from the SDSU campus as shown on **Figure 8-4, Detailed Adobe Falls Faculty/Staff Housing Project Traffic ADT Volumes & Distribution**. **Figure 8-4** also depicts the Adobe Falls project ADT volumes on the analyzed street segments. The Adobe Falls distribution to the surrounding local streets is shown in **Figure 8-5, Adobe Falls Faculty/Staff Housing Traffic Distribution (Near-Term & Horizon Year)**. The traffic distribution assignment accounts for the access of the Adobe Falls project component to and from major roadways along with the location of parking lots and structures on campus. **Figure 8-6, Adobe Falls Faculty/Staff Housing Traffic Assignment (Near-Term) AM/PM Peak Hours & ADT**, shows the Adobe Falls assignment for the near-term project traffic, and **Figure 8-7, Adobe Falls Faculty/Staff Housing Traffic Assignment (Horizon Year) AM/PM Peak Hours & ADT**, shows the Adobe Falls assignment for the horizon year project traffic.

3.14.7.2.3 Alvarado Hotel

The traffic distribution for the Alvarado Hotel project component is based on its proximity to the SDSU campus and the surrounding amenities. Given that this project component is expected to be used primarily by visitors to the campus, the majority of the traffic is distributed based on the location of the San Diego International Airport and related tourist facilities. The distribution also considers the possibility of local businesses using the hotel for meetings and conferences. **Figure 8-8, Alvarado Hotel Project Traffic Distribution**, illustrates this distribution. The traffic assignment for this component of the proposed project takes into account access to and from major roadways. **Figure 8-9, Alvarado Hotel Traffic Assignment AM/PM Peak Hours & ADT**, shows the hotel assignment for both the near-term and the horizon year. (Note: Because the Alvarado Hotel component of the proposed project is expected to be built out in the 2012 Near-Term scenario, both the near-term and horizon year assignments are the same.)

Figure 8-10, Near-Term Total Project Traffic Volumes AM/PM Peak Hours & ADT, depicts the traffic volumes and distribution for the proposed project for the near-term 2012 scenario. **Figure 8-11, Horizon Year Total Project Traffic Volumes AM/PM Peak Hours & ADT**, depicts the traffic volumes and distribution for the proposed project at buildout year 2024/25.

3.14.7.2.4 Cumulative Projects

There are other planned projects in the areas adjacent to the project site that will add traffic to the roadways surrounding the project location. Based on correspondence with the City of San Diego and the City of La Mesa, and a review of other traffic studies in the area, the following projects

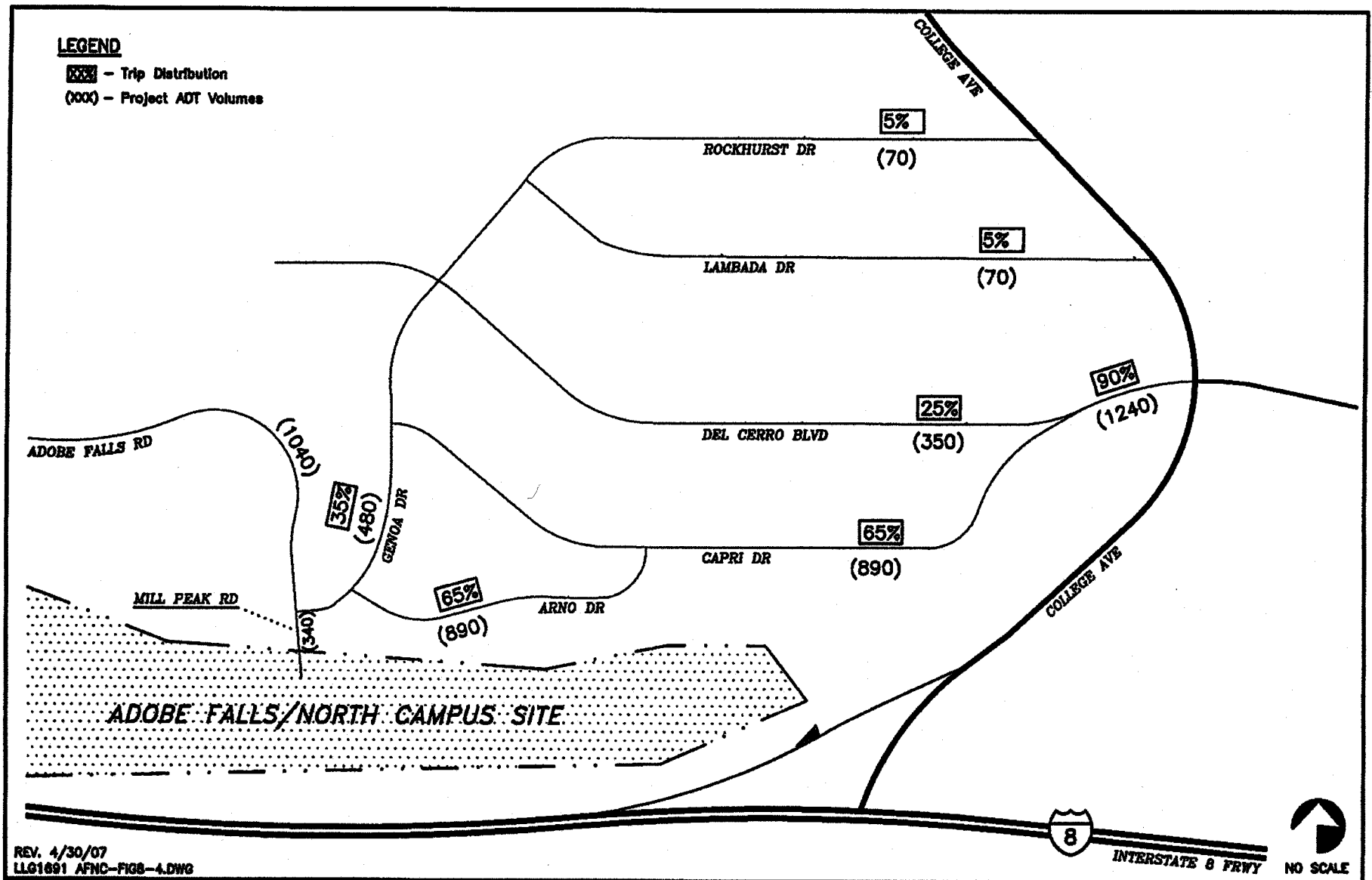


Figure 8-4

Detailed Adobe Falls Faculty/Staff Housing
 Project Traffic ADT Volumes & Distribution

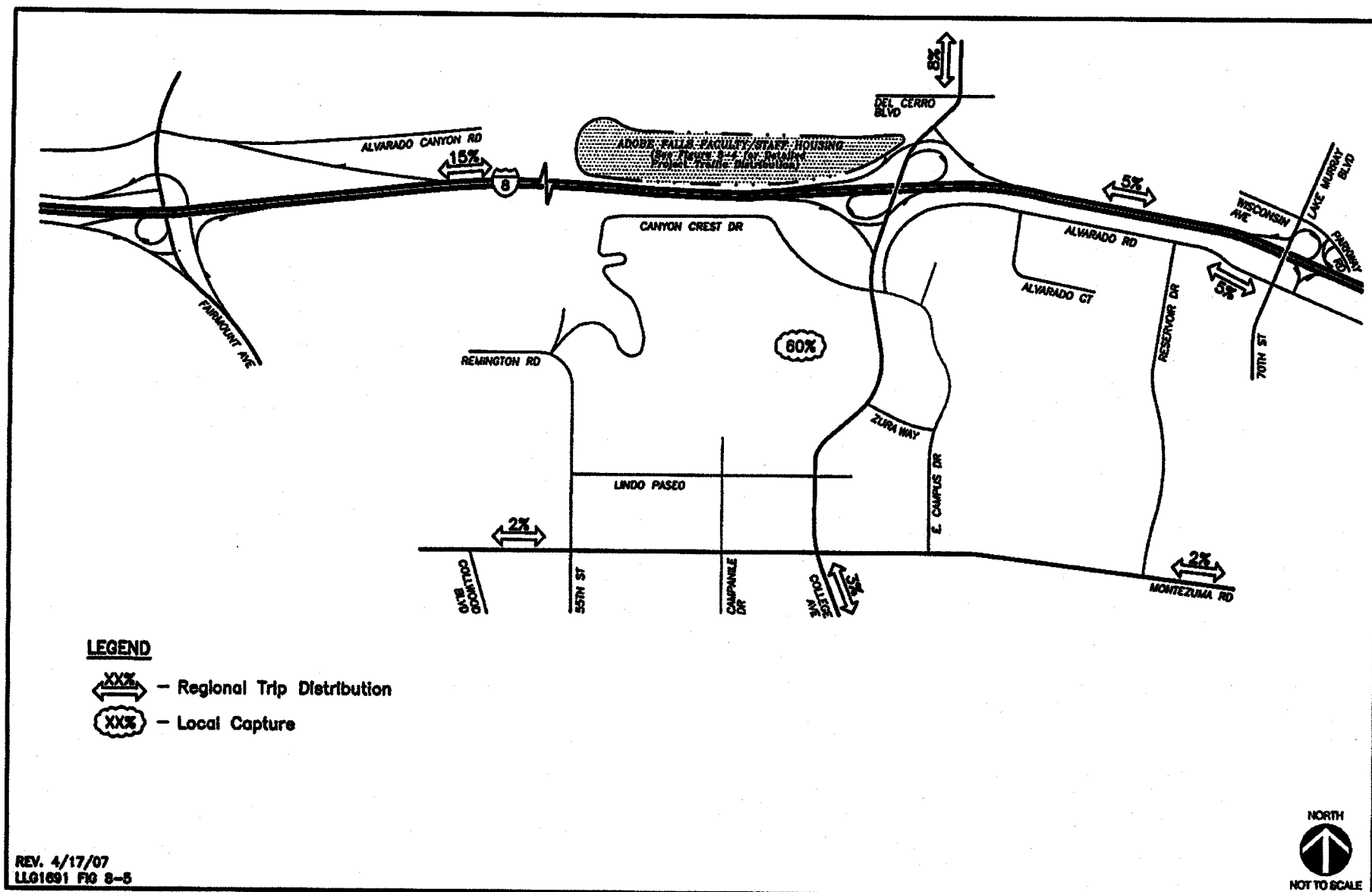
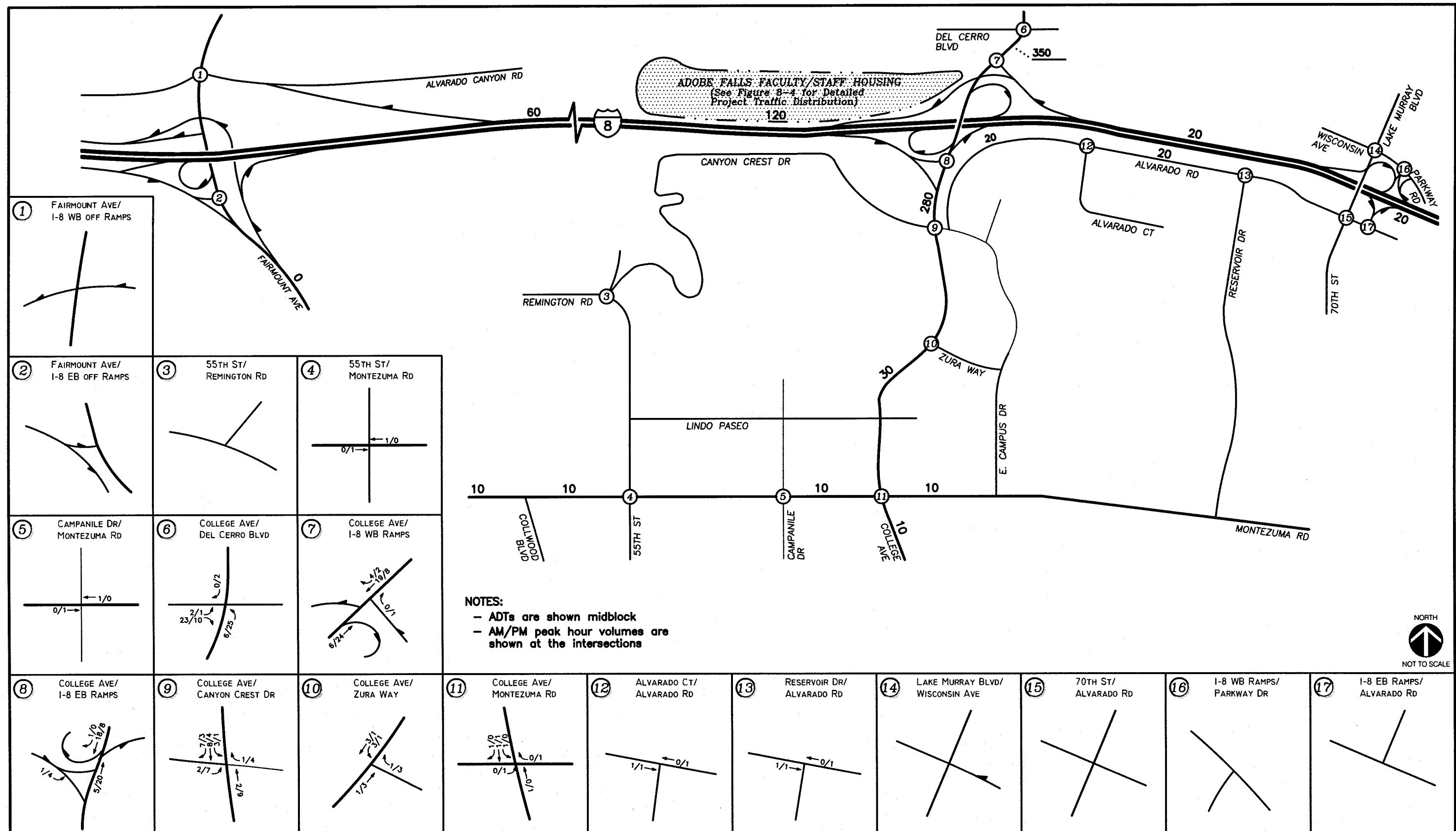
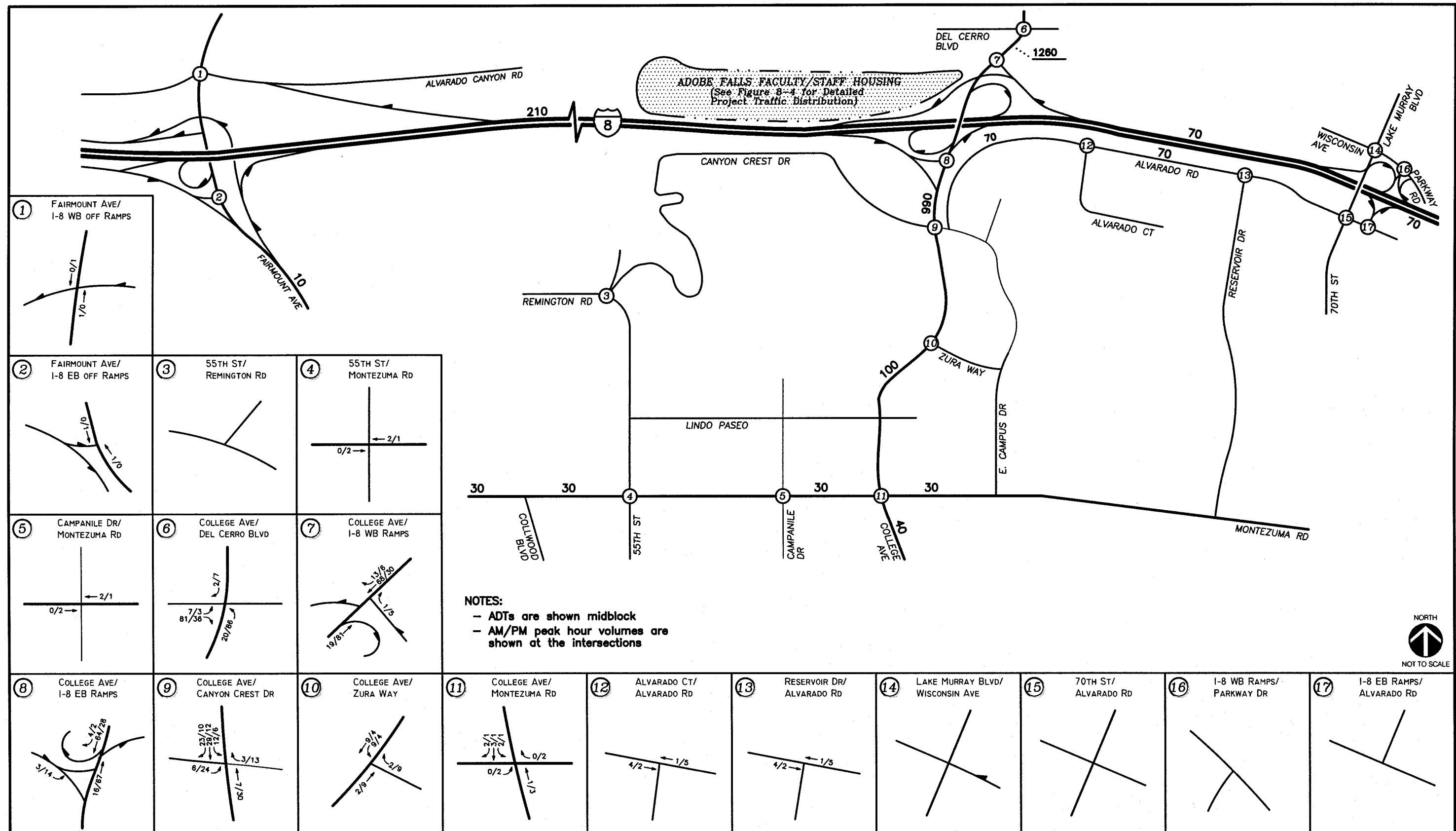
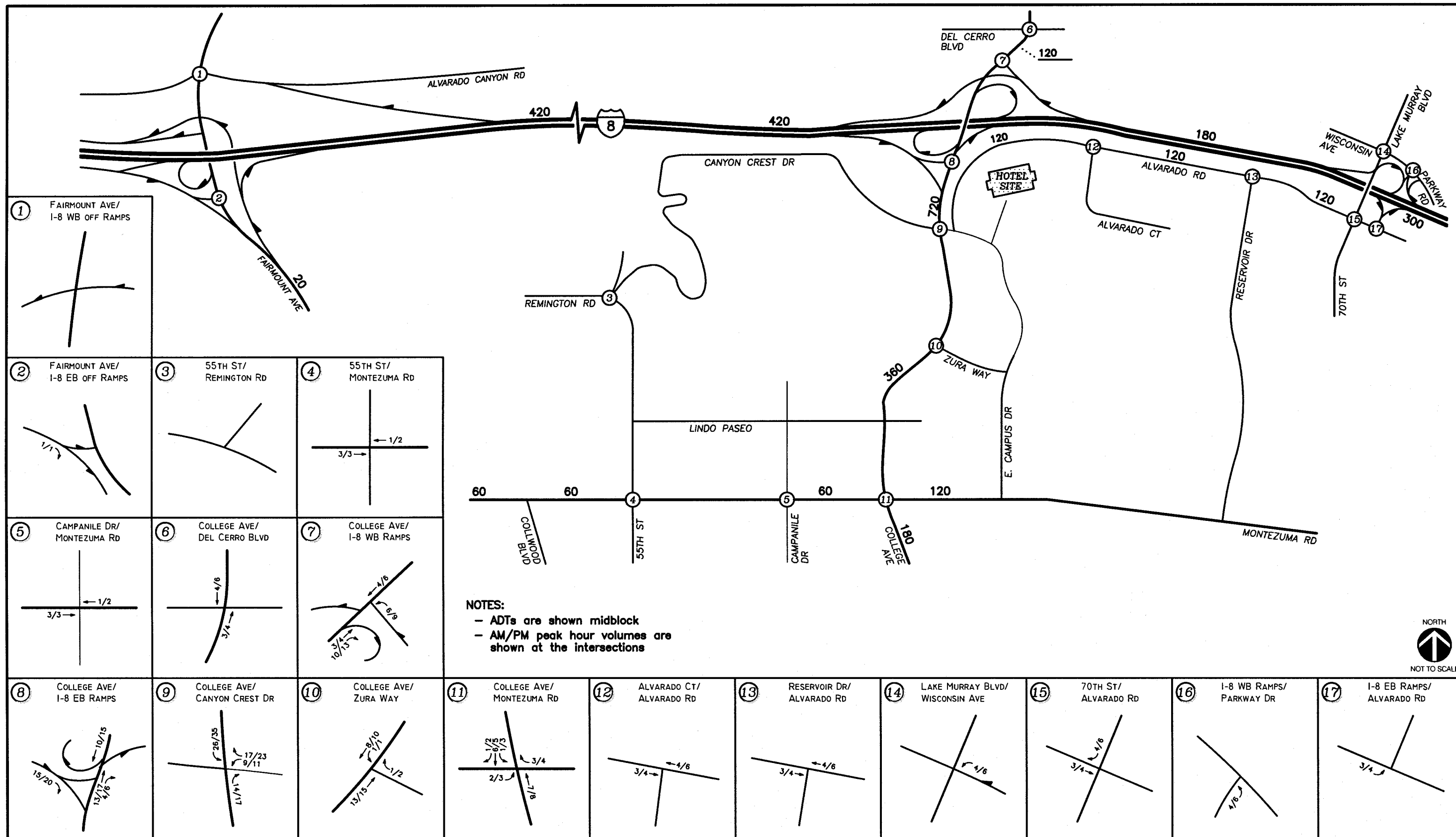
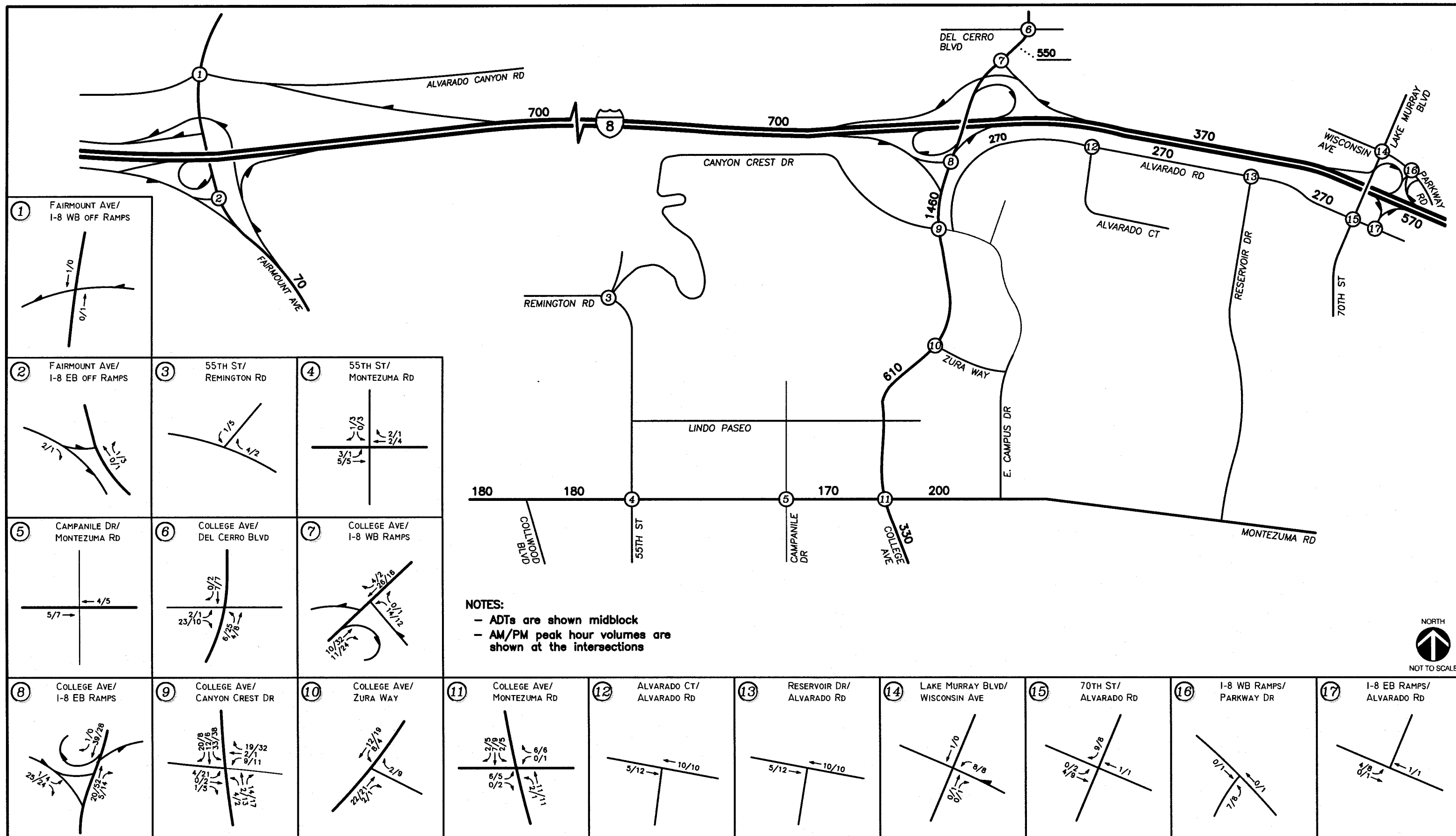


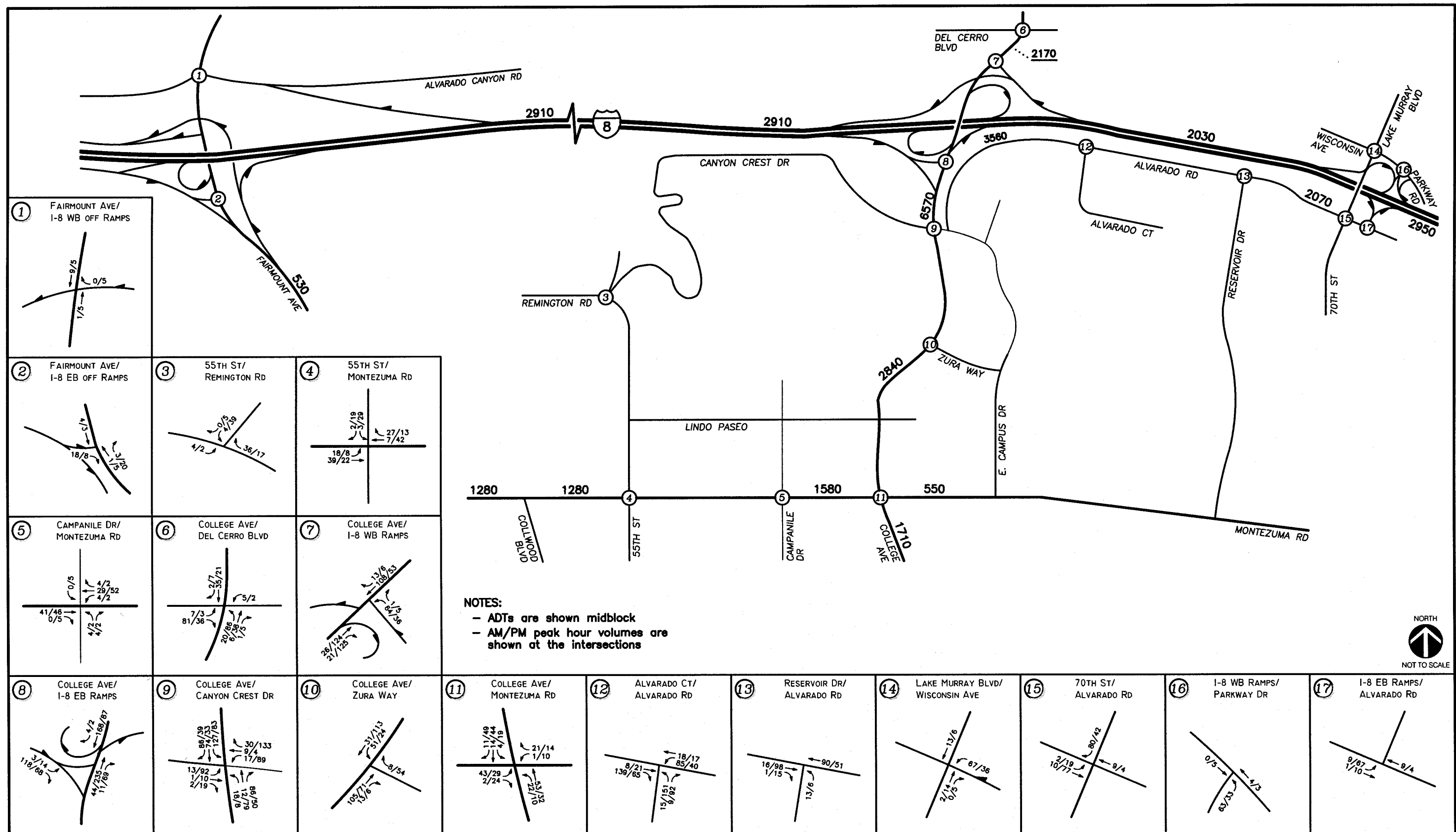
Figure 8-5
Adobe Falls Faculty/Staff Housing Traffic Distribution
(Near-Term & Horizon Year)











listed below were included as cumulative projects in the respective near-term and horizon year analyses. (See **EIR Appendix N, Appendix H** for additional information specific to the cumulative projects.)

3.14.7.2.4.1 Near-Term Cumulative Projects

El Cerrito Gateway is a proposed mixed-use project that would include 220 multi-family dwelling units and 10,000 square feet of retail space. The project would be located on El Cajon Boulevard south of the SDSU campus and is expected to generate approximately 1,720 ADT.

Mesa Commons I is a proposed mixed-use project that would include 52 multi-family dwelling units and approximately 2,800 square feet of retail space. The project would be located at El Cajon Boulevard and Catoctin Drive south of the SDSU campus.

Mesa Commons II is a proposed residential development that would include 33 row homes and seven single-family homes and would be located at 4883, 4905 and 4915 Catoctin Drive.

Centrepont College Avenue is a proposed mixed-use project that would include 312 multi-family dwelling units and 40,000 square feet of commercial space. The project would be located south of El Cajon Boulevard at 63rd Street.

Sorority Row is a proposed housing project for 215 student-sorority members that would include apartments and sorority chapter houses.

Park at 54th Street is a proposed 90-unit housing development located at the corner of 54th Street and Collwood Boulevard.

Centrepont at Grantville is a proposed mixed-use development consisting of approximately 588 condominiums, 20,428 square feet of retail uses, a 5,000 square foot high turn-over restaurant, and 109,800 square feet of office space. The project would replace the existing 179,190 square feet of office and 56,240 square feet of industrial land uses presently located on the site, which is bordered by Vandever Avenue to the north, Twain Avenue to the south, Mission Gorge Road to the east, and Fairmount Avenue to the west in the City of San Diego. The project is expected to generate a net 3,190 ADT.

The Religious Center project is a proposed 25,000 square foot structure for campus-based religious organizations located on the southwest corner of Campanile Drive and Lindo Paseo.

Jessie Avenue is a proposed development that would consist of 47 town homes, and 1,232 square feet of commercial space that would replace 25 existing mobile homes and an abandoned 8,057 square foot restaurant. The project would be located on Jessie Avenue in the City of La Mesa.

Comanche Apartments is a proposed development consisting of 19 town homes with a small commercial component that would replace the existing 16 small apartments located on the site, which is near the intersection of Comanche Drive and El Cajon Boulevard in the City of La Mesa.

Parks Avenue Townhomes is a proposed development consisting of 10 town homes with a small commercial component that would replace an existing used car lot with a 2,000 square foot modular office. The project would be located near the intersection of Parks Avenue and El Cajon Boulevard in the City of La Mesa.

Temple Emanuel is the proposed demolition of the existing sanctuary and construction of a new sanctuary at 6299 Capri Drive in the Del Cerro community. The typical weekday trip generation is not expected to increase as a result of the project. Friday evening and Saturday traffic may increase during services that attract more attendees than the current sanctuary can accommodate.

Coleman College Redevelopment is a proposed redevelopment that would consist of approximately 150 senior housing units on the 9.2-acre site located at 7380 Parkway Drive in the City of La Mesa.

Alvarado Mixed-Use Development is a proposed mixed-use development that would consist of 925 residential dwelling units, a 225-room hotel, 237,000 square feet of office, and 25,000 square feet of retail uses. The development would replace the existing Sunland RV Resort, located at 7407 Alvarado Road in the City of La Mesa. For the purposes of this traffic study, fifty percent of the project was considered to be built in the near-term analysis, with the full project buildout included in the horizon year analysis.

3.14.7.2.4.2 Horizon Year Cumulative Projects

The Paseo is a formerly proposed mixed-use project that would have included 470 apartments, 111,000 square feet of campus-serving office space, a multiplex movie theater (16 screens), 153,500 square feet of retail space, 60,000 square feet of restaurant space, and 4,500 square feet of space for religious organizations. The project was proposed for the site generally bounded by College Avenue to the east, Campanile Drive to the west, and Montezuma Road to the south. The former project was estimated to generate 11,301 ADT. As of the date of this traffic study, The Paseo project

is on hold. However, because it is likely that a Paseo-type project will be developed on the former site at some time in the future, the ADT generated by the previously proposed project were factored into the proposed project Horizon Year analysis as a cumulative project in order to account for the future vehicle trips that would be generated by a project of this nature.

Crossroads Redevelopment Project is a long-term redevelopment project consisting of a variety of programmatic residential, commercial, and public facilities, including approximately 2,421 dwelling units over a 1,032-acre redevelopment area. The project would be located on three non-contiguous subareas lying within the following boundaries: (i) El Cajon Boulevard and University Avenue from 54th Street to the City of La Mesa; (ii) the east side of 54th Street and north of College Grove Drive; and (iii) Redwood and Thorn Street, SR 94, and 54th Street.

3.14.8 PROJECT IMPACTS

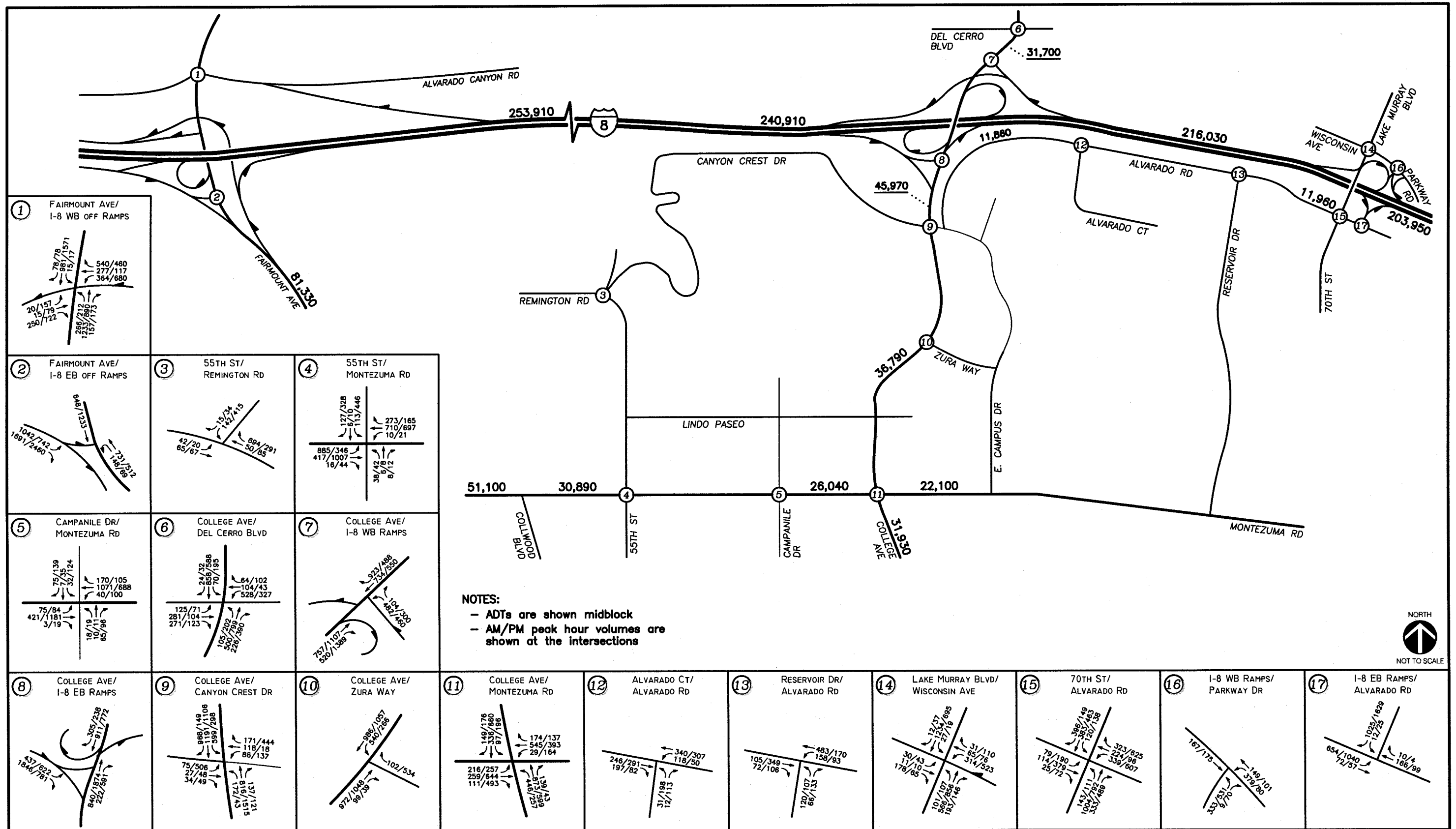
This section presents an analysis of the potential impacts of the proposed project under three different scenarios: existing + buildout project; existing + cumulative projects + near-term (2012) project; and horizon year with buildout project. The section includes analysis of the intersection, street segment, ramp meter, and freeway mainline operations.

3.14.8.1 Existing + Project

The existing + buildout project scenario analyzed below is an assessment of the impacts of the project at buildout measured in relation to existing traffic and roadway conditions. Since the project will be developed long-term, over the next 15-20 years, an "existing + project" analysis is not an accurate scenario from which to determine significant impacts. Therefore, the existing + project analysis is presented for information purposes only; near-term (2012) and long-term (2030) scenarios were analyzed for the purpose of assessing significant impacts. The analysis addresses intersection delays and levels of service, street segment operations, ramp meter queues and delays, and freeway mainline operations. **Figure 9-1, Existing + Project Traffic Volumes AM/PM Peak Hours & ADT**, depicts the existing + total projects traffic volumes. **EIR Appendix N, Appendix I** contains the peak hour intersection, ramp meter, and freeway analysis worksheets for the existing + total project scenario.

3.14.8.1.1 Intersection Operations

Table 3.14-16, Existing + Project Intersection Operations, summarizes the peak hour intersection operations for the existing + project conditions. As shown on **Table 3.14-16**, with the addition of project traffic, the following signalized intersections are projected to operate at unacceptable levels of service:



- Fairmount Avenue / I-8 Westbound Off-ramps/Camino del Rio North (LOS F during the PM peak hour)
- Fairmount Avenue / I-8 Eastbound Off-Ramps (LOS F during the PM peak hour)
- 55th Street / Montezuma Road (LOS F during the AM peak hour)
- College Avenue / Del Cerro Boulevard (LOS F during the AM peak hour)
- College Avenue / I-8 Eastbound Ramps (LOS E during the AM peak hour)
- College Avenue / Canyon Crest Drive (LOS E during the AM peak hour and LOS F during the PM peak hour)

Under this scenario, the following unsignalized intersections in the project vicinity are projected to operate at unacceptable levels of service:

- College Avenue / Zura Way (LOS F during the PM peak hour)
- I-8 WB Ramps/ Parkway Drive (LOS E during the PM peak hour)

Table 3.14-16
Existing + Project Intersection Operations

Intersection	Control Type	Peak Hour	Existing		Existing + Project	
			Delay ^a	LOS ^b	Delay	LOS
1. Fairmount Ave / I-8 WB Off Ramps / Camino del Rio N	Signal	AM	47.8	D	49.2	D
		PM	154.8	F	155.5	F
2. Fairmount Ave / I-8 EB Off Ramps	Signal	AM	37.9	D	38.5	D
		PM	99.8	F	100.8	F
3. 55th Street / Remington Rd	Signal	AM	8.9	A	9.0	A
		PM	8.3	A	8.5	A
4. 55th Street / Montezuma Rd	Signal	AM	73.4	E	80.3	F
		PM	33.7	C	35.8	D
5. Campanile Dr / Montezuma Rd	Signal	AM	31.8	C	32.7	C
		PM	32.2	C	33.2	C
6. College Ave / Del Cerro Blvd	Signal	AM	68.1	E	86.8	F
		PM	40.6	D	42.5	D
7. College Ave / I-8 WB Ramps	Signal	AM	8.9	A	10.0	A
		PM	8.7	A	11.1	B
8. College Ave / I-8 EB Ramps	Signal	AM	40.0	D	58.9	E
		PM	15.3	B	19.7	B
9. College Ave / Canyon Crest Dr	Signal	AM	64.1	E	68.6	E
		PM	62.3	E	>120	F
10. College Ave / Zura Way	TWSC ^c	AM	14.3	B	15.6	C
		PM	>120	F	>120	F

**Table 3.14-16
Existing + Project Intersection Operations**

Intersection	Control Type	Peak Hour	Existing		Existing + Project	
			Delay ^a	LOS ^b	Delay	LOS
11. College Ave / Montezuma Rd	Signal	AM	38.9	D	47.4	D
		PM	36.5	D	38.3	D
12. Alvarado Ct / Alvarado Rd	TWSC ^c	AM	14.4	B	20.0	C
		PM	13.4	B	27.3	D
13. Reservoir Dr / Alvarado Rd	Signal	AM	17.1	B	17.9	B
		PM	20.8	C	22.2	C
14. Lake Murray Blvd / Parkway Dr	Signal	AM	30.8	C	40.7	D
		PM	32.5	C	36.9	D
15. 70th Street / Alvarado Rd	Signal	AM	30.1	C	30.2	C
		PM	39.3	D	40.5	D
16. I-8 WB Ramps / Parkway Dr	AWSC ^d	AM	18.3	C	22.3	C
		PM	31.1	D	40.6	E
17. I-8 EB Ramps / Alvarado Rd	Signal	AM	19.4	B	19.7	B
		PM	16.9	B	17.0	B

Notes:

- a. Average delay expressed in seconds per vehicle.
- b. Level of Service.
- c. TWSC – Two-Way Stop Controlled intersection. Minor street approach delay is reported.
- d. AWSC – All-Way Stop Controlled intersection.

SIGNALIZED		UNSIGNALIZED	
DELAY/LOS THRESHOLDS		DELAY/LOS THRESHOLDS	
Delay	LOS	Delay	LOS
0.0 < 10.0	A	0.0 < 10.0	A
10.1 to 20.0	B	10.1 to 15.0	B
20.1 to 35.0	C	15.1 to 25.0	C
35.1 to 55.0	D	25.1 to 35.0	D
55.1 to 80.0	E	35.1 to 50.0	E
> 80.1	F	> 50.1	F

3.14.8.1.2 Street Segment Operations

Table 3.14-17, Existing + Project College Area Segment Operations, and Table 3.14-18, Existing + Project Del Cerro Area Segment Operations, summarizes the key segment operations in the study area with the addition of the project traffic to the existing conditions. As seen in Tables 3.14-17 and 3.14-18, with the addition of project traffic, the following study area segments are calculated to operate at unacceptable LOS E or worse conditions:

- Alvarado Road between East Campus Drive and Reservoir Drive (LOS F)
- Alvarado Road between Reservoir Drive and 70th Street (LOS F)
- College Avenue between I-8 Eastbound Ramps and Zura Way (LOS F)
- College Avenue between Zura Way and Montezuma Road (LOS E)
- College Avenue South of Montezuma Road (LOS F)

- Montezuma Road between Fairmount Avenue and Collwood Boulevard (LOS F)
- Montezuma Road between 55th Street and College Avenue (LOS E)
- Fairmount Avenue between Montezuma Road and I-8 (LOS F)

Table 3.14-17
Existing + Project College Area Segment Operations

Segment	LOS E Capacity ^a	Existing			Existing + Total Project		
		Volume	LOS ^b	V/C ^c	Volume	LOS	V/C
Alvarado Road							
E. Campus Dr to Reservoir Dr	10,000	8,300	D	0.83	11,860	F	1.19
Reservoir Dr to 70th St	10,000	9,890	E	0.99	11,960	F	1.20
College Avenue							
Del Cerro Blvd to I-8 EB Ramps	40,000	29,530	C	0.74	31,700	D	0.79
I-8 EB Ramps to Zura Way	40,000	39,400	E	0.99	45,970	F	1.15
Zura Way to Montezuma Rd	40,000	33,950	D	0.85	36,790	E	0.92
South of Montezuma Rd	30,000	30,220	F	1.01	31,930	F	1.06
Montezuma Road							
Fairmount Ave to Collwood Blvd	40,000	49,820	F	1.25	51,100	F	1.28
Collwood Blvd to 55th St	40,000	29,610	C	0.74	30,890	D	0.77
55th St to College Ave	30,000	24,460	D	0.82	26,040	E	0.87
College Ave to E. Campus Dr	30,000	21,550	D	0.72	22,100	D	0.74
Fairmount Avenue							
Montezuma Rd to I-8	60,000	80,800	F	1.347	81,330	F	1.356

Notes:

- Capacities based on City of San Diego's Roadway Classification & LOS table (See Appendix C).
- Average Daily Traffic
- Volume to Capacity ratio

**Table 3.14-18
Existing + Project
Del Cerro Street Segment Operations**

Segment	LOS C Capacity ^a	Existing		Existing + Total Project	
		Volume	LOS ^b	Volume	LOS
Adobe Falls Rd/Mill Peak Road					
North of Genoa Dr	1,500	410	C+	840	C+
Arno Drive					
Helena Pl to Capri Dr	1,500	370	C+	1,170	C+
Capri Drive					
East of Arno Dr	1,500	720	C+	1,520	C
Del Cerro Boulevard					
Genoa Dr to Capri Dr	5,000	3,640	C	3,950	C
Capri Dr to College Ave	5,000	5,170	D	6,290	D
Genoa Drive					
Capri Dr to Arno Pl	1,500	400	C+	830	C+
Lambda Drive					
Rockhurst Dr to College Ave	1,500	600	C+	660	C+
Rockhurst Drive					
Lambda Dr to College Ave	1,500	500	C+	560	C+

Notes:

- a. Capacities based on City of San Diego's Roadway Classification & LOS table (See Appendix C).
- b. Average Daily Traffic

General Notes:

- 1. C+ equals better than LOS C.
- 2. Project volume projections include a 10% decrease in overall Adobe Falls trip generation due to the planned shuttle system from the development to the campus.

3.14.8.1.3 Ramp Meter Operations

Table 3.14-19, Existing + Project Ramp Meter Operations, summarizes the existing + project ramp meter operations for the I-8/College Avenue and the I-8/Fairmount Avenue interchanges. Using the fixed rate method, the southbound College Avenue on-ramp to westbound I-8 is projected to operate with a 27-minute delay, a project increase of 1 minute. The northbound College Avenue on-

ramp to the eastbound I-8 is calculated to operate with a 52-minute delay, a project increase of 14 minutes.

The maximum delay method indicates that with the 15-minute maximum delay, queues of 3,600 feet per lane are projected at the southbound College Avenue on-ramp to the westbound I-8, a project increase of 175 feet. A queue of 6,825 feet per lane is projected at the northbound College Avenue on-ramp to the eastbound I-8, a project increase of 1,725 feet. These queue lengths exceed the available storage on the ramp. It should be noted that actual delays and queues would be much shorter; as previously noted, the ramp meter analysis and methodology results are very conservative.

Table 3.14-19
Existing + Project Ramp Meter Operations

Location/Scenario	Peak Hour	Peak Hour Demand	Ramp Meter Rate (Flow) ^a	Excess Demand	Delay per Lane ^b	Queue per Lane ^c
Fixed Rate Method						
SB Fairmount Ave to EB I-8						
Existing	PM	430	492	0	0	0
Existing + Project	PM	434	492	0	0	0
Project Increase	PM	2	492	0	0	0
NB College Avenue to WB I-8						
Existing	AM	250	318	0	0	0
Existing + Project	AM	260	318	0	0	0
Project Increase	AM	10	318	0	0	0
SB College Avenue to WB I-8						
Existing	AM	455	318	137	26	3425
Existing + Project	AM	462	318	144	27	3600
Project Increase	AM	7	318	7	1	175
NB College Avenue to EB I-8						
Existing	PM	522	318	204	38	5100
Existing + Project	PM	591	318	273	52	6825
Project Increase	PM	69	318	69	14	1725
Maximum Delay Method						
SB Fairmount Ave to EB I-8						
Existing	PM	430	492	0	0	0
Existing + Project	PM	432	492	0	0	0
Project Increase	PM	2	NA	0	0	0

**Table 3.14-19
Existing + Project Ramp Meter Operations**

Location/Scenario	Peak Hour	Peak Hour Demand	Ramp Meter Rate (Flow) ^a	Excess Demand	Delay per Lane ^b	Queue per Lane ^c
NB College Avenue to WB I-8						
Existing	PM	250	318	0	0	0
Existing + Project	PM	260	318	0	0	0
Project Increase	PM	10	NA	0	0	0
SB College Avenue to WB I-8						
Existing	PM	455	318	137	15	3425
Existing + Project	PM	462	318	144	15	3600
Project Increase	PM	7	NA	7	0	175
NB College Avenue to EB I-8						
Existing	PM	522	318	204	15	5100
Existing + Project	PM	591	318	273	15	6825
Project Increase	PM	69	NA	69	0	1725

Notes:

- a. Meter Rates obtained from Caltrans.
- b. Delay expressed in minutes per lane.
- c. Queue expressed in feet per lane.

General Notes:

Bold & Shading represents a potential significant impact.

NA = Not Applicable.

3.14.8.1.4 Freeway Mainline Operations

Table 3.14-20, Freeway Mainline Operations Existing + Project, summarizes the freeway mainline operations on I-8 under the existing + project scenario. As shown on **Table 3.14-20**, with the addition of project traffic, the segment of I-8 between Fairmount Avenue and Waring Road is projected to continue to operate at LOS E during the AM peak hour in the westbound direction, and LOS F(0) during the PM peak hour in the eastbound direction. The segments of I-8 between Waring Road and Lake Murray Boulevard are projected to continue to operate at LOS F(0) during the AM peak hour in the westbound direction, and LOS F(0) during the PM peak hour in the eastbound direction. The segment of I-8 between Lake Murray Boulevard and Fletcher Parkway is calculated to continue to operate at LOS F(1) during the AM peak hour in the westbound direction, and LOS F(0) during the PM peak hour in the eastbound direction.

**Table 3.14-20
Freeway Mainline Operations
Existing + Project**

Freeway Segment	Dir.	# of Lanes	Hourly Capacity ^a	ADT	Existing Peak Hour Volume ^b		Project Volume		Existing + Project Peak Hour Volume		V/C ^c		LOS ^d	
					AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
Interstate 8														
Fairmount Ave to Waring Rd	EB	5	10,000	253,910	3946	12103	121	82	4067	12185	0.407	1.218	A	F(0)
	WB	6	12,000		11869	7925	34	131	11903	8056	0.992	0.671	E	C
Waring Rd to College Ave	EB	5	10,000	240,910	6868	10969	121	82	6989	11051	0.699	1.105	C	F(0)
	WB	5	10,000		11506	7183	34	131	11540	7314	1.154	0.731	F(0)	C
College Ave to Lake Murray Blvd	EB	4 + 1	9,200	216,030	5313	10392	15	71	5328	10463	0.579	1.137	B	F(0)
	WB	5	10,000		10842	6919	65	41	10907	6960	1.091	0.696	F(0)	C
Lake Murray Blvd to Fletcher Pkwy	EB	4 + 1	9,200	203,950	4991	9761	24	138	5015	9899	0.545	1.076	B	F(0)
	WB	4	8,000		10184	6499	128	74	10312	6573	1.289	0.822	F(1)	D

Notes:

- Capacities calculated at 2,000 vph per lane and 1,200 vph per auxiliary lane
- Values calculated in the Existing Conditions table
- $V/C = ((ADT)(K)(D)/\text{Truck Factor}/\text{Capacity})$
- Level of Service

LOS	V/C
A	<0.41
B	0.62
C	0.8
D	0.92
E	1
F(0)	1.25
F(1)	1.35
F(2)	1.45
F(3)	>1.46

3.14.8.2 Near-Term Project Analysis

The Near-Term project analysis is an assessment of the impacts of the proposed project at near-term buildout (i.e., the project at Year 2012) measured in relation to the near-term without project conditions. The near-term without project traffic volumes were calculated utilizing the existing traffic volumes, plus projected ambient traffic growth, plus the near-term cumulative projects traffic described in section 3.14.6.2.4.2. **Figure 9-2, Near-Term Without Project Traffic Volumes AM/PM Peak Hours & ADT**, depicts the near-term without project traffic volumes. (See **EIR Appendix N, Appendix J** for the peak hour intersection, ramp meter, and freeway analysis worksheets for the near-term without project scenario.)

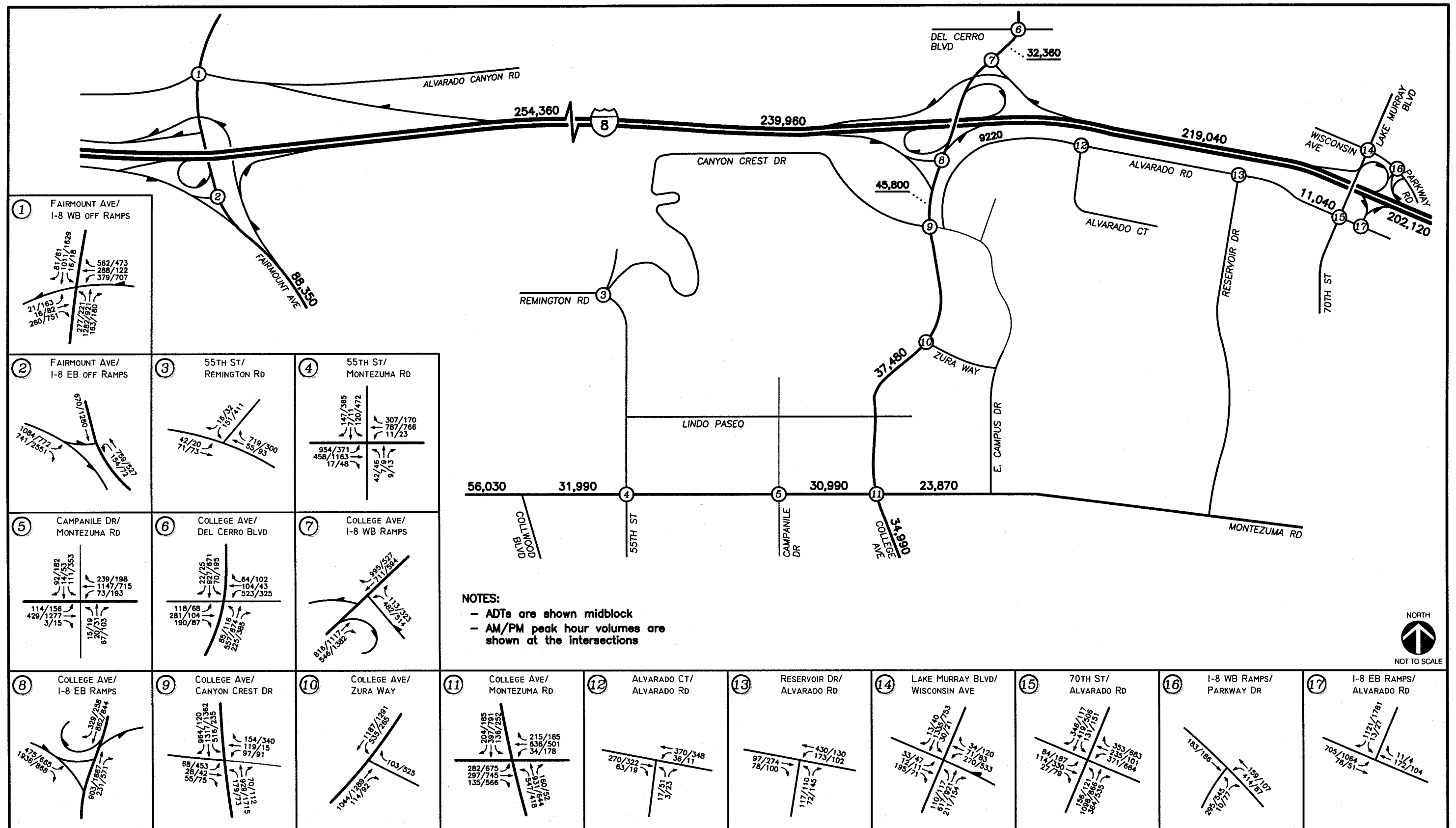
Under the Near-Term project analysis, the vehicle trips that would result with near-term project buildout are added to the without project scenario, and significant impacts are identified. **Figure 9-3, Near-Term With Project Traffic Volumes AM/PM Peak Hours & ADT**, depicts the near-term without project traffic volumes. (See **EIR Appendix N, Appendix K** for the peak hour intersection, ramp meter, and freeway analysis worksheets for the near-term with project scenario.)

3.14.8.2.1 Intersection Analysis

Table 3.14-21, Near-Term Intersection Operations, summarizes the peak hour intersection operations for the near-term project under with and without project conditions. As shown on **Table 3.14-21**, under this scenario, the addition of project traffic would result in significant impacts at the following intersections:

- College Avenue / Del Cerro Boulevard (LOS E during the AM peak hour)
- College Avenue / I-8 Eastbound Ramps (LOS E during the AM peak hour)
- College Avenue / Canyon Crest Drive (LOS F during the AM and the PM peak hours)
- College Avenue / Montezuma Road (LOS F during the AM and PM peak hours)
- College Avenue / Zura Way (LOS F during the PM peak hour)
- I-8 WB Ramps/ Parkway Drive (LOS E during the PM peak hour)

It should be noted that while the proposed project would add additional vehicle trips to the above intersections and, thereby, result in significant impacts, as shown on **Table 3.14-21**, the identified intersections also would operate at unacceptable levels of service under without project conditions.



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Figure 9-2
Near-Term without Project Traffic Volumes
AM/PM Peak Hours & ADT

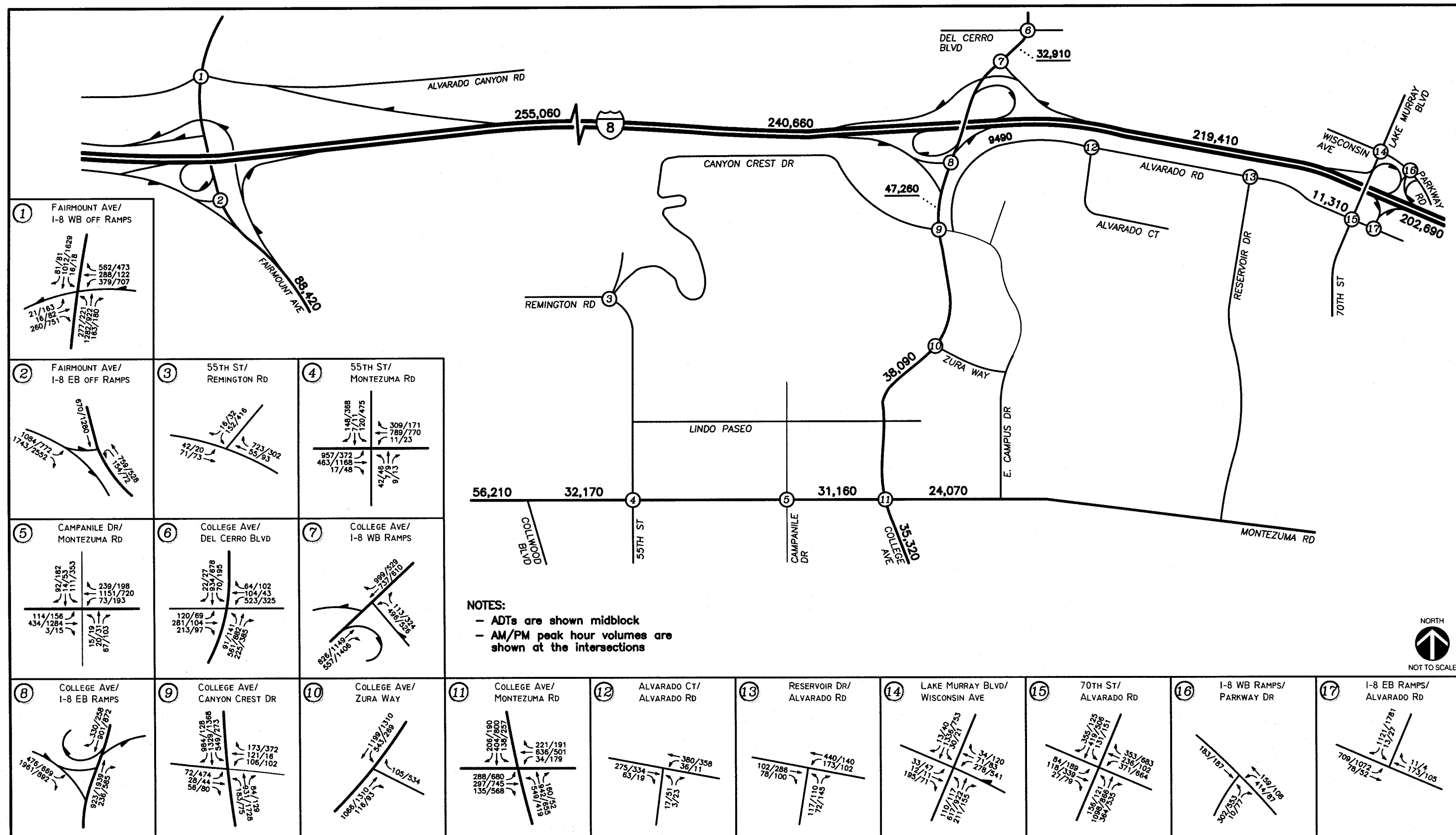


Table 3.14-21
Near-Term Intersection Operations

Intersection	Control Type	Peak Hour	Near-Term without Project		Near-Term with Project		
			Delay ^a	LOS ^b	Delay	LOS	D ^c
1. Fairmount Ave / I-8 WB Off Ramps / Camino del Rio N	Signal	AM PM	51.1 169.4	D F	51.1 169.4	D F	0.0 0.0
2. Fairmount Ave / I-8 EB Off Ramps	Signal	AM PM	39.3 115.7	D F	39.3 116.3	D F	0.0 0.6
3. 55th Street / Remington Rd	Signal	AM PM	9.2 8.4	A A	9.2 8.5	A A	0.0 0.1
4. 55th Street / Montezuma Rd	Signal	AM PM	110.6 39.7	F D	111.3 40.0	F D	0.7 0.3
5. Campanile Dr / Montezuma Rd	Signal	AM PM	46.3 67.3	D E	46.5 67.8	D E	0.2 0.5
6. College Ave / Del Cerro Blvd	Signal	AM PM	75.4 40.8	E D	79.2 41.3	E D	3.8 0.5
7. College Ave / I-8 WB Ramps	Signal	AM PM	9.9 10.8	A B	9.9 11.5	A B	0.0 0.7
8. College Ave / I-8 EB Ramps	Signal	AM PM	68.9 20.1	E C	72.7 27.6	E C	3.8 7.5
9. College Ave / Canyon Crest Dr	Signal	AM PM	80.8 >120.0	F F	83.7 >120	F F	2.9 >2.0
10. College Ave / Zura Way	TWSC ^c	AM PM	16.5 >120.0	C F	16.9 >120	C F	0.4 >2.0
11. College Ave / Montezuma Rd	Signal	AM PM	104.8 98.4	F F	108.0 100.2	F F	3.2 1.8
12. Alvarado Ct / Alvarado Rd	TWSC ^c	AM PM	15.8 15.1	C C	16.1 15.5	C C	0.3 0.4
13. Reservoir Dr / Alvarado Rd	Signal	AM PM	17.7 21.5	B C	17.8 21.5	B C	0.1 0.0
14. Lake Murray Blvd / Parkway Dr	Signal	AM PM	33.6 35.3	C D	34.0 35.7	C D	0.4 0.4
15. 70th Street / Alvarado Rd	Signal	AM PM	32.3 42.6	C D	32.4 42.6	C D	0.1 0.0

**Table 3.14-21
Near-Term Intersection Operations**

Intersection	Control Type	Peak Hour	Near-Term without Project		Near-Term with Project		
			Delay ^a	LOS ^b	Delay	LOS	Δ ^c
16. I-8 WB Ramps / Parkway Dr	AWSC ^d	AM	23.1	C	23.7	C	0.6
		PM	46.1	E	49.7	E	3.6
17. I-8 EB Ramps / Alvarado Rd	Signal	AM	19.8	B	20.3	C	0.5
		PM	18.7	B	19.3	B	0.6

Notes:

a. Average delay expressed in seconds per vehicle.

b. Level of Service.

c. TWSC – Two-Way Stop Controlled intersection. Minor street approach delay is reported.

d. AWSC – All-Way Stop Controlled intersection.

e. Δ denotes project induced delay increase.

General Notes:

Bold/shading represent a potential significant impact

SIGNALIZED		UNSIGNALIZED	
DELAY/LOS THRESHOLDS		DELAY/LOS THRESHOLDS	
Delay	LOS	Delay	LOS
0.0 < 10.0	A	0.0 < 10.0	A
10.1 to 20.0	B	10.1 to 15.0	B
20.1 to 35.0	C	15.1 to 25.0	C
35.1 to 55.0	D	25.1 to 35.0	D
55.1 to 80.0	E	35.1 to 50.0	E
> 80.1	F	> 50.1	F

3.14.8.2.2 Street Segment Operations

Table 3.14-22, Near-Term College Area Street Segment Operations, summarizes the key street segment operations for the near-term project under with and without project conditions. As shown on **Table 3.14-22**, under this scenario, the addition of project traffic would result in significant impacts on the following study area street segments:

- Alvarado Road between East Campus Drive and Reservoir Drive (LOS E)
- Alvarado Road between Reservoir Drive and 70th Street (LOS F)
- College Avenue between I-8 Eastbound Ramps and Zura Way (LOS F)

**Table 3.14-22
Near-Term College Area Street Segment Operations**

Segment	LOS E Capacity ^a	Near-Term without Project			Near-Term with Project			V/C ^d
		Volume	LOS ^b	V/C ^c	Volume	LOS	V/C	
Alvarado Road								
E. Campus Dr to Reservoir Dr	10,000	9,220	E	0.92	9,490	E	0.95	0.03
Reservoir Dr to 70th St	10,000	11,040	F	1.10	11,310	F	1.13	0.03
College Avenue								
Del Cerro Blvd to I-8 EB Ramps	40,000	32,360	D	0.81	32,910	D	0.82	0.01
I-8 EB Ramps to Zura Way	40,000	45,800	F	1.15	47,260	F	1.18	0.03
Zura Way to Montezuma Rd	40,000	37,480	E	0.94	38,090	E	0.95	0.01
South of Montezuma Rd	30,000	34,990	F	1.17	35,320	F	1.18	0.01
Montezuma Road								
Fairmount Ave to Collwood Blvd	40,000	56,030	F	1.40	56,210	F	1.41	0.01
Collwood Blvd to 55th St	40,000	31,990	D	0.80	32,170	D	0.80	0.00
55th St to College Ave	30,000	30,990	F	1.03	31,160	F	1.04	0.01
College Ave to E. Campus Dr	30,000	23,870	D	0.80	24,070	D	0.80	0.00
Fairmount Avenue								
Montezuma Rd to I-8	60,000	88,350	F	1.473	88,420	F	1.474	0.001

Notes:

- Capacities based on City of San Diego's Roadway Classification & LOS table (See Appendix C).
- Average Daily Traffic
- Volume to Capacity ratio

Table 3.14-23, Near-Term Del Cerro Street Segment Operations, summarizes the segment operations in the Del Cerro community with the addition of the near-term (2012) project traffic. For purposes of this analysis, it was assumed that both the Upper and Lower Villages of the proposed Adobe Falls Faculty/Staff Housing project component would be fully built out by the year 2012. As shown on **Table 3.14-23**, with the addition of project traffic, all of the roadway segments in the Del Cerro community would operate at acceptable levels of service, and the proposed project would not result in significant impacts. As previously noted, other than Del Cerro Boulevard, all of the other roadways are non-classified streets. According to the City of San Diego Traffic Impact Study Manual, LOS grades, such as A-F, are not applied to these unclassified streets. Therefore, consistent with City standards, **Table 3.14-23** depicts the levels of service as whether the LOS is better than or worse than LOS C.

Table 3.14-23
Near-Term Del Cerro Street Segment Operations

Segment	LOS C Capacity ^a	Near-Term Without Project		Near-Term With Entire Project	
		Volume	LOS ^b	Volume	LOS
Adobe Falls Road/Mill Peak Road North of Genoa Drive	1,500	410	C+	840	C+
Arno Drive Helena Pl to Capri Dr	1,500	370	C+	1,170	C+
Capri Drive East of Arno Dr	1,500	720	C+	1,520	C
Del Cerro Boulevard Genoa Dr to Capri Dr Capri Dr to College Ave	5,000	3,640	C	3,950	C
	5,000	5,170	D	6,290	D
Genoa Drive Capri Dr to Arno Pl	1,500	400	C+	830	C+
Lambda Drive Rockhurst Dr to College Ave	1,500	600	C+	660	C+
Rockhurst Drive Lambda Dr to College Ave	1,500	500	C+	560	C+

Notes:

a Capacities based on City of San Diego's Roadway Classification and LOS table (See Appendix C).

b Level of Service

General Notes:

1. C+ equals better than LOS C.
2. Project volume projections include a 10% decrease in overall Adobe Falls trip generation due to the planned shuttle system from the development to the campus. It is planned that the shuttle system would be implemented once the traffic volumes on the residential roadways reach a point that warrant such a system.

The impact analysis presented in this section is premised on access to the Adobe Falls Faculty/Staff Housing Upper Village provided *via* Mill Peak Road, and access to the Lower Village provided *via* Adobe Falls Road, with both roads exiting out to College Avenue. Under this access scenario, 48 townhomes/condominiums would be developed on the Upper Village site, and 124 townhomes/condominiums would be developed on the Lower Village site. However, as discussed in EIR Section 5.0, *Alternatives*, alternate access routes are being considered that would involve providing access to/from the Lower Village site *via* the western portion of Adobe Falls Road out to Waring Road, rather than College Avenue. See EIR Section 5.0, *Alternatives*, for further discussion regarding alternate access roads.

3.14.8.2.3 Freeway Ramp Meter Operations

Table 3.14-24, Near-Term Freeway Ramp Meter Operations, summarizes the freeway ramp meter operations for the near-term project under with and without project scenarios.

Using the fixed rate method, the southbound College Avenue on-ramp to westbound I-8 is projected to operate with a 34-minute delay, with no increase in delay caused by the project. The northbound College Avenue on-ramp to the eastbound I-8 is projected to operate with a 50-minute delay, a project increase of 2 minutes.

The maximum delay method indicates that with the 15-minute maximum delay, queues of 4,550 feet per lane are projected at the southbound College Avenue on-ramp to the westbound I-8, a project increase of 50 feet. A queue of 6,675 feet per lane is projected at the northbound College Avenue on-ramp to the eastbound I-8, a project increase of 350 feet. These queue lengths exceed the available storage on the ramp.

Based on the applicable significance criteria, under the near-term scenario, the proposed project would result in a potentially significant impact at the northbound College Avenue on ramp to the eastbound I-8. Note that the project adds less than 20 peak-hour trips to the Fairmount Avenue and Waring Road on-ramps and, therefore, a ramp meter analysis is not required at these locations.

Table 3.14-24
Near-Term Freeway Ramp Meter Operations

Location/Scenario	Peak Hour	Peak Hour Demand	Ramp Meter Rate (Flow) ^a	Excess Demand	Delay per Lane ^b	Queue per Lane ^c
Fixed Rate Method						
SB Fairmount Ave to EB I-8						
Near-Term	PM	447	492	0	0	0
Near-Term + Project	PM	448	492	0	0	0
Project Increase	PM	1	492	0	0	0
NB College Avenue to WB I-8						
Near-Term	AM	273	318	0	0	0
Near-Term + Project	AM	279	318	0	0	0
Project Increase	AM	6	318	0	0	0
SB College Avenue to WB I-8						
Near-Term	AM	498	318	180	34	4500
Near-Term + Project	AM	500	318	182	34	4550
Project Increase	AM	2	318	2	0	50
NB College Avenue to EB I-8						
Near-Term	PM	571	318	253	48	6325
Near-Term + Project	PM	585	318	267	50	6675
Project Increase	PM	14	318	14	2	350
Maximum Delay Method						
SB Fairmount Ave to EB I-8						
Near-Term	PM	447	492	0	0	0
Near-Term + Project	PM	448	492	0	0	0
Project Increase	PM	1	NA	0	0	0
NB College Avenue to WB I-8						
Near-Term	PM	273	318	0	0	0
Near-Term + Project	PM	279	318	0	0	0
Project Increase	PM	6	NA	0	0	0
SB College Avenue to WB I-8						
Near-Term	PM	498	318	180	15	4500
Near-Term + Project	PM	500	318	182	15	4550
Project Increase	PM	2	NA	2	0	50
NB College Avenue to EB I-8						
Near-Term	PM	571	318	253	15	6325
Near-Term + Project	PM	585	318	267	15	6675
Project Increase	PM	14	NA	14	0	350

Notes:

- a. Meter Rates obtained from Caltrans.
- b. Delay expressed in minutes per lane.
- c. Queue expressed in feet per lane.

General Notes:

Bold & Shading represents a potential significant impact.

NA = Not Applicable.

3.14.8.2.4 Freeway Operations

Table 3.14-25, Near-Term Freeway Mainline Operations, summarizes the freeway mainline operations on I-8 for the near-term project under with and without project scenarios. As shown on **Table 3.14-25**, with the addition of project traffic, the segments of I-8 between Fairmount Avenue and Lake Murray Boulevard are calculated to continue to operate at LOS F(0) during the AM peak hour in the westbound direction; the segment of I-8 between Lake Murray Boulevard and Fletcher Parkway is calculated to continue to operate at LOS F(1) during the AM peak hour in the westbound direction; and the segments of I-8 between Fairmount Avenue and Fletcher Parkway are calculated to continue to operate at LOS F(0) the PM peak hour in the eastbound direction. However, under the applicable threshold of significance, the addition of project traffic would not result in a significant impact under the Near-Term project scenario.

Table 3.14-25
Near-Term Freeway Mainline Operations
Interstate 8

Scenario	Direction	Number of Lanes	Hourly Capacity ^a	ADT ^b	% K ^c		% D ^c		Truck Factor ^d	Peak Hour Volume ^e		V/C ^f		LOS	
					AM	PM	AM	PM		AM	PM	AM	PM	AM	PM
Near-Term Without Project															
Fairmount Avenue to Waring Road	EB	5M	10,000	254,360	0.075	0.074	0.374	0.604	0.965	7,340	11,723	0.734	1.172	C	F(0)
	WB	5M	10,000		0.075	0.074	0.626	0.396		12,297	7,677	1.230	0.768	F(0)	C
Waring Road to College Avenue	EB	5M	10,000	239,960	0.075	0.074	0.374	0.604	0.965	6,925	11,060	0.692	1.106	C	F(0)
	WB	5M	10,000		0.075	0.074	0.626	0.396		11,601	7,242	1.160	0.724	F(0)	C
College Avenue to Lake Murray Boulevard	EB	4M + 1A	9,200	219,040	0.073	0.078	0.330	0.600	0.963	5,439	10,637	0.591	1.156	B	F(0)
	WB	5M	10,000		0.073	0.078	0.670	0.400		11,098	7,082	1.110	0.708	F(0)	C
Lake Murray Boulevard to Fletcher Parkway	EB	4M + 1A	9,200	202,120	0.073	0.078	0.330	0.600	0.963	5,018	9,815	0.545	1.067	B	F(0)
	WB	4M	8,000		0.073	0.078	0.670	0.400		10,240	6,535	1.280	0.817	F(1)	D
Near-Term With Project															
Fairmount Avenue to Waring Road	EB	5M	10,000	255,060	0.075	0.074	0.374	0.604	0.965	7366	11751	0.737	1.175	C	F(0)
	WB	5M	10,000		0.075	0.074	0.626	0.396		12312	7703	1.231	0.770	F(0)	C
Waring Road to College Avenue	EB	5M	10,000	240,660	0.075	0.074	0.374	0.604	0.965	6951	11088	0.695	1.109	C	F(0)
	WB	5M	10,000		0.075	0.074	0.626	0.396		11616	7268	1.162	0.727	F(0)	C
College Avenue to Lake Murray Boulevard	EB	4M + 1A	9,200	219,410	0.073	0.078	0.330	0.600	0.963	5445	10651	0.592	1.158	B	F(0)
	WB	5M	10,000		0.073	0.078	0.670	0.400		11112	7095	1.111	0.710	F(0)	C
Lake Murray Boulevard to Fletcher Parkway	EB	4M + 1A	9,200	202,690	0.073	0.078	0.330	0.600	0.963	5028	9837	0.547	1.069	B	F(0)
	WB	4M	8,000		0.073	0.078	0.670	0.400		10261	6556	1.283	0.820	F(1)	D

General Notes:

Bold and Shading represents a potential significant impact.

Notes:

a. Capacity calculated at 2,000 vehicles per hour per lane and 1,200 vehicles per hour per auxiliary lane

(M: Mainline, A: Auxiliary)

b. Existing Average Daily Traffic Volumes from CALTRANS

c. Peak Hour Percentage (K) and Direction Split (D) from CALTRANS "2005 Traffic Volumes", June 2006 (Appendix D)

d. Truck Factor from "2005 Annual Average Daily Truck Traffic on the California State Highway System", November 2006 (Appendix D)

e. Peak Hour Volume = ((ADT)(K)(D)/Truck Factor)

f. V/C = ((ADT)(K)(D)/Truck Factor/Capacity)

FREEWAY				FREEWAY			
V/C / LOS THRESHOLDS		V/C / LOS THRESHOLDS		V/C / LOS THRESHOLDS		V/C / LOS THRESHOLDS	
V / C	LOS	V / C	LOS	V / C	LOS	V / C	LOS
< 0.41	A	1.25	F(0)				
0.62	B	1.35	F(1)				
0.80	C	1.45	F(2)				
0.92	D	> 1.46	F(3)				
1.00	E						

3.14.8.3 Horizon Year Project Analysis

The following analysis is an assessment of the impacts of the 2024/25 buildout project traffic volumes in relation to the long-term, or Horizon Year, without project roadway conditions. This section includes the analysis results and discussions of the resulting intersection, street segment, ramp meter, and freeway mainline operations.

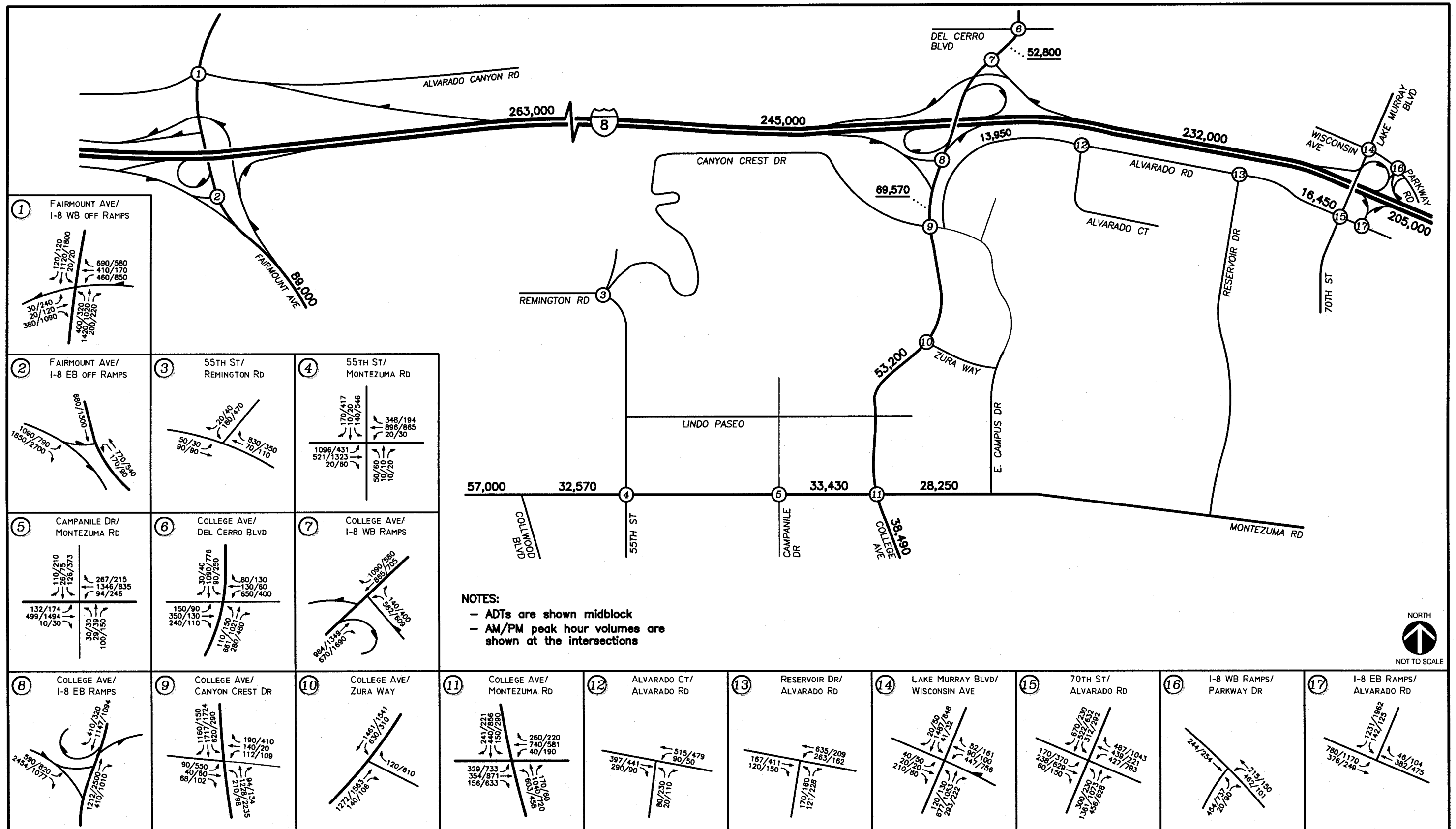
The Horizon Year without project traffic volumes were forecast using the SANDAG Series 10 model volumes for the Year 2030. In addition, traffic generated by cumulative projects not already in the SANDAG model were added to the Year 2030 forecast volumes. **Figure 10-1, Horizon Year Without Project Traffic Volumes AM/PM Peak Hours & ADT**, depicts the Horizon Year roadway traffic volumes under the without project scenario. **EIR Appendix N, Appendix L** contains the peak hour intersection, ramp meter, and freeway analysis worksheets for the horizon year without project scenario.

Figure 10-2, Horizon Year With Project Traffic Volumes AM/PM Peak Hours & ADT, depicts the Horizon Year roadway volumes with the addition of the project buildout traffic. **EIR Appendix N, Appendix M** contains the peak hour intersection, ramp meter, and freeway analysis worksheets for the horizon year with project scenario.

3.14.8.3.1 Intersection Analysis

Table 3.14-26, Horizon Year Intersection Operations, summarizes the peak hour intersection operations for the Horizon Year under the with and without project scenario. As shown in **Table 3.14-26**, the addition of project traffic would result in potentially significant impacts at the following intersections:

- Fairmount Avenue / I-8 Westbound Off-ramp/Camino del Rio North (LOS F during the AM and PM peak hours)
- 55th Street / Montezuma Road (LOS F during the AM peak hour and LOS E during the PM peak hour)
- Campanile Drive / Montezuma Road (LOS F during the AM and PM peak hours)
- College Avenue / Del Cerro Boulevard (LOS F during the AM peak hour and LOS E during the PM peak hour)
- College Avenue / I-8 Westbound Ramps (LOS E during the PM peak hour)
- College Avenue / I-8 Eastbound Ramps (LOS F during the AM and PM peak hours)
- College Avenue / Canyon Crest Drive (LOS F during the AM and PM peak hours)
- College Avenue / Montezuma Road (LOS F during the AM and PM peak hours)



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Figure 10-1
Horizon Year without Project Traffic Volumes
AM/PM Peak Hours & ADT

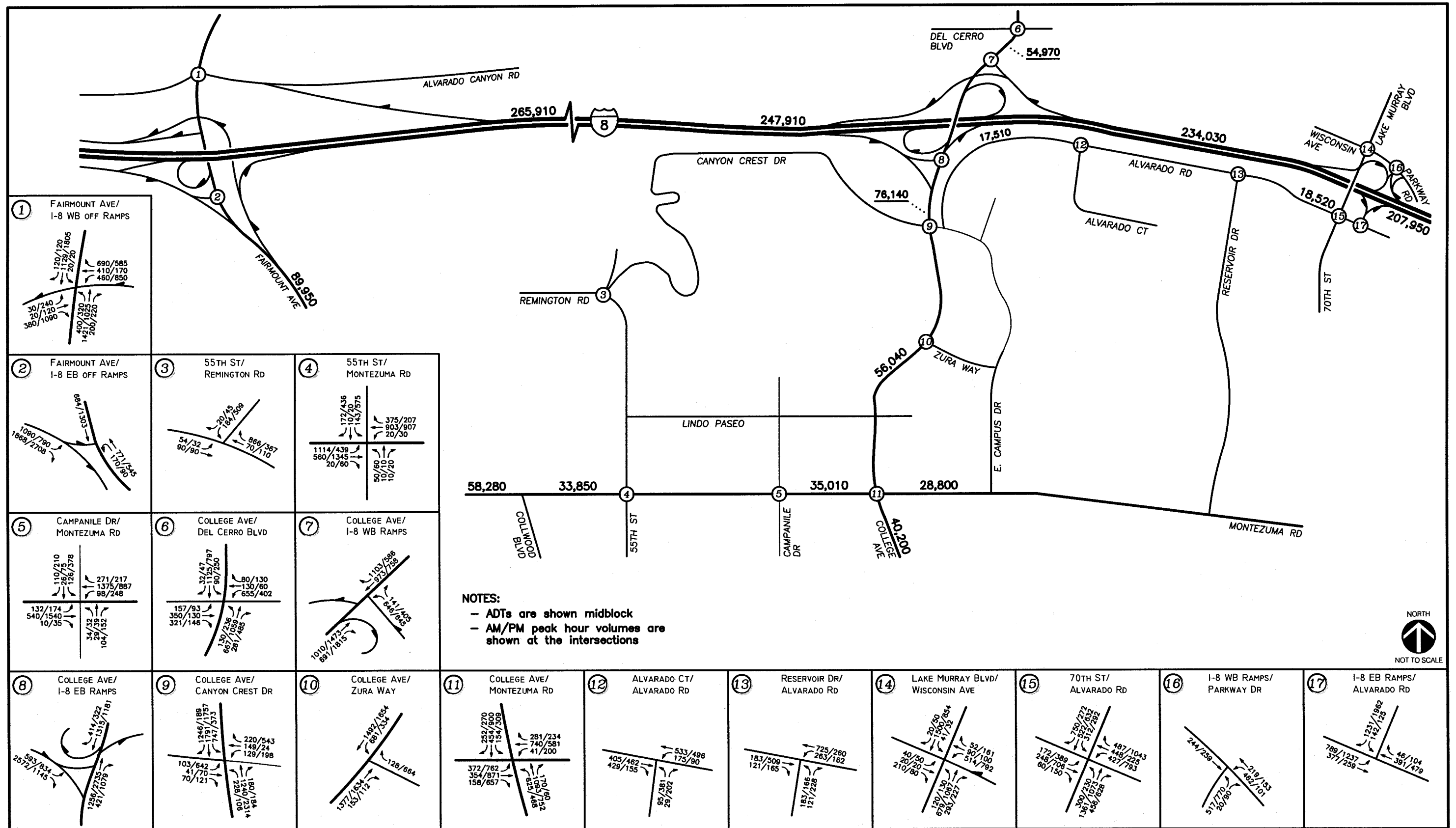


Figure 10-2
Horizon Year With Project Traffic Volumes
AM/PM Peak Hours & ADT

Reservoir Drive / Alvarado Road (LOS E during the PM peak hour)

- Lake Murray Boulevard / Parkway Drive (LOS F during the AM peak hour and LOS E during the PM peak hour)
- 70th Street / Alvarado Road (LOS F during the AM and PM peak hours)
- I-8 Eastbound Ramps / Alvarado Road (LOS F during the PM peak hour)
- College Avenue / Zura Way (LOS F during the PM peak hour)
- Alvarado Court / Alvarado Road (LOS F during the AM and PM peak hours)
- I-8 Westbound Ramps / Parkway Drive (LOS F during the AM and PM peak hours)

It should be noted that while the proposed project would add additional vehicle trips to the above intersections and, thereby, result in significant impacts, as shown on **Table 3.14-26**, the identified intersections also would operate at unacceptable levels of service under without project conditions with the following exceptions: College Avenue/I-8 Westbound Ramps, Reservoir Drive/Alvarado Road, and Lake Murray Boulevard/Parkway Drive.

Table 3.14-26
Horizon Year Intersection Operations

Intersection	Control Type	Peak Hour	Horizon Year without Project		Horizon Year with Project		
			Delay	LOS	Delay	LOS	Δ ^e
1. Fairmount Ave / I-8 WB Off Ramp / Camino del Rio N	Signal	AM PM	92.6 286.7	F F	96.1 287.5	F F	3.5 0.8
2. Fairmount Ave / I-8 EB Off Ramp	Signal	AM PM	43.0 140.5	D F	43.8 140.9	D F	0.8 0.4
3. 55th Street / Remington Rd	Signal	AM PM	10.2 9.1	B A	10.4 9.1	B A	0.2 0.0
4. 55th Street / Montezuma Rd	Signal	AM PM	>120 56.9	F E	>120 66.7	F E	>2.0 9.8
5. Campanile Dr / Montezuma Rd	Signal	AM PM	84.0 101.3	F F	90.0 105.8	F F	6.0 4.5
6. College Ave / Del Cerro Blvd	Signal	AM PM	>120 63.1	F E	>120 69.6	F E	>2.0 6.5
7. College Ave / I-8 WB Ramps	Signal	AM PM	10.5 51.8	B D	11.1 65.0	B E	0.6 13.2
8. College Ave / I-8 EB Ramps	Signal	AM PM	>120 109.9	F F	>120 >120	F F	>2.0 >2.0
9. College Ave / Canyon Crest Dr	Signal	AM PM	>120 >120	F F	>120 >120	F F	>2.0 >2.0
10. College Ave / Zura Way	TWSC ^c	AM PM	21.1 >120	C F	24.3 >120	C F	3.2 >2.0
11. College Ave / Montezuma Rd	Signal	AM PM	>120 >120	F F	>120 >120	F F	>2.0 >2.0
12. Alvarado Ct / Alvarado Rd	TWSC ^c	AM PM	54.1 35.4	F D	>120 >120	F F	>2.0 >2.0
13. Reservoir Dr / Alvarado Rd	Signal	AM PM	21.6 36.5	C D	23.4 67.9	C E	1.8 31.4
14. Lake Murray Blvd / Parkway Dr	Signal	AM PM	72.7 65.4	E E	90.5 71.6	F E	17.8 5.8
15. 70th Street / Alvarado Rd	Signal	AM PM	81.1 119.3	F F	92.7 >120	F F	11.6 >2.0
16. I-8 WB Ramps / Parkway Dr	AWSC ^d	AM PM	61.3 >120	F F	80.5 >120	F F	19.2 >2.0
17. I-8 EB Ramps / Alvarado Rd	Signal	AM PM	24.3 101.4	C F	24.8 105.1	C F	0.5 3.7

Notes:

- a. Average delay expressed in seconds per vehicle.
- b. Level of Service.
- c. TWSC – Two-Way Stop Controlled intersection. Minor street approach delay is reported.
- d. AWSC – All-Way Stop Controlled intersection.
- e. Δ denotes project induced delay increase.

General Notes:

Bold and shading represents a potential significant impact

SIGNALIZED		UNSIGNALIZED	
DELAY/LOS THRESHOLDS		DELAY/LOS THRESHOLDS	
Delay	LOS	Delay	LOS
0.0 < 10.0	A	0.0 < 10.0	A
10.1 to 20.0	B	10.1 to 15.0	B
20.1 to 35.0	C	15.1 to 25.0	C
35.1 to 55.0	D	25.1 to 35.0	D
55.1 to 80.0	E	35.1 to 50.0	E
> 80.1	F	> 50.1	F

3.14.8.3.2 Roadway Segment Operations

Table 3.14-27, Horizon Year Roadway Segment Operations, summarizes the key roadway segment operations for Horizon Year project under with and without project scenarios. As shown in **Table 3.14-27**, the proposed project would result in significant impacts at the following study area roadway segments:

- Alvarado Road between East Campus Drive and Reservoir Drive (LOS F)
- Alvarado Road between Reservoir Drive and 70th Street (LOS F)
- College Avenue between Del Cerro Boulevard and I-8 Eastbound Ramps (LOS F)
- College Avenue between I-8 Eastbound Ramps and Zura Way (LOS F)
- College Avenue between Zura Way and Montezuma Road (LOS F)
- College Avenue South of Montezuma Road (LOS F)
- Montezuma Road between Fairmount Avenue and Collwood Boulevard (LOS F)
- Montezuma Road between 55th Street and College Avenue (LOS F)

It should be noted that while the proposed project would add additional vehicle trips to the above roadway segments and, thereby, result in significant impacts, as shown on **Table 3.14-27**, the identified roadway segments also would operate at unacceptable levels of service under without project conditions.

Table 3.14-27A, Horizon-Year Del Cerro Roadway Segment Operations, summarizes the roadway segment operations in the Del Cerro community under horizon-year conditions. Because it is assumed, for purposes of this analysis, that the Adobe Falls Faculty/Staff Housing component of the proposed project would be fully built out during the near-term (2012) scenario, no additional vehicle trips would be added by the horizon year and, therefore, horizon-year conditions would be the same as near-term conditions.

**Table 3.14-27
Horizon Year Segment Operations**

Segment	LOS E Capacity ^a	Horizon Year without Project			Horizon Year with Project			V/C ^{II}
		Volume	LOS ^b	V/C ^c	Volume	LOS	V/C	
Alvarado Road								
E. Campus Dr to Reservoir Dr	10,000	13,950	F	1.40	17,510	F	1.75	0.35
Reservoir Dr to 70th St	10,000	16,450	F	1.65	18,520	F	1.85	0.20
College Avenue								
Del Cerro Blvd to I-8 EB Ramps	40,000	52,800	F	1.32	54,970	F	1.37	0.05
I-8 EB Ramps to Zura Way	40,000	69,570	F	1.74	76,140	F	1.90	0.16
Zura Way to Montezuma Rd	40,000	53,200	F	1.33	56,040	F	1.40	0.07
South of Montezuma Rd	30,000	38,490	F	1.28	40,200	F	1.34	0.06
Montezuma Road								
Fairmount Ave to Collwood Blvd	40,000	57,000	F	1.43	58,280	F	1.46	0.03
Collwood Blvd to 55th St	40,000	32,570	D	0.81	33,850	D	0.85	0.04
55th St to College Ave	30,000	33,430	F	1.11	35,010	F	1.17	0.06
College Ave to E. Campus Dr	30,000	28,250	E	0.94	28,800	E	0.96	0.02
Fairmount Avenue								
Montezuma Rd to I-8	60,000	89,000	F	1.483	89,530	F	1.492	0.009

Notes:

a. Capacities based on City of San Diego's Roadway Classification & LOS table (See Appendix C).

b. Average Daily Traffic

c. Volume to Capacity ratio

Table 3.14-27A
Horizon-Year Del Cerro Street Segment Operations

Segment	LOS C Capacity ^a	Horizon-Year Without Project		Horizon-Year With Project	
		Volume	LOS ^b	Volume	LOS
Adobe Falls Road/Mill Peak Road North of Genoa Drive	1,500	410	C+	840	C+
Arno Drive Helena Pl to Capri Dr	1,500	370	C+	1,170	C+
Capri Drive East of Arno Dr	1,500	720	C+	1,520	C
Del Cerro Boulevard					
Genoa Dr to Capri Dr	5,000	3,640	C	3,950	C
Capri Dr to College Ave	5,000	5,170	D	6,290	D
Genoa Drive Capri Dr to Arno Pl	1,500	400	C+	830	C+
Lambda Drive Rockhurst Dr to College Ave	1,500	600	C+	660	C+
Rockhurst Drive Lambda Dr to College Ave	1,500	500	C+	560	C+

Notes:

a Capacities based on City of San Diego's Roadway Classification and LOS table (See Appendix C).

b Level of Service

General Notes:

1. C+ equals better than LOS C.
2. Project volume projections include a 10% decrease in overall Adobe Falls trip generation due to the planned shuttle system from the development to the campus. It is planned that the shuttle system would be implemented once the traffic volumes on the residential roadways reach a point that warrant such a system.

3.14.8.3.3 Ramp Meter Operations

Table 3.14-28, Horizon Year Ramp Meter Operations, summarizes the Horizon Year project freeway ramp meter operations under with and without project conditions.

Using the fixed rate method, the northbound College Avenue on-ramp to westbound I-8 is projected to operate with a 5-minute delay, a project increase of 2 minutes; the southbound College Avenue on-ramp to westbound I-8 is projected to operate with a 44-minute delay, a project increase of 1 minute; and, the northbound College Avenue on-ramp to the eastbound I-8 is projected to operate with a 144-minute delay, a project increase of 13 minutes. A ramp meter delay longer than 15 minutes is considered to be unacceptable.

The maximum delay method indicates that with the 15-minute maximum delay, queues of 700 feet per lane are projected at the northbound College Avenue on-ramp to westbound I-8, a project

increase of 275 feet; a queue of 5,850 feet per lane is projected at the southbound College Avenue on-ramp to westbound I-8, a project increase of 175 feet; and, a queue of 19,025 feet per lane is projected at the northbound College Avenue on-ramp to eastbound I-8, a project increase of 1,725 feet. These queue lengths exceed the available storage on the ramp.

Based on the applicable thresholds of significance, the project would result in a significant impact at the northbound College Avenue to eastbound I-8 ramp.

**Table 3.14-28
Horizon Year Freeway Ramp Meter Operations**

Location/Scenario	Peak Hour	Peak Hour Demand	Ramp Meter Rate (Flow)^a	Excess Demand	Delay per Lane^b	Queue per Lane^c
Fixed Rate Method						
SB Fairmount Ave to EB I-8						
Horizon Year	PM	450	492	0	0	0
Horizon Year + Project	PM	452	492	0	0	0
Project Increase	PM	2	492	0	0	0
NB College Avenue to WB I-8						
Horizon Year	AM	335	318	17	3	425
Horizon Year + Project	AM	346	318	28	5	700
Project Increase	AM	11	318	11	2	275
SB College Avenue to WB I-8						
Horizon Year	AM	545	318	227	43	5675
Horizon Year + Project	AM	552	318	234	44	5850
Project Increase	AM	7	318	7	1	175
NB College Avenue to EB I-8						
Horizon Year	PM	1010	318	692	131	17300
Horizon Year + Project	PM	1079	318	761	144	19025
Project Increase	PM	69	318	69	13	1725
Maximum Delay Method						
SB Fairmount Ave to EB I-8						
Horizon Year	PM	450	492	0	0	0
Horizon Year + Project	PM	454	492	0	0	0
Project Increase	PM	2	NA	0	0	0
NB College Avenue to WB I-8						
Horizon Year	PM	335	318	17	0	425
Horizon Year + Project	PM	346	318	28	0	700
Project Increase	PM	11	NA	11	0	275
SB College Avenue to WB I-8						
Horizon Year	PM	545	318	227	15	5675
Horizon Year + Project	PM	552	318	234	15	5850
Project Increase	PM	7	NA	7	1	175
NB College Avenue to EB I-8						
Horizon Year	PM	1010	318	692	15	17300
Horizon Year + Project	PM	1079	318	761	15	19025
Project Increase	PM	69	NA	69	13	1725

Notes:

- a. Meter Rates obtained from Caltrans.
- b. Delay expressed in minutes per lane.
- c. Queue expressed in feet per lane.

General Notes:

Bold & Shading represents a potential significant impact.

NA = Not Applicable.

3.14.8.3.4 Freeway Operations

Table 3.14-29, Horizon Year Freeway Mainline Operations, summarizes the freeway mainline operations on I-8 during the Horizon Year with and without project scenarios. As shown in **Table 3.14-29**, with the addition of project traffic, the segment of I-8 between Fairmount Avenue and Waring Road is projected to continue to operate at LOS F(1) during the AM peak hour in the westbound direction; the segments of I-8 between Waring Road and Lake Murray Boulevard are projected to continue to operate at LOS F(0) during the AM peak hour in the westbound direction; the segment of I-8 between Lake Murray Boulevard and Fletcher Parkway is projected to continue to operate at LOS F(1) during the AM peak hour in the westbound direction; and, the segments of I-8 between Fairmount Avenue and Fletcher Parkway are projected to continue to operate at LOS F(0) during the PM peak hour in the eastbound direction.

Based on the applicable thresholds of significance, the proposed project would result in significant impacts on I-8 at the following mainline segments:

Fairmount Avenue to Waring Road (eastbound)

Waring Road to College Avenue (eastbound)

College Avenue to Lake Murray Boulevard (eastbound and westbound)

Lake Murray Boulevard to Fletcher Parkway (eastbound and westbound)

Table 3.14-29
Horizon Year Freeway Mainline Operations
Interstate 8

Scenario	Direction	Number of Lanes	Hourly Capacity ^a	ADT ^b	% K ^c		% D ^c		Truck Factor ^d	Peak Hour Volume ^e		V/C ^f		LOS	
					AM	PM	AM	PM		AM	PM	AM	PM	AM	PM
Horizon Year Without Project															
Fairmount Avenue to Waring Road	EB	5M	10,000	263,000	0.075	0.074	0.374	0.604	0.965	7,590	12,122	0.759	1.212	C	F(0)
	WB	5M	10,000		0.075	0.074	0.626	0.396		12,714	7,937	1.271	0.794	F(1)	C
Waring Road to College Avenue	EB	5M	10,000	245,000	0.075	0.074	0.374	0.604	0.965	7,070	11,292	0.707	1.129	C	F(0)
	WB	5M	10,000		0.075	0.074	0.626	0.396		11,844	7,394	1.184	0.739	F(0)	C
College Avenue to Lake Murray Boulevard	EB	4M + 1A	9,200	232,000	0.073	0.078	0.330	0.600	0.963	5,760	11,266	0.626	1.225	C	F(0)
	WB	5M	10,000		0.073	0.078	0.670	0.400		11,754	7,501	1.175	0.750	F(0)	C
Lake Murray Boulevard to Fletcher Parkway	EB	4M + 1A	9,200	205,000	0.073	0.078	0.330	0.600	0.963	5,090	9,955	0.553	1.082	B	F(0)
	WB	4M	8,000		0.073	0.078	0.670	0.400		10,386	6,628	1.298	0.829	F(1)	D
Horizon Year With Project															
Fairmount Avenue to Waring Road	EB	5M	10,000	265,910	0.075	0.074	0.374	0.604	0.965	7711	12204	0.771	1.220	C	F(0)
	WB	5M	10,000	0.075	0.074	0.626	0.396	12748		8068	1.275	0.807	F(1)	D	
Waring Road to College Avenue	EB	5M	10,000	247,910	0.075	0.074	0.374	0.604	0.965	7191	11374	0.719	1.137	C	F(0)
	WB	5M	10,000		0.075	0.074	0.626	0.396		11878	7525	1.188	0.753	F(0)	C
College Avenue to Lake Murray Boulevard	EB	4M + 1A	9,200	234,030	0.073	0.078	0.330	0.600	0.963	5775	11337	0.628	1.232	C	F(0)
	WB	5M	10,000		0.073	0.078	0.670	0.400		11819	7542	1.182	0.754	F(0)	C
Lake Murray Boulevard to Fletcher Parkway	EB	4M + 1A	9,200	207,950	0.073	0.078	0.330	0.600	0.963	5114	10093	0.556	1.097	B	F(0)
	WB	4M	8,000		0.073	0.078	0.670	0.400		10514	6702	1.314	0.838	F(1)	D

General Notes:

Bold and Shading—represents a potential significant impact.

Notes:

a. Capacity calculated at 2,000 vehicles per hour per lane and 1,200 vehicles per hour per auxiliary lane

(M: Mainline, A: Auxiliary)

b. Existing Average Daily Traffic Volumes from CALTRANS

c. Peak Hour Percentage (K) and Direction Split (D) from CALTRANS "2005 Traffic Volumes",

June 2006 (Appendix D)

d. Truck Factor from "2005 Annual Average Daily Truck Traffic on the California State Highway System",

November 2006 (Appendix D)

e. Peak Hour Volume = ((ADT)(K)(D)/Truck Factor)

f. V/C = ((ADT)(K)(D)/Truck Factor/Capacity)

FREEWAY		FREEWAY	
V/C / LOS THRESHOLDS		V/C / LOS THRESHOLDS	
V / C	LOS	V / C	LOS
< 0.41	A	1.25	F(0)
0.62	B	1.35	F(1)
0.80	C	1.45	F(2)
0.92	D	> 1.46	F(3)
1.00	E		

3.14.8.3.5 Intersection Lane Vehicles Operations

In addition to analyzing the freeway interchanges under the Caltrans Highway Capacity Manual ("HCM") based methodology, the interchanges also were analyzed using the Caltrans Intersection Lane Vehicles ("ILV") analysis methodology. The ILV analysis, which assesses the capacity of the freeway ramps, is provided for information purposes only; no determinations of impact significance are required to be made based on the analysis. **EIR Appendix N, Appendix N** contains the ILV analysis worksheets.

3.14.8.3.5.1 Existing + Project

Table 3.14-30, Existing + Project ILV Operations, summarizes the results of the ILV analysis for existing + project conditions. As shown in **Table 3.14-30**, under existing conditions, the Fairmount Avenue / I-8 EB Off Ramp operates under capacity in the AM peak hour, and near capacity in the PM peak hour; the College Avenue / I-8 interchange operates under capacity in the AM and PM peak hours; and, the I-8 EB Ramps / Alvarado Road intersection is calculated to operate under capacity in the AM and PM peak hours.

As shown in **Table 3.14-30**, with the addition of project traffic, the Fairmount Avenue / I-8 EB Off Ramp is projected to continue to operate under capacity in the AM peak hour and near capacity in the PM peak hour; the College Avenue / I-8 interchange is projected to operate under capacity in the AM and PM peak hours, with the exception of the College Avenue / I-8 EB Ramp, which is calculated to operate near capacity in the PM peak hour; and, the I-8 EB Ramps / Alvarado Road intersection is calculated to continue to operate under capacity in the AM and PM peak hours.

Table 3.14-30
Existing + Project ILV Operations

Intersection	Peak Hour	Existing		Existing + Project	
		Total Operating Level (ILV / Hour)	Capacity	Total Operating Level (ILV / Hour)	Capacity
Fairmount Ave / I-8 EB Off Ramp	AM	866	Under	930	Under
	PM	1297	Near	1301	Near
College Ave / I-8 WB Ramps	AM	575	Under	620	Under
	PM	704	Under	784	Under
College Ave / I-8 EB Ramps	AM	615	Under	674	Under
	PM	1124	Under	1248	Near
I-8 EB Ramps / Alvarado Rd	AM	670	Under	679	Under
	PM	910	Under	914	Under

General Notes:

1. See Appendix L for ILV calculation sheets.

3.14.8.3.5.2 Near-Term Project

Table 3.14-31, Near-Term ILV Operations, summarizes the results of the near-term with and without project ILV analysis. As shown in **Table 3.14-31**, under the without project scenario, the Fairmount Avenue / I-8 EB Off Ramp is projected to operate under capacity in the AM peak hour and near capacity in the PM peak hour; the College Avenue / I-8 interchange is projected to operate under capacity in the AM and PM peak hours, with the exception of the College Avenue / I-8 EB Ramp, which is projected to operate near capacity in the PM peak hour; and, the I-8 EB Ramps / Alvarado Road intersection is calculated to operate under capacity in the AM and PM peak hours.

As shown in **Table 3.14-31**, with the addition of near-term project traffic, the Fairmount Avenue / I-8 EB Off Ramp is projected to continue to operate under capacity in the AM peak hour and near capacity in the PM peak hour; the College Avenue / I-8 interchange is projected to continue to operate under capacity in the AM and PM peak hours, with the exception of the College Avenue / I-8 EB Ramp, which is calculated to continue operate near capacity in the PM peak hour; and the I-8 EB Ramps / Alvarado Road intersection is projected to operate under capacity in the AM and PM peak hours.

**Table 3.14-31
Near-Term ILV Operations**

Intersection	Peak Hour	Near-Term without Project		Near-Term with Project	
		Total Operating Level (ILV / Hour)	Capacity	Total Operating Level (ILV / Hour)	Capacity
Fairmount Ave / I-8 EB Off Ramp	AM	922	Under	961	Under
	PM	1350	Near	1350	Near
College Ave / I-8 WB Ramps	AM	649	Under	661	Under
	PM	816	Under	838	Under
College Ave / I-8 EB Ramps	AM	690	Under	700	Under
	PM	1277	Near	1305	Near
I-8 EB Ramps / Alvarado Rd	AM	733	Under	734	Under
	PM	995	Under	996	Under

General Notes:

1. See Appendix L for ILV calculation sheets.

3.14.8.3.5.3 Horizon Year Project

Table 3.14-32, Horizon Year ILV Operations, summarizes the results of the Horizon Year with and without project ILV analysis. As shown in **Table 3.14-32**, under the without project

scenario, the Fairmount Avenue / I-8 EB Off Ramp is projected to operate under capacity in the AM peak hour and near capacity in the PM peak hour; the College Avenue / I-8 WB Ramp is projected to operate under capacity in the AM and PM peak hours; the College Avenue / I-8 EB Ramp is projected to operate under capacity in the AM peak hour and over capacity in the PM peak hour; and the I-8 EB Ramps / Alvarado Road intersection is projected to operate under capacity in the AM peak hour and near capacity in the PM peak hour.

As shown in **Table 3.14-32**, with the addition of 2024/25 buildout project traffic, the Fairmount Avenue / I-8 EB Off Ramp is projected to continue operate under capacity in the AM peak hour and near capacity in the PM peak hour; the College Avenue / I-8 WB Ramp is projected to continue to operate under capacity in the AM and PM peak hours; the College Avenue / I-8 EB Ramp is projected to operate under capacity in the AM peak hour and over capacity in the PM peak hour; and the I-8 EB Ramps / Alvarado Road intersection is projected to continue to operate under capacity in the AM peak hour and near capacity in the PM peak hour.

Table 3.14-32
Horizon Year ILV Operations

Intersection	Peak Hour	Horizon Year without Project		Horizon Year with Project	
		Total Operating Level (ILV / Hour)	Capacity	Total Operating Level (ILV / Hour)	Capacity
Fairmount Ave / I-8 EB Off Ramp	AM	1014	Under	1021	Under
	PM	1424	Near	1427	Near
College Ave / I-8 WB Ramps	AM	783	Under	828	Under
	PM	980	Under	1080	Under
College Ave / I-8 EB Ramps	AM	901	Under	955	Under
	PM	1660	Over	1785	Over
I-8 EB Ramps / Alvarado Rd	AM	998	Under	1007	Under
	PM	1456	Near	1460	Near

General Notes:

1. See Appendix L for ILV calculation sheets.

3.14.8.3.6 Adobe Falls Faculty/Staff Housing Lower Village

Under the proposed project, access to the Adobe Falls Faculty/Staff Housing project component would be provided either through the Del Cerro community *via* Mill Peak Road and Adobe Falls Road, or by way of an alternate access route. The analysis presented above is premised on access to the Adobe Falls site *via* Mill Peak Road and the eastern portion of Adobe Falls Road (east).

As proposed, the Lower Village portion of the project would include the development of up to 300 townhomes/condominiums. The following is an analysis of the potential traffic impacts associated with the development of 300 Lower Village units, and 48 Upper Village units, with access in to and out of the Adobe Falls site provided exclusively *via* the western portion of Adobe Falls Road (west) and, ultimately, Waring Road. Related to this scenario is one in which access in to and out of the Adobe Falls Faculty/Staff Housing Lower Village would be provided *via* both the eastern and western portions of Adobe Falls Road, and would be utilized in conjunction with the adjacent Smoketree condominium development, *via* gated access. Under this "dual utilization" scenario, 174 townhomes/condominiums would be built in the Lower Village. Because the number of ADT that would be generated under the dual utilization scenario is less than the ADT generated by the 300 unit project, the traffic impacts associated with the dual utilization scenario are within the impact envelope of the 300 unit scenario and no further analysis is necessary. (See, EIR Section 5.6, *Adobe Falls Alternate Access Routes*, for additional analysis relating to alternate access routes.)

Under the proposed project scenario in which 300 units are developed on the Lower Village site, the Adobe Falls Faculty/Staff Housing would generate a maximum of 2,800 ADT (300 Lower Village Units + 48 Upper Village Units; $348 \times 8 = 2,784$). 2,800 represents the maximum ADT and is likely overstated for several reasons. First, as discussed in Section 3.14.7.1.2 above, the faculty and staff residing in the housing likely would generate between 2-4 ADT, rather than the 8 ADT utilized for purposes of the analysis. Second, it is likely that access in to and out of the Upper Village development would be provided *via* Mill Peak Road, rather than Adobe Falls Road (west), due to the cost of a connector road that would connect the Upper and Lower Villages. (See EIR Section 5.6, *Adobe Falls Alternate Access Routes*.) Therefore, the ADT actually generated under this proposed project scenario could be as low as 600 ADT (300 units \times 2 ADT per unit).

In any event, based on a field review of the area and a review of area maps, the two roads that will need to carry the majority of project traffic and, therefore, are most likely to be impacted by the project, are Adobe Falls Road (west) and Waring Road, the road to which Adobe Falls Road connects. These two roads were specifically analyzed in terms of roadway capacity with and without project traffic conditions.

An existing traffic count was conducted on the western portion of Adobe Falls Road, which showed an existing ADT of 3,690. (See, **EIR Appendix N, Traffic Technical Report, Appendix E.**) The LOD D capacity of this portion of Adobe Falls Road is 6,500 ADT using the City 2-lane

collector capacity. Therefore, Adobe Falls Road presently has capacity for an additional 2,800 ADT. As shown in **Table 3.14-33, Street Segment Analysis, Adobe Falls Road/Waring Road**, based on applicable trip distribution percentages, the proposed project would add a maximum of 2,800 ADT to Adobe Falls Road east of Waring Road, and a maximum of 2,000 ADT to Waring Road south of Zion Avenue.

Table 3.14-33
Street Segment Analysis
Adobe Falls Road/Waring Road

Street Segment	Roadway Capacity (LOS D)	Existing		Existing + Project	
		ADT	LOS	ADT	LOS
Adobe Falls Road East of Waring Road	6,500	3,690	C	6,490	D
Waring Road South of Zion Avenue	35,000	24,000	C	26,000	C

Also as shown on **Table 3.14-33**, the addition of project traffic to Adobe Falls Road and Waring Road would result in acceptable levels of service, LOS D and C, respectively. Therefore, under the proposed project scenario in which 300 units are developed on the Adobe Falls Faculty/Staff Housing Lower Village site, the project would not result in potentially significant impacts. However, under this scenario, a potentially significant impact may occur at the intersection of Adobe Falls Road and Waring Road if proper intersection geometrics are not provided. Mitigation is proposed that would require the preparation of a peak-hour intersection analysis at this location prior to final approval of the Lower Village, during project-specific review.

3.14.9 CONGESTION MANAGEMENT PROGRAM COMPLIANCE

The Congestion Management Program ("CMP") adopted on November 22, 1991, is intended to link land use, transportation and air quality through level of service performance. The CMP requires an Enhanced CEQA Review for projects that are expected to generate more than 2,400 ADT or more than 200 peak hour trips. Because the proposed project trip generation exceeds the CMP thresholds, preparation of each CMP analysis is required.

The SANDAG CMP Update July 2006 report contains a list of "CMP Arterials" that are to be analyzed if the project exceeds the referenced trip generation thresholds. No CMP arterials listed in the report are within the project study area; however, I-8 is a CMP Freeway. Therefore,

the following freeway segments were analyzed to satisfy the CMP requirements. The results of the analysis are provided above, in **Section 3.14.7**:

- I-8 between Fairmount Avenue to Waring Road
- I-8 between Waring Road and College Avenue
- I-8 between College Avenue and Lake Murray Blvd / 70th Street
- I-8 east of Lake Murray Boulevard / 70th Street

As noted in **Section 3.14.7**, at buildout year, the proposed project would result in significant impacts to each of the four freeway segments.

3.14.10 PARKING ANALYSIS

3.14.10.1 Existing Parking Supply and Demand

LLG commissioned parking counts in October 2006, while school was in session, in order to determine the parking supply and demand on campus. The supply of parking when the counts were undertaken in October was 13,924 spaces campus-wide.

Table 3.14-34, Existing Parking Supply and Demand, lists by hour and category (students, faculty/staff, and special permit) the existing supply and demand for each parking lot and structure on the SDSU campus counted. From this table it is possible to determine the peak parking time and the peak parking occupancy for each parking lot and structure. In general, parking lots and structures closer to the central campus buildings have a higher occupancy level for greater portions of the day than those lots and structures that are more distant.

Table 3.14-35, Existing Parking Supply and Demand Summary, provides a summary of the parking supply and demand data contained in **Table 3.14-34**. As shown in **Table 3.14-35**, the average peak hour demand for parking is between 10:00 am and 11:00 am when 65% (9,030 out of 13,924 spaces) of the campus parking spaces are occupied.

3.14.10.2 Future Parking Requirements

Using the above parking count data and the current student headcount enrollment of 33,441 students, the existing average peak parking demand is 0.27 parking spaces per student. $(9,030 \text{ existing parking demand} \div 33,441 \text{ students}) = 0.27 \text{ parking spaces per student}$.

Based on this parking rate, the future demand for student, faculty, staff, and visitor parking can be determined based on the projected increased student enrollment. Based on the project

buildout 2024/25 projected enrollment of 44,826 students, the project buildout parking demand would be approximately 12,103 parking spaces. (44,826 students * 0.27 parking spaces per student) = 12,103 parking spaces.

Based on the number of existing and planned parking spaces on campus, there will be a total of 15,591 parking spaces planned for the horizon year. This amount represents 3,488 parking spaces more than the calculated demand of 12,103 parking spaces. **EIR Appendix N, Appendix O**, contains a table detailing the parking spaces to be provided over the next ten years, and a map of the existing parking lots/structures.

Based on the above calculations, the project would not result in significant impacts relating to parking.

**Table 3.14-34
Existing Parking Supply And Demand**

Parking Type	Supply	8:00 AM	9:00 AM	10:00 AM	11:00 AM	12:00 PM	1:00 PM	2:00 PM	3:00 PM	4:00 PM
Parking Lot A										
Student	447	201 ^a	310	366	363	Break	363	351	306	281
Special Permit ^b	19	9	10	10	13	Break	9	11	9	8
Total	466	210	320	376	376	Break	371	362	315	289
Percentage Occupied		45%	69%	81%	81%	Break	80%	78%	68%	62%
Parking Lot B										
Special Permit	8	4	5	6	6	Break	4	5	4	5
Percentage Occupied		50%	63%	75%	75%	Break	50%	63%	50%	63%
Parking Lot C										
Student	507	212	272	304	335	Break	332	297	279	241
Special Permit	8	4	6	4	3	Break	4	4	3	2
Total	515	216	278	308	338	Break	336	301	282	243
Percentage Occupied		42%	54%	60%	66%	Break	65%	58%	55%	47%
Parking Lot D										
Student	432	0	0	0	0	Break	0	0	0	0
Percentage Occupied		0%	0%	0%	0%	Break	0%	0%	0%	0%
Parking Lot E										
Student	229	126	159	163	160	Break	163	161	157	171
Special Permit	16	0	1	1	0	Break	0	0	0	0
Total	245	126	160	164	160	Break	163	161	157	171
Percentage Occupied		51%	65%	67%	65%	Break	67%	66%	64%	70%
Parking Lot F										
Faculty/Staff	253	180	253	253	253	Break	253	253	253	213
Special Permit	9	9	9	9	9	Break	9	9	9	25
Total	262	189	262	262	262	Break	262	262	262	238
Percentage Occupied		72%	100%	100%	100%	Break	100%	100%	100%	91%
Parking Lot G										
Faculty/Staff	49	32	49	49	49	Break	49	49	49	49
Special Permit	25	5	25	25	25	Break	25	25	25	25
Total	74	37	74	74	74	Break	74	74	74	74
Percentage Occupied		50%	100%	100%	100%	Break	100%	100%	100%	100%

**Table 3.14-34
Existing Parking Supply And Demand**

Parking Type	Supply	8:00 AM	9:00 AM	10:00 AM	11:00 AM	12:00 PM	1:00 PM	2:00 PM	3:00 PM	4:00 PM
Parking Lot H										
Special Permit	22	6	6	6	7	Break	7	11	6	8
Percentage Occupied		27%	27%	27%	32%	Break	32%	50%	27%	36%
Parking Lot K										
Special Permit	14	3	4	6	7	Break	5	4	5	5
Percentage Occupied		21%	29%	43%	50%	Break	36%	29%	36%	36%
Parking Lot L										
Special Permit	97	20	25	26	25	Break	22	22	22	21
Percentage Occupied		21%	26%	27%	26%	Break	23%	23%	23%	22%
Parking Lot M										
Special Permit	51	18	20	24	25	Break	25	27	23	32
Percentage Occupied		35%	39%	47%	49%	Break	49%	53%	45%	63%
Parking Lot N										
Special Permit	32	0	3	4	8	Break	2	0	0	0
Percentage Occupied		0%	9%	13%	25%	Break	6%	0%	0%	0%
Parking Lot P										
Special Permit	39	0	0	0	1	Break	2	1	2	1
Percentage Occupied		0%	0%	0%	3%	Break	5%	3%	5%	3%
Parking Lot Q										
Special Permit	44	3	7	8	10	Break	16	9	6	5
Percentage Occupied		7%	16%	18%	23%	Break	36%	20%	14%	11%
Parking Lot R										
Student	28	8	9	10	12	Break	7	10	5	4
Special Permit	16	2	1	3	3	Break	2	2	1	2
Total	44	10	10	13	15	Break	9	12	6	6
Percentage Occupied		23%	23%	30%	34%	Break	20%	27%	14%	14%
Parking Lot U										
Student	145	141	141	140	137	Break	137	137	140	140
Special Permit	11	6	6	6	4	Break	5	6	6	3
Total	156	147	147	146	141	Break	142	143	146	143
Percentage Occupied		94%	94%	94%	90%	Break	91%	92%	94%	92%

**Table 3.14-34
Existing Parking Supply And Demand**

Parking Type	Supply	8:00 AM	9:00 AM	10:00 AM	11:00 AM	12:00 PM	1:00 PM	2:00 PM	3:00 PM	4:00 PM
Parking Lot V										
Student	65	66	66	68	67	Break	66	64	64	63
Special Permit	17	8	9	9	7	Break	8	9	7	7
Total	82	74	75	77	74	Break	74	73	71	70
Percentage Occupied		90%	91%	94%	90%	Break	90%	89%	87%	85%
Parking Lot W										
Student	381	264	364	349	346	Break	321	334	340	352
Special Permit	16	0	1	2	4	Break	5	4	5	3
Total	397	264	365	351	350	Break	326	338	345	355
Percentage Occupied		66%	92%	88%	88%	Break	82%	85%	87%	89%
Parking Lot X										
Faculty/Staff	97	31	47	59	57	Break	65	63	56	47
Student	397	117	268	313	335	Break	301	258	232	205
Special Permit	6	2	1	1	0	Break	0	1	2	2
Total	500	150	316	373	392	Break	366	322	290	254
Percentage Occupied		30%	63%	75%	78%	Break	73%	64%	58%	51%
Underground Parking (Student Services)										
Special Permit	83	25	37	44	45	Break	52	52	52	56
Percentage Occupied		30%	45%	53%	54%	Break	63%	63%	63%	67%
Parking Structure 1										
Faculty/Staff	1112	283	410	585	648	Break	709	671	692	704
Student	656	494	761	762	761	Break	739	719	700	651
Special Permit	160	16	24	40	42	Break	56	59	58	55
Total	1928	793	1195	1387	1451	Break	1504	1449	1450	1410
Percentage Occupied		41%	62%	72%	75%	Break	78%	75%	75%	73%
Parking Structure 2										
Faculty/Staff	495	184	444	494	492	Break	465	478	457	413
Special Permit	17	4	6	11	11	Break	9	10	8	7
Total	512	188	450	505	503	Break	474	488	465	420
Percentage Occupied		37%	88%	99%	98%	Break	93%	95%	91%	82%

**Table 3.14-34
Existing Parking Supply And Demand**

Parking Type	Supply	8:00 AM	9:00 AM	10:00 AM	11:00 AM	12:00 PM	1:00 PM	2:00 PM	3:00 PM	4:00 PM
Parking Structure 3										
Faculty/Staff	22	0	0	1	3	Break	1	3	3	12
Student	1849	1043	959	737	536	Break	569	672	783	1001
Special Permit	8	4	3	3	4	Break	4	3	3	5
Total	1879	1047	962	741	543	Break	574	678	789	1018
Percentage Occupied		56%	51%	39%	29%	Break	31%	36%	42%	54%
Parking Structure 4										
Faculty/Staff	463	203	375	459	512	Break	483	496	444	429
Student	1416	1173	1366	1354	1365	Break	1305	1251	1243	1293
Special Permit	91	13	31	38	40	Break	43	32	29	27
Total	1970	1389	1772	1851	1917	Break	1831	1779	1716	1749
Percentage Occupied		71%	90%	94%	97%	Break	93%	90%	87%	89%
Parking Structure 5										
Faculty/Staff	27	17	17	17	17	Break	17	15	15	13
Student	1315	632	632	1259	1278	Break	1228	1179	1111	987
Special Permit	33	8	19	27	30	Break	29	31	31	29
Total	1375	657	668	1303	1325	Break	1274	1225	1157	1029
Percentage Occupied		48%	49%	95%	96%	Break	93%	89%	84%	75%
Parking Structure 6										
Student	2441	1474	1136	780	632	Break	673	850	861	1025
Special Permit	37	1	2	3	2	Break	8	2	2	1
Total	2478	1475	1138	783	634	Break	681	852	863	1026
Percentage Occupied		60%	46%	32%	26%	Break	27%	34%	35%	41%
Parking Structure 8										
Faculty/Staff	143	114	135	133	134	Break	127	125	115	115
Special Permit	76	15	26	33	32	Break	39	41	32	32
Total	219	129	161	166	166	Break	166	166	147	147
Percentage Occupied		59%	74%	76%	76%	Break	76%	76%	67%	67%

Notes:

- a. Number in cell represents the parking demand at the listed time.
- b. Special Permit parking spaces counted included disabled parking spaces, vendor spaces, visitor spaces, etc.

**Table 3.14-35
Existing Parking Supply and Demand Summary**

Parking Type	Supply	8:00 AM	9:00 AM	10:00 AM	11:00 AM	12:00 PM	1:00 PM	2:00 PM	3:00 PM	4:00 PM
Faculty/Staff	2,661	1,044	1,742	2,082	2,206	Break	2,211	2,190	2,115	2,029
Students	10,308	5,951	6,443	6,605	6,327	Break	6,204	6,283	6,221	6,414
Special Permit	955	185	285	343	360	Break	394	386	354	349
Grand Total	13,924	7,180	8,470	9,030	8,893	Break	8,809	8,859	8,690	8,792
Percentage Occupied		52%	61%	65%	64%	Break	63%	64%	62%	63%

Notes:

- a. Number in cell represents the parking demand at the listed time.
- b. Special Permit parking spaces counted included disabled parking spaces, vendor spaces, visitor spaces, etc.

3.14.11 OTHER PROJECT-RELATED TRAFFIC IMPACTS

3.14.11.1 Construction-Related Impacts

Construction of the proposed project would generate construction truck and employee trips during project construction. Because a number of the roadway segments and intersections in the project study area are presently operating at unacceptable levels of service during the AM and/or PM peak hours, the additional vehicle trips associated with project construction may result in potentially significant traffic impacts. Mitigation is proposed to reduce the potential impacts to a level below significant.

3.14.11.2 Emergency Access Impacts

The Alvarado Hospital Medical Center, which is located on the south side of Alvarado Road just east of Alvarado Court, provides twenty-four hour emergency services to the area. The proposed project would add additional traffic to Alvarado Road and the intersections along Alvarado Road causing an increase in vehicular delay, which could have an adverse effect on emergency access.

As discussed in EIR **Section 3.13, Public Utilities and Service Systems**, emergency vehicles have the right-of-way and, therefore, are able to bypass traffic congestion *en route* to or from the hospital. In addition, the roadway configuration of Alvarado Road is such that there is adequate right-of-way for emergency vehicles to maneuver around traffic, even under congested conditions. The narrowest point on the roadway is a 40-foot wide section where parking is allowed on both sides of the street. Even assuming cars are parked on both sides of the street, this leaves approximately 28 feet of roadway, which is a sufficient width for cars traveling in opposite directions to pull over next to the parked cars and for the emergency vehicle to pass. Additionally, mitigation is proposed that would require SDSU to work with Alvarado Hospital and the City of San Diego to improve emergency access to the hospital, including investigation of the removal of on-street parking from Alvarado Road. (See EIR **Section 3.13, Public Utilities and Service Systems**, Mitigation Measure PSS-2.) Mitigation also is proposed that would reduce potential construction-related traffic impacts to a level below significant. This is especially relevant with respect to construction of the Alvarado Campus component of the proposed project and the potential traffic impacts to Alvarado Road and emergency vehicle access. For these reasons, any impacts to emergency access that would result with implementation of the proposed project would be less than significant.

3.14.11.3 Vehicle Speed Impacts

While the roadway segment analysis indicates that the residential streets within the vicinity of the Adobe Falls Faculty/Staff Housing project component can accommodate the additional traffic that would be generated by the proposed project (i.e., the roadways have adequate vehicle carrying capacity), it is often the case that vehicle speeds on residential streets, rather than traffic volumes, are the primary cause for concern. These vehicle speeds could be viewed as a potentially significant impact. Mitigation is proposed that would require the preparation of a traffic calming study prior to occupancy of the Adobe Falls Faculty/Staff Housing Upper Village to recommend potential traffic calming measures to reduce vehicle speeds.

3.14.12 CUMULATIVE IMPACTS

The impacts analysis presented above considered the cumulative traffic impacts associated with pending and probable future projects both in the near-term analysis (2012), and in the horizon year analysis (2030). No further analysis is required.

3.14.13 MITIGATION MEASURES

As previously discussed, the analysis in this section was conducted under three different scenarios: existing traffic conditions, Near-Term (2012) conditions, and horizon year (2030) conditions. Both the near-term and horizon year analyses include traffic projections based on regional growth and implementation of pending projects. (See Cumulative Projects, **Section 3.14.7.2.4.**) In order to calculate impacts that could occur with implementation of the proposed project, the project traffic is added to the traffic to be generated by these other projects. In many cases, the addition of the proposed project traffic is incremental compared to the overall increase in traffic that would occur without the proposed project and, therefore, the projected impacts would occur with or without implementation of the proposed project. Moreover, the project would not cause the LOS to degrade to unacceptable levels at any intersection or roadway segment. Nevertheless, consistent with City of San Diego practices, the impacts are identified as potentially significant and measures to mitigate these impacts are proposed below.

3.14.13.1 Significant Impacts Summary

The following is a summary list of the potentially significant impacts anticipated to result with implementation of the proposed project under Near-Term and Horizon Year conditions. The numbers assigned to each impact location correspond to the recommended mitigation measures that follow this summary list.

3.14.13.1.1 Near-Term Significant Impacts

A. Intersections

- A-1. College Avenue / Del Cerro Boulevard
- A-2. College Avenue / I-8 Eastbound Ramps
- A-3. College Avenue / Canyon Crest Drive
- A-4. College Avenue / Zura Way
- A-5. College Avenue / Montezuma Road
- A-6. I-8 WB Ramps/ Parkway Drive

B. Street Segments

- B-1. Alvarado Road: E. Campus Drive to Reservoir Drive
- B-2. Alvarado Road: Reservoir Drive to 70th Street
- B-3. College Avenue: I-8 Eastbound Ramps to Zura Way

C. Freeway Ramp Meters

- C-1. Northbound College Avenue to eastbound I-8

3.14.13.1.2 Horizon Year Significant Impacts

E. Intersections

- E-1. Fairmount Ave / I-8 WB Off Ramp / Camino del Rio North
- E-2. 55th Street / Montezuma Road
- E-3. Campanile Drive / Montezuma Road
- E-4. College Avenue / Del Cerro Boulevard
- E-5. College Avenue / I-8 WB Ramps
- E-6. College Avenue / I-8 EB Ramps
- E-7. College Avenue / Canyon Crest Drive
- E-8. College Avenue / Zura Way
- E-9. College Avenue / Montezuma Road
- E-10. Alvarado Court / Alvarado Road
- E-11. Reservoir Drive / Alvarado Road
- E-12. Lake Murray Boulevard / Wisconsin Drive / Parkway Drive
- E-13. 70th Street / Alvarado Road
- E-14. I-8 WB Ramps / Parkway Drive
- E-15. I-8 EB Ramps / Alvarado Road

F. Street Segments

- F-1. Alvarado Road: E. Campus Drive to Reservoir Drive
- F-2. Alvarado Road: Reservoir Drive to 70th Street
- F-3. College Avenue: Del Cerro Boulevard to I-8 Eastbound Ramps
- F-4. College Avenue: I-8 Eastbound Ramps to Zura Way
- F-5. College Avenue: Zura Way to Montezuma Road
- F-6. College Avenue: South of Montezuma Road
- F-7. Montezuma Road: Fairmount Avenue to Collwood Boulevard
- F-8. Montezuma Road: 55th Street to College Avenue

G. Freeway Ramp Meters

- G-1. Northbound College Avenue to eastbound I-8

H. Freeway Mainline Segments

- H-1. Interstate 8: Fairmount Avenue to Waring Road (eastbound)
- H-2. Interstate 8: Waring Road to College Avenue (eastbound)
- H-3. Interstate 8: College Avenue to Lake Murray Boulevard (eastbound and westbound)
- H-4. Interstate 8: Lake Murray Boulevard to Fletcher Parkway (eastbound and westbound)

I. Del Cerro Community Vehicle Speeds

- I-1. Potential residential street speed issues.

While the roadway segment analysis indicates that the residential streets within the vicinity of the Adobe Falls development can accommodate the additional traffic from a traffic capacity standpoint, vehicle speeds on residential streets may result in a potentially significant impact.

J. Construction-Related Impacts

- J-1. Traffic impacts relating to construction of the proposed project are potentially significant, especially in relation to construction affecting Alvarado Road and the Alvarado Hospital.

3.14.13.2 Mitigation Measures

The mitigation measures proposed below are recommended to mitigate the significant Near-Term and Horizon Year impacts associated with the proposed project.

3.14.13.2.1 Near-Term Mitigation Measures

Intersections

TCP-1 A-1. College Avenue / Del Cerro Boulevard. SDSU shall contribute to the City of San Diego its fair-share of the costs to provide two left-turn lanes and one shared through/right-turn lane on the westbound approach.

TCP-2 A-2. College Avenue / I-8 Eastbound Ramps. SDSU shall contribute to the City of San Diego its fair-share of the costs to provide an additional (third) northbound through lane on College Avenue.

TCP-3 A-3. College Avenue / Canyon Crest Drive. SDSU shall contribute to the City of San Diego its fair-share of the costs to provide an additional (third) northbound through lane on College Avenue.

TCP-4 A-4. College Avenue / Zura Way. SDSU shall contribute to the City of San Diego its fair-share of the costs to install a traffic signal at the intersection. Alternatively, the City could prohibit southbound left-turns at the intersection, which would require an additional southbound left-turn lane at the College Avenue / Montezuma Road intersection.

TCP-5 A-5. College Avenue / Montezuma Road. SDSU shall contribute to the City of San Diego its fair-share of the costs to provide an additional (third) northbound through lane and an exclusive northbound right-turn lane on College Avenue.

TCP-6 A-6. I-8 WB Ramps/ Parkway Drive. SDSU shall contribute to the City of San Diego its fair-share of the costs to install a traffic signal at the intersection.

Street Segments

TCP-7 B-1. Alvarado Road: E. Campus Drive to Reservoir Drive. SDSU shall contribute to the City of San Diego its fair-share of the costs to widen Alvarado Road (on the south side) to two through lanes plus a two-way-left-turn lane between College Avenue and 70th Street, and realign Alvarado Road to remove existing substandard curves.

TCP-8 B-2. Alvarado Road: Reservoir Drive to 70th Street. SDSU shall contribute to the City of San Diego its fair-share of the costs to widen Alvarado Road (on the south side) to two through lanes plus a two-way-left-turn lane between College Avenue and 70th Street, and realign Alvarado Road to remove existing substandard curves.

TCP-9 B-3. College Avenue: I-8 Eastbound Ramps to Zura Way. SDSU shall contribute to the City of San Diego its fair-share of the costs to provide an additional (third) northbound through lane on College Avenue between I-8 and Zura Way.

Freeway Ramp Meter

TCP-10 C-1. Northbound College Avenue to I-8 Eastbound. SDSU shall contribute to the City of San Diego its fair-share of the costs to provide an additional single occupancy vehicle ("SOV") storage lane on the I-8 Eastbound On-Ramp from College Avenue (northbound).

3.14.13.2.2 Horizon Year Mitigation Measures

Intersections

TCP-11 E-1. Fairmount Ave / I-8 WB Off Ramp / Camino del Rio North. SDSU shall contribute to the City of San Diego its fair-share of the costs to widen Fairmount Avenue between Mission Gorge Road and I-8 to a six-lane facility.

TCP-12 E-2. 55th Street / Montezuma Road. SDSU shall contribute to the City of San Diego its fair-share of the costs to provide a dedicated westbound right-turn lane at the 55th Street / Montezuma Road intersection.

TCP-13 E-3. Campanile Drive / Montezuma Road. SDSU shall contribute to the City of San Diego its fair-share of the costs to provide a second southbound left-turn lane, and a dedicated right-turn lane on the northbound approach.

E-4. College Avenue / Del Cerro Boulevard. The provision of additional lanes at the College Avenue / Del Cerro Boulevard intersection (Mitigation Measure TCP-1, A-1) would mitigate this impact.

TCP-14 E-5. College Avenue / I-8 WB Ramps. SDSU shall contribute to the City of San Diego its fair-share of the costs to provide three northbound lanes and two southbound lanes on the College Avenue bridge over I-8 . It should be noted that the contribution of a fair share would not fully mitigate this cumulative impact.

E-6. College Avenue / I-8 EB Ramps. The provision of an additional northbound through lane on College Avenue (Mitigation Measure TCP-2, A-2) would mitigate this impact to the extent feasible. It should be noted that the contribution of a fair share would not fully mitigate this cumulative impact.

TCP-15 E-7. College Avenue / Canyon Crest Drive. SDSU shall contribute to the City of San Diego its fair-share of the costs to provide an additional dedicated left-turn lane on both the eastbound and westbound approaches. This fair share contribution along with the provision of the additional northbound through lane on College Avenue (Mitigation Measure TCP-9, B-3) would mitigate this impact.

E-8. College Avenue / Zura Way. The fair-share contribution towards installing a traffic signal at the College Avenue / Zura Way intersection (Mitigation Measure TCP-4, A-4) would mitigate this impact.

TCP-16 E-9. College Avenue / Montezuma Road. SDSU shall contribute to the City of San Diego its fair-share of the costs to provide a dedicated right-turn lane on the northbound approach. This fair share contribution along with the provision of the additional lanes at the College Avenue / Montezuma Road intersection (Mitigation Measure TCP-5, A-5) would mitigate this impact.

TCP-17 E-10. Alvarado Court / Alvarado Road. SDSU shall contribute to the City of San Diego its fair-share of the costs to install a traffic signal at the Alvarado Court / Alvarado Road intersection, and shall contribute its fair share of the costs to provide a dedicated right-turn lane on the eastbound approach, and a dedicated left-turn lane on the westbound approach.

TCP-18 E-11. Reservoir Drive / Alvarado Road. SDSU shall contribute to the City of San Diego its fair-share of the costs to provide a dedicated right-turn lane on the eastbound approach.

TCP-19 E-12. Lake Murray Boulevard / Wisconsin Drive / Parkway Drive. SDSU shall contribute to the City of San Diego its fair-share of the costs to provide an additional left-turn lane on the westbound approach.

TCP-20 E-13. 70th Street / Alvarado Road. SDSU shall contribute to the City of San Diego its fair-share of the costs to widen 70th Street to six lanes through the Alvarado Road intersection and over the I-8 bridge (70th Street will transition to four through lanes north of I-8 and south of Alvarado Road), and its fair share of the costs to provide an additional right-turn lane on the southbound approach.

E-14. I-8 WB Ramps / Parkway Drive. The installation of a traffic signal at the I-8 WB Ramps/Parkway Drive intersection (Mitigation Measure TCP-6, A-6) would mitigate this impact.

TCP-21 E-15. I-8 EB Ramps / Alvarado Road. SDSU shall contribute to the City of San Diego its fair-share of the costs to provide an additional through lane on the westbound approach.

Street Segments

F-1. Alvarado Road: E. Campus Drive to Reservoir Drive. The Community Plan classification for Alvarado Road is a three-lane Collector. In order to fully mitigate the horizon year impact to Alvarado Road, the road would need to be widened to four-lane Collector standards. Since this is beyond the Community Plan designation of the roadway, improvements to four-lanes is not considered feasible, and the impact is considered partially mitigated.

F-2. Alvarado Road: Reservoir Drive to 70th Street. The Community Plan classification for Alvarado Road is a three-lane Collector. In order to fully mitigate the horizon year impact to Alvarado Road, the road would need to be widened to four-lane Collector standards. Since this is beyond the

Community Plan designation of the roadway, improvements to four-lanes is not considered feasible, and the impact is considered partially mitigated.

F-3. College Avenue: Del Cerro Boulevard to I-8 Eastbound Ramps. The provision of additional lanes at the College Avenue / Del Cerro Boulevard intersection, an additional northbound through lane on College Avenue, and the fair share contribution required by Mitigation Measure TCP-14 would mitigate this impact.

F-4. College Avenue: I-8 Eastbound Ramps to Zura Way. The provision of an additional (third) northbound through lane on College Avenue between I-8 EB Ramps and Zura Way (Mitigation Measure TCP-9, B-3) would mitigate this impact.

F-5. College Avenue: Zura Way to Montezuma Road. The provision of an additional (third) northbound through lane on College Avenue between Zura Way and Montezuma Road would mitigate this impact.

F-6. College Avenue: South of Montezuma Road. The provision of additional lanes at the College Avenue / Montezuma Road intersection (Mitigation Measure TCP-5, A-5) would mitigate this impact.

F-7. Montezuma Road: Fairmount Avenue to Collwood Boulevard. Since this portion of Montezuma Road is classified as a 4-lane major, and it is not feasible to widen this portion of Montezuma Road to six lanes, this impact is considered significant and not mitigated.

TCP-22 F-8. Montezuma Road: 55th Street to College Avenue. SDSU shall contribute to the City of San Diego its fair-share of the costs to improve Montezuma Road between 55th Street and College Avenue to four-lane Major Arterial standards.

Freeway Ramp Meters

G-1. Northbound College Avenue to I-8 Eastbound. The provision of an additional SOV storage lane on the I-8 Eastbound On-Ramp from College Avenue (northbound) would mitigate this impact (TCP 10, C-1).

Freeway Mainline

H-1. Interstate 8: Fairmount Avenue to Waring Road (eastbound). SDSU shall contribute its fair-share of the costs to prepare a Project Study Report ("PSR") for the future widening of I-8.

H-2. Interstate 8: Waring Road to College Avenue (eastbound). SDSU shall contribute its fair-share of the costs to prepare a Project Study Report ("PSR") for the future widening of I-8.

H-3. Interstate 8: College Avenue to Lake Murray Boulevard (eastbound and westbound). SDSU shall contribute its fair-share of the costs to prepare a Project Study Report ("PSR") for the future widening of I-8.

H-4. Interstate 8: Lake Murray Boulevard to Fletcher Parkway (eastbound and westbound). SDSU shall contribute its fair-share of the costs to prepare a Project Study Report ("PSR") for the future widening of I-8.

Del Cerro Streets

TCP-23 I-1. Del Cerro Residential Streets. Following occupancy of the Adobe Falls Faculty/Staff Housing Lower Village, SDSU, or its designee, shall prepare a Traffic Calming Study to determine the methods available to control and/or reduce vehicle speeds on residential roadways in the Del Cerro community.

The Traffic Calming Study shall focus on the vicinity of the two elementary schools located near the intersection of Del Cerro Boulevard and College Avenue – Phoebe Hearst Elementary School and the Temple Emanuel school, and shall consider all appropriate traffic calming strategies, including those identified in the *City of San Diego Street Design Manual* (November 2002). Following completion of the study, SDSU shall contribute its fair-share of the costs to implement feasible traffic calming measures identified in the study based on the percentage of Adobe Falls Faculty/Staff Housing generated average daily trips ("ADT") relative to the community total ADT.

TCP-24 Adobe Falls Faculty/Staff Housing Shuttle. Following occupancy of the Adobe Falls Faculty / Staff Housing Lower Village, and every six months

thereafter, SDSU, or its designee, shall conduct traffic counts on Adobe Falls Road, Mill Peak Road, Capri Drive, Arno Drive, and Genoa Drive, to determine existing roadway average daily trips ("ADT"). At such time as the ADT generated by the Adobe Falls Faculty/Staff Housing Upper and Lower Villages reaches 80% of the total ADT forecast in this EIR, SDSU shall institute regular shuttle service to the community to ensure project-generated ADT do not exceed the levels forecast in this EIR.

Construction-Related Impacts

- TCP-25** J-1. Construction-Related Impacts. Prior to the commencement of construction activities associated with the proposed project, SDSU shall work with the City of San Diego to prepare a Traffic Control Plan ("TCP") to minimize the impacts to the surrounding roadways that may result during project construction activities. Special attention shall be paid to Alvarado Road and the potential effect of construction related traffic on Alvarado Hospital emergency access. The TCP shall require that a minimum of one lane of travel on Alvarado Road remain open at all times during project construction; that flagmen be utilized to assist in the direction of traffic when necessary; that area emergency response providers be given notice of road closures; and that construction activities, including road closures and the movement of heavy equipment, occur during off-peak periods to the maximum extent feasible.
- TCP-26** During project-specific review of the Adobe Falls Faculty/Staff Housing Lower Village, SDSU, or its designee, shall conduct a peak-hour intersection analysis of the project's impacts on the Adobe Falls Road/Waring Road intersection.

3.14.13.3 Mitigation Measure Fair-Share Contributions

Table 3.14-36, Mitigation Fair-Share Contribution - Near-Term Impacts, and Table 3.14-37, Mitigation Fair-Share Contribution - Horizon Year Impacts, depict the proposed project fair share percentages for each of the roadway improvement mitigation measures listed above. The percentages shown have been calculated according to the following formula used by the City of San Diego:

Near-Term Impact Fair Share =

(Near-Term Project Traffic Volumes) / (Horizon Year With Project – Existing Traffic Volumes)

Horizon Year Impact Fair Share =

(Horizon Year Project Traffic Volumes) / (Horizon Year With Project – Existing Traffic Volumes)

The fair share contribution calculations for each impacted location listed below can be found in **EIR Appendix N, Appendix Q.**

Table 3.14-36
Mitigation Fair-Share Contributions
Near-Term Impacts

Mitigation Measure Number	Impacted Locations	Fair Share Percentage
A-1	College Avenue / Del Cerro Boulevard intersection	5%
A-2	College Avenue / I-8 EB Ramps intersection	4%
A-3	College Avenue / Canyon Crest Drive intersection	6%
A-4	College Avenue / Zura Way intersection	3%
A-5	College Avenue / Montezuma Road intersection	2%
A-6	I-8 WB Ramps/ Parkway Drive intersection	2%
B-1	Alvarado Road: E. Campus Drive to Reservoir Drive	3%
B-2	Alvarado Road: Reservoir Drive to 70 th Street	3%
B-3	College Avenue: I-8 EB Ramps to Zura Way	4%
C-1	Northbound College Avenue to Eastbound I-8	3%

Table 3.14-37
Mitigation Fair-Share Contributions
Horizon Year Impacts

Mitigation Measure Number	Impacted Locations	Fair Share Percentage
E-1	I-8 WB Off Ramp/ Fairmount Avenue intersection	1%
E-2	55 th Street / Montezuma Road intersection	12%
E-3	Campanile Drive / Montezuma Road intersection	8%
E-4	College Avenue / Del Cerro Boulevard intersection	17%
E-5	College Avenue / I-8 WB Ramps intersection	19%
E-6	College Avenue / I-8 EB Ramps intersection	16%
E-7	College Avenue / Canyon Crest Drive intersection	23%
E-8	College Avenue / Zura Way intersection	16%
E-9	College Avenue / Montezuma Road intersection	11%
E-10	Alvarado Court / Alvarado Road intersection	31%
E-11	Reservoir Drive / Alvarado Road intersection	21%
E-12	Lake Murray Boulevard / Parkway Drive intersection	8%
E-13	70 th Street / Alvarado Road intersection	5%
E-14	I-8 WB Ramps / Parkway Drive intersection	11%
E-15	I-8 EB Ramps / Alvarado Road intersection	4%
F-1	Alvarado Road: E. Campus Drive to Reservoir Drive	39%
F-2	Alvarado Road: Reservoir Drive to 70 th Street	24%
	College Avenue: Del Cerro Boulevard to I-8 Eastbound Ramps	9%
F-4	College Avenue: I-8 Eastbound Ramps to Zura Way	18%
F-5	College Avenue: Zura Way to Montezuma Road	13%
F-6	College Avenue: South of Montezuma Road	17%
F-7	Montezuma Road: Fairmount Avenue to Collwood Boulevard	15%
F-8	Montezuma Road: 55 th Street to College Avenue	15%
G-1	Northbound College Avenue to eastbound I-8	12%

3.14.13.4 Post-Mitigation Operations

Table 3.14-38, Mitigated Near-Term Intersection Calculations, and Table 3.14-39, Mitigated Near-Term Segment Operations, depict the levels of service at the intersections and roadway segments significantly impacted by the near-term 2012 project following implementation of the proposed roadway improvement mitigation measures.

Table 3.14-40, Mitigated Horizon Year Intersection Operations, and Table 3.14-41, Mitigated Horizon Year Segment Operations, depict the levels of service at the intersections and roadway segments significantly impacted by the project at full buildout following implementation of the proposed roadway improvement mitigation measures. The mitigation analysis worksheets for each of the tables are provided in **EIR Appendix N, Appendix R.**

The tables show that with implementation of the proposed mitigation measures, all identified significant impacts would be mitigated to below a level of significance except for the impacts to the College Avenue / I-8 interchange, Montezuma Road (between Fairmount Avenue to Collwood Blvd), Alvarado Road (between E. Campus Drive to 70th Street) and I-8 (between Fairmount Avenue to Fletcher Parkway). Impacts to these locations would remain significant and unavoidable.

**Table 3.14-38
Mitigated Near-Term Intersection Calculations**

Intersection	Control Type	Peak Hour	Near-Term without Project		Near-Term with Project			With Mitigation	
			Delay ^a	LOS ^b	Delay	LOS	Δ ^d	Delay	LOS
College Ave / Del Cerro Blvd	Signal	AM	75.4	E	79.2	E	3.8	64.4	E
College Ave / I-8 EB Ramps	Signal	AM	68.9	E	72.7	E	3.8	26.8	C
College Ave / Canyon Crest Dr	Signal	AM	80.8	F	83.7	F	2.9	39.1	D
		PM	>120	F	>120	F	>2.0	70.5	E
College Ave / Zura Way	TWSC ^c	PM	>120	F	>120	F	>2.0	22.6	C
College Ave / Montezuma Rd	Signal	AM	104.8	F	108.0	F	3.2	61.7	E
		PM	98.4	F	100.2	F	1.2	94.1	F
I-8 WB Ramps / Parkway Dr	Signal	PM	46.1	E	49.7	E	3.0	20.9	C

Notes:

a. Average delay expressed in seconds per vehicle.

b. Level of Service.

c. TWSC – Two-Way Stop Controlled intersection. Minor street approach delay is reported.

d. Δ denotes project induced delay increase.

General Notes:

Bold and shading represents a significant impact

SIGNALIZED		UNSIGNALIZED	
DELAY/LOS THRESHOLDS		DELAY/LOS THRESHOLDS	
Delay	LOS	Delay	LOS
0.0 < 10.0	A	0.0 < 10.0	A
10.1 to 20.0	B	10.1 to 15.0	B
20.1 to 35.0	C	15.1 to 25.0	C
35.1 to 55.0	D	25.1 to 35.0	D
55.1 to 80.0	E	35.1 to 50.0	E
> 80.1	F	> 50.1	F

**Table 3.14-39
Mitigated Near-Term Segment Operations**

Segment	LOS E Capacity ^a	Near-Term without Project			Near-Term with Project			V/C ^d	Mitigated LOS E Capacity ^a	With Mitigation		
		Volume	LOS ^b	V/C ^c	Volume	LOS ^b	V/C ^c			Volume	LOS	V/C
Alvarado Road												
E. Campus Dr to Reservoir Dr	10,000	9,220	E	0.92	9,490	E	0.95	0.03	15,000	9,900	C	0.63
Reservoir Dr to 70th St	10,000	11,040	F	1.10	11,310	F	1.13	0.03	15,000	11,720	D	0.75
College Avenue												
I-8 EB Ramps to Zura Way	40,000	45,800	F	1.15	47,260	F	1.18	0.03	50,000	47,260	E	0.94

Notes:

- a. Capacities based on City of San Diego's Roadway Classification & LOS table.
- b. Average Daily Traffic
- c. Volume to Capacity ratio

Table 17-3.14-40

Mitigated Horizon Year Intersection Operations

Intersection	Control Type	Peak Hour	Horizon Year without Project		Horizon Year with Project			With Mitigation	
			Delay	LOS	Delay	LOS	D ^c	Delay	LOS
Fairmount Ave / I-8 WB Off Ramp / Camino del Rio N	Signal	AM	92.6	F	96.1	F	3.5	70.0	E
		PM	286.7	F	287.5	F	0.8	218.8	F
55th Street / Montezuma Rd	Signal	AM	>120	F	>120	F	>2.0	106.9	F
		PM	56.9	E	66.7	E	9.8	50.4	D
Campanile Dr / Montezuma Rd	Signal	AM	84.0	F	90.0	F	6.0	65.7	E
		PM	101.3	F	105.8	F	4.5	74.5	E
College Ave / Del Cerro Blvd	Signal	AM	137.3	F	>120	F	>2.0	131.2	F
		PM	63.1	E	69.6	E	6.5	61.3	E
College Ave / I-8 WB Ramps	Signal	PM	51.8	D	65.0	E	13.2	64.3	E
College Ave / I-8 EB Ramps	Signal	AM	>120	F	>120	F	>2.0	149.2	F
		PM	109.9	F	>120	F	>2.0	44.3	D
College Ave / Canyon Crest Dr	Signal	AM	>120	F	>120	F	>2.0	110.8	F
		PM	>120	F	>120	F	>2.0	>120	F
College Ave / Zura Way	TWSC ^c	AM	57.6	E	117.2	F	59.6	38.3	D
		PM	>120	F	>120	F	>2.0	65.2	E
College Ave / Montezuma Rd	Signal	AM	>120	F	>120	F	>2.0	102.9	F
		PM	>120	F	>120	F	>2.0	86.5	F
Alvarado Ct / Alvarado Rd	TWSC ^c	AM	54.1	F	>120	F	>2.0	16.2	B
		PM	35.4	D	>120	F	>2.0	26.8	C

Table 17-3.14-40
Mitigated Horizon Year Intersection Operations

Intersection	Control Type	Peak Hour	Horizon Year without Project		Horizon Year with Project			With Mitigation	
			Delay	LOS	Delay	LOS	Δ^e	Delay	LOS
Reservoir Dr / Alvarado Rd	Signal	PM	36.5	D	96.1	F	3.5	24.7	C
Lake Murray Blvd / Wisconsin Ave	Signal	AM	>120	F	90.5	F	17.8	30.9	C
		PM	86.0	F	71.6	E	5.8	29.2	C
70th Street / Alvarado Rd	Signal	AM	81.1	F	92.7	F	11.6	63.7	E
		PM	119.3	F	>120	F	>2.0	96.1	F
I-8 WB Ramps / Parkway Dr	AWSC ^d	AM	61.3	F	80.5	F	19.2	49.8	D
		PM	>120	F	>120	F	>2.0	32.5	C
I-8 EB Ramps / Alvarado Rd	Signal	PM	101.4	F	105.1	F	3.7	81.1	F

Notes:

- a. Average delay expressed in seconds per vehicle.
- b. Level of Service.
- c. TWSC – Two-Way Stop Controlled intersection. Minor street approach delay is reported.
- d. AWSC – All-Way Stop Controlled intersection.
- e. Δ denotes project induced delay increase.

General Notes:

Bold and shading represents a potential significant impact

SIGNALIZED		UNSIGNALIZED	
DELAY/LOS THRESHOLDS		DELAY/LOS THRESHOLDS	
Delay	LOS	Delay	LOS
0.0 < 10.0	A	0.0 < 10.0	A
10.1 to 20.0	B	10.1 to 15.0	B
20.1 to 35.0	C	15.1 to 25.0	C
35.1 to 55.0	D	25.1 to 35.0	D
55.1 to 80.0	E	35.1 to 50.0	E
> 80.1	F	> 50.1	F

**Table 3.14-41
Mitigated Horizon Year Segment Operations**

Segment	LOS E Capacity ^a	Horizon Year without Project			Horizon Year with Project			V/C ^d	Mitigated LOS E Capacity ^a	With Mitigation		
		Volume	LOS ^b	V/C ^c	Volume	LOS ^b	V/C ^c			Volume	LOS	V/C
Alvarado Road												
E. Campus Dr to Reservoir Dr	10,000	13,950	F	1.40	17,510	F	1.75	0.35	15,000 ^d	17,510	F	1.16
Reservoir Dr to 70th St	10,000	16,450	F	1.65	18,520	F	1.85	0.20	15,000 ^d	18,520	F	1.23
College Avenue												
Del Cerro Blvd to I-8 EB Ramps	40,000	52,800	F	1.32	54,970	F	1.37	0.05	^e	54,970	NA	NA
I-8 EB Ramps to Zura Way	40,000	69,570	F	1.74	76,140	F	1.90	0.16	50,000	76,140	F	1.52
Zura Way to Montezuma Rd	40,000	53,200	F	1.33	56,040	F	1.40	0.07	50,000	56,040	F	1.12
South of Montezuma Rd	30,000	38,490	F	1.28	40,200	F	1.34	0.06	50,000	40,200	D	0.80
Montezuma Road												
Fairmount Ave to Collwood Blvd	40,000	57,000	F	1.43	58,280	F	1.46	0.03	40,000 ^d	58,280	F	1.45
55th St to College Ave	30,000	33,430	F	1.11	35,010	F	1.17	0.06	40,000	35,010	E	0.87

Notes:

- Capacities based on City of San Diego's Roadway Classification & LOS table.
- Average Daily Traffic
- Volume to Capacity ratio
- It is not feasible to fully mitigate this impact; therefore, this segment is considered unmitigated.
- The additional capacity at the College Ave/Del Cerro Blvd intersection and the additional northbound through lane on College Avenue mitigates this segment impact.

NA = Not Applicable.

3.14.14 LEVEL OF SIGNIFICANCE AFTER MITIGATION

With implementation of the proposed mitigation measures, all identified significant impacts would be mitigated to below a level of significance except for the impacts to the College Avenue / I-8 Interchange, Montezuma Road (between Fairmount Avenue to Collwood Blvd), Alvarado Road (between E. Campus Drive to 70th Street), and I-8 (between Fairmount Avenue to Fletcher Parkway). Impacts to these locations would remain significant and unavoidable.

The above identified significant and unavoidable impacts would occur whether or not the university obtains fair-share funding from the California Legislature pursuant to *City of Marina v. Board of Trustees of The California State University* (2006) 39 Cal.4th 341.

As discussed throughout this section, the proposed project would result in significant impacts at various intersections, freeway interchanges and mainline segments within the project study area. Fair-share mitigation is recommended that would reduce the identified impacts to a level below significant. However, the university's fair-share funding commitment is necessarily conditioned up requesting and obtaining funds from the California Legislature. If the Legislature does not provide funding, or if funding is significantly delayed, all identified significant impacts would remain significant and unavoidable.