TRAFFIC STUDY

For

Beauvais Tentative Map
(TM 5315RPL, ER 03-02-035)

Prepared For: The County of San Diego

Submitted To:
Stone Summit, LLC
3940 Hortensia Street
San Diego, CA 92110

Prepared By:
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REGISTERED PROFESSIONAL ENGINEER
BILL E. DARNELL
No. 22338
Expires 9/30/09
CIVIL
STATE OF CALIFORNIA

Signature: Bill E Darnell
Date Signed: 11/26/08

Revised: November 25, 2008
Revised: April 10, 2007
Revised: February 10, 2005
Revised: December 17, 2003
Original: August 20, 2003

SDC DPLU RCVD 01/27/2010
TM5315RPL5

D & A Ref. No.: 030705

Darnell & ASSOCIATES, INC.

TRANSPORTATION PLANNING & TRAFFIC ENGINEERING

November 25, 2008

Jerry Gaughan
Stone Summit, LLC
3940 Hortensia Street
San Diego, CA 92110

D&A Ref. No.: 030705

Subject: Traffic Study for the Proposed Beauvais Tentative Map (TM 5315 RPL, ER 03-02-035), a Residential Subdivision Located on 23.2 Acres off Old Castle Road just west of Lilac Road in the Valley Center Area of San Diego County.

Dear Mr. Gaughan:

In accordance with your authorization, Darnell & Associates, Inc. (D&A) has revised our April 10, 2007 traffic study for the proposed Beauvais Tentative Map (TM 5315 RPL, ER 03-02-035) to respond to The County's October 8, 2008 comment letter. A copy of our written responses to each of the County's comments is provided directly behind this letter and in Appendix K. This traffic study has been prepared to assess the direct and cumulative impacts associated with the proposed project. This study analyzes the following traffic scenarios: existing, existing plus project, cumulative without project, and cumulative with project.

If you have any questions, please feel free to contact the office.

Sincerely,

DARNELL & ASSOCIATES, INC.

REGISTERED PROFESSIONAL ENGINEER
BILL E. DARNELL
No. 22338
Expires 9/30/09
CIVIL
STATE OF CALIFORNIA

Shawn Macias
Assistant Transportation Planner

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Date Signed: 11/26/08

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030705-Beauvais TM-RPT(11-25-08)/11-08

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Darnell & ASSOCIATES, INC.

TRANSPORTATION PLANNING & TRAFFIC ENGINEERING

MEMORANDUM

DATE: November 25, 2008

TO: Jerry Gaughan, Valley Center View Properties E-Mail: jerrygaughan@msn.com

FROM: Bill E. Darnell Bill E Darnell

D&A Ref. No: 030705

RE: Beauvais Major Subdivision; TM 5315; ER 03-02-035; Fifth Iteration Review of Initial Studies/Information

Darnell & Associates, Inc. (D&A) has reviewed the County of San Diego's October 8, 2008 comments on our April 10, 2007 Traffic Study for Beauvais Tentative Map (TM 5315; ER 03-02-035). The following summarizes our responses to each of the traffic related comments. These responses have been incorporated into our November 2008 iteration of the Traffic Study for the Beauvais Tentative Map.

Comment 1: *Figure 5 should update the projects trip distribution percentages for road segments and intersections up to 2008 or state that these percentages are currently valid.*

Response 1: In Figure 5, the project's trip distribution percentages for roadway segments and intersections are currently valid.

Comment 2: *The addendum should provide an assessment of cumulative traffic impacts of the proposed project assuming the inclusion of the Merriam Mountains/Stonegate Project.*

Response 2: The project's cumulative traffic impacts include the Merriam Mountains/Stonegate Project.

Comment 3: *The addendum should note that the 1-15/Gopher Canyon Road interchange was added to the TIF program as part of the January 2008 update.*

Response 3: The study was updated to reflect the addition of the 1-15/Gopher Canyon Road interchange to the County's Traffic Impact Fee (TIF) Program.

Comment 4: *In the Projects TIF calculation estimate, the traffic study has applied (Pg. 32) a pass-by trip reduction to the project's proposed residential uses. The trip generation estimate and TIF calculation estimate shall be revised to be based on TIF program update of January 2008.*

Response 4: The project's TIF calculation estimate had been recalculated to reflect the County TIF Program update in January 2008. The new Traffic Impact Fee estimate for the project is $59,857.

TRAFFIC STUDY

FOR

BEAUVAIS TENTATIVE MAP
(TM 5315 RPL, ER 03-02-035)

IN THE
COUNTY OF SAN DIEGO

Submitted To:

Stone Summit, LLC
3940 Hortensia Street
San Diego, CA 92110

Submitted By:

Darnell & Associates, Inc.
1446 Front Street, Third Floor
San Diego, CA 92101
619-233-9373

November 25, 2008
030705-Beauvais TM-RPT(11-25-08)/11-08

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EXECUTIVE SUMMARY

The developer proposes to subdivide a 23.2-acre lot into 7 residential lots. The site is located on the south side of Old Castle Road, west of Lilac Road in the Valley Center area of San Diego County.

As this report will show, the proposed project is estimated to generate 84 average daily trips, 7 AM peak hour trips, and 8 PM peak hour trips.

The proposed project will not have a significant direct impact on any of the key roadway segments or intersections analyzed within this report. The proposed project, however, will be part of a cumulative impact along the following roadway segments:

1) Gopher Canyon Road from Holly Hill Road to Interstate 15;
2) Champagne Boulevard from Gopher Canyon Road to Old Castle Road;
3) Lilac Road from Old Castle Road to Valley Center Road; and
4) Valley Center Road from Miller Road to Woods Valley Road.

The proposed project will also be part of a cumulative impact at the following intersections:

1) Gopher Canyon Road/I-15 Southbound Ramps;
2) Gopher Canyon Road/I-15 Northbound Ramps;
3) Old Castle Road/Lilac Road; and
4) Lilac Road/Valley Center Road.

See Section VI of this report for a description of the measures the developer will take to mitigate its cumulative impacts.

SECTION I – INTRODUCTION

PROJECT DESCRIPTION

The developer proposes to subdivide a 23.2-acre lot into 7 residential lots. The site is located on the south side of Old Castle Road, west of Lilac Road in the Valley Center area of San Diego County. Figure 1 shows the regional location of the project and Figure 2 shows the proposed site plan.

CONGESTION MANAGEMENT PROGRAM

Based on the approval of Proposition 111 in 1990, regulations require the preparation, implementation, and annual updating of a Congestion Management Program (CMP) in each of California's urbanized counties. The original CMP for the San Diego region was adopted in 1991 and has been updated periodically as an element of the Regional Transportation Plan (RTP). One required element of the CMP is a process to evaluate the transportation and traffic impacts of large projects on the regional transportation system. That process is undertaken by local agencies, project applicants, and traffic consultants through a transportation impact report usually conducted as part of the CEQA project review process. Authority for local land use decisions including project approvals and any required mitigation remains the responsibility of local jurisdictions.

The criteria for which a project is subject to the regulations as set forth in the CMP are determined by the trip generation potential for the project. Currently, the threshold is 2,400 average daily trips (ADT) or 200 peak hour trips. The proposed project will generate 84 average daily trips, 7 AM peak hour trips, and 8 PM peak hour trips (see Section III), and is therefore, not subject to CMP guidelines for traffic impact studies.

SCENARIOS STUDIED

The traffic scenarios analyzed in this report are identified as follows:

Existing (2007) Conditions refers to that condition which exists on the ground today (2007), including existing traffic and existing lane configurations at intersections and roadway segments.

Existing (2007) Plus Project Conditions refers to that condition which includes the project traffic added onto existing volumes.

Cumulative (2010) Without Project Conditions refers to that condition which includes approved/pending projects in the study area plus the existing traffic volumes with the addition of three years of ambient growth (since three years of growth were added onto the existing 2007 traffic volumes, the cumulative conditions are approximately representative of the traffic that is expected to exist by the year 2010). This scenario shows the impact without the project.

Cumulative (2010) With Project Conditions refers to that condition which includes approved/pending projects in the sphere of influence of the study area plus the project traffic plus the existing traffic volumes with the addition of three years of ambient growth (since three years of growth were added onto the existing 2007 traffic volumes, the cumulative conditions are approximately representative of the traffic that is expected to exist by the year 2010). This scenario shows the impact with the project.

LEVEL OF SERVICE

Level of Service (LOS) is a professional industry standard by which the operating conditions of a given roadway segment or intersection are measured. Level of Service is defined on a scale of A to F; where LOS 'A' represents the best operating conditions and LOS 'F' represents the worst operating conditions. LOS 'A' facilities are characterized as having free flowing traffic conditions with no restrictions on maneuvering or operating speeds; traffic volumes are low and travel speeds are high. LOS 'F' facilities are characterized as having forced flow with many stoppages and low operating speeds. The average daily traffic volumes (ADT) and delay ranges that are equivalent to each level of service are shown in Table 1.

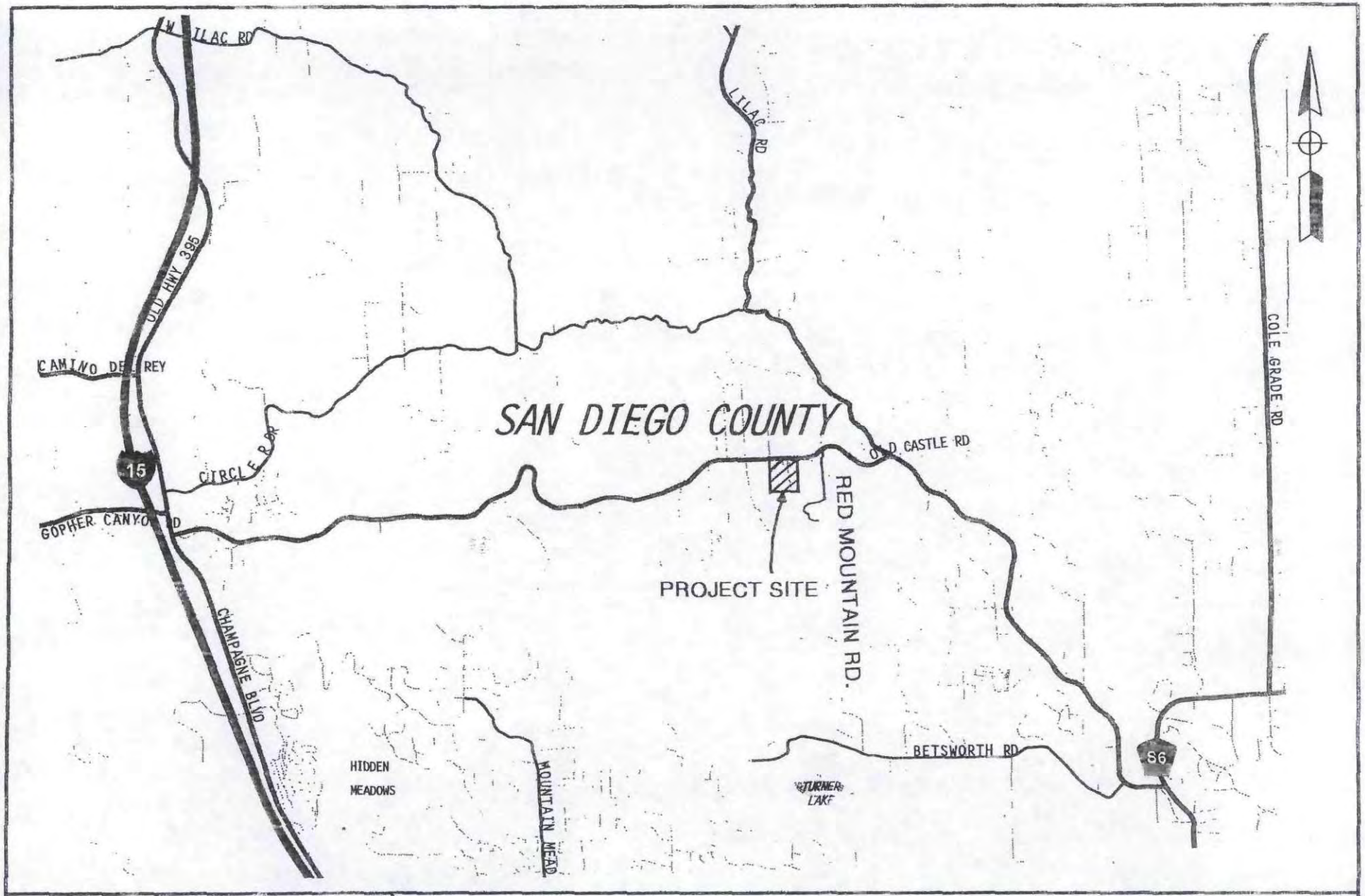

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FIGURE 1

VICINITY MAP

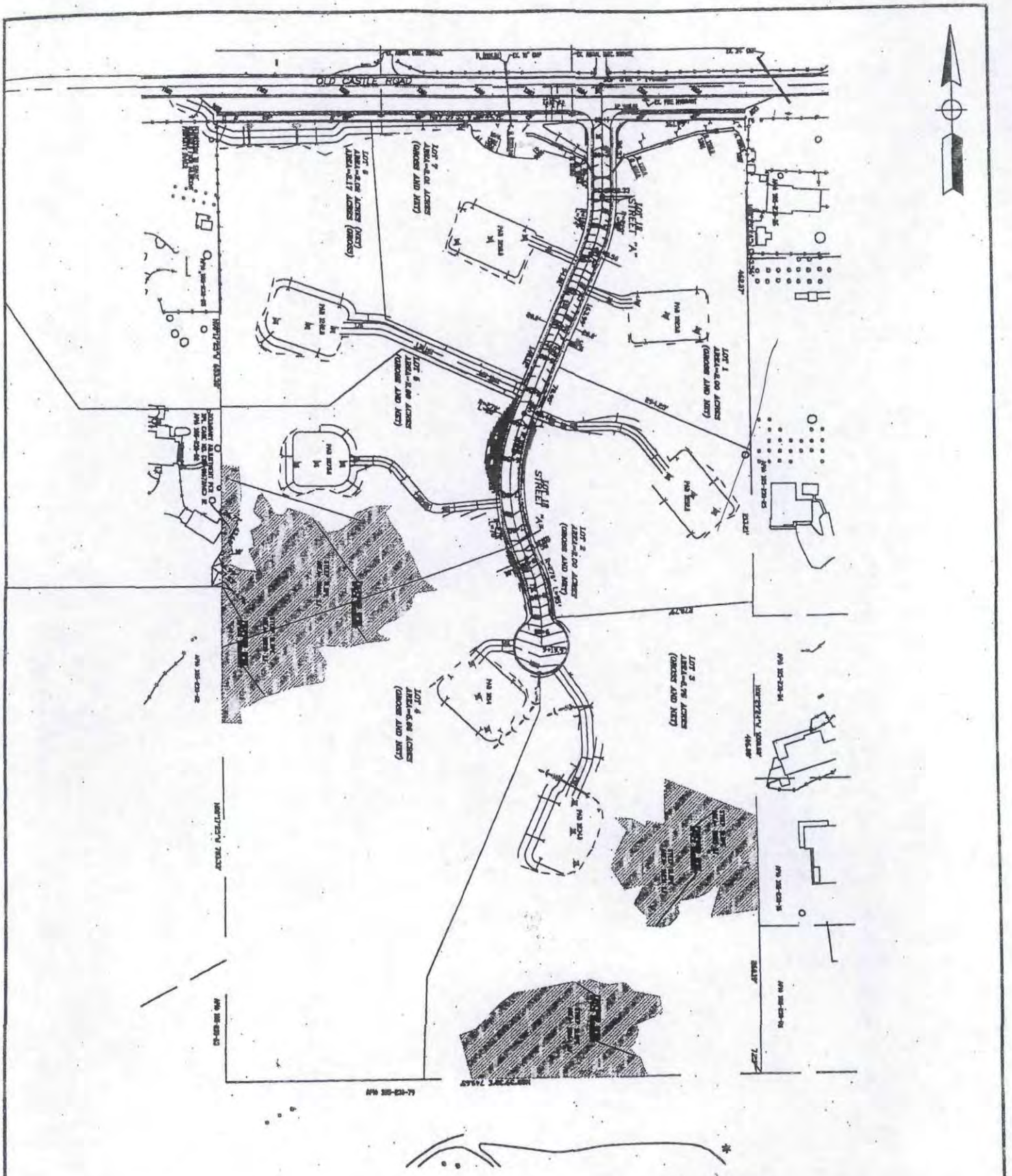

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FIGURE 2

SITE MAP

Table 1 - Level of Service Ranges			
Level of Service	Intersections		Roadway Segments
	Signalized- Delay (Seconds/Vehicle)[1]	Unsignalized Delay (Seconds/Vehicle)[1]	Average Daily Traffic (ADT)[2]
A	Less than or Equal to 10.0	Less than or Equal to 10.0	Less Than 1,900
B	10.1 to 20.0	10.1 to 15.0	1,900 to 4,100
C	20.1 to 35.0	15.1 to 25.0	4,100 to 7,100
D	35.1 to 55.0	25.1 to 35.0	7,100 to 10,900
E	55.1 to 80.0	35.1 to 50.0	10,900 to 16,200
F	Greater Than 80.0	Greater Than 50.1	Greater Than 16,200

[1] The delay ranges shown are based on the 2000 Highway Capacity Manual (HCM)
[2] The volume ranges are based on the County of San Diego Circulation Element of a Light Collector, the average daily volume ranges for the other roadway classifications has been provided in Appendix A.

According to pages XII-4-16 and XII-4-17 of the San Diego County General Plan Public Facility Element a LOS 'C', which allows for stable traffic flow with room to maneuver, is a generally accepted level to strive for in new development. However, there are some cases where development cannot achieve a LOS 'C' on off-site roadways. For instance, there are areas where the existing development pattern precludes the addition of lanes or other mitigation or when the community is opposed to certain improvements to maintain a LOS 'C'. Additionally, there are existing roadways in the County that are currently operating below a LOS 'C'. In these cases a Level of Service 'D' is acceptable on off-site roadways." A copy of excerpts from the County's Public Facility Element can be found in Appendix A.

ANALYSIS METHODOLOGY

The roadway segment daily LOS was determined by comparing the traffic volumes under each traffic scenario to the capacity of the roadway according to its roadway cross-section and classification. For the purpose of this report, the daily traffic volumes of the roadway segments in the vicinity of the project were compared to the County of San Diego Level of Service classification thresholds. The daily (24 hour) traffic count sheets and a copy of the "Summary of County of San Diego Public Road Standards" are included in Appendix A.

The Synchro Software, version 6.0, was utilized to analyze the morning and afternoon peak hour conditions of the intersections in the project vicinity. It should be noted that Synchro, version 6.0, is based on the methodologies outlined in the 2000 Highway Capacity Manual (HCM).

The signalized intersection methodology defines LOS based on delay using variables such as lane configuration, traffic volumes, and signal timings. The unsignalized intersection methodology defines LOS based on the longest delay experienced by any single movement.

To comply with Caltrans District 11 procedures, the Intersecting Lane Vehicle (ILV) methodology was utilized to analyze the intersections under Caltrans jurisdiction (the Gopher Canyon Road/I-15 Southbound and Northbound Ramp intersections). The ILV analysis is only applicable for signalized intersections. Under existing conditions the Gopher Canyon Road/I-15 Southbound and Northbound Ramp intersections are stop controlled. However, signalization is proposed to mitigate the existing failing condition. Hence ILV analysis was performed for mitigated conditions under cumulative with project conditions. The ILV method determines the operating condition of an intersection based upon the number of intersecting vehicles that enter the intersection per lane during the hour (ILV/hr). Where less than 1200 ILV/hr represents stable flow, 1200 to 1500 ILV/hr represents unstable flow with considerable delays possible, and 1500 ILV/hr represents capacity, or stop-and-go operation with severe delay and heavy congestion.

REPORT ORGANIZATION

Following this section, Section II evaluates the existing roadway characteristics and traffic conditions surrounding the project area. Section III examines the project trip generation and distribution assumptions. Section IV analyzes the traffic for existing plus project and cumulative conditions with and without the proposed project. Section V addresses project access and on-site circulation. Section VI provides recommended mitigation measures and Section VII summarizes the report's findings and conclusions.

SECTION II - EXISTING CONDITIONS

This section of the traffic study is intended to assess the existing conditions of the roadways and intersections within the vicinity of the project to determine travel flow and/or delay difficulties, if any, that exist prior to adding the traffic generated by the proposed project. The existing conditions analysis establishes a base condition which is used to assess the other scenarios discussed in this report.

Darnell & Associates, Inc. (D&A) conducted a field review of the area surrounding the project in November 2004, November 2007, and July 2008. The existing roadway geometrics are illustrated in Figure 3.

EXISTING ROADWAY CHARACTERISTICS

The key segments analyzed in the study area are identified below:

Interstate 15 (I-15) is a north/south (8)-lane freeway extending from Interstate 5 in Chula Vista through San Diego County and into Riverside County. The posted speed limit along I-15 is 65 miles per hour south of the Deer Springs Road interchange and is 70 miles per hour north of the Deer Spring Road interchange. I-15 serves the site via the Gopher Canyon Road interchange. The Gopher Canyon Road interchange is the standard diamond design and the ramps are currently stop sign-controlled.

Old Highway 395 between Gopher Canyon Road and Circle R Drive is a north/south two (2)-lane undivided circulation element roadway with bike lanes on both sides. The current cross-section of Old Highway 395 is equivalent to a Light Collector with a capacity of 10,900 ADT at LOS 'D'. The ultimate Circulation Element Classification of Old Highway 395 is a four (4)-lane Collector with bike lanes and a capacity of 30,800 ADT at LOS 'D'.

The General Plan Update proposed circulation element network classifies the segments of Old Highway 395 north of Old Castle Road to I-15 as a 4.1B-Major Road with intermittent turn lanes which is a four-lane undivided roadway with 84 to 98 feet of right-of-way (ROW), and a capacity of 30,800 ADT at LOS 'D'.

Champagne Boulevard between Gopher Canyon Road and Old Castle Road is a north/south two (2)-lane undivided circulation element roadway with bike lanes on both sides. There is a posted speed limit of 55 mph along Champagne Boulevard just south of Old Castle Road. The current cross-section of Champagne Boulevard is equivalent to a Light Collector with a capacity of 10,900 ADT at LOS 'D'. The ultimate Circulation Element Classification of Champagne Boulevard is a four (4)-lane Collector with bike lanes and a capacity of 30,800 ADT at LOS "D".

The General Plan Update proposed circulation element network classifies the segments of Champagne Boulevard from Old Castle Road to Mountain Meadow Road as a 4.1B - Major Road with intermittent turn lanes which is a four-lane undivided roadway with 84 to 98 feet of ROW, and a capacity of 30,800 ADT at LOS "D".

Gopher Canyon Road (SF 1415) west of I-15 is an east/west two (2)-lane undivided circulation element roadway with a current capacity equivalent to that of a Light Collector, 10,900 ADT at LOS "D". The posted speed limit on Gopher Canyon Road west of I-15 is 50 mph. Between the I-15 southbound ramps and Champagne Boulevard, Gopher Canyon Road is a four (4)-lane divided circulation element roadway with a current capacity equivalent to that of a Collector, 30,800 ADT at LOS "D". On the segment between the I-15 northbound ramps and Champagne Boulevard, the four (4) lanes consist of two (2) westbound through lanes, one (1) eastbound left turn lane, and one (1) eastbound right turn lane. The ultimate Circulation Element Classification of Gopher Canyon Road is a four (4)-lane Collector Road with bike lanes and a capacity of 30,800 ADT at LOS "D".

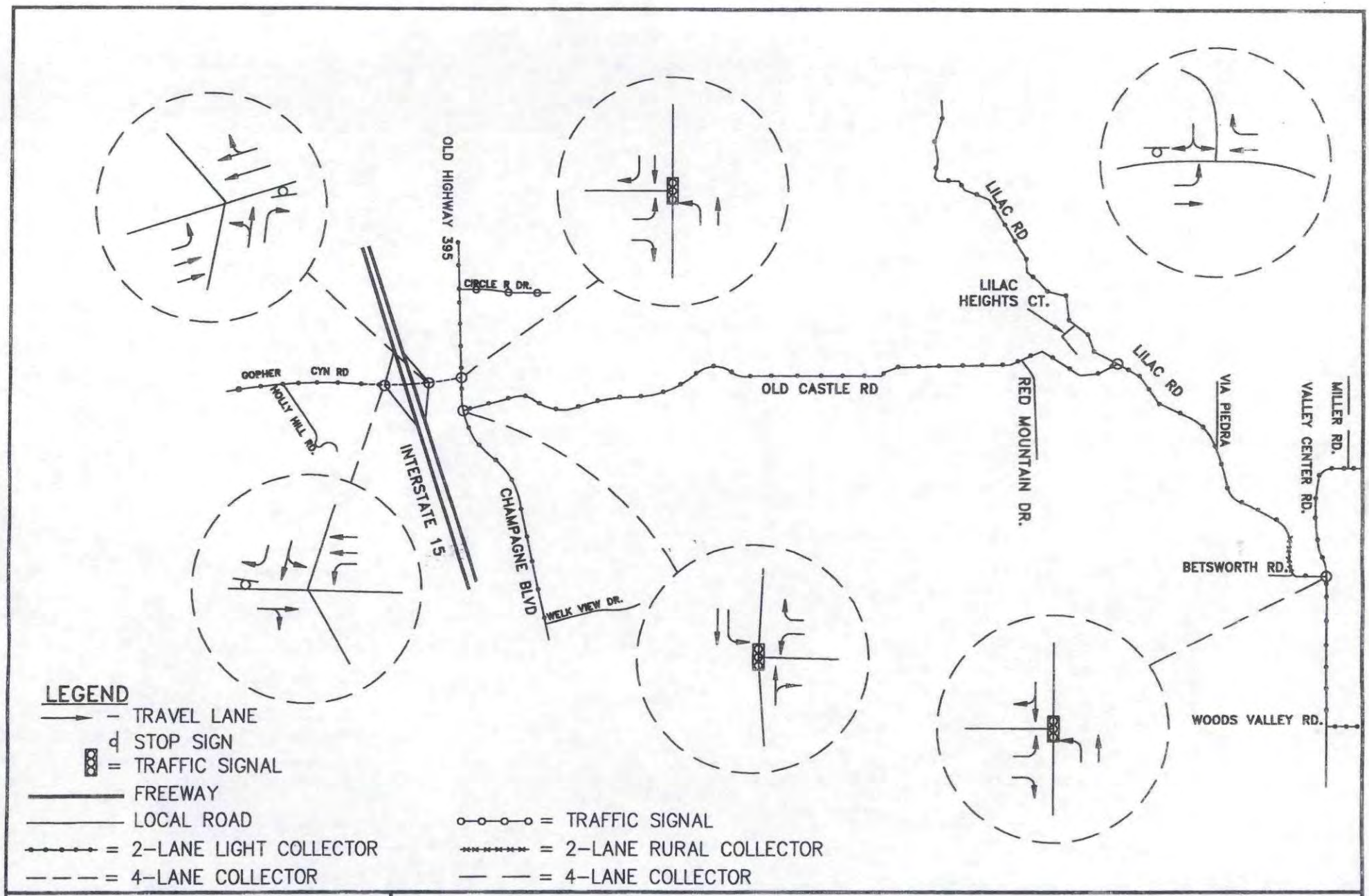

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FIGURE 3

EXISTING CONDITIONS

The General Plan Update proposed circulation element network classifies Gopher Canyon Road as a 4.1B-Major Road with intermittent turn lanes which is a four-lane undivided roadway with 84 to 98 feet of ROW, and a capacity of 30,800 ADT at LOS "D".

Old Castle Road (SF 1415) extends from Champagne Boulevard to Lilac Road as a two (2)-lane undivided circulation element roadway with no parking and no bike lanes and a posted speed limit of 50 mph. The current capacity of Old Castle Road is equivalent to that of a Light Collector, 10,900 ADT at LOS "D". The ultimate Circulation Element Classification of Old Castle Road is a four (4)-lane Collector with bike lanes and a capacity of 30,800 ADT at LOS 'D'.

The General Plan Update proposed circulation element network classifies Old Castle Road as a 2.2D Light Collector which is a two-lane undivided roadway with a wider right-of-way (88 feet) for optional passing lanes. This classification accommodates turn lanes at intersections and has a capacity of 13,500 ADT at LOS "D".

Lilac Road (SA 110 & SF 1415) is generally constructed from north of Old Castle Road to Valley Center Road as a two (2)-lane undivided circulation element roadway with a posted speed limit of 55 mph. Lilac Road widens between Blueberry Hill Lane and Betsworth Road to provide a two-way center left turn lanes. (Blueberry Hill Lane is located approximately 680 feet north of Betsworth Road.) Bike lanes are provided on the north and south sides of Lilac Road. The existing capacity of Lilac Road is equivalent to that of a Light Collector, 10,900 ADT at LOS "D". From State Highway 76 to Old Castle Road, Lilac Road (SA 110) has the ultimate Circulation Element Classification of a Light Collector with bike lanes and a capacity of 10,900 ADT at LOS "D". Between Old Castle Road and Valley Center Road, Lilac Road (SF 1415) has the ultimate Circulation Element Classification of a four (4)-lane Collector with bike lanes and a capacity of 30,800 ADT at LOS "D".

The General Plan Update proposed circulation element network classifies the segment of Lilac Road north of Old Castle Road as a 2.2E-Light Collector which is a two-lane undivided roadway with a ROW of 64 feet and a capacity of 10,900 ADT at LOS "D".

Between Lilac Road and Anthony Road, Lilac Road has a General Plan Update proposed classification of a 2.1D Community Collector, which is a two-lane undivided roadway with 84 feet of ROW for optional or periodic passing lanes. This classification has a capacity of 13,500 ADT at LOS "D".

Between Anthony Road and Betsworth Road, Lilac Road is classified in the General Plan Update roadway network as a 4.1B-Major Road with intermittent turn lanes which is a four-lane undivided roadway with 84 to 98 feet of ROW, and a capacity of 30,800 ADT at LOS "D".

Between Betsworth Road and Valley Center Road, the proposed General Plan Update Classification for Lilac Road is a 4.2A –Boulevard which is a four-lane roadway with a raised median, a right-of-way (ROW) of 106 feet, and a capacity of 27,000 ADT at LOS 'D'.

Valley Center Road (SF 639) is constructed as a two-lane Light Collector Road with bike lanes and a posted speed limit of 45 miles per hour. Left turn pockets are provided at the intersections. In the vicinity of Lilac Road, Valley Center Road runs through a commercial area consisting of mostly small businesses. The existing capacity of Valley Center Road is estimated to be 10,900 ADT at Level of Service LOS 'D'. The County of San Diego has a Capital Improvement Project (CIP) under construction to improve Valley Center Road to four-lane Major Road standards between Banbury Drive and Cole Grade Road. When these improvements are completed, this section of Valley Center Road will have the capacity equivalent to a Major Road, 33,400 daily vehicles at LOS 'D'. The Valley Center CIP is expected to be completed by late summer 2009.

In the County of San Diego Circulation Element, Valley Center Road between Lake Wohlford Road and Cole Grade has an ultimate classification of a 6-lane Prime Arterial with bike lanes, capacity of 50,000 at LOS 'D'. East of Cole Grade Road, Valley Center Road has an ultimate classification of a four-lane Collector with bike lanes, and capacity of 30,800 daily vehicles at LOS 'D'.

The General Plan Update proposed roadway network downgrades the ultimate classification of the segments of Valley Center Road between High Point Drive and Miller Road and the segments from Lilac Road to Woods Valley Road to a 4.2A-Boulevard (a four-lane divided roadway with a raised median, 106 feet of ROW, and a capacity of 27,000 ADT at LOS 'D'). The segments of Valley Center Road between Miller Road and Lilac Road and south of Woods Valley Road were downgraded to the classification of a 4.1A Major Road with raised medians (a four-lane divided roadway with a raised median, 98 feet of ROW, and a capacity of 33,400 ADT at LOS 'D').

ROADWAY SEGMENT DAILY TRAFFIC

Twenty-four (24) hour count data for Gopher Canyon Road, Old Highway 395, Champagne Boulevard, and Old Castle Road just east of Champagne Boulevard were collected on typical weekdays in October 2007. Additional count data for these key roadway segments, however, were also previously counted in April 2003 and October 2005. A comparison of the October 2007 counts to the older count data found that in some locations there had actually been a decrease in traffic. Since there is no explanation to explain any decreases in traffic volumes on the local roadway network, to assess the worst case scenario the highest traffic volume count was assumed to represent the existing 2007 conditions.

Twenty-four (24) hour count data for the segments of Old Castle Road west of Lilac Road, Lilac Road between Lilac Heights Court and Old Castle Road, and Lilac Road between Old Castle Road and Via Piedra were collected in on typical weekdays in October 2004 and twenty-four hour (24) count data for the segment of Lilac Road between Via Piedra and Betsworth Road was collected in June 2004. The existing traffic counts on these roadway segments were increased by a growth factor of three percent (3%) per year for three (3) years for a total growth of 9% to represent base year (2007) conditions.

Twenty-four (24) hour count data for the segments of Lilac Road between Betsworth Road and Valley Center Road, Valley Center Road between Miller Road and Lilac Road, and Valley Center Road between Lilac Road and Woods Valley Road were collected on typical weekdays in January 2006. The existing traffic counts on these roadway segments were increased by a growth factor of three percent (3%) per year for one (1) year for a total growth of 3% to represent base year (2007) conditions.

Existing traffic volumes for Interstate 15 (I-15) were obtained from the Caltrans website and are representative of 2006 traffic volumes. A review of the historic trend for volumes on I-15 found that traffic volumes on I-15 in the study area have been gradually decreasing since 2004. Thus, for the purpose of this study, the 2006 traffic volumes obtained from the Caltrans website was assumed to represent 2007 conditions.

Figure 4 presents the existing conditions traffic volumes used in this analysis. Count summaries are included in Appendix A.

KEY INTERSECTIONS

Figure 3 provides intersection configurations and traffic control for the key intersections. The key intersections analyzed in the study area are identified below:

- Gopher Canyon Road/I-15 Southbound Ramps (one-way stop-controlled);
- Gopher Canyon Road/I-15 Northbound Ramps (one-way stop-controlled);
- Gopher Canyon Road/Old Highway 395-Champagne Boulevard (signalized);
- Old Castle Road/Champagne Boulevard(signalized);
- Old Castle Road/Lilac Road(one-way stop-controlled); and
- Lilac Road/Valley Center Road (signalized).

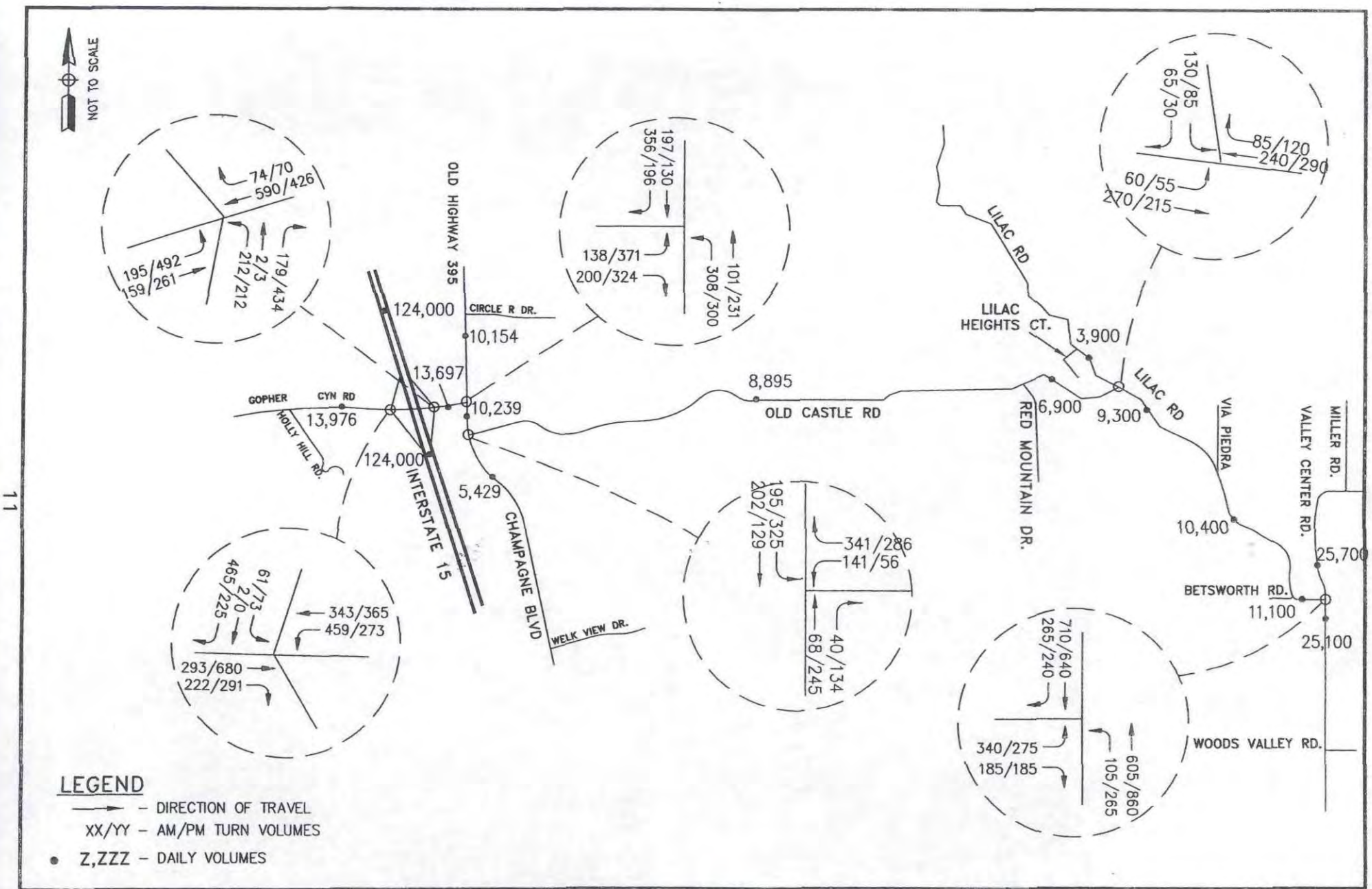

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FIGURE 4

EXISTING (2008) TRAFFIC VOLUMES

INTERSECTION TRAFFIC COUNTS

AM and PM peak hour turn counts for each of the key intersections were collected on the following dates:

- Gopher Canyon Road/I-15 Southbound Ramps (October 2007);
- Gopher Canyon Road/I-15 Northbound Ramps (October 2007);
- Gopher Canyon Road/Old Highway 395-Champagne Boulevard (October 2007);
- Old Castle Road/Champagne Boulevard(October 2007);
- Old Castle Road/Lilac Road(October 2004); and
- Lilac Road/Valley Center Road (January 2006).

The traffic volumes at Old Castle Road/Lilac Road and Lilac Road/Valley Center Road intersections were increased by a growth of 3% per year for 3 years and 1 year, respectively to reach the base year (2007) conditions. Figure 4 presents the existing conditions traffic volumes used in this analysis. Count summaries are included in Appendix A.

EXISTING LEVEL OF SERVICE CONDITIONS

Roadway Segments

The existing levels of service for the key roadway segments are summarized in Table 2. As can be seen from Table 2, the segments of I-15 between Old Highway 395 and Deer Springs Road, Gopher Canyon Road between Holly Hill Road and I-15, and Lilac Road between Betsworth Road and Valley Center Road currently operate at LOS 'E'. Valley Center Road between Miller Road and Woods Valley Road currently operates at LOS 'F'. All other key roadway segments currently operate at LOS 'D' or better.

Table 2 - Existing Roadway Segment Level of Service Summary

Freeway Segments					
Roadway Segment	Classification	Capacity	ADT	V/C	LOS
Interstate 15					
-Old Hwy 395 to Gopher Cyn Rd	8F	(a)	124,000	0.941	**E**
-Gopher Cyn Rd to Deer Springs Rd	8F	(a)	124,000	0.941	**E**
County Roadway Segments					
Roadway Segment	Classification	Capacity (b)	ADT		LOS
Gopher Canyon Road					
-Holly Hill Rd to I-15	LC	10,900	13,976		**E**
-I-15 to Old Highway 395	4C	30,800	13,697		A
Old Hwy 395					
-Circle R Drive to Gopher Cyn Rd	LC	10,900	10,154		D
Champagne Boulevard					
-Gopher Cyn Rd to Old Castle Rd	LC	10,900	10,239		D
-Old Castle Rd to Welk View Dr	LC	10,900	5,429		C
Old Castle Road					
-Champagne Blvd to Red Mountain Dr	LC	10,900	8,895		D
-Red Mountain Dr to Lilac Rd	LC	10,900	6,900		C
Lilac Road					
-Lilac Heights Ct to Old Castle Rd	LC	10,900	3,900		B
-Old Castle Rd to Via Piedra	LC	10,900	9,300		D
-Via Piedra to Betsworth Rd	LC	10,900	10,400		D
-Betsworth Rd to Valley Center Rd	LC	10,900	11,100		**E**
Valley Center Road					
-Miller Rd to Lilac Rd	LC	10,900	25,700		**F**
-Lilac Rd to Woods Valley Rd	LC	10,900	25,100		**F**

(a) The levels of service for Interstate 15 were determined based on the Caltrans District 11 procedures. See Appendix C for the calculations.
(b) Capacity is based on upper limit of LOS 'D' per the County of San Diego Level of Service Thresholds
ADT = Average Daily Traffic; V/C = Volume to Capacity Ratio; LOS = Level of Service
8F = 8-Lane Freeway; LC = Light Collector; 4C = 4-Lane Collector

Intersections

The existing levels of service for the key intersections are summarized in Table 3. As shown in Table 3, under existing conditions the southbound left-through movement at the Gopher Canyon Road/I-15 Southbound ramp and the northbound left-through movement at the Gopher Canyon Road/I-15 Northbound ramp operate at LOS 'F' during both the AM and PM peak hours. All other key intersections currently operate at an acceptable LOS 'D' or better. Copies of the Synchro worksheets for existing conditions are provided in Appendix C.

Table 3 - Existing Intersection Level of Service Summary

Intersection	Critical Movement	AM Peak Hour		PM Peak Hour	
		Delay (sec/veh)	LOS	Delay (sec/veh)	LOS
Gopher Canyon Rd @	WBL	11.9	B	15.0	B
I-15 Southbound Ramps (OWSC)	SBL-T	**794.9**	**F**	**Err**	**F**
Gopher Canyon Rd @	EBL	10.4	B	11.6	B
I-15 Northbound Ramps (OWSC)	NBL-T	**248.1**	**F**	**Err**	**F**
Gopher Cyn Rd @ Old Hwy 395 (sig.)	Intersection	22.0	C	20.3	C
Old Castle Rd @ Champagne Blvd (sig.)	Intersection	20.0	C	22.1	C
Old Castle Rd @	EBL	8.2	A	8.5	A
Lilac Rd (OWSC)	SB	20.4	C	17.5	C
Lilac Rd @ Valley Center Rd (sig.)	Intersection	36.5	D	43.5	D

sec/veh = seconds of delay per vehicle; LOS = Level of Service; OWSC = One-Way Stop-Controlled; sig. = Signalized
EBL = Eastbound Left; WBL = Westbound Left; WB = Westbound Approach; NBL-T = Northbound Left-Through; SBL = Southbound Left; SBL-T = Southbound Left-through; SB = Southbound Approach
Err = Delay is too high for the software to calculate

SECTION III - PROJECT RELATED CONDITIONS

TRIP GENERATION

Table 4 summarizes the trip generation for the proposed Beauvais Tentative Map. As shown in Table 4, based on trip generation rates published in April 2002 by the San Diego Association of Governments (SANDAG) in their *(Not So) Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region*, the proposed 7-lot subdivision is estimated to generate 84 average daily trips, 7 AM peak hour trips, and 8 PM peak hour trips.

Table 4 - Trip Generation Rates and Calculations Summary

Trip Generation Rates

Land Use	Daily	AM Peak Hour			PM Peak Hour		
		Total - % of Daily	% In	% Out	Total - % of Daily	% In	% Out
Estate Residential	12 Trips/DU	8%	30%	70%	10%	70%	30%

Trip Generation

Land Use	Total No. of Units	Daily	AM Peak Hour			PM Peak Hour		
			Total	In	Out	Total	In	Out
Estate Residential	7 DUs	84	7	2	5	8	6	2

Trip Generation Rates are based on rates published by SANDAG
DU = Dwelling Unit

TRIP DISTRIBUTION/TRIP ASSIGNMENT

The project traffic was assigned to the roadway network using the percentages depicted in Figure 5. The project related daily and peak hour traffic volumes are illustrated in Figure 6. The impacts associated with the addition of project traffic are discussed in the following section, Section IV.

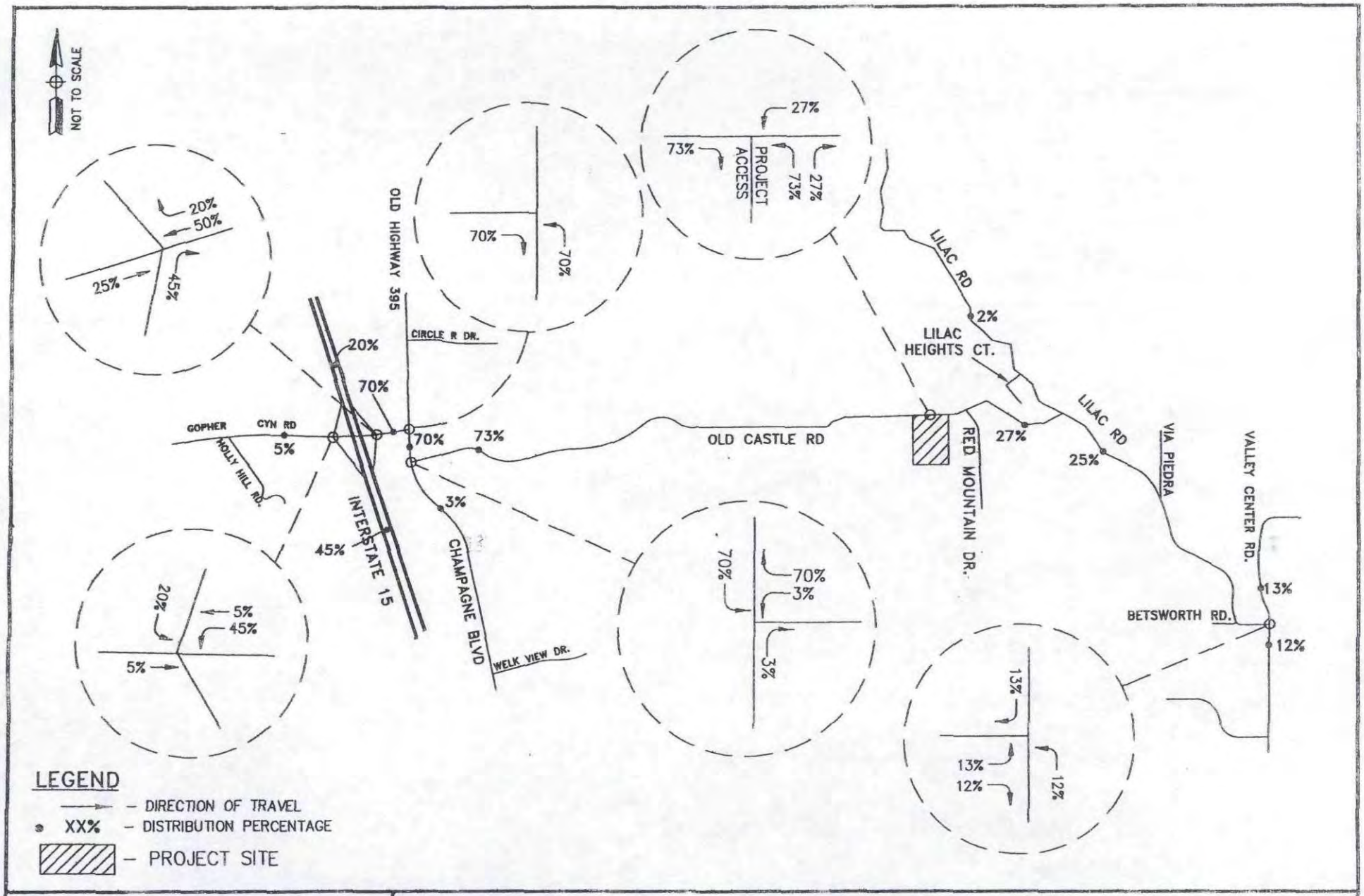

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FIGURE 5

PROJECT TRIP DISTRIBUTION

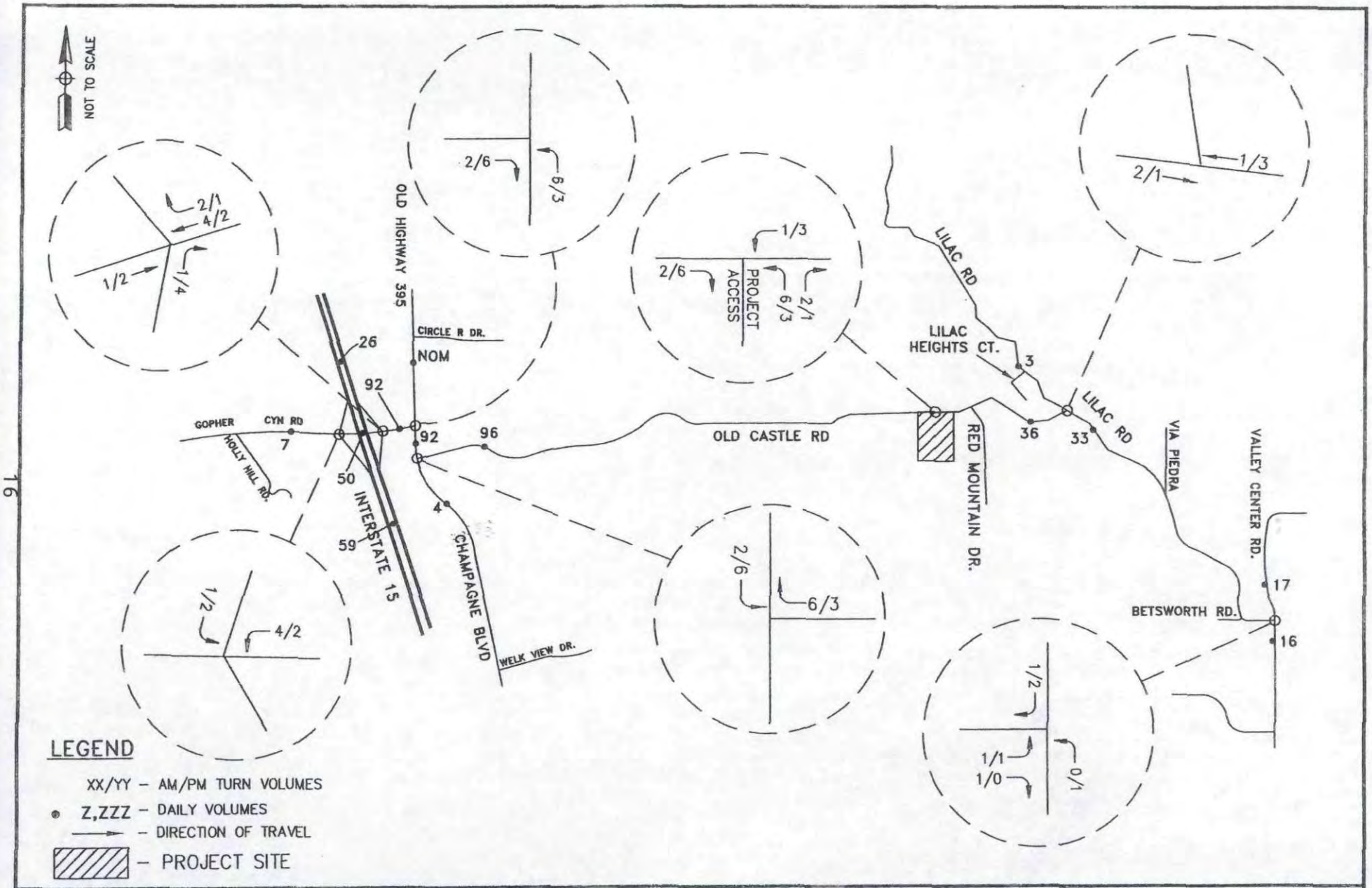

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FIGURE 6

PROJECT RELATED TRAFFIC VOLUMES

SECTION IV – IMPACTS

PUBLIC FACILITIES ELEMENT IN COUNTY

According to page XII-4-20 of the *Public Facility Element* for San Diego County, a discretionary project which has a significant impact on roadways will be required, as a condition of approval, to make "improvements or other measures necessary to mitigate traffic impacts to avoid reduction in the existing Level of Service below 'D' on off-site and on-site abutting Circulation Element roads. New development that would significantly impact congestion on roads at LOS 'E' or 'F', either currently or as a result of the project, will be denied unless improvements are scheduled to increase the LOS to 'D' or better or appropriate mitigation is provided. Appropriate mitigation would include a fair share contribution in the form of road improvements or a fair share contribution to an established program or project. If impacts cannot be mitigated, the project will be denied unless a specific statement of overriding findings is made pursuant to Section 15091(b) and 15093 of the State CEQA Guidelines." A copy of excerpts from the County's *Public Facility Element* can be found in Appendix A.

LEVELS OF SIGNIFICANCE STANDARDS

Although the *Public Facility Element* (PFE) sets standards as to which level of service roadways and intersections must operate within the County (i.e. requires operation of LOS 'D' or better), it does not establish a threshold to evaluate whether a project is significant if it adds traffic to a roadway facility that is currently operating at an unacceptable LOS 'E' or F. Thus, the County's *Guidelines for Determining Significance, First Revision December 5, 2007* were developed to evaluate the significance of traffic impacts on roadways and intersections which are currently operating at LOS 'E' or F. A summary of the County's Guidelines is provided in Table 5. Excerpts from the County's Guidelines are provided in Appendix A.

Table 5 - Measures of Significant Project Impacts

LOS	Allowable Increase on Congested Roads and Intersections				
	Intersections		Road Segments		
	Signalized	Unsignalized	2-Lane Road	4-Lane Road	6-Lane Road
LOS 'E'	Delay of 2 seconds	20 peak hour trips on a critical movement	200 ADT	400 ADT	600 ADT
LOS 'F'	Delay of 1 second, or 5 peak hour trips on a critical movement	5 peak hour trips on a critical movement	100 ADT	200 ADT	300 ADT

Notes:
- A critical movement is one that is experiencing excessive queues.
- By adding proposed project trips to all other trips from a list of projects, these same tables are used to determine if total cumulative impacts are significant. If cumulative impacts are found to be significant, each project that contributes any trips must mitigate a share of the cumulative impacts.
- The County may also determine impacts have occurred on roads even when a project's traffic or cumulative impacts do not trigger an unacceptable level of service, when such traffic uses a significant amount of remaining road capacity.

ADT= Average Daily Traffic; LOS= Level of Service, sec= Seconds of Delay per Vehicle

It should be noted that the significance thresholds summarized in Table 5 are currently only utilized by the County of San Diego to determine if a project has a significant direct and/or future impact. A project is considered to have a significant cumulative impact if it adds any traffic to a roadway segment and/or intersection that operates at LOS 'E' or F under cumulative conditions and the total cumulative traffic added to the roadway or intersection exceeds the thresholds indentified in Table 5. Table 6 was utilized to assess both the direct and cumulative impacts for Interstate 15.

Consistent with the *Public Facility Element* the criteria described below were only applied to segments and intersections that operate at LOS 'E' or LOS 'F'.

Roadway Segments

As shown in Table 5, per the County's Guidelines, "[t]raffic volume increases from public or private projects that result in one or more of the following criteria will have a significant traffic volume or level of service traffic impact on a road segment unless specific facts show there are other circumstances that mitigate or avoid such impacts:

- The additional or redistributed ADT generated by the proposed project will significantly increase congestion on a Circulation Element Road or State Highway currently operating at LOS 'E' or LOS 'F' or will cause a Circulation Element Road or State Highway to operate at LOS 'E' or F as a result of the proposed project as identified in Table [5], or

- The additional or redistributed ADT generated by the proposed project will cause a residential street to exceed its design capacity."

As discussed on pages 13 and 14 of the County's *Guidelines for Determining Significance, First Revision December 5, 2007* an increase of the daily thresholds established for roadway segments operating at LOS 'E' would result in only one additional car every 2.4 minutes per lane while the thresholds established for roadway segments operating at LOS 'F' would result in only one additional car every 4.8 minutes. Therefore, the thresholds identified in Table 5, in most cases, would result in changes to traffic flow that would not be noticeable to the average driver and would thus not constitute a significant impact on the roadway.

For Regionally Significant Arterials (RSA) such as Interstate 15, the *San Diego Traffic Engineers' Council (SANTEC)/Institute of Transportation Engineers (ITE) Guidelines For Traffic Impact Studies (TIS) in the San Diego Region* may be utilized to determine significance. A summary of the SANTEC/ITE Guidelines are provided in Table 6. With the exception of Interstate 15, the County's *Guidelines for Determining Significance, First Revision December 5, 2007* was utilized to assess whether a project was significant. Since Caltrans bases the freeways levels of service on volume-to-capacity ratio rather than ADT, the SANTEC/ITE Significance Thresholds summarized in Table 6 were utilized to evaluate the project's direct and cumulative impacts to Interstate 15.

Table 6 - SANTEC/ITE Guidelines for Measures of Significant Project Impacts

LOS with Project	Allowable Change due to Project Impact						
	Freeways		Roadway Segments		Signalized Intersections	Ramps	Ramps with > 15 min. delay
	V/C	Speed (mph)	V/C	Speed (mph)	Delay (sec.)	Delay (min.)	Delay (min.)
E & F	0.01	1	0.02	1	2	-	2
V/C = Volume to Capacity Ratio							

Signalized Intersections

"Traffic volume increases from public or private projects that result in one or more of the following criteria will have a significant traffic volume or level of service traffic impact on a, signalized intersection:

- The additional or redistributed ADT generated by the proposed project will significantly increase congestion on a signalized intersection currently operating at LOS 'E' or LOS 'F'; or will cause a signalized intersection to operate at LOS 'E' or F as identified in Table [5]."

As discussed on page 15 and 16 of the County's *Guidelines for Determining Significance, First Revision December 5, 2007* an increase in delay of two seconds, the threshold established for signalized intersections operating at LOS 'E', "...is a small fraction of the typical cycle length for a signalized intersection that ranges between 60 and 120 seconds. The likelihood of increased queues forming due to the additional two seconds of delay is low." Thus, the increase in delay of two (2) seconds, on average, would result in changes to traffic flow that would not be noticeable to the average driver and would thus

not constitute a significant impact. Since small changes and disruptions to the traffic flow at a signalized intersection can have a greater effect on the overall intersection operation when the intersection is operating at LOS 'F', versus LOS 'E', a more stringent guideline of one (1) second of delay was established for intersections operating at LOS 'F'.

The five (5)-peak hour trip threshold, established for the critical movement of a signalized intersection operating at LOS 'F', when spread out throughout the peak hour, results in an increase of one vehicle every 12 minutes or 720 seconds. This increase would not be noticeable to the average driver because one additional vehicle during a 12-minute interval, on average, would clear the traffic signal cycles well within the 12-minute period. Further, even if all five (5) additional peak hour vehicles arrived at the same time, these trips would also, on average, clear the traffic cycle and the existing queue lengths would be re-established. Thus, the increase of five (5) peak hour trips to a critical movement at a signalized intersection, on average, would result in changes to traffic flow that would not be noticeable to the average driver and would thus not constitute a significant impact. (See page 15 and 16 of the County's *Guidelines for Determining Significance, First Revision December 5, 2007* provided in Appendix A.)

Unsignalized Intersections

"Traffic volume increases from public or private projects that result in one or more of the following criteria will have a significant traffic volume or level of service traffic impact" at an unsignalized intersection:

- "The additional or redistributed ADT generated by the proposed project will add [more than 20] peak hour trips to a critical movement of an unsignalized intersection, and cause the unsignalized intersection to operate below LOS 'D', or

- The additional or redistributed ADT generated by the proposed project will add [more than 20] peak hour trips to a critical movement of an unsignalized intersection currently operating at LOS 'E', or

- The additional or redistributed ADT generated by the proposed project will add [more than 5] peak hour trips to a critical movement of an unsignalized intersection, and cause the unsignalized intersection to operate at LOS 'F', or

- The additional or redistributed ADT generated by the proposed project will add [more than 5] peak hour trips to a critical movement of an unsignalized intersection currently operating at LOS 'F', or

- Based upon an evaluation of existing accident rates, the signal priority list, intersection geometrics, proximity of adjacent driveways, sight distance or other factors, it is found that the generation rate less than those specified above would significantly impact the operations of the intersection."

As discussed on pages 17 and 18 of the County's *Guidelines for Determining Significance, First Revision December 5, 2007* the addition of 20 peak hour trips to a critical movement, the threshold established for an unsignalized intersection operating at LOS 'E', would result in an increase of one (1) vehicle every 3.0 minutes or 180 seconds. "Assuming the wait time for a vehicle in the critical movement queue is less than 3.0 minutes, which is typical for LOS 'E' conditions; this would not be noticeable to the average driver and would not be considered a significant impact." The five (5)-peak hour trip threshold established for an unsignalized intersection operating at LOS 'F', would result in an increase of one (1) vehicle every 12.0 minutes or 720 seconds. "This typically exceeds the wait time in the queue and would not be noticeable to the average driver." (See pages 17 and 18 of the County's *Guidelines for Determining Significance, First Revision December 5, 2007* provided in Appendix A.)

EXISTING PLUS PROJECT CONDITIONS

The daily and peak hour turn volumes for existing (2007) plus project conditions are shown in Figure 7.

Roadway Segments

The roadway segments were analyzed with the traffic generated from the proposed project added to existing traffic volumes. The roadway segments daily levels of service are summarized in Table 7.

As shown in Table 7, the following roadway segments operate at LOS 'E' or F under existing and existing plus project conditions:

- Interstate 15 between Old Highway 395 and Deer Springs Road [operates at LOS 'E'];
- Gopher Canyon Road between Holly Hill Road and I-15 [operates at LOS 'E'];
- Lilac Road between Betsworth Road and Valley Center Road [operates at LOS 'E']; and
- Valley Center Road between Miller Road and Woods Valley Road [operates at LOS 'F'].

The segment of I-15 between Old Highway 395 and Deer Springs Road currently operates at LOS 'E' and will continue to operate at LOS 'E' with the addition of the proposed project. The proposed project will add between 17 to 38 daily trips to this segment of I-15 resulting in no increase in the existing volume-to-capacity ratio (v/c). Under the PFE criteria, a significant impact would result if the project would "significantly impact congestion" on this road segment which currently operates at LOS 'E'. Since the project traffic added to the segment increases the v/c by less than the 0.01 allowed per the SANTEC/ITE Significance Thresholds for a freeway segment operating at LOS 'E', it is concluded that the proposed project will not significantly impact congestion. Thus, the proposed project is considered to not have a significant direct impact on I-15 between Old Highway 395 and Deer Springs Road.

The segment of Gopher Canyon Road between Holly Hill Road and I-15 operates at LOS 'E' under existing conditions. With the addition of 4 ADT from the proposed project, this segment of Gopher Canyon Road will continue to operate at LOS 'E'. Under the PFE criteria, a significant impact would result if the project would "significantly impact congestion" on this road segment which currently operates at LOS 'E'. Since the project traffic added to this segment of Gopher Canyon Road is less than the 200 ADT allowed per the County of San Diego's *Guidelines for Determining Significance* for a two-lane roadway operating at LOS 'E', it is concluded that the proposed project will not significantly impact congestion. Thus, the proposed project is considered to not have a significant direct impact on Gopher Canyon Road between Holly Hill Road and I-15.

The segment of Lilac Road between Betsworth Road and Valley Center Road operates at LOS 'E' under existing conditions. With the addition of 21 ADT from the proposed project, this segment of Lilac Road will continue to operate at LOS 'E'. Under the PFE criteria, a significant impact would result if the project would "significantly impact congestion" on this road segment which currently operates at LOS 'E'. Since the project traffic added to this segment of Lilac Road is less than the 200 ADT allowed per the County of San Diego's *Guidelines for Determining Significance* for a two-lane roadway operating at LOS 'E', it is concluded that the proposed project will not significantly impact congestion. Thus, the proposed project is considered to not have a significant direct impact on Lilac Road between Betsworth Road and Valley Center Road.

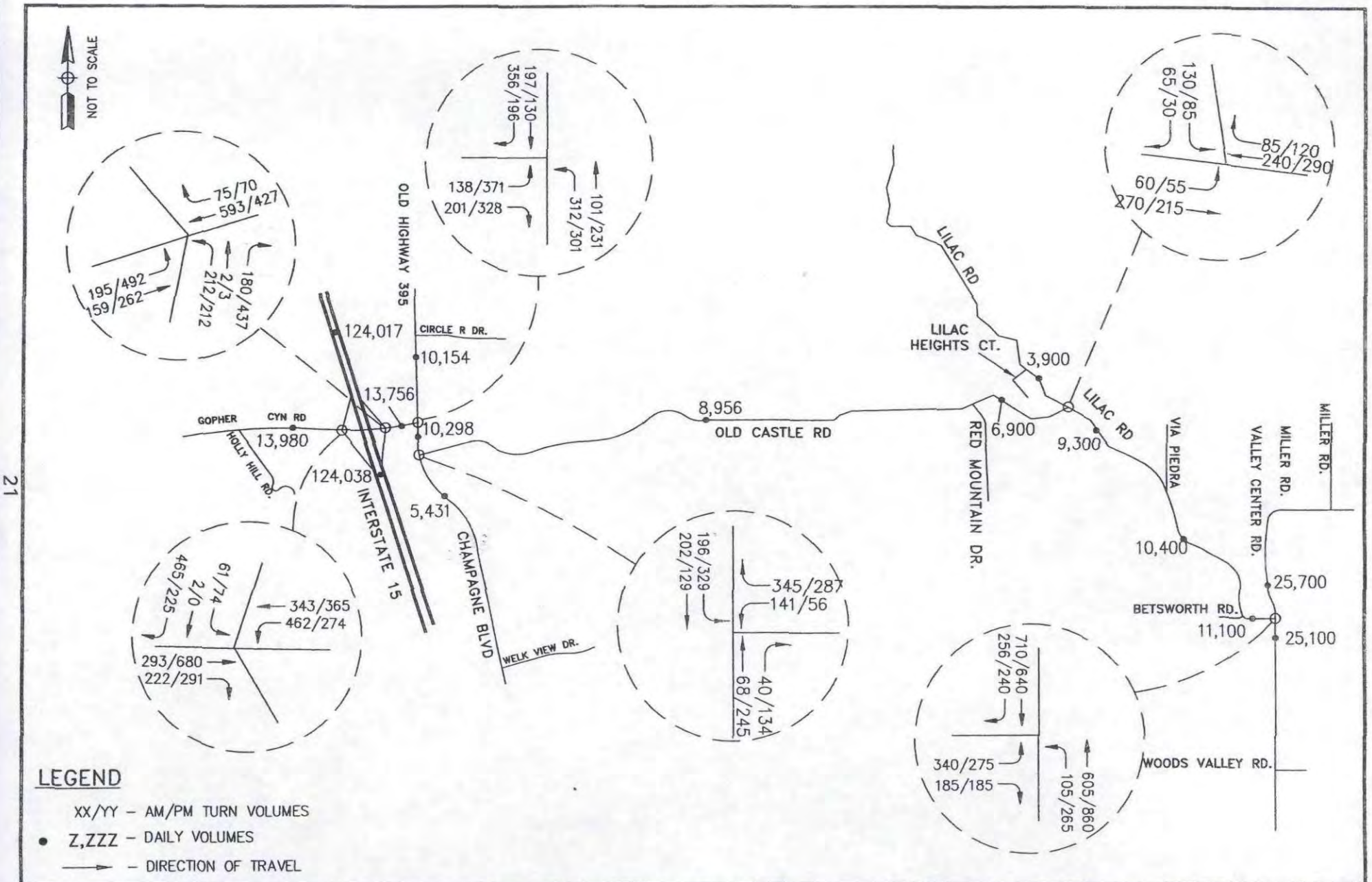

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FIGURE 7

EXISTING + PROJECT TRAFFIC VOLUMES

Table 7 - Existing (2007) Plus Project Roadway Segment Level of Service Summary

Freeway Segments

Roadway Segment	Class	Capacity	Existing			Project Traffic	Existing + Project					
			A.D.T.	V/C	LOS		A.D.T.	V/C	LOS	Δ V/C	Significant	Impact
Interstate 15												
-Old Hwy 395 to Gopher Cyn Rd	8F	(a)	124,000	**0.941**	**E**	**17**	**124,017**	**0.941**	**E**	**0.000**	**NO**	**NONE**
-Gopher Cyn Rd to Deer Springs Rd	8F	(a)	124,000	**0.941**	**E**	**38**	**124,038**	**0.941**	**E**	**0.000**	**NO**	**NONE**

County Roadway Segments

Roadway Segment	Class	Capacity (b)	Existing		Project Traffic	Existing + Project			
			A.D.T.	LOS		A.D.T.	LOS	Significant	Impact
Gopher Canyon Road									
-Holly Hill Rd to I-15	LC	10,900	**13,976**	**E**	**4**	**13,980**	**E**	**NO**	**NONE**
-I-15 to Champagne Blvd	4C	30,800	13,697	A	59	13,756	B	N/A	NONE
Old Hwy 395									
-Circle R Drive to Gopher Cyn Rd	LC	10,900	10,154	D	0	10,154	D	N/A	NONE
Champagne Boulevard									
-Gopher Cyn Rd to Old Castle Rd	LC	10,900	10,239	D	59	10,298	D	N/A	NONE
-Old Castle Rd to Welk View Dr	LC	10,900	5,429	C	2	5,431	C	N/A	NONE
Old Castle Road									
-Champagne Blvd to Red Mountain Dr	LC	10,900	8,895	D	61	8,956	D	N/A	NONE
-Red Mountain Dr to Lilac Rd	LC	10,900	6,900	C	23	6,923	C	N/A	NONE
Lilac Road									
-Lilac Heights Ct to Old Castle Rd	LC	10,900	3,900	B	2	3,902	B	N/A	NONE
-Old Castle Rd to Via Piedra	LC	10,900	9,300	D	21	9,321	D	N/A	NONE
-Via Piedra to Betsworth Rd	LC	10,900	10,400	D	21	10,421	D	N/A	NONE
-Betsworth Rd to Valley Center Rd	LC	10,900	**11,100**	**E**	**21**	**11,121**	**E**	**NO**	**NONE**
Valley Center Road									
-Miller Rd to Lilac Rd	LC	10,900	**25,700**	**F**	**11**	**25,711**	**F**	**NO**	**NONE**
-Lilac Rd to Woods Valley Rd	LC	10,900	**25,100**	**F**	**10**	**25,110**	**F**	**NO**	**NONE**

(a) The levels of service for Interstate 15 were determined based on the Caltrans District 11 procedures. See Appendix C & D for the calculations.
(b) Capacity is based on upper limit of LOS 'D' per the County of San Diego Level of Service Thresholds
ADT = Average Daily Traffic; V/C = Volume to Capacity Ratio; LOS = Level of Service ; N/A = Not Applicable; Significance is based on the County's PFE & Guidelines for Determining Significance
8F = 8-Lane Freeway; LC = Light Collector; 4C = 4-Lane Collector

The segments of Valley Center Road between Miller Road and Woods Valley Road operate at LOS 'F' under existing conditions. With the addition of 10 to 11 ADT from the proposed project these segments of Valley Center Road will continue to operate at LOS 'F'. Under the PFE criteria, a significant impact would result if the project would "significantly impact congestion" on these roadway segments which currently operate at LOS 'F'. Since the project traffic added to these segments of Valley Center Road is less than the 100 ADT allowed per the County of San Diego's *Guidelines for Determining Significance* for a two-lane roadway operating at LOS 'F', it is concluded that the proposed project will not significantly impact congestion. Thus, the proposed project is considered to not have a significant direct impact on Valley Center Road between Miller Road and Woods Valley Road.

All other key roadway segments continue to operate at an acceptable LOS 'D' or better under existing plus project conditions.

Intersections

The intersections were analyzed with the traffic generated from the proposed project added to existing traffic volumes. The intersections' levels of service for existing plus project conditions is summarized in Table 8. A copy of the Synchro worksheets for existing plus project conditions can be found in Appendix D.

As shown in Table 8, the southbound left-through movement at the Gopher Canyon Road/I-15 Southbound ramp and the northbound left-through movement at the Gopher Canyon Road/I-15 Northbound ramp operate at LOS 'F' during both the AM and PM peak hours under existing and existing plus project conditions. All other key intersections continue to operate at an acceptable LOS 'D' or better under existing plus project conditions.

Under existing conditions, the southbound left-through movement at the Gopher Canyon Road/I-15 Southbound ramp intersection operates at LOS 'F' during the AM and PM peak hour. With the addition of project traffic (0 trips to the southbound left-through movement during the AM peak hour and 1 trip to the southbound through-left movement during the PM peak hour), the southbound left-through movement will continue to operate at LOS 'F' during the AM and PM peak hours. Under the PFE criteria, a significant impact would result if the project would "significantly impact congestion" on this intersection which currently operates at LOS 'F'. Since the addition of project traffic added to the critical movement is less than the 5 peak hour trips allowed per the County of San Diego's *Guidelines for Determining Significance First Revision December 5, 2007* for an unsignalized intersection operating at LOS 'F', it is concluded that the proposed project will not significantly impact congestion at this intersection. Thus, the proposed project is considered to not have a significant direct impact at the Gopher Canyon Road/I-15 Southbound ramp intersection.

Table 8 – Existing (2007) Plus Project Intersection Level of Service Summary

Intersection	Critical Move	Existing				Existing + Project											
		AM Peak		PM Peak		AM Peak						PM Peak					
		Delay	LOS	Delay	LOS	Delay	LOS	Δ Delay	Proj. Trips	Sig.?	Impact	Delay	LOS	Δ Delay	Proj. Trips	Sig.?	Impact
Gopher Canyon Rd @ I-15 Southbound Ramps (OWSC)	WBL	11.9	B	15.0	B	11.9	B	0.0	3	**NO**	**NONE**	15.0	B	0.0	1	**NO**	**NONE**
	SBL-T	**794.9**	**F**	**Err**	**F**	**810.5**	**F**	**15.6**	**0**			**Err**	**F**	**-**	**1**		
Gopher Canyon Rd @ I-15 Northbound Ramps (OWSC)	EBL	10.4	B	11.6	B	10.4	B	0.0	0	**NO**	**NONE**	11.6	B	0.0	0	**NO**	**NONE**
	NBL-T	**248.1**	**F**	**Err**	**F**	**250.4**	**F**	**2.3**	**0**			**Err**	**F**	**-**	**0**		
Gopher Cyn Rd @ Old Hwy 395 (sig.)	Int.	22.0	C	20.3	C	22.0	C	0.0	5	N/A	NONE	20.3	C	0.0	5	N/A	NONE
Old Castle Rd @ Champagne Blvd (sig.)	Int.	20.0	C	22.1	C	20.0	C	0.0	4	N/A	NONE	22.2	C	0.1	1	N/A	NONE
Old Castle Rd @ Lilac Rd (OWSC)	EBL	8.2	A	8.5	A	8.2	A	0.0	0	N/A	NONE	8.6	A	0.1	0	N/A	NONE
	SB	20.4	C	17.5	C	20.5	C	0.1	0			17.6	C	0.1	0		
Lilac Rd @ Valley Center Rd (sig.)	Int.	36.5	D	43.5	D	36.8	D	0.3	2	N/A	NONE	43.9	D	0.4	3	N/A	NONE

Delay = seconds of delay per vehicle; LOS = Level of Service; Δ Delay = Increase (Decrease) in delay measured in seconds/vehicle; Err = Delay is too high for the software to calculate
OWSC = One-Way Stop-Controlled; sig. = Signalized; Sig.? = Significance Based on County of San Diego's PFE & Guidelines for Determining Significance;
EBL = Eastbound Left; WBL = Westbound Left; WB = Westbound Approach; NBL-T = Northbound Left-Through;
SBL = Southbound Left; SBL-T = Southbound Left-through; SB = Southbound Approach
N/A = Not Applicable because intersection operates at LOS 'D' or better;
Proj. Trips = See Figure 6 For Project Related Peak Hour Trips on Each Critical Movement

Under existing conditions, the northbound left-through movement at the Gopher Canyon Road/I-15 Northbound ramp intersection operates at LOS 'F' during the AM and PM peak hour. With the addition of project traffic (0 trips to the northbound left-through movement during the AM and PM peak hour), the northbound left-through movement will continue to operate at LOS 'F' during the AM and PM peak hour. Under the PFE criteria, a significant impact would result if the project would "significantly impact congestion" on this intersection which currently operates at LOS 'F'. Since the addition of project traffic added to the critical movement is less than the 5 peak hour trips allowed per the County of San Diego's *Guidelines for Determining Significance* for an unsignalized intersection operating at LOS 'F', it is concluded that the proposed project will not significantly impact congestion at this intersection. Thus, the proposed project is considered to not have a significant direct impact at the Gopher Canyon Road/I-15 Northbound Ramps intersection.

CUMULATIVE WITHOUT PROJECT

Approved/Pending Projects

The project descriptions, locations, and project trip generation information for the approved/pending projects in the North County and Valley Center areas were obtained from Darnell & Associates, Inc. (D&A) *Traffic Study for Welk Resort Canyon Villas (TM 531RPL/R03-004/S03-029/LOG NO.79-08-099A)* dated November 6, 2008 and D&A's *Traffic Study for Valley Center Road Fueling Station (S03-023, ER 03-08-016)* dated January 12, 2007. Excerpts from the traffic studies for Welk Resort Canyon Villas and the Valley Center Road Fueling Station projects are provided in Appendix B.

Ambient Growth

To account for regional growth and any additional projects that may come on line prior to the development of the proposed project (estimated to be 2010), an ambient growth of 2.0% per year for a period of three (3) years was added to the existing (2007) traffic volumes. The traffic generated by the approved/pending projects was then added onto the existing plus ambient growth to get the cumulative without project traffic volumes. The cumulative (2010) without project traffic volumes are illustrated in Figure 8.

CUMULATIVE (2010) WITH PROJECT CONDITIONS

The daily and peak hour turn volumes for cumulative (2010) with project conditions are illustrated in Figure 9.

Roadway Segments

The roadway segments were analyzed under cumulative conditions with and without the proposed project. The roadway segments daily levels of service are summarized in Table 9. As shown in Table 9, the following roadway segments operate at LOS 'E' or F under cumulative conditions with or without the addition of the proposed project:

- Interstate 15 from Old Highway 395 to Deer Springs Road [operates at LOS 'F'(3)];
- Gopher Canyon Road from Holly Hill Road to Interstate 15 [operates at LOS 'F'];
- Old Highway 395 from Circle R Drive to Gopher Canyon Road [operates at LOS 'E'];
- Champagne Boulevard from Gopher Canyon Road to Old Castle Road [operates at LOS 'F'];
- Champagne Boulevard from Old Castle Road to Welk View Drive [operates at LOS 'E'];
- Lilac Road from Old Castle Road to Via Piedra [operates at LOS 'E'];
- Lilac Road from Via Piedra to Valley Center Road [operates at LOS 'F']; and
- Valley Center Road from Miller Road to Woods Valley Road [operates at LOS 'F'].

The proposed project will add 17 average daily trips (1 AM peak hour trip and 2 PM peak hour trip) to I-15 between Old Highway 395 and Gopher Canyon Road and 38 average daily trips (4 AM peak hour trips and 4 PM peak hour trips) to I-15 between Gopher Canyon Road and Deer Springs Road, resulting in an

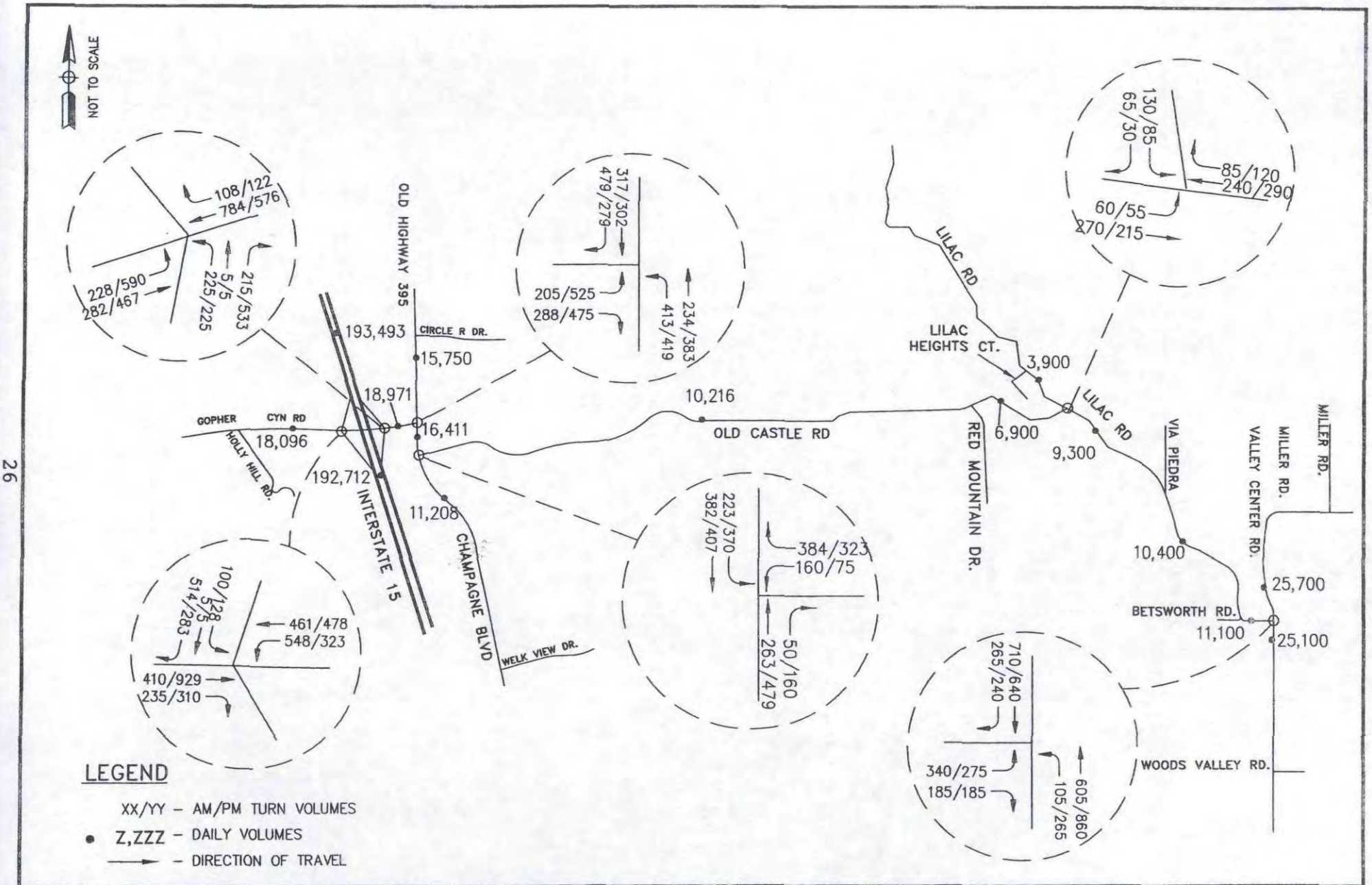

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FIGURE 8

CUMULATIVE (2010) W/O PROJECT TRAFFIC VOLUMES

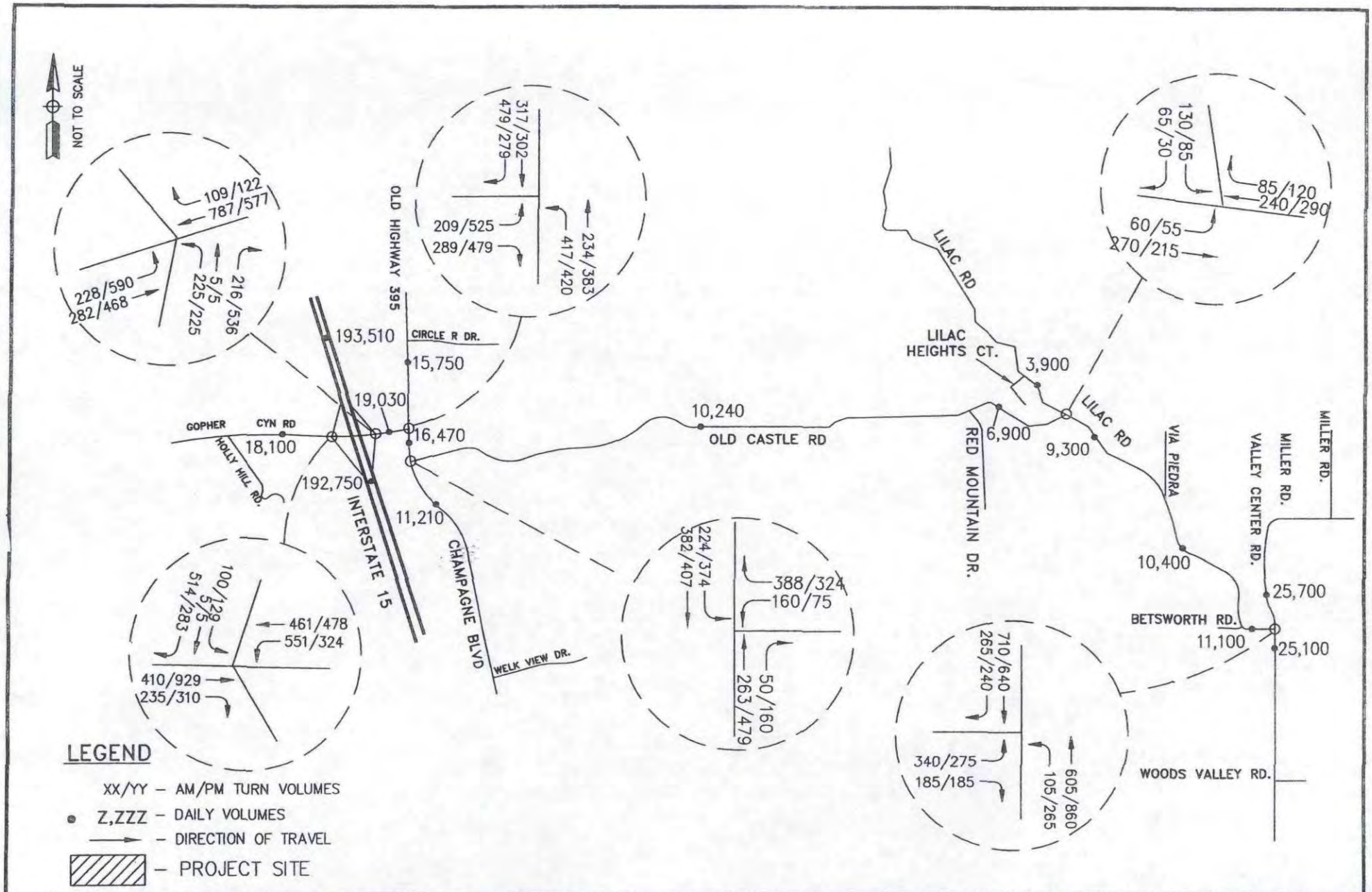

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FIGURE 9

CUMULATIVE(2010) WITH PROJECT TRAFFIC VOLUMES

Table 9 - Cumulative (2010) Roadway Segment Level of Service Summary

Freeway Segments

Roadway Segment	Class	Capacity	Existing (A)			Cum. w/o Project (B)			Cum. w/Project (C)			Cumulative Contribution[1] (C) - (A)			Project's Contribution[2] (C) - (B)		
			ADT	V/C	LOS	ADT	V/C	LOS	ADT	V/C	LOS	Δ ADT	Δ V/C	Cumulative Impact?[3]	Project Traffic	Δ V/C	Project Impact?[4]
Interstate 15																	
-Old Hwy 395 to Gopher Cyn Rd	8F	(5)	**124,000**	**0.941**	**E**	**193,493**	**1.468**	**F(3)**	**193,510**	**1.469**	**F(3)**	**69,510**	**0.528**	**YES**	**17**	**0.001**	**NONE**
-Gopher Cyn Rd to Deer Springs Rd	8F	(5)	**124,000**	**0.941**	**E**	**192,712**	**1.462**	**F(3)**	**192,750**	**1.463**	**F(3)**	**68,750**	**0.522**	**YES**	**38**	**0.001**	**NONE**

County Roadway Segments

Roadway Segment	Class	Capacity[6]	Existing (A)		Cum. w/o Project (B)		Cum. w/Project (C)		Cumulative Contribution[1] (C) - (A)		Project's Contribution[2] (C) - (B)	
			ADT	LOS	ADT	LOS	ADT	LOS	Δ ADT	Cumulative Impact?[3]	Project Traffic	Project Impact?[4]
Gopher Canyon Road												
-Holly Hill Rd to I-15	LC	10,900	**13,976**	**E**	**18,096**	**F**	**18,100**	**F**	**4,124**	**YES**	**4**	**CUM**
-I-15 to Champagne Blvd	4C	30,800	13,697	A	18,971	B	19,030	B	5,333	N/A	59	N/A
Old Hwy 395												
-Circle R Drive to Gopher Cyn Rd	LC	10,900	10,154	D	**15,750**	**E**	**15,750**	**E**	**5,596**	**YES**	**0**	**CUM**
Champagne Boulevard												
-Gopher Cyn Rd to Old Castle Rd	LC	10,900	10,239	D	**16,411**	**E**	**16,470**	**F**	**6,231**	**YES**	**59**	**CUM**
-Old Castle Rd to Welk View Dr	LC	10,900	5,429	C	**11,208**	**E**	**11,210**	**E**	**5,781**	**YES**	**2**	**CUM**
Old Castle Road												
-Champagne Blvd to Red Mountain	LC	10,900	8,895	D	10,179	D	10,240	D	1,345	NO	61	N/A
-Red Mountain Dr to Lilac Rd	LC	10,900	6,900	C	10,735	D	10,758	D	3,858	N/A	23	N/A
Lilac Road												
-Lilac Heights Ct to Old Castle Rd	LC	10,900	3,900	B	5,944	C	5,946	C	2,406	N/A	2	N/A
-Old Castle Rd to Via Piedra	LC	10,900	9,300	D	**14,979**	**E**	**15,000**	**E**	**5,700**	**YES**	**21**	**CUM**
-Via Piedra to Betsworth Rd	LC	10,900	10,400	D	**18,334**	**F**	**18,355**	**F**	**7,955**	**YES**	**21**	**CUM**
-Betsworth Rd to Valley Center Rd	LC	10,900	**11,100**	**E**	**19,162**	**F**	**19,183**	**F**	**8,083**	**YES**	**21**	**CUM**
Valley Center Road								F				
-Miller Rd to Lilac Rd	LC	10,900	**25,700**	**F**	**44,276**	**F**	**44,287**	**F**	**18,587**	**YES**	**11**	**CUM**
-Lilac Rd to Woods Valley Rd	LC	10,900	**25,100**	**F**	**43,731**	**F**	**43,741**	**F**	**18,641**	**YES**	**10**	**CUM**

ADT = Average Daily Traffic; LOS = Level of Service; V/C = Volume-to-Capacity Ratio; N/A = Not Applicable because segment operates at LOS 'D' or better
Significance is based on County of San Diego's PFE & Guidelines for Determining Significance, 8F = 8-Lane Freeway; LC = Light Collector; 4C = 4-Lane Collector
(1) Change in existing conditions due to the cumulative projects including the proposed project (i.e. the difference between cumulative with project and existing conditions)
(2) The incremental change in conditions associated with the proposed project (i.e. the difference between cumulative with project and cumulative without project conditions)
(3) Cumulative Impacts are those impacts associated with the addition of all cumulative approved/pending projects including the proposed project
(4) Project Impacts assess whether the project traffic itself is a portion of the total cumulative impacts
(5) The levels of service for Interstate 15 were determined based on the Caltrans District 11 procedures. See Appendix C, E, & F for the calculations.
(6) Capacity is based on the upper limit of LOS 'D' per the County of San Diego Level of Service Thresholds

increase in the cumulative without project volume-to-capacity ratio or 0.001. The addition 1 peak hour trip to I-15 from Old Highway 395 and Gopher Canyon Road results in 0.125 additional vehicles per lane (1 vehicles/8 lanes = 0.125 vehicles per lane) over the course of one hour or approximately one (1) additional vehicle per lane every 480 minutes or 8 hours. The 4 peak hour trips to I-15 between Gopher Canyon Road and Deer Springs Road results in 0.5 additional vehicles per lane (4 vehicles/8 lanes = 0.5 vehicles per lane) over the course of one hour or approximately one (1) additional vehicle per lane every 120 minutes. This would result in changes to traffic flow that would not be noticeable to the average driver. Additionally, the increase in volume-to-capacity ratio associated with the proposed project is less than the 0.01 allowed per the SANTEC/ITE Guidelines, which are utilized by Caltrans to determine significance. Therefore, the proposed project is not considered to be a significant part of the cumulative impacts to Interstate 15.

The proposed project is not expected to add any traffic to the segment of Old Highway 395 between Circle R Drive and Gopher Canyon Road and will therefore not be part of the cumulative impact. On the remaining failing roadway segments of Gopher Canyon Road, Champagne Boulevard, Lilac Road, and Valley Center Road; the proposed project will add between 2 and 21 average daily trips and is thus considered to be part of the cumulative impacts. See Section VI for a discussion on the measures the developer will take to mitigate its portion of the cumulative impacts.

The segments of Gopher Canyon Road between I-15 and Champagne Boulevard, Old Castle Road between Champagne Blvd and Lilac Road; and Lilac Road between Lilac Heights Court and Old Castle Road will continue to operate at an acceptable LOS 'D' or better under cumulative with project conditions.

Intersections

The intersections were analyzed under cumulative conditions with and without the proposed project. The intersections' levels of service for cumulative conditions are summarized in Table 10. A copy of the Synchro worksheets for cumulative without and with project conditions can be found in Appendix E and F, respectively.

As can be seen in Table 10, the following intersections have critical movements that operate at LOS 'E' or 'F' under cumulative conditions with or without the addition of the proposed project:

- Gopher Canyon Road/I-15 Southbound Ramps;
- Gopher Canyon Road/I-15 Northbound Ramps;
- Old Castle Road/Lilac Road; and
- Lilac Road/Valley Center Road.

The proposed project will add traffic to each of the above listed intersections, and is therefore, considered to be a portion of the cumulative impacts. See Section VI for a discussion on the measures the developer will take to mitigate its portion of the cumulative impacts.

Gopher Canyon Road at Old Highway 395 and Old Castle Road at Champagne Blvd will continue to operate at an acceptable LOS 'C' under cumulative with project conditions.

Table 10 - Cumulative (2010) Intersection Level of Service Summary													
Intersection	Critical Move	Existing (A)		Cum w/o Project (B)		Cum + Project (C)		Cumulative Contribution (C) - (A) [1]			Project's Contribution (C) - (B) [2]		
		Delay	LOS	Delay	LOS	Delay	LOS	Δ Delay	Cum Trips	Project Impact? [2]	Δ Delay	Proj. Trips	Project Impact [2]
AM Peak Hour													
Gopher Canyon Rd @	WBL	11.9	B	16.3	C	16.4	C	4.5	92	**YES**	0.1	3	**Cumulative[3]**
I-15 Southbound Ramps (OWSC)	SBL-T	**794.9**	**F**	**Err**	**F**	**Err**	**F**	-	**42**		-	**0**	
Gopher Canyon Rd @	EBL	10.4	B	12.8	B	12.9	B	2.5	33	**YES**	0.1	0	**Cumulative [3]**
I-15 Northbound Ramps (OWSC)	NBL-T	**248.1**	**F**	**898.0**	**F**	**903.8**	**F**	-	**16**		-	**0**	
Gopher Cyn Rd @ Old Hwy 395 (sig.)	Int.	22.0	C	24.2	C	24.3	C	2.3	645 Total	N/A	0.1	5	NONE
Old Castle Rd @ Champagne Blvd (sig.)	Int.	20.0	C	20.0	C	20.0	C	0.0	480 Total	N/A	0.0	5	NONE
Old Castle Rd @	EBL	8.2	A	9.1	A	9.1	A	0.9	5	**YES**	0.0	0	**Cumulative[3]**
Lilac Rd (OWSC)	SB	20.4	C	**81.6**	**F**	**82.4**	**F**	**62.0**	**59**		**0.8**	**0**	
Lilac Rd @ Valley Center Rd (sig.)	Int.	36.5	D	**182.7**	**F**	**183.0**	**F**	**146.5**	**1,552 Total**	**YES**	**0.3**	**2**	**Cumulative**
PM Peak Hour													
Gopher Canyon Rd @	WBL	15.0	B	25.4	D	25.5	D	10.5	51	**YES**	0.1	1	**Cumulative**
I-15 Southbound Ramps (OWSC)	*SBL-T*	***Err***	***F***	***Err***	***F***	***Err***	***F***	-	***61***		-	***1***	
Gopher Canyon Rd @	EBL	11.6	B	21.1	C	21.1	C	9.5	98	**YES**	0.0	0	**Cumulative [3]**
I-15 Northbound Ramps (OWSC)	NBL-T	**Err**	**F**	**Err**	**F**	**Err**	**F**	-	**15**		-	**0**	
Gopher Cyn Rd @ Old Hwy 395 (sig.)	Int.	20.3	C	34.0	C	34.0	C	13.7	836 Total	N/A	0.0	5	NONE
Old Castle Rd @ Champagne Blvd (sig.)	Int.	22.1	C	26.1	C	26.8	C	4.7	644 Total	N/A	0.7	5	NONE
Old Castle Rd @	EBL	8.5	A	9.5	A	9.5	A	1.0	5	**YES**	0.0	0	**Cumulative[3]**
Lilac Rd (OWSC)	SB	17.5	C	**147.3**	**F**	**149.5**	**F**	**132.0**	**108**		**2.2**	**0**	
Lilac Rd @ Valley Center Rd (sig.)	Int.	43.5	D	**284.0**	**F**	**284.6**	**F**	**241.1**	**1,959 Total**	**YES**	**0.6**	**3**	**Cumulative**

Delay is measured in seconds of delay per vehicle; Δ Delay= Change in delay; LOS= Level of Service; N/A= Not Applicable because intersection operates at LOS 'D' or better, Int. = Intersection
Significance is based on County of San Diego's PFE & Guidelines for Determining Significance, Err = Delay is too high for the software to calculate; OWSC = One-Way Stop-Controlled; sig. = Signalized;
EBL = Eastbound Left; WBL = Westbound Left; WB = Westbound Approach; NBL-T = Northbound Left-Through; SBL = Southbound Left; SBL-T = Southbound Left-through; SB = Southbound Approach
[1] The incremental change in conditions associated with the proposed project (i.e. the difference between cumulative with project and cumulative without project conditions)
[2] Project Impacts assess whether the project traffic itself is a portion of the total cumulative impacts
[3] Although the project does not add any traffic to the critical movements, it does add traffic through the intersection and is therefore considered to be part of the cumulative impact
Proj. Trips = See Figure 6 For Project Related Peak Hour Trips on Each Critical Movement

SECTION V - PROJECT ACCESS & ON-SITE CIRCULATION

PROJECT ACCESS

The project proposes to take access via one location along the south side of Old Castle Road. The access road (Street "A") will terminate in a cul-de-sac and will provide access for the 7 residential lots. Street "A" will be designed to provide one (1) lane of ingress and one (1) lane of egress.

The proposed access at Old Castle Road and Street "A" was analyzed under cumulative with project conditions utilizing the Synchro software; version 6.0, assuming it would be stop-controlled on the northbound (access) approach. The result of the analysis is summarized in Table 11. As shown in Table 11, the proposed access operates at an acceptable LOS 'C' under cumulative with project conditions. A copy of the Synchro worksheets for the project access analysis can be found in Appendix G.

Table 11 - Project Access Level of Service Summary

Intersection	Critical Movement	Cumulative + Project			
		AM Peak Hour		PM Peak Hour	
		Delay	LOS	Delay	LOS
Old Castle Road @ Street "A" (Project Access)	Northbound Approach	17.5	C	16.2	C
Delay is measured in seconds per vehicle					

SIGHT DISTANCE

D&A evaluated the sight distance at the project driveway and found there to be in excess of 500 feet of sight distance in both directions. However, once the grading for the site is completed, the project Civil Engineer should certify that a minimum of 500 feet of sight distance is provided at this driveway.

ON-SITE CIRCULATION

As previously stated, the project proposes to provide one access road (Street "A") off the south side of Old Castle Road. Street "A" is twenty-four feet (24') wide and provides direct access to the private driveways of the 7 individual lots. Street "A" terminates in a cul-de-sac with a 40-foot radius which provides adequate space for emergency vehicles, residents, and guests to turn around.

SECTION VI - PROJECT MITIGATION

COUNTY OF SAN DIEGO TRAFFIC IMPACT FEE (TIF) PROGRAM

The County of San Diego has developed an overall programmatic solution that addresses existing and projected future road deficiencies in the unincorporated portions of San Diego County. This program includes the adoption of a Transportation Impact Fee (TIF) program to fund improvements to roadways necessary to mitigate potential cumulative impacts caused by traffic from future development. This program is based on a summary of projections method contained in an adopted planning document, as referenced in the State CEQA Guidelines Section 15130 (b)(1)(B), which evaluates regional or area wide conditions contributing to cumulative transportation impacts. Based on SANDAG regional growth and land use forecasts, the SANDAG Regional Transportation Model was utilized to analyze projected build-out (year 2030) development conditions on the existing circulation element roadway network throughout the unincorporated area of the County. Based on the results of the traffic modeling, funding necessary to construct transportation facilities that will mitigate cumulative impacts from new development was identified. Existing roadway deficiencies will be corrected through improvement projects funded by other public funding sources, such as TransNet, gas tax, and grants.

Potential cumulative impacts to the region's freeways have been addressed in SANDAG's Regional Transportation Plan (RTP). This plan, which considers freeway buildout over the next 30 years, will use funds from TransNet, state, and federal funding to improve freeways to projected level of service objectives in the RTP.

The proposed project is located in the Valley Center Planning area and is estimated to generate 84 average daily trips. As discussed in Section IV, these trips will be distributed on circulation element roadways in the County that were analyzed by the TIF program, some of which currently or are projected to operate at inadequate levels of service. The potential growth represented by the proposed project was included in the growth projections upon which the TIF program is based. Therefore, payment of the TIF, which will be required at issuance of building permits, in combination with other components of the program described above, will mitigate potential cumulative traffic impacts to less than significant.

As of April 27, 2008, the TIF program fee per residential unit in Valley Center is $8,551. Thus, the total TIF for the proposed 7-unit estate residential subdivision is $59,857 (8,551/du X 7units = 59,857). It should be noted that the actual fee is subject to change as the TIF Ordinance is updated annually and the fees are adjusted to reflect the engineering cost index (A copy of the current TIF Rates are provided in Appendix J.)

All key roadway segments and intersections including the Gopher Canyon Road/Interstate 15 interchange are included in the County TIF program. Therefore, it can be concluded that the payment of the County TIF will mitigate the projects cumulative impacts to the County roadway segments and intersections. A list of all the roadway segments included in the County TIF program January 2008 update is provided in Appendix J.

ROADWAY SEGMENTS

A summary of the project's impacts and the recommended mitigation measures for the key roadway segments are summarized in Table 12. A brief description of each of the mitigation measures is provided below.

Roadway Segment Direct Impacts

- The proposed project does not have a significant direct impact on any of the key roadway segments analyzed.

Table 12 - Summary of Roadway Segment Mitigation Requirements					
Roadway Segment	Class	Type of Impact	Project Significant	Explanation	Project Mitigation
Interstate 15					
Old Hwy 395 to Gopher Cyn	8F	Direct	No	LOS 'E' to LOS 'E', Project does not increase v/c	None
		Cumulative	No	LOS 'F' (3) to LOS 'F' (3). Project increases v/c by .001	None
Gopher Cyn to Deer Springs	8F	Direct	No	LOS 'E' to LOS 'E', Project does not increase v/c	None
		Cumulative	No	LOS 'F'(3) to LOS 'F'(3), Project increases v/c by .001	None
Gopher Canyon Road					
Holly Hill Rd to I-15	LC	Direct	No	LOS 'E' to LOS 'E', Project adds 4 ADT	None
		Cumulative	***Yes***	***LOS 'F' to LOS 'F', Project adds 4 ADT***	***Pay TIF***
I-15 to Champagne Blvd	4C	Direct	No	LOS 'A' to LOS 'B', Project adds 59 ADT	None
		Cumulative	N/A	Operates at LOS 'B'	None
Old Highway 395					
Circle R Dr to Gopher Cyn Rd	LC	Direct	N/A	Operates at LOS 'D'	None
		Cumulative	No	LOS 'E' to LOS 'E', Project Adds 0 ADT	None
Champagne Boulevard					
Gopher Cyn to Old Castle	LC	Direct	N/A	Operates at LOS 'D'	None
		Cumulative	***Yes***	***LOS 'E' to LOS 'F', Project Adds 59 ADT***	***Pay TIF***
Old Castle to Welk View Dr	LC	Direct	N/A	Operates at LOS 'C'	None
		Cumulative	***Yes***	***LOS 'E' to LOS 'E', Projects Adds 2 ADT***	***Pay TIF***
Old Castle Road					
Champagne to Red Mountain	LC	Direct	N/A	Operates at LOS 'D'	None
		Cumulative	*No*	*Operates at LOS 'D'*	*None*
Red Mountain to Lilac Rd	LC	Direct	N/A	Operates at LOS 'C'	None
		Cumulative	N/A	Operates at LOS 'D'	None
Along Project Frontage	LC	**Project**	***Required per Center-Line Ordinance***		***Frontage Improvements***
Lilac Road					
Lilac Heights Ct to Old Castle	LC	Direct	N/A	Operates at LOS 'B'	None
		Cumulative	N/A	Operates at LOS 'C'	None
Old Castle to Via Piedra	LC	Direct	N/A	Operates at LOS 'D'	None
		Cumulative	***Yes***	***LOS 'E' to LOS 'E', Project Adds 21 ADT***	***Pay TIF***
Via Piedra to Betsworth	LC	Direct	N/A	Operates at LOS 'D'	None
		Cumulative	***Yes***	***LOS 'F' to LOS 'F', Project Adds 21 ADT***	***Pay TIF***
Betsworth to Valley Center	LC	Direct	***No***	***LOS 'E' to LOS 'E', Project Adds 21ADT***	***None***
		Cumulative	***Yes***	***LOS 'F' to LOS 'F', Project Adds 21 ADT***	***Pay TIF***
Valley Center Road					
Miller Rd to Lilac Rd	LC	Direct	***No***	***LOS 'F' to LOS 'F', Project Adds 11 ADT***	***None***
		Cumulative	***Yes***	***LOS 'F' to LOS 'F', Project Adds 11 ADT***	***Pay TIF***
Lilac Rd to Woods Valley	LC	Direct	***No***	***LOS 'F' to LOS 'F', Project Adds 10 ADT***	***None***
		Cumulative	***Yes***	***LOS 'F' to LOS 'F', Project Adds 10 ADT***	***Pay TIF***

TIF = County of San Diego's Transportation Impact Fee Program, Class = Roadway Segments Existing Classification
8F = 8-Lane Freeway, LC = Light Collector, N/A = Not Applicable

Roadway Segment Cumulative Impacts

- The proposed project was found to be part of a cumulative impact at the following locations:

  1) Gopher Canyon Road from Holly Hill Road to Interstate 15;
  2) Champagne Boulevard from Gopher Canyon Road to Welk View Drive;
  3) Lilac Road from Old Castle Road to Valley Center Road; and
  4) Valley Center Road from Miller Road to Woods Valley Road.

- As mitigation of its cumulative impacts the developer will pay the County of San Diego's Transportation Impact Fee (TIF). As of April 27, 2008 the current TIF for the proposed project is $59,857. It should be noted that the actual fee is subject to change as the TIF Ordinance is updated annually and the fees are adjusted to reflect the engineering cost index.

- On the segment of Interstate-15 between Old Hwy 395 to Deer Springs Road, the proposed project will add 55 average daily trips resulting in an increase in the cumulative (2010) with project volume-to-capacity ratio of .001. This less than the 0.01 allowed per the SANTEC/ITE Guidelines which are utilized by Caltrans to determine significance. Therefore, the proposed project is not considered to be a significant part of the cumulative impacts to Interstate 15 between Old Hwy 395 and Deer Springs Road.

Roadway Segment Frontage Improvements

- As part of the County of San Diego's Center-Line Ordinance, the developer will be required to make frontage improvements along Old Castle Road.

INTERSECTIONS

A summary of the project's impacts and the recommended mitigation measures for the key intersections are summarized in Table 13. A brief description of each of the mitigation measures is provided below.

Intersection Direct Impacts

- The proposed project does not have a significant direct impact on any of the key intersections analyzed.

Intersection Cumulative Impacts

- The proposed project was found to be part of a cumulative impact at the following intersections:

  1) Gopher Canyon Road/I-15 Southbound Ramps;
  2) Gopher Canyon Road/I-15 Northbound Ramps;
  3) Old Castle Road/Lilac Road; and
  4) Lilac Road/Valley Center Road.

- To mitigate its cumulative impacts to the above intersections, the developer will pay the County of San Diego's Transportation Impact Fee (TIF). As of April 27, 2008 the current TIF for the proposed project is $59,857. It should be noted that the actual fee is subject to change as the TIF Ordinance is updated annually and the fees are adjusted to reflect the engineering cost index.

Table 13 - Summary of Intersection Mitigation Requirements					
Intersection	Traffic Control	Type of Impact	Project Significant	Explanation	Project Mitigation
Gopher Canyon Rd @ I-15 Southbound Ramps	OWSC	Direct	**No**	**AM: SBL-T - LOS 'F' to LOS 'F', Project Adds 0 Trips PM SBL-T - LOS 'F' to LOS 'F', Project Adds 1 Trip**	**None**
		Cumulative	***Yes***	***AM: SBL-T - LOS 'F' to LOS 'F', Project Adds 0 Trips PM SBL-T - LOS 'F' to LOS 'F', Project Adds 1 Trip***	***Pay TIF***
Gopher Canyon Rd @ I-15 Northbound Ramps	OWSC	Direct	No	**AM: NBL-T - LOS 'F' to LOS 'F', Project Adds 0 Trips PM: NBL-T - LOS 'F' to LOS 'F', Project Adds 0 Trips**	**None**
		Cumulative	***Yes*** [1]	***AM: NBL-T - LOS 'F' to LOS 'F', Project Adds 0 Trips PM: NBL-T - LOS 'F' to LOS 'F', Project Adds 0 Trips***	***Pay TIF***
Gopher Cyn Rd @ Old Hwy 395	SIG.	Direct	N/A	AM: LOS 'C' to LOS 'C' PM: LOS 'C' to LOS 'C'	None
		Cumulative	N/A	AM: LOS 'C' to LOS 'C' PM: LOS 'C' to LOS 'C'	None
Old Castle Rd @ Champagne Blvd	Sig.	Direct	N/A	AM: LOS 'C' to LOS 'C' PM: LOS 'C' to LOS 'C'	None
		Cumulative	N/A	AM: LOS 'C' to LOS 'C' PM: LOS 'C' to LOS 'C'	None
Old Castle Rd @ Lilac Rd	OWSC	Direct	N/A	AM: SB – LOS 'C' to LOS 'C' PM: SB – LOS 'C' to LOS 'C'	None
		Cumulative	***Yes*** [1]	***AM: SB - LOS 'F' to LOS 'F', Project Adds 0 Trips PM: SB – LOS 'F' to LOS 'F', Project Adds 0 Trips***	***Pay TIF***
Lilac Rd @ Valley Center Rd	SIG.	Direct	N/A	AM: LOS 'D' to LOS 'D' PM: LOS 'D' to LOS 'D'	None
		Cumulative	***No***	***AM: LOS 'F' to LOS 'F', Project Adds, 2 Trips & Increases Delay by 0.3 sec. PM: LOS 'F' to LOS 'F', Project Adds 3 Trips & Increases Delay by 0.6 sec.***	***Pay TIF***

OWSC = One-Way Stop-Controlled, SIG = Signalized, LOS = Level of Service,
NBL-T = Northbound Left-Through, SBL-T = Southbound Left-Through, WB = Westbound Approach, SB = Southbound Approach
N/A = Not Applicable, TIF = County of San Diego's Transportation Impact Fee Program
[1] Although the project does not add any traffic to the critical movements, it does add traffic through the intersection and is therefore considered to be part of the cumulative impact

SECTION VII - SUMMARY OF FINDINGS AND CONCLUSIONS

- The developer proposes to subdivide a 23.2-acre lot into 7 residential lots. The site is located on the south side of Old Castle Road, west of Lilac Road in the Valley Center area of San Diego County.

- The proposed project is estimated to generate 84 average daily trips, 7 AM peak hour trips, and 8 PM peak hour trips.

- The proposed project will not have a significant direct impact on any of the key roadway segments or intersections analyzed within this report.

- The proposed project, will however, be part of a cumulative impact along the following roadway segments: (1) Gopher Canyon Road from Holly Hill Road to Interstate 15; (2) Champagne Boulevard from Gopher Canyon Road to Welk View Drive; (3) Lilac Road from Old Castle Road to Valley Center Road; and (4) Valley Center Road from Miller Road to Woods Valley Road.

- The proposed project will also be part of a cumulative impact at the following intersections: (1) Gopher Canyon Road/I-15 Southbound Ramps; (2) Gopher Canyon Road/I-15 Northbound Ramps; (3) Old Castle Road/Lilac Road, and (4) Lilac Road/Valley Center Road.

- See Section VI of this report for a description of the measures the developer will take to mitigate its cumulative impacts.

- Once the grading for the site is completed, the project Civil Engineer should certify that a minimum of 500 feet of sight distance is provided at this driveway.

- The proposed project access and on-site circulation will adequately accommodate project traffic.

APPENDIX A

- 24-Hour Machine Counts
- AM/PM Peak Hour Turn Counts
- SANDAG Trip Generation Rates
- County of San Diego Level of Service Thresholds
- Excerpts from the Public Facility Element
- County of San Diego's *Guidelines for Determining Significance*
- GP2020 Roadway Network & Volumes
- Proposed GP 2020 Circulation Element Road Standards
- Valley Center Road CIP Info

24-Hour Machine Counts

Caltrans 2005 ADT

District	Route	Rte Suf	County	PM Prefix	Postmile	Description	Back Peak Hour	Back Peak Month	Back AADT	Ahead Peak Hour	Ahead Peak Month	Ahead AADT
11	15		SD	R	31.52	JCT. RTE. 78	15000	207000	198000	9900	135000	128000
11	15		SD	R	32.86	EL NORTE PARKWAY	9900	135000	128000	9300	127000	120000
11	15		SD	R	33.92	NORTH JUNCTION OF CENTRE CITY PARKWAY	9300	127000	120000	9900	135000	128000
11	15		SD	R	36.64	DEER SPRINGS ROAD	9900	135000	128000	10400	140000	136000
11	15		SD	R	40.84	GOPHER CANYON ROAD	10400	140000	136000	9900	134000	130000
11	15		SD	R	43.28	ESCONDIDO HIGHWAY	9900	134000	130000	9900	136000	128000
11	15		SD	R	46.49	JCT. RTE. 76	9900	136000	128000	9400	127000	121000

Caltrans 2005 Truck

Route	Route Suffix	District	County	Postmile Prefix	Postmile	Leg	AADT Total	Total Trucks	Total Truck %	2 Axle Volume	2 Axle Percent	3 Axle Volume	3 Axle Percent	4 Axle Volume	4 Axle Percent	5 Axle Volume	5 Axle Percent	Description	Year	Verify/Estimate
15		11	SD	R	31.517	A	128000	12928	10.1	5714	44.2	1112	8.6	672	5.2	5430	42	JCT. RTE. 78	80	V
15		11	SD	R	31.517	B	198000	14058	7.1	6860	48.8	1589	11.3	787	5.6	4822	34.3	JCT. RTE. 78	96	E
15		11	SD	R	36.636	A	136000	17952	13.2	6337	35.3	1454	8.1	754	4.2	9407	52.4	DEER SPRINGS ROAD	86	V
15		11	SD	R	46.491	B	128000	13094	10.23	4167	31.82	1041	7.95	447	3.41	7440	56.82	JCT. RTE. 76	00	E
15		11	SD	R	46.491	A	121000	9849	8.14	3200	32.49	751	7.63	334	3.39	5565	56.5	JCT. RTE. 76	00	E

Average Daily Traffic Volumes

Prepared by: Southland Car Counters

Volumes for: Tuesday, October 25, 2005 City: Escondido Project #: 05-4276-005

Location: Gopher Canyon Rd btwn Honeyhill Rd and I-15

AM Period	NB	SB	EB		WB			PM Period	NB	SB	EB		WB		
00:00			11		13			12:00			66		60		
00:15			6		14			12:15			63		70		
00:30			10		10			12:30			56		62		
00:45			4	31	10	47	78	12:45			69	254	56	248	502
01:00			2		13			13:00			58		71		
01:15			6		11			13:15			67		55		
01:30			3		6			13:30			76		67		
01:45			7	18	10	40	58	13:45			87	288	71	264	552
02:00			1		4			14:00			93		77		
02:15			1		7			14:15			100		69		
02:30			3		5			14:30			70		86		
02:45			2	7	6	22	29	14:45			94	357	80	312	669
03:00			4		5			15:00			99		86		
03:15			2		7			15:15			95		107		
03:30			3		13			15:30			129		100		
03:45			2	11	4	29	40	15:45			141	464	115	408	872
04:00			7		8			16:00			159		122		
04:15			10		6			16:15			172		108		
04:30			8		16			16:30			201		101		
04:45			14	39	18	48	87	16:45			205	737	130	461	1198
05:00			11		29			17:00			198		116		
05:15			33		35			17:15			178		116		
05:30			49		61			17:30			214		113		
05:45			48	141	96	221	362	17:45			226	816	118	463	1279
06:00			49		116			18:00			192		149		
06:15			79		143			18:15			128		106		
06:30			93		175			18:30			120		110		
06:45			111	332	227	661	993	18:45			119	559	85	450	1009
07:00			92		193			19:00			95		97		
07:15			83		162			19:15			81		81		
07:30			89		210			19:30			66		50		
07:45			86	350	212	777	1127	19:45			56	298	45	273	571
08:00			94		177			20:00			42		38		
08:15			83		153			20:15			47		34		
08:30			87		104			20:30			49		42		
08:45			73	337	100	534	871	20:45			40	178	42	156	334
09:00			69		115			21:00			32		41		
09:15			74		92			21:15			48		25		
09:30			76		78			21:30			41		51		
09:45			75	294	73	358	652	21:45			36	157	39	156	313
10:00			65		65			22:00			33		35		
10:15			68		54			22:15			22		23		
10:30			66		69			22:30			18		22		
10:45			78	277	73	261	538	22:45			21	94	23	103	197
11:00			70		62			23:00			20		34		
11:15			68		61			23:15			11		22		
11:30			60		53			23:30			15		32		
11:45			74	272	84	260	532	23:45			16	62	21	109	171
Total Vol.				2109		3258	**5367**					4264		3403	**7667**

Daily Totals

NB	SB	EB	WB	Combined
		6373	6661	**13034**

	AM			PM		
Split %	39.3%	60.7%	**41.2%**	55.6%	44.4%	**58.8%**
Peak Hour	*06:30*	*06:45*	***06:45***	*17:00*	*17:15*	***17:15***
Volume	379	792	**1167**	816	496	**1306**
P.H.F.	0.85	0.87	**0.86**	0.90	0.83	**0.95**

Average Daily Traffic Volumes

Prepared by: Southland Car Counters

Volumes for: Tuesday, October 25, 2005 City: Escondido Project #: 05-4276-006

Location: Gopher Canyon Rd btwn I-15 and Old Hwy 395/Champagne Blvd

AM Period	NB	SB	EB		WB			PM Period	NB	SB	EB		WB		
00:00			14		4			12:00			88		71		
00:15			15		8			12:15			70		88		
00:30			9		9			12:30			66		96		
00:45			9	47	3	24	71	12:45			72	296	81	336	632
01:00			10		2			13:00			90		92		
01:15			5		5			13:15			90		73		
01:30			5		4			13:30			100		91		
01:45			4	24	3	14	38	13:45			119	399	81	337	736
02:00			4		4			14:00			108		97		
02:15			5		1			14:15			115		75		
02:30			1		2			14:30			97		92		
02:45			1	11	5	12	23	14:45			101	421	83	347	768
03:00			2		3			15:00			114		101		
03:15			5		3			15:15			114		99		
03:30			3		5			15:30			112		96		
03:45			8	18	3	14	32	15:45			151	491	129	425	916
04:00			8		6			16:00			129		92		
04:15			5		5			16:15			134		117		
04:30			8		12			16:30			126		87		
04:45			7	28	17	40	68	16:45			136	525	98	394	919
05:00			6		45			17:00			136		94		
05:15			11		51			17:15			131		101		
05:30			11		86			17:30			135		85		
05:45			28	56	72	254	310	17:45			155	557	88	368	925
06:00			33		98			18:00			139		104		
06:15			40		95			18:15			157		101		
06:30			62		115			18:30			138		96		
06:45			91	226	106	414	640	18:45			143	577	71	372	949
07:00			91		116			19:00			110		54		
07:15			74		111			19:15			97		53		
07:30			77		129			19:30			102		37		
07:45			95	337	148	504	841	19:45			93	402	37	181	583
08:00			98		110			20:00			81		25		
08:15			75		107			20:15			86		33		
08:30			96		114			20:30			52		20		
08:45			71	340	112	443	783	20:45			56	275	18	96	371
09:00			89		127			21:00			58		30		
09:15			89		100			21:15			70		13		
09:30			105		97			21:30			67		26		
09:45			77	360	100	424	784	21:45			54	249	16	85	334
10:00			91		104			22:00			53		9		
10:15			87		88			22:15			43		7		
10:30			62		88			22:30			33		22		
10:45			77	317	108	388	705	22:45			29	158	11	49	207
11:00			78		95			23:00			40		19		
11:15			86		68			23:15			14		8		
11:30			75		94			23:30			22		8		
11:45			76	315	87	344	659	23:45			7	83	7	42	125
Total Vol.				2079		2875	**4954**					4433		3032	**7465**

Daily Totals

NB	SB	EB	WB	Combined
		6512	5907	**12419**

	AM			PM		
Split %	42.0%	58.0%	**39.9%**	59.4%	40.6%	**60.1%**
Peak Hour	07:45	07:00	**07:45**	17:45	15:30	**17:45**
Volume	364	504	**843**	589	434	**978**
P.H.F.	0.93	0.85	**0.87**	0.94	0.84	**0.95**

Average Daily Traffic Volumes

Prepared by: Southland Car Counters

Volumes for: Tuesday, October 25, 2005 City: Escondido Project #: 05-4276-002

Location: Old Hwy 395 btwn Circle R Drive and Gopher Canyon Rd

AM Period	NB		SB		EB	WB		PM Period	NB		SB		EB	WB	
00:00	8		2					12:00	64		67				
00:15	8		3					12:15	64		68				
00:30	4		2					12:30	58		79				
00:45	9	29	2	9			38	12:45	74	260	64	278			538
01:00	4		0					13:00	50		73				
01:15	3		0					13:15	87		65				
01:30	5		5					13:30	78		71				
01:45	2	14	2	7			21	13:45	66	281	68	277			558
02:00	3		3					14:00	72		67				
02:15	5		2					14:15	77		68				
02:30	2		1					14:30	89		62				
02:45	2	12	3	9			21	14:45	88	326	72	269			595
03:00	1		1					15:00	83		75				
03:15	4		0					15:15	84		74				
03:30	3		3					15:30	110		89				
03:45	4	12	2	6			18	15:45	124	401	88	326			727
04:00	5		6					16:00	108		90				
04:15	2		6					16:15	141		96				
04:30	6		7					16:30	145		99				
04:45	4	17	14	33			50	16:45	118	512	80	365			877
05:00	6		23					17:00	149		62				
05:15	5		43					17:15	141		82				
05:30	7		62					17:30	121		62				
05:45	14	32	69	197			229	17:45	138	549	77	283			832
06:00	17		81					18:00	120		76				
06:15	27		92					18:15	114		77				
06:30	50		124					18:30	123		57				
06:45	54	148	105	402			550	18:45	114	471	55	265			736
07:00	79		130					19:00	99		37				
07:15	62		121					19:15	69		40				
07:30	65		136					19:30	83		26				
07:45	64	270	147	534			804	19:45	53	304	24	127			431
08:00	72		125					20:00	64		20				
08:15	58		105					20:15	49		17				
08:30	64		89					20:30	45		14				
08:45	57	251	100	419			670	20:45	32	190	11	62			252
09:00	56		87					21:00	48		10				
09:15	61		91					21:15	49		16				
09:30	59		78					21:30	42		13				
09:45	44	220	80	336			556	21:45	40	179	10	49			228
10:00	57		76					22:00	32		7				
10:15	45		91					22:15	33		4				
10:30	47		66					22:30	25		15				
10:45	51	200	86	319			519	22:45	22	112	7	33			145
11:00	50		66					23:00	25		8				
11:15	69		50					23:15	15		2				
11:30	51		63					23:30	11		4				
11:45	48	218	61	240			458	23:45	10	61	9	23			84
Total Vol.		1423		2511			**3934**			3646		2357			**6003**

Daily Totals

NB	SB	EB	WB	Combined
5069	4868			**9937**

	AM			PM		
Split %	36.2%	63.8%	**39.6%**	60.7%	39.3%	**60.4%**
Peak Hour	07:00	07:00	**07:00**	16:15	15:45	**15:45**
Volume	270	534	**804**	553	373	**891**
P.H.F.	0.85	0.91	**0.95**	0.90	0.94	**0.91**

Average Daily Traffic Volumes

Prepared by: Southland Car Counters

Volumes for: Tuesday, October 25, 2005 City: Escondido Project #: 05-4276-003

Location: Champagne Blvd btwn Gopher Canyon Rd and Old Castle Rd

AM Period	NB		SB		EB	WB		PM Period	NB		SB		EB	WB	
00:00	5		9					12:00	69		78				
00:15	7		6					12:15	77		49				
00:30	7		4					12:30	78		72				
00:45	6	25	1	20			45	12:45	82	306	69	268			574
01:00	5		5					13:00	86		67				
01:15	6		5					13:15	86		72				
01:30	6		3					13:30	70		85				
01:45	6	23	4	17			40	13:45	64	306	98	322			628
02:00	3		3					14:00	87		91				
02:15	7		2					14:15	81		76				
02:30	7		0					14:30	88		71				
02:45	5	22	1	6			28	14:45	83	339	79	317			656
03:00	3		2					15:00	83		87				
03:15	7		4					15:15	91		78				
03:30	5		3					15:30	88		104				
03:45	1	16	1	10			26	15:45	118	380	111	380			760
04:00	3		4					16:00	123		130				
04:15	3		3					16:15	102		97				
04:30	12		7					16:30	123		141				
04:45	20	38	7	21			59	16:45	117	465	101	469			934
05:00	21		9					17:00	115		87				
05:15	18		15					17:15	120		99				
05:30	34		17					17:30	108		127				
05:45	23	96	46	87			183	17:45	92	435	103	416			851
06:00	48		40					18:00	91		102				
06:15	48		70					18:15	80		71				
06:30	54		90					18:30	79		77				
06:45	77	227	103	303			530	18:45	52	302	51	301			603
07:00	80		104					19:00	71		47				
07:15	68		113					19:15	35		61				
07:30	62		140					19:30	47		43				
07:45	105	315	113	470			785	19:45	27	180	45	196			376
08:00	76		113					20:00	33		46				
08:15	73		84					20:15	28		34				
08:30	72		102					20:30	28		41				
08:45	84	305	77	376			681	20:45	30	119	23	144			263
09:00	79		81					21:00	28		26				
09:15	74		71					21:15	20		47				
09:30	74		103					21:30	24		21				
09:45	71	298	98	353			651	21:45	17	89	27	121			210
10:00	76		61					22:00	23		30				
10:15	60		82					22:15	16		17				
10:30	60		68					22:30	16		15				
10:45	83	279	72	283			562	22:45	10	65	22	84			149
11:00	78		64					23:00	28		9				
11:15	74		54					23:15	11		10				
11:30	66		71					23:30	15		11				
11:45	74	292	71	260			552	23:45	1	55	8	38			93
Total Vol.		1936		2206			**4142**			3041		3056			**6097**

Daily Totals

NB	SB	EB	WB	Combined
4977	5262			**10239**

	AM			PM		
Split %	46.7%	53.3%	**40.5%**	49.9%	50.1%	**59.5%**
Peak Hour	07:45	07:15	**07:15**	16:30	15:45	**15:45**
Volume	326	479	**790**	475	479	**945**
P.H.F.	0.78	0.86	**0.91**	0.96	0.85	**0.89**

Average Daily Traffic Volumes

Prepared by: Southland Car Counters

Volumes for: Wednesday, October 26, 2005 City: Escondido Project #: 05-4276-004

Location: Champagne Blvd btwn Old Castle Rd and Welk View Dr

AM Period	NB		SB		EB	WB		PM Period	NB		SB		EB	WB	
00:00	3		1					12:00	41		48				
00:15	1		2					12:15	30		44				
00:30	1		2					12:30	41		32				
00:45	1	6	1	6			12	12:45	47	159	33	157			316
01:00	5		1					13:00	49		43				
01:15	0		1					13:15	35		33				
01:30	0		0					13:30	57		37				
01:45	3	8	1	3			11	13:45	38	179	47	160			339
02:00	0		2					14:00	32		49				
02:15	2		2					14:15	50		37				
02:30	2		0					14:30	52		37				
02:45	1	5	0	4			9	14:45	51	185	44	167			352
03:00	1		1					15:00	44		38				
03:15	1		0					15:15	50		40				
03:30	2		1					15:30	63		28				
03:45	1	5	0	2			7	15:45	82	239	56	162			401
04:00	0		2					16:00	54		48				
04:15	2		0					16:15	76		55				
04:30	1		2					16:30	86		42				
04:45	1	4	4	8			12	16:45	101	317	49	194			511
05:00	1		8					17:00	91		40				
05:15	2		7					17:15	91		23				
05:30	1		13					17:30	87		35				
05:45	1	5	19	47			52	17:45	95	364	47	145			509
06:00	3		35					18:00	80		37				
06:15	6		30					18:15	67		34				
06:30	10		61					18:30	50		27				
06:45	16	35	67	193			228	18:45	62	259	26	124			383
07:00	22		64					19:00	37		21				
07:15	32		78					19:15	30		13				
07:30	18		86					19:30	19		15				
07:45	22	94	112	340			434	19:45	34	120	10	59			179
08:00	19		113					20:00	21		11				
08:15	19		86					20:15	14		13				
08:30	20		57					20:30	19		6				
08:45	19	77	62	318			395	20:45	18	72	9	39			111
09:00	25		62					21:00	18		6				
09:15	26		52					21:15	22		5				
09:30	31		48					21:30	28		7				
09:45	40	122	48	210			332	21:45	16	84	3	21			105
10:00	29		40					22:00	8		8				
10:15	24		49					22:15	21		10				
10:30	35		43					22:30	13		4				
10:45	23	111	48	180			291	22:45	5	47	5	27			74
11:00	46		37					23:00	8		3				
11:15	42		35					23:15	15		1				
11:30	38		40					23:30	7		6				
11:45	40	166	39	151			317	23:45	8	38	1	11			49
Total Vol.		638		1462			**2100**			2063		1266			**3329**

Daily Totals

NB	SB	EB	WB	Combined
2701	2728			**5429**

	AM			PM		
Split %	30.4%	69.6%	**38.7%**	62.0%	38.0%	**61.3%**
Peak Hour	11:00	07:30	**07:15**	16:45	15:45	**16:15**
Volume	166	397	**480**	370	201	**540**
P.H.F.	0.90	0.88	**0.90**	0.93	0.90	**0.90**

030537

Average Daily Traffic Volumes

Prepared by: Southland Car Counters

Volumes for: Thursday, July 17, 2003 City: Escondido Hidden Meadows Project #: 03-1127-001

Location: Old Castle Rd & e/o Champagne Bl Client Ref #:

AM Period	NB	SB	EB		WB			PM Period	NB	SB	EB		WB		
12:00-12:15			9		2			12:00-12:15			46		60		
12:15-12:30			5		5			12:15-12:30			45		42		
12:30-12:45			8		2			12:30-12:45			54		46		
12:45-1:00			5	27	4	13	40	12:45-1:00			60	205	42	190	395
1:00-1:15			1		2			1:00-1:15			59		57		
1:15-1:30			4		4			1:15-1:30			52		47		
1:30-1:45			3		4			1:30-1:45			55		58		
1:45-2:00			4	12	6	16	28	1:45-2:00			51	217	49	211	428
2:00-2:15			1		0			2:00-2:15			70		39		
2:15-2:30			1		5			2:15-2:30			79		56		
2:30-2:45			1		1			2:30-2:45			63		43		
2:45-3:00			0	3	4	10	13	2:45-3:00			69	281	56	194	475
3:00-3:15			1		2			3:00-3:15			57		51		
3:15-3:30			0		8			3:15-3:30			85		51		
3:30-3:45			1		6			3:30-3:45			90		79		
3:45-4:00			1	3	3	19	22	3:45-4:00			75	307	91	272	579
4:00-4:15			2		2			4:00-4:15			81		70		
4:15-4:30			1		6			4:15-4:30			84		77		
4:30-4:45			1		7			4:30-4:45			85		49		
4:45-5:00			6	10	24	39	49	4:45-5:00			96	346	57	253	599
5:00-5:15			2		46			5:00-5:15			78		56		
5:15-5:30			17		41			5:15-5:30			97		44		
5:30-5:45			20		55			5:30-5:45			91		46		
5:45-6:00			19	58	49	191	249	5:45-6:00			63	329	41	187	516
6:00-6:15			31		64			6:00-6:15			68		41		
6:15-6:30			55		58			6:15-6:30			63		36		
6:30-6:45			55		72			6:30-6:45			63		35		
6:45-7:00			51	192	60	254	446	6:45-7:00			58	252	22	134	386
7:00-7:15			60		75			7:00-7:15			67		32		
7:15-7:30			52		97			7:15-7:30			45		27		
7:30-7:45			62		99			7:30-7:45			45		23		
7:45-8:00			47	221	60	331	552	7:45-8:00			38	195	22	104	299
8:00-8:15			68		73			8:00-8:15			35		25		
8:15-8:30			66		59			8:15-8:30			37		22		
8:30-8:45			52		65			8:30-8:45			39		16		
8:45-9:00			47	233	52	249	482	8:45-9:00			27	138	13	76	214
9:00-9:15			41		59			9:00-9:15			22		18		
9:15-9:30			41		52			9:15-9:30			26		20		
9:30-9:45			51		56			9:30-9:45			23		13		
9:45-10:00			64	197	65	232	429	9:45-10:00			32	103	13	64	167
10:00-10:15			45		50			10:00-10:15			28		10		
10:15-10:30			45		57			10:15-10:30			13		9		
10:30-10:45			34		57			10:30-10:45			15		9		
10:45-11:00			32	156	57	221	377	10:45-11:00			17	73	12	40	113
11:00-11:15			41		58			11:00-11:15			14		6		
11:15-11:30			38		46			11:15-11:30			11		8		
11:30-11:45			60		46			11:30-11:45			15		4		
11:45-12:00			61	200	41	191	391	11:45-12:00			9	49	8	26	75
Total Vol.	0	0		1312		1766	3078		0	0		2495		1751	4246
Daily Totals									0	0		3807		3517	7324

Average Daily Traffic Volumes

Prepared by: Southland Car Counters

Volumes for: Tuesday, October 12, 2004 City: Valley Center Project #: 04-4342-003

Location: Old Castle Rd W/o Lilac Rd

AM Period	NB	SB	EB		WB			PM Period	NB	SB	EB		WB		
00:00			2		2			12:00			30		35		
00:15			6		5			12:15			27		28		
00:30			6		7			12:30			40		37		
00:45			4	18	6	20	38	12:45			30	127	44	144	271
01:00			7		8			13:00			39		38		
01:15			18		14			13:15			33		42		
01:30			12		9			13:30			33		54		
01:45			7	44	5	36	80	13:45			29	134	40	174	308
02:00			10		4			14:00			42		47		
02:15			10		5			14:15			40		53		
02:30			9		7			14:30			48		68		
02:45			7	36	6	22	58	14:45			35	165	52	220	385
03:00			7		10			15:00			43		71		
03:15			8		5			15:15			53		60		
03:30			12		9			15:30			51		88		
03:45			11	38	7	31	69	15:45			42	189	115	334	523
04:00			9		12			16:00			63		76		
04:15			9		15			16:15			67		60		
04:30			7		18			16:30			50		88		
04:45			8	33	20	65	98	16:45			73	253	51	275	528
05:00			10		31			17:00			76		74		
05:15			10		30			17:15			56		70		
05:30			20		26			17:30			65		72		
05:45			27	67	20	107	174	17:45			59	256	51	267	523
06:00			30		30			18:00			79		35		
06:15			42		42			18:15			69		37		
06:30			60		40			18:30			72		42		
06:45			90	222	60	172	394	18:45			66	286	43	157	443
07:00			100		77			19:00			55		38		
07:15			67		59			19:15			36		24		
07:30			66		60			19:30			25		29		
07:45			70	303	44	240	543	19:45			26	142	29	120	262
08:00			60		62			20:00			21		33		
08:15			56		55			20:15			22		26		
08:30			46		49			20:30			18		20		
08:45			49	211	59	225	436	20:45			15	76	18	97	173
09:00			40		55			21:00			12		15		
09:15			42		40			21:15			10		12		
09:30			30		42			21:30			8		10		
09:45			39	151	30	167	318	21:45			7	37	8	45	82
10:00			32		22			22:00			7		7		
10:15			36		27			22:15			9		7		
10:30			30		30			22:30			10		9		
10:45			41	139	31	110	249	22:45			8	34	2	25	59
11:00			40		26			23:00			8		2		
11:15			36		35			23:15			4		4		
11:30			38		31			23:30			2		5		
11:45			40	154	30	122	276	23:45			1	15	12	23	38
Total Vol.				1416		1317	**2733**					1714		1881	**3595**

Daily Totals

NB	SB	EB	WB	Combined
		3130	3198	**6328**

	AM			PM		
Split %	51.8%	48.2%	**43.2%**	47.7%	52.3%	**56.8%**
Peak Hour	06:45	06:45	**06:45**	18:00	15:15	**15:30**
Volume	323	256	**579**	286	339	**562**
P.H.F.	0.81	0.83	**0.82**	0.91	0.74	**0.89**

Average Daily Traffic Volumes

Prepared by: Southland Car Counters

Volumes for: Tuesday, October 12, 2004 City: Valley Center Project #: 04-4342-001

Location: Lilac Rd N/o Old Castle Rd

AM Period	NB		SB		EB	WB		PM Period	NB		SB		EB	WB	
00:00	0		0					12:00	21		28				
00:15	2		0					12:15	26		24				
00:30	2		0					12:30	24		20				
00:45	3	7	0	0			7	12:45	25	96	22	94			190
01:00	0		0					13:00	21		18				
01:15	1		0					13:15	21		23				
01:30	1		0					13:30	26		23				
01:45	0	2	0	0			2	13:45	24	92	21	85			177
02:00	0		0					14:00	29		23				
02:15	0		1					14:15	54		22				
02:30	0		0					14:30	36		51				
02:45	0	0	0	1			1	14:45	21	140	30	126			266
03:00	0		1					15:00	31		21				
03:15	2		0					15:15	72		30				
03:30	0		0					15:30	43		57				
03:45	0	2	1	2			4	15:45	39	185	27	135			320
04:00	0		1					16:00	26		32				
04:15	2		2					16:15	47		26				
04:30	1		7					16:30	27		31				
04:45	0	3	7	17			20	16:45	46	146	23	112			258
05:00	0		6					17:00	43		37				
05:15	2		10					17:15	32		25				
05:30	1		17					17:30	38		26				
05:45	4	7	15	48			55	17:45	30	143	14	102			245
06:00	4		23					18:00	35		23				
06:15	10		26					18:15	46		14				
06:30	15		21					18:30	37		22				
06:45	20	49	41	111			160	18:45	31	149	23	82			231
07:00	22		44					19:00	29		13				
07:15	24		52					19:15	27		14				
07:30	34		40					19:30	30		8				
07:45	38	118	49	185			303	19:45	21	107	8	43			150
08:00	37		50					20:00	20		5				
08:15	45		40					20:15	14		2				
08:30	54		65					20:30	11		4				
08:45	41	177	50	205			382	20:45	16	61	6	17			78
09:00	18		42					21:00	19		6				
09:15	16		15					21:15	24		7				
09:30	10		24					21:30	13		8				
09:45	21	65	17	98			163	21:45	14	70	3	24			94
10:00	17		30					22:00	11		3				
10:15	32		27					22:15	9		1				
10:30	24		20					22:30	8		1				
10:45	17	90	26	103			193	22:45	5	33	3	8			41
11:00	14		29					23:00	5		0				
11:15	28		26					23:15	9		3				
11:30	28		19					23:30	3		1				
11:45	17	87	29	103			190	23:45	4	21	2	6			27
Total Vol.		607		873			**1480**			1243		834			**2077**

Daily Totals

NB	SB	EB	WB	Combined
1850	1707			**3557**

	AM			PM		
Split %	41.0%	59.0%	**41.6%**	59.8%	40.2%	**58.4%**
Peak Hour	08:00	08:00	**08:00**	15:00	15:15	**15:15**
Volume	177	205	**382**	185	146	**326**
P.H.F.	0.82	0.79	**0.80**	0.66	0.64	**0.80**

Average Daily Traffic Volumes

Prepared by: Southland Car Counters

Volumes for: Tuesday, October 12, 2004 City: Valley Center Project #: 04-4342-002

Location: Lilac Rd Btwn Old Castle Rd & Via Piedra

AM Period	NB	SB	EB		WB			PM Period	NB	SB	EB		WB		
00:00			7		8			12:00			52		55		
00:15			3		8			12:15			59		53		
00:30			1		6			12:30			50		54		
00:45			4	15	6	28	43	12:45			43	204	48	210	414
01:00			4		3			13:00			63		39		
01:15			7		4			13:15			48		69		
01:30			0		7			13:30			53		57		
01:45			3	14	1	15	29	13:45			48	212	50	215	427
02:00			2		4			14:00			53		73		
02:15			1		0			14:15			70		72		
02:30			2		2			14:30			79		61		
02:45			0	5	3	9	14	14:45			63	265	63	269	534
03:00			3		6			15:00			47		102		
03:15			3		5			15:15			83		99		
03:30			4		4			15:30			72		101		
03:45			2	12	6	21	33	15:45			59	261	122	424	685
04:00			1		3			16:00			108		112		
04:15			3		8			16:15			69		127		
04:30			3		6			16:30			91		100		
04:45			4	11	6	23	34	16:45			90	358	113	452	810
05:00			4		16			17:00			82		107		
05:15			10		17			17:15			78		116		
05:30			27		12			17:30			85		105		
05:45			27	68	30	75	143	17:45			79	324	62	390	714
06:00			34		40			18:00			73		55		
06:15			52		51			18:15			74		66		
06:30			62		60			18:30			75		50		
06:45			93	241	85	236	477	18:45			65	287	58	229	516
07:00			147		66			19:00			61		44		
07:15			135		79			19:15			32		41		
07:30			98		97			19:30			25		49		
07:45			88	468	90	332	800	19:45			37	155	37	171	326
08:00			123		83			20:00			14		40		
08:15			75		74			20:15			19		41		
08:30			101		79			20:30			24		18		
08:45			69	368	70	306	674	20:45			21	78	30	129	207
09:00			65		45			21:00			21		33		
09:15			69		41			21:15			17		29		
09:30			46		46			21:30			13		24		
09:45			65	245	45	177	422	21:45			16	67	26	112	179
10:00			58		59			22:00			19		11		
10:15			53		57			22:15			18		20		
10:30			51		43			22:30			9		21		
10:45			47	209	34	193	402	22:45			13	59	12	64	123
11:00			62		45			23:00			3		14		
11:15			65		50			23:15			14		9		
11:30			45		51			23:30			9		9		
11:45			57	229	46	192	421	23:45			4	30	6	38	68
Total Vol.				1885		1607	**3492**					2300		2703	**5003**

Daily Totals

	NB	SB	EB	WB	Combined
			4185	4310	**8495**

	AM			PM		
Split %	54.0%	46.0%	**41.1%**	46.0%	54.0%	**58.9%**
Peak Hour	06:45	07:15	**06:45**	16:00	15:30	**16:00**
Volume	473	349	**800**	358	462	**810**
P.H.F.	0.80	0.90	**0.93**	0.83	0.91	**0.92**

Average Daily Traffic Volumes

Prepared by: Southland Car Counters

Volumes for: Wednesday, June 09, 2004 City: Valley Center Project #: 04-4195-001

Location: Lilac Rd NE/o Betsworth Rd

AM Period	NB	SB	EB		WB			PM Period	NB	SB	EB		WB		
12:00-12:15			6		14			12:00-12:15			50		70		
12:15-12:30			7		7			12:15-12:30			33		54		
12:30-12:45			3		7			12:30-12:45			30		55		
12:45-1:00			8	24	8	36	60	12:45-1:00			25	138	38	217	355
1:00-1:15			7		7			1:00-1:15			18		40		
1:15-1:30			3		5			1:15-1:30			30		44		
1:30-1:45			4		8			1:30-1:45			25		45		
1:45-2:00			3	17	6	26	43	1:45-2:00			20	93	50	179	272
2:00-2:15			2		5			2:00-2:15			33		51		
2:15-2:30			5		6			2:15-2:30			30		55		
2:30-2:45			0		3			2:30-2:45			23		49		
2:45-3:00			3	10	4	18	28	2:45-3:00			93	179	111	266	445
3:00-3:15			2		5			3:00-3:15			90		110		
3:15-3:30			0		2			3:15-3:30			93		108		
3:30-3:45			3		2			3:30-3:45			94		110		
3:45-4:00			1	6	5	14	20	3:45-4:00			108	385	101	429	814
4:00-4:15			2		7			4:00-4:15			109		108		
4:15-4:30			4		4			4:15-4:30			142		87		
4:30-4:45			9		7			4:30-4:45			104		113		
4:45-5:00			15	30	12	30	60	4:45-5:00			121	476	95	403	879
5:00-5:15			21		19			5:00-5:15			128		104		
5:15-5:30			33		13			5:15-5:30			90		89		
5:30-5:45			51		27			5:30-5:45			100		75		
5:45-6:00			50	155	25	84	239	5:45-6:00			128	446	97	365	811
6:00-6:15			56		47			6:00-6:15			91		63		
6:15-6:30			78		57			6:15-6:30			72		63		
6:30-6:45			95		51			6:30-6:45			84		76		
6:45-7:00			134	363	62	217	580	6:45-7:00			65	312	64	266	578
7:00-7:15			203		85			7:00-7:15			60		73		
7:15-7:30			113		133			7:15-7:30			71		72		
7:30-7:45			98		124			7:30-7:45			37		55		
7:45-8:00			102	516	110	452	968	7:45-8:00			33	201	50	250	451
8:00-8:15			118		94			8:00-8:15			29		37		
8:15-8:30			101		113			8:15-8:30			36		41		
8:30-8:45			89		97			8:30-8:45			46		40		
8:45-9:00			60	368	69	373	741	8:45-9:00			31	142	45	163	305
9:00-9:15			65		56			9:00-9:15			31		42		
9:15-9:30			60		60			9:15-9:30			25		41		
9:30-9:45			70		67			9:30-9:45			26		32		
9:45-10:00			66	261	71	254	515	9:45-10:00			17	99	32	147	246
10:00-10:15			67		56			10:00-10:15			26		34		
10:15-10:30			58		60			10:15-10:30			10		16		
10:30-10:45			55		66			10:30-10:45			18		16		
10:45-11:00			54	234	68	250	484	10:45-11:00			13	67	15	81	148
11:00-11:15			28		56			11:00-11:15			14		12		
11:15-11:30			35		60			11:15-11:30			10		11		
11:30-11:45			33		66			11:30-11:45			12		13		
11:45-12:00			40	136	68	250	386	11:45-12:00			6	42	8	44	86
Total Vol.	0	0		2120		2004	4124		0	0		2580		2810	5390
Daily Totals									0	0		4700		4814	9514

Average Daily Traffic Volumes

Prepared by: Southland Car Counters

Volumes for: Wednesday, January 18, 2006 City: Valley Center Project #: 05-4335-004

Location: Lilac Rd W/o Valley Center Rd

AM Period	NB	SB	EB		WB			PM Period	NB	SB	EB		WB		
00:00			8		4			12:00			80		69		
00:15			4		11			12:15			101		86		
00:30			3		5			12:30			100		142		
00:45			4	19	6	26	45	12:45			79	360	113	410	770
01:00			9		7			13:00			80		92		
01:15			3		13			13:15			76		81		
01:30			1		3			13:30			72		75		
01:45			0	13	5	28	41	13:45			85	313	93	341	654
02:00			4		3			14:00			56		105		
02:15			3		7			14:15			102		89		
02:30			3		8			14:30			101		73		
02:45			0	10	8	26	36	14:45			103	362	87	354	716
03:00			5		5			15:00			96		130		
03:15			1		4			15:15			112		164		
03:30			1		2			15:30			115		123		
03:45			2	9	6	17	26	15:45			88	411	113	530	941
04:00			2		5			16:00			122		117		
04:15			8		4			16:15			96		139		
04:30			8		6			16:30			123		115		
04:45			15	33	3	18	51	16:45			88	429	124	495	924
05:00			20		15			17:00			99		111		
05:15			21		20			17:15			97		108		
05:30			45		21			17:30			90		86		
05:45			43	129	27	83	212	17:45			102	388	99	404	792
06:00			48		45			18:00			88		78		
06:15			80		64			18:15			85		81		
06:30			82		72			18:30			65		99		
06:45			109	319	84	265	584	18:45			56	294	61	319	613
07:00			135		78			19:00			55		59		
07:15			148		86			19:15			29		62		
07:30			118		111			19:30			40		48		
07:45			125	526	91	366	892	19:45			40	164	43	212	376
08:00			111		73			20:00			31		37		
08:15			99		102			20:15			34		57		
08:30			92		85			20:30			42		44		
08:45			101	403	78	338	741	20:45			24	131	58	196	327
09:00			76		48			21:00			38		36		
09:15			89		51			21:15			21		61		
09:30			66		64			21:30			25		40		
09:45			74	305	57	220	525	21:45			16	100	36	173	273
10:00			72		54			22:00			9		14		
10:15			90		79			22:15			16		19		
10:30			70		54			22:30			20		15		
10:45			60	292	61	248	540	22:45			9	54	14	62	116
11:00			82		66			23:00			6		17		
11:15			85		53			23:15			13		17		
11:30			55		61			23:30			7		15		
11:45			75	297	53	233	530	23:45			7	33	13	62	95
Total Vol.				2355		1868	**4223**					3039		3558	**6597**

Daily Totals

NB	SB	EB	WB	Combined
		5394	5426	**10820**

	AM			PM		
Split %	55.8%	44.2%	**39.0%**	46.1%	53.9%	**61.0%**
Peak Hour	07:00	07:30	**07:00**	15:15	15:00	**15:15**
Volume	526	377	**892**	437	530	**954**
P.H.F.	0.89	0.85	**0.95**	0.90	0.81	**0.86**

Average Daily Traffic Volumes

Prepared by: Southland Car Counters

Volumes for: Wednesday, January 18, 2006 City: Valley Center Project #: 05-4335-001

Location: Valley Center btwn Miller Rd and Lilac Rd

AM Period	NB		SB		EB	WB		PM Period	NB		SB		EB	WB	
00:00	22		25					12:00	151		185				
00:15	23		29					12:15	180		211				
00:30	21		24					12:30	210		239				
00:45	19	85	27	105			190	12:45	196	737	240	875			1612
01:00	17		34					13:00	195		203				
01:15	22		20					13:15	191		150				
01:30	10		20					13:30	172		170				
01:45	11	60	22	96			156	13:45	215	773	190	713			1486
02:00	6		12					14:00	210		171				
02:15	12		26					14:15	200		216				
02:30	14		21					14:30	241		205				
02:45	12	44	12	71			115	14:45	235	886	165	757			1643
03:00	15		16					15:00	247		173				
03:15	11		16					15:15	270		190				
03:30	5		17					15:30	264		185				
03:45	7	38	22	71			109	15:45	285	1066	200	748			1814
04:00	9		11					16:00	260		203				
04:15	8		29					16:15	277		216				
04:30	19		40					16:30	267		207				
04:45	10	46	42	122			168	16:45	272	1076	211	837			1913
05:00	20		63					17:00	277		215				
05:15	28		97					17:15	286		223				
05:30	59		136					17:30	264		206				
05:45	47	154	155	451			605	17:45	247	1074	191	835			1909
06:00	72		139					18:00	219		154				
06:15	92		186					18:15	224		157				
06:30	112		200					18:30	217		153				
06:45	148	424	186	711			1135	18:45	189	849	132	596			1445
07:00	227		186					19:00	180		126				
07:15	250		262					19:15	182		128				
07:30	216		259					19:30	150		103				
07:45	227	920	218	925			1845	19:45	120	632	84	441			1073
08:00	190		228					20:00	110		77				
08:15	227		230					20:15	103		72				
08:30	184		232					20:30	93		65				
08:45	163	764	172	862			1626	20:45	146	452	103	317			769
09:00	114		194					21:00	94		66				
09:15	109		211					21:15	115		81				
09:30	110		222					21:30	97		69				
09:45	111	444	190	817			1261	21:45	82	388	58	274			662
10:00	111		197					22:00	68		47				
10:15	140		185					22:15	82		58				
10:30	135		194					22:30	77		54				
10:45	127	513	182	758			1271	22:45	56	283	40	199			482
11:00	152		171					23:00	45		32				
11:15	150		176					23:15	56		39				
11:30	139		193					23:30	46		33				
11:45	172	613	166	706			1319	23:45	28	175	20	124			299
Total Vol.		4105		5695			**9800**			8391		6716			**15107**

Daily Totals

NB	SB	EB	WB	Combined
12496	12411			**24907**

	AM			PM		
Split %	41.9%	58.1%	**39.3%**	55.5%	44.5%	**60.7%**
Peak Hour	07:00	07:15	**07:15**	16:30	12:15	**16:30**
Volume	920	967	**1850**	1102	893	**1958**
P.H.F.	0.92	0.92	**0.90**	0.99	0.93	**0.96**

Average Daily Traffic Volumes

Prepared by: Southland Car Counters

Volumes for: Wednesday, January 18, 2006 City: Valley Center Project #: 05-4335-002

Location: Valley Center btwn Lilac Rd and Wood Valley Rd

AM Period	NB		SB		EB	WB		PM Period	NB		SB		EB	WB	
00:00	20		20					12:00	151		184				
00:15	17		26					12:15	177		210				
00:30	21		25					12:30	188		221				
00:45	9	67	25	96			163	12:45	203	719	250	865			1584
01:00	16		33					13:00	195		202				
01:15	18		14					13:15	207		165				
01:30	8		14					13:30	193		194				
01:45	9	51	20	81			132	13:45	196	791	174	735			1526
02:00	4		10					14:00	222		184				
02:15	11		19					14:15	188		202				
02:30	11		18					14:30	214		182				
02:45	10	36	9	56			92	14:45	222	846	156	724			1570
03:00	11		11					15:00	194		215				
03:15	10		17					15:15	239		200				
03:30	10		21					15:30	243		192				
03:45	5	36	22	71			107	15:45	288	964	236	843			1807
04:00	7		12					16:00	214		178				
04:15	11		30					16:15	222		216				
04:30	16		52					16:30	238		197				
04:45	12	46	54	148			194	16:45	256	930	190	781			1711
05:00	24		73					17:00	248		200				
05:15	39		115					17:15	262		211				
05:30	63		150					17:30	243		192				
05:45	45	171	154	492			663	17:45	251	1004	155	758			1762
06:00	95		184					18:00	266		146				
06:15	120		179					18:15	243		129				
06:30	146		193					18:30	253		134				
06:45	196	557	220	776			1333	18:45	241	1003	121	530			1533
07:00	165		169					19:00	173		100				
07:15	175		228					19:15	215		123				
07:30	160		239					19:30	151		80				
07:45	165	665	196	832			1497	19:45	130	669	78	381			1050
08:00	152		202					20:00	111		59				
08:15	159		201					20:15	128		74				
08:30	136		207					20:30	107		83				
08:45	124	571	160	770			1341	20:45	135	481	127	343			824
09:00	117		197					21:00	111		74				
09:15	116		226					21:15	115		97				
09:30	108		221					21:30	89		90				
09:45	133	474	225	869			1343	21:45	66	381	50	311			692
10:00	109		194					22:00	79		52				
10:15	159		211					22:15	74		73				
10:30	136		203					22:30	54		54				
10:45	132	536	192	800			1336	22:45	42	249	40	219			468
11:00	153		173					23:00	33		37				
11:15	165		196					23:15	32		46				
11:30	134		186					23:30	25		32				
11:45	172	624	168	723			1347	23:45	29	119	23	138			257
Total Vol.		3834		5714			***9548***			8156		6628			***14784***

Daily Totals

NB	SB	EB	WB	Combined
11990	12342			**24332**

	AM			PM		
Split %	40.2%	59.8%	**39.2%**	55.2%	44.8%	**60.8%**
Peak Hour	06:45	09:00	**06:45**	17:15	12:15	**15:00**
Volume	696	869	**1552**	1022	883	**1807**
P.H.F.	0.89	0.96	**0.93**	0.96	0.88	**0.86**

AM/PM Peak Hour Turn Counts

Intersection Turning Movement

Prepared by: Southland Car Counters

N-S STREET: I-15 SB Ramps DATE: 10/25/2005 LOCATION: City of Escondido

E-W STREET: Gopher Canyon Rd DAY: TUESDAY PROJECT# 05-4275-004

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	0	0	.5	.5	1	0	2	0	1	2	0	
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM				13		105		62	40	52	79		351
7:15 AM				17		115		60	47	65	65		369
7:30 AM				16		142		85	52	90	73		458
7:45 AM				18		107		70	50	72	83		400
8:00 AM				13		79		59	30	80	73		334
8:15 AM				12		80		58	42	76	70		338
8:30 AM				16		71		49	28	52	33		249
8:45 AM				16		71		54	30	55	51		277
9:00 AM													
9:15 AM													
9:30 AM													
9:45 AM													
10:00 AM													
10:15 AM													
10:30 AM													
10:45 AM													
11:00 AM													
11:15 AM													
11:30 AM													
11:45 AM													
TOTAL VOLUMES =	NL 0	NT 0	NR 0	SL 121	ST 0	SR 770	EL 0	ET 497	ER 319	WL 542	WT 527	WR 0	TOTAL 2776

AM Peak Hr Begins at: 700 AM

PEAK VOLUMES =	0	0	0	64	0	469	0	277	189	279	300	0	1578
PEAK HR. FACTOR:		0.000			0.843			0.850			0.888		0.861

CONTROL: stopsign southbound offramp only

Intersection Turning Movement

Prepared by: Southland Car Counters

N-S STREET: I-15 SB Ramps DATE: 10/25/2005 LOCATION: City of Escondido

E-W STREET: Gopher Canyon Rd DAY: TUESDAY PROJECT# 05-4275-004

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	0	0	.5	.5	1	0	2	0	1	2	0	
1:00 PM													
1:15 PM													
1:30 PM													
1:45 PM													
2:00 PM													
2:15 PM													
2:30 PM													
2:45 PM													
3:00 PM													
3:15 PM													
3:30 PM													
3:45 PM													
4:00 PM				15		50		134	46	48	58		351
4:15 PM				20		49		130	47	56	57		359
4:30 PM				16		59		138	44	47	62		366
4:45 PM				17		47		148	45	44	55		356
5:00 PM				10		42		142	45	56	51		346
5:15 PM				17		50		154	50	55	65		391
5:30 PM				9		57		156	59	46	82		409
5:45 PM				10		52		151	51	47	73		384
6:00 PM													
6:15 PM													
6:30 PM													
6:45 PM													
TOTAL VOLUMES =	NL 0	NT 0	NR 0	SL 114	ST 0	SR 406	EL 0	ET 1153	ER 387	WL 399	WT 503	WR 0	TOTAL 2962

PM Peak Hr Begins at: 500 PM

PEAK VOLUMES =	0	0	0	46	0	201	0	603	205	204	271	0	1530
PEAK HR. FACTOR:		0.000			0.922			0.940			0.928		0.935

CONTROL: stopsign southbound offramp only

Intersection Turning Movement

Prepared by: Southland Car Counters

N-S STREET: I-15 NB Ramps DATE: 10/25/2005 LOCATION: City of Escondido

E-W STREET: Gopher Canyon Rd DAY: TUESDAY PROJECT# 05-4275-005

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	0	1	0	0	0	1	2	0	0	2	0	
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM	26		51				46	36			126	14	299
7:15 AM	40		41				44	49			112	13	299
7:30 AM	30		46				40	44			123	16	299
7:45 AM	27		42				29	44			86	13	241
8:00 AM	31		50				37	40			116	12	286
8:15 AM	24		50				31	38			90	14	247
8:30 AM	26		52				36	32			99	16	261
8:45 AM	29		42				35	34			89	13	242
9:00 AM													
9:15 AM													
9:30 AM													
9:45 AM													
10:00 AM													
10:15 AM													
10:30 AM													
10:45 AM													
11:00 AM													
11:15 AM													
11:30 AM													
11:45 AM													
TOTAL VOLUMES =	NL 233	NT 0	NR 374	SL 0	ST 0	SR 0	EL 298	ET 317	ER 0	WL 0	WT 841	WR 111	TOTAL 2174

AM Peak Hr Begins at: 700 AM

PEAK VOLUMES =	123	0	180	0	0	0	159	173	0	0	447	56	1138
PEAK HR. FACTOR:		0.935			0.000			0.892			0.898		0.952

CONTROL: stopsign NB offramp only

Intersection Turning Movement

Prepared by: Southland Car Counters

N-S STREET: I-15 NB Ramps DATE: 10/25/2005 LOCATION: City of Escondido

E-W STREET: Gopher Canyon Rd DAY: TUESDAY PROJECT# 05-4275-005

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	0	1	0	0	0	1	2	0	0	2	0	
1:00 PM													
1:15 PM													
1:30 PM													
1:45 PM													
2:00 PM													
2:15 PM													
2:30 PM													
2:45 PM													
3:00 PM													
3:15 PM													
3:30 PM													
3:45 PM													
4:00 PM	18		78				102	69			75	12	354
4:15 PM	19		75				112	57			77	22	362
4:30 PM	40		78				112	63			85	23	401
4:45 PM	22		76				105	54			69	20	346
5:00 PM	53		104				93	46			74	18	388
5:15 PM	40		88				99	49			65	19	360
5:30 PM	54		120				100	51			90	16	431
5:45 PM	50		22				98	40			70	16	296
6:00 PM													
6:15 PM													
6:30 PM													
6:45 PM													
TOTAL VOLUMES =	NL 296	NT 0	NR 641	SL 0	ST 0	SR 0	EL 821	ET 429	ER 0	WL 0	WT 605	WR 146	TOTAL 2938

PM Peak Hr Begins at: 445 PM

PEAK VOLUMES =	169	0	388	0	0	0	397	200	0	0	298	73	1525
PEAK HR. FACTOR:		0.800			0.000			0.939			0.875		0.885

CONTROL: stopsign NB offramp only

Intersection Turning Movement

Prepared by: Southland Car Counters

N-S STREET: Old Hwy 395/Champagne Blvd DATE: 10/25/2005 LOCATION: City of Escondido

E-W STREET: Gopher Canyon Rd DAY: TUESDAY PROJECT# 05-4275-002

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	1	0	0	1	0	1	0	1	0	0		
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM	49	15			55	60	37		38				254
7:15 AM	58	18			53	66	39		44				278
7:30 AM	51	18			58	66	36		45				274
7:45 AM	63	21			74	67	46		49				320
8:00 AM	62	21			67	57	40		48				295
8:15 AM	63	23			48	69	38		50				291
8:30 AM	50	26			49	58	51		49				283
8:45 AM	59	25			23	61	42		56				266
9:00 AM													
9:15 AM													
9:30 AM													
9:45 AM													
10:00 AM													
10:15 AM													
10:30 AM													
10:45 AM													
11:00 AM													
11:15 AM													
11:30 AM													
11:45 AM													
TOTAL VOLUMES =	NL 455	NT 167	NR 0	SL 0	ST 427	SR 504	EL 329	ET 0	ER 379	WL 0	WT 0	WR 0	TOTAL 2261

AM Peak Hr Begins at: 745 AM

PEAK VOLUMES =	238	91	0	0	238	251	175	0	196	0	0	0	1189
PEAK HR. FACTOR:		0.956			0.867			0.928			0.000		0.929

CONTROL: *signalized*

Intersection Turning Movement

Prepared by: Southland Car Counters

N-S STREET: Old Hwy 395/Champagne Blvd DATE: 10/25/2005 LOCATION: City of Escondido

E-W STREET: Gopher Canyon Rd DAY: TUESDAY PROJECT# 05-4275-002

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	1	0	0	1	0	1	0	1	0	0		
1:00 PM													
1:15 PM													
1:30 PM													
1:45 PM													
2:00 PM													
2:15 PM													
2:30 PM													
2:45 PM													
3:00 PM													
3:15 PM													
3:30 PM													
3:45 PM													
4:00 PM	69	49			38	46	95		57				354
4:15 PM	56	47			36	40	75		48				302
4:30 PM	48	42			30	37	50		33				240
4:45 PM	58	45			37	42	67		45				294
5:00 PM	54	46			39	47	87		56				329
5:15 PM	51	51			31	50	99		53				335
5:30 PM	48	50			34	47	100		76				355
5:45 PM	52	63			22	41	78		64				320
6:00 PM													
6:15 PM													
6:30 PM													
6:45 PM													
TOTAL VOLUMES =	NL 436	NT 393	NR 0	SL 0	ST 267	SR 350	EL 651	ET 0	ER 432	WL 0	WT 0	WR 0	TOTAL 2529

PM Peak Hr Begins at: 500 PM

PEAK VOLUMES =	205	210	0	0	126	185	364	0	249	0	0	0	1339
PEAK HR. FACTOR:		0.902			0.904			0.871			0.000		0.943

CONTROL: signalized

Intersection Turning Movement

Prepared by: Southland Car Counters

N-S STREET: Champagne Blvd DATE: 10/25/2005 LOCATION: City of Escondido

E-W STREET: Old Castle Rd DAY: TUESDAY PROJECT# 05-4275-003

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	1	1	0	0	0	0	1	0	1	
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM		11	10	56	76					35		74	262
7:15 AM		10	6	52	72					31		69	240
7:30 AM		13	7	55	89					30		81	275
7:45 AM		12	8	54	56					26		77	233
8:00 AM		14	8	46	44					19		65	196
8:15 AM		18	10	55	39					20		66	208
8:30 AM		14	10	31	37					18		39	149
8:45 AM		15	9	38	30					20		59	171
9:00 AM													
9:15 AM													
9:30 AM													
9:45 AM													
10:00 AM													
10:15 AM													
10:30 AM													
10:45 AM													
11:00 AM													
11:15 AM													
11:30 AM													
11:45 AM													
TOTAL VOLUMES =	NL 0	NT 107	NR 68	SL 387	ST 443	SR 0	EL 0	ET 0	ER 0	WL 199	WT 0	WR 530	TOTAL 1734

AM Peak Hr Begins at: 700 AM

PEAK VOLUMES =	0	46	31	217	293	0	0	0	0	122	0	301	1010
PEAK HR. FACTOR:		0.917			0.885			0.000			0.953		0.918

CONTROL: stopsign on old castle wb

Intersection Turning Movement

Prepared by: Southland Car Counters

N-S STREET: Champagne Blvd DATE: 10/25/2005 LOCATION: City of Escondido

E-W STREET: Old Castle Rd DAY: TUESDAY PROJECT# 05-4275-003

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	1	1	0	0	0	0	1	0	1	
1:00 PM													
1:15 PM													
1:30 PM													
1:45 PM													
2:00 PM													
2:15 PM													
2:30 PM													
2:45 PM													
3:00 PM													
3:15 PM													
3:30 PM													
3:45 PM													
4:00 PM		66	41	62	47					11		43	270
4:15 PM		78	30	72	42					10		46	278
4:30 PM		33	21	59	30					9		33	185
4:45 PM		63	27	61	20					11		90	272
5:00 PM		56	28	57	27					15		69	252
5:15 PM		48	27	60	25					15		49	224
5:30 PM		52	30	66	26					13		52	239
5:45 PM		51	32	56	25					12		54	230
6:00 PM													
6:15 PM													
6:30 PM													
6:45 PM													
TOTAL VOLUMES =	NL 0	NT 447	NR 236	SL 493	ST 242	SR 0	EL 0	ET 0	ER 0	WL 96	WT 0	WR 436	TOTAL 1950

PM Peak Hr Begins at: 400 PM

PEAK VOLUMES =	0	240	119	254	139	0	0	0	0	41	0	212	1005
PEAK HR. FACTOR:		0.831			0.862			0.000			0.626		0.904

CONTROL: stopsign on old castle wb

Intersection Turning Movement

Prepared by: Southland Car Counters

N-S STREET: Lilac Rd DATE: 10/13/2004 LOCATION: City of San Diego

E-W STREET: Old Castle Rd DAY: WEDNESDAY PROJECT# 04-4341-001

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	0	0	0	1	0	1	1	0	0	1	1	
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM				30		13	10	90			63	12	218
7:15 AM				20		15	15	52			47	15	164
7:30 AM				35		13	15	50			57	24	194
7:45 AM				33		16	14	54			52	26	195
8:00 AM				33		7	18	47			34	22	161
8:15 AM				34		24	18	41			41	34	192
8:30 AM				41		17	16	37			39	31	181
8:45 AM				28		24	11	37			35	9	144
9:00 AM													
9:15 AM													
9:30 AM													
9:45 AM													
10:00 AM													
10:15 AM													
10:30 AM													
10:45 AM													
11:00 AM													
11:15 AM													
11:30 AM													
11:45 AM													
TOTAL VOLUMES =	NL 0	NT 0	NR 0	SL 254	ST 0	SR 129	EL 117	ET 408	ER 0	WL 0	WT 368	WR 173	TOTAL 1449

AM Peak Hr Begins at: 700 AM

PEAK VOLUMES =	0	0	0	118	0	57	54	246	0	0	219	77	771
PEAK HR. FACTOR:		0.000			0.893			0.750			0.914		0.884

CONTROL: 1waystop, (SB)

Intersection Turning Movement

Prepared by: Southland Car Counters

N-S STREET: Lilac Rd DATE: 10/13/2004 LOCATION: City of San Diego

E-W STREET: Old Castle Rd DAY: WEDNESDAY PROJECT# 04-4341-001

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	0	0	0	1	0	1	1	0	0	1	1	
1:00 PM													
1:15 PM													
1:30 PM													
1:45 PM													
2:00 PM													
2:15 PM													
2:30 PM													
2:45 PM													
3:00 PM													
3:15 PM													
3:30 PM													
3:45 PM													
4:00 PM				30		8	12	70			59	18	197
4:15 PM				21		4	10	48			67	19	169
4:30 PM				17		10	12	49			60	28	176
4:45 PM				14		3	7	48			56	31	159
5:00 PM				23		8	18	50			82	29	210
5:15 PM				14		3	11	42			48	16	134
5:30 PM				10		6	19	56			52	35	178
5:45 PM				17		9	9	56			58	20	169
6:00 PM													
6:15 PM													
6:30 PM													
6:45 PM													
TOTAL VOLUMES =	NL 0	NT 0	NR 0	SL 146	ST 0	SR 51	EL 98	ET 419	ER 0	WL 0	WT 482	WR 196	TOTAL 1392

PM Peak Hr Begins at: 415 PM

PEAK VOLUMES =	0	0	0	75	0	25	47	195	0	0	265	107	714
PEAK HR. FACTOR:		0.000			0.806			0.890			0.838		0.850

CONTROL: 1waystop, (SB)

Intersection Turning Movement

Prepared by: Southland Car Counters

N-S STREET: Valley Center Rd DATE: 01/19/2006 LOCATION: City of Valley Center

E-W STREET: Lilac Rd DAY: THURSDAY PROJECT# 05-4334-004

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	1	0	0	1	0	1	0	1	0	1	0	
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM	17	137			136	49	110		44	0			493
7:15 AM	25	146			169	49	98		38	1			526
7:30 AM	32	124			181	74	80		56	0			547
7:45 AM	24	153			142	69	71		40	0			499
8:00 AM	17	163			197	62	79		45	0			563
8:15 AM	29	109			173	89	64		42	0			506
8:30 AM	19	117			135	71	76		37	0			455
8:45 AM	22	109			145	65	63		29	0			433
9:00 AM													
9:15 AM													
9:30 AM													
9:45 AM													
10:00 AM													
10:15 AM													
10:30 AM													
10:45 AM													
11:00 AM													
11:15 AM													
11:30 AM													
11:45 AM													
TOTAL VOLUMES =	185	1058	0	0	1278	528	641	0	331	1	0	0	4022

AM Peak Hr Begins at: *715 AM*

PEAK VOLUMES =	98	586	0	0	689	254	328	0	179	1	0	0	2135
PEAK HR. FACTOR:		0.950			0.910			0.932			0.250		0.948

CONTROL: Signalized

Intersection Turning Movement

Prepared by: Southland Car Counters

N-S STREET: Valley Center Rd DATE: 01/19/2006 LOCATION: City of Valley Center

E-W STREET: Lilac Rd DAY: THURSDAY PROJECT# 05-4334-004

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	1	1	0	0	1	0	1	0	1	0	1	0	
1:00 PM													
1:15 PM													
1:30 PM													
1:45 PM													
2:00 PM													
2:15 PM													
2:30 PM													
2:45 PM													
3:00 PM													
3:15 PM													
3:30 PM													
3:45 PM													
4:00 PM	61	194			162	65	71		43		0		596
4:15 PM	55	201			150	51	62		39		1		559
4:30 PM	52	193			177	57	58		36		0		573
4:45 PM	49	185			132	58	61		38		0		523
5:00 PM	68	209			156	56	69		41		0		599
5:15 PM	73	223			180	65	73		52		0		666
5:30 PM	67	214			153	54	64		45		0		597
5:45 PM	46	189			153	50	55		28		0		521
6:00 PM													
6:15 PM													
6:30 PM													
6:45 PM													
TOTAL VOLUMES =	471	1608	0	0	1263	456	513	0	322	0	1	0	4634

PM Peak Hr Begins at: 445 PM

PEAK VOLUMES =	257	831	0	0	621	233	267	0	176	0	0	0	2385
PEAK HR. FACTOR:		0.919			0.871			0.886			0.000		0.895

CONTROL: Signalized

SANDAG Trip Generation Rates

(NOT SO)

BRIEF GUIDE OF VEHICULAR TRAFFIC GENERATION RATES FOR THE SAN DIEGO REGION

SANDAG
401 B Street, Suite 800
San Diego, California 92101
(619) 699-1900 • Fax (619) 699-1950

APRIL 2002

NOTE: This listing only represents a *guide* of average, or estimated, traffic generation "driveway" rates and some very general trip data for land uses (emphasis on acreage and building square footage) in the San Diego region. These rates (both local and national) are subject to change as future documentation becomes available, or as regional sources are updated. For more specific information regarding traffic data and trip rates, please refer to the San Diego Traffic Generators manual. ***Always check with local jurisdictions for their preferred or applicable rates.***

LAND USE	TRIP CATEGORIES [PRIMARY:DIVERTED:PASS-BY][a]	ESTIMATED WEEKDAY VEHICLE TRIP GENERATION RATE (DRIVEWAY)	HIGHEST PEAK HOUR % (plus IN:OUT ratio) Between 6:00-9:30 A.M.		Between 3:00-6:30 P.M.		TRIP LENGTH (Miles)[b]
AGRICULTURE (Open Space)	[80:18:2]	2/acre**					10.8
AIRPORT	[78:20:2]						12.5
Commercial		60/acre, 100/flight, 70/1000 sq. ft.* **	5%	(6:4)	6%	(5:5)	
General Aviation		6/acre, 2/flight, 6/based aircraft* **	9%	(7:3)	15%	(5:5)	
Heliports		100/acre**					
AUTOMOBILE[5]							
Car Wash							
Automatic		900/site, 600/acre**	4%	(5:5)	9%	(5:5)	
Self-serve		100/wash stall**	4%	(5:5)	8%	(5:5)	
Gasoline	[21:51:28]						2.8
with/Food Mart		160/vehicle fueling space**	7%	(5:5)	8%	(5:5)	
with/Food Mart & Car Wash		155/vehicle fueling space**	8%	(5:5)	9%	(5:5)	
Older Service Station Design		150/vehicle fueling space, 900/station**	7%	(5:5)	9%	(5:5)	
Sales (Dealer & Repair)		50/1000 sq. ft., 300/acre, 60/service stall* **	5%	(7:3)	8%	(4:6)	
Auto Repair Center		20/1000 sq. ft., 400/acre, 20/service stall*	8%	(7:3)	11%	(4:6)	
Auto Parts Sales		60/1000 sq. ft. **	4%		10%		
Quick Lube		40/service stall**	7%	(6:4)	10%	(5:5)	
Tire Store		25/1000 sq. ft., 30/service stall**	7%	(6:4)	11%	(5:5)	
CEMETERY		5/acre*					
CHURCH (or Synagogue)	[64:25:11]	9/1000 sq. ft., 30/acre** (quadruple rates for Sunday, or days of assembly)	5%	(6:4)	8%	(5:5)	5.1
COMMERCIAL/RETAIL[5]							
Super Regional Shopping Center (More than 80 acres, more than 800,000 sq. ft., w/usually 3+ major stores)		35/1000 sq. ft.,[c] 400/acre*	4%	(7:3)	10%	(5:5)	
Regional Shopping Center (40-80acres, 400,000-800,000 sq. ft., w/usually 2+ major stores)	[54:35:11]	50/1000 sq. ft.,[c] 500/acre*	4%	(7:3)	9%	(5:5)	5.2
Community Shopping Center (15-40 acres, 125,000-400,000 sq. ft., w/usually 1 major store, detached restaurant(s), grocery and drugstore)	[47:31:22]	80/1000 sq. ft., 700/acre* **	4%	(6:4)	10%	(5:5)	3.6
Neighborhood Shopping Center (Less than 15 acres, less than 125,000 sq. ft., w/usually grocery & drugstore, cleaners, beauty & barber shop, & fast food services)		120/1000 sq. ft., 1200/acre* **	4%	(6:4)	10%	(5:5)	
Commercial Shops	[45:40:15]						
Specialty Retail/Strip Commercial		40/1000 sq. ft., 400/acre*	3%	(6:4)	9%	(5:5)	4.3
Electronics Superstore		50/1000 sq. ft**			10%	(5:5)	
Factory Outlet		40/1000 sq. ft.**	3%	(7:3)	9%	(5:5)	
Supermarket		150/1000 sq. ft., 2000/acre* **	4%	(7:3)	10%	(5:5)	
Drugstore		90/1000 sq. ft.**	4%	(6:4)	10%	(5:5)	
Convenience Market (15-16 hours)		500/1000 sq. ft.**	8%	(5:5)	8%	(5:5)	
Convenience Market (24 hours)		700/1000 sq. ft.**	9%	(5:5)	7%	(5:5)	
Convenience Market (w/gasoline pumps)		850/1000 sq. ft., 550/vehicle fueling space**	6%	(5:5)	7%	(5:5)	
Discount Club		60/1000 sq. ft., 600/acre* **	1%	(7:3)	9%	(5:5)	
Discount Store		60/1000 sq. ft., 600/acre**	3%	(6:4)	8%	(5:5)	
Furniture Store		6/1000 sq. ft., 100/acre**	4%	(7:3)	9%	(5:5)	
Lumber Store		30/1000 sq. ft., 150/acre**	7%	(6:4)	9%	(5:5)	
Home Improvement Superstore		40/1000 sq. ft.**	5%	(6:4)	8%	(5:5)	
Hardware/Paint Store		60/1000 sq. ft., 600/acre**	2%	(6:4)	9%	(5:5)	
Garden Nursery		40/1000 sq. ft., 90/acre**	3%	(6:4)	10%	(5:5)	
Mixed Use: Commercial (w/supermarket)/Residential		110/1000 sq. ft., 2000/acre* (commercial only)	3%	(6:4)	9%	(5:5)	
		5/dwelling unit, 200/acre* (residential only)	9%	(3:7)	13%	(6:4)	
EDUCATION							
University (4 years)	[91:9:0]	2.4/student, 100 acre*	10%	(8:2)	9%	(3:7)	8.9
Junior College (2 years)	[92:7:1]	1.2/student, 24/1000 sq. ft., 120/acre* **	12%	(8:2)	9%	(6:4)	9.0
High School	[75:19:6]	1.3/student, 15/1000 sq. ft., 60/acre* **	20%	(7:3)	10%	(4:6)	4.8
Middle/Junior High	[63:25:12]	1.4/student, 12/1000 sq. ft. 50/acre**	30%	(6:4)	9%	(4:6)	5.0
Elementary	[57:25:10]	1.6/student, 14/1000 sq. ft., 90/acre* **	32%	(6:4)	9%	(4:6)	3.4
Day Care	[28:58:14]	5/child, 80/1000 sq. ft.**	17%	(5:5)	18%	(5:5)	3.7
FINANCIAL[5]	[35:42:23]						3.4
Bank (Walk-in only)		150/1000 sq. ft., 1000/acre* **	4%	(7:3)	8%	(4:6)	
with Drive-Through		200/1000 sq. ft., 1500/acre*	5%	(6:4)	10%	(5:5)	
Drive-Through only		250 (125 one-way)/lane*	3%	(5:5)	13%	(5:5)	
Savings & Loan		60/1000 sq. ft., 600/acre**	2%		9%		
Drive-Through only		100 (50 one-way)/lane**	4%		15%		
HOSPITAL	[73:25:2]						8.3
General		20/bed, 25/1000 sq. ft., 250/acre*	8%	(7:3)	10%	(4:6)	
Convalescent/Nursing		3/bed**	7%	(6:4)	7%	(4:6)	
INDUSTRIAL							
Industrial/Business Park (commercial included)	[79:19:2]	16/1000 sq. ft., 200/acre* **	12%	(8:2)	12%	(2:8)	9.0
Industrial Park (no commercial)		8/1000 sq. ft., 90/acre**	11%	(9:1)	12%	(2:8)	
Industrial Plant (multiple shifts)	[92:5:3]	10/1000 sq. ft., 120/acre*	14%	(8:2)	15%	(3:7)	11.7
Manufacturing/Assembly		4/1000 sq. ft., 50/acre**	19%	(9:1)	20%	(2:8)	
Warehousing		5/1000 sq. ft., 60/acre**	13%	(7:3)	15%	(4:6)	
Storage		2/1000 sq. ft., 0.2/vault, 30/acre*	6%	(5:5)	9%	(5:5)	
Science Research & Development		8/1000 sq. ft., 80/acre*	16%	(9:1)	14%	(1:9)	
Landfill & Recycling Center		6/acre	11%	(5:5)	10%	(4:6)	

(OVER)

MEMBER AGENCIES: Cities of Carlsbad, Chula Vista, Coronado, Del Mar, El Cajon, Encinitas, Escondido, Imperial Beach, La Mesa, Lemon Grove, National City, Oceanside, Poway, San Diego, San Marcos, Santee, Solana Beach, Vista and County of San Diego.
ADVISORY/LIAISON MEMBERS: California Department of Transportation, County Water Authority, U.S. Department of Defense, S.D. Unified Port District and Tijuana/Baja California.

LAND USE	TRIP CATEGORIES [PRIMARY:DIVERTED:PASS-BY][P]	ESTIMATED WEEKDAY VEHICLE TRIP GENERATION RATE (DRIVEWAY)	HIGHEST PEAK HOUR % (plus IN:OUT ratio) Between 6:00-9:30 A.M.		Between 3:00-6:30 P.M.		TRIP LENGTH (Miles)[L]
LIBRARY	[44:44:12]	50/1000 sq. ft., 400/acre**	2%	(7:3)	10%	(5:5)	3.9
LODGING	[58:38:4]						7.6
Hotel (w/convention facilities/restaurant)		10/occupied room, 300/acre	8%	(6:4)	8%	(6:4)	
Motel		9/occupied room, 200/acre*	8%	(4:6)	9%	(6:4)	
Resort Hotel		8/occupied room, 100/acre*	5%	(6:4)	7%	(4:6)	
Business Hotel		7/occupied room**	8%	(4:6)	9%	(6:4)	
MILITARY	[82:16:2]	2.5/military & civilian personnel*	9%	(9:1)	10%	(2:8)	11.2
OFFICE							
Standard Commercial Office (less than 100,000 sq. ft.)	[77:19:4]	20/1000 sq. ft.,[g] 300/acre*	14%	(9:1)	13%	(2:8)	8.8
Large (High-Rise) Commercial Office (more than 100,000 sq. ft., 6 + stories)	[82:15:3]	17/1000 sq. ft.,[g] 600/acre*	13%	(9:1)	14%	(2:8)	10.0
Office Park (400,000 + sq. ft.)		12/1000 sq.ft., 200/acre* **	13%	(9:1)	13%	(2:8)	
Single Tenant Office		14/1000 sq. ft., 180/acre*	15%	(9:1)	15%	(2:8)	8.8
Corporate Headquarters		7/1000 sq. ft., 110/acre*	17%	(9:1)	16%	(1:9)	
Government (Civic Center)	[50:34:16]	30/1000 sq. ft.**	9%	(9:1)	12%	(3:7)	6.0
Post Office							
Central/Walk-In Only		90/1000 sq. ft.**	5%		7%		
Community (not including mail drop lane)		200/1000 sq. ft., 1300/acre*	8%	(6:4)	9%	(5:5)	
Community (w/mail drop lane)		300/1000 sq. ft., 2000/acre*	7%	(5:5)	10%	(5:5)	
Mail Drop Lane only		1500 (750 one-way)/lane*	7%	(5:5)	12%	(5:5)	
Department of Motor Vehicles		180/1000 sq. ft., 900/acre**	8%	(6:4)	10%	(4:6)	
Medical-Dental	[60:30:10]	50/1000 sq. ft., 500/acre*	8%	(8:2)	11%	(3:7)	6.4
PARKS	[66:28:6]		4%		8%		5.4
City (developed w/meeting rooms and sports facilities)		50/acre*	13%	(5:5)	9%	(5:5)	
Regional (developed)		20/acre*					
Neighborhood/County (undeveloped)		5/acre (add for specific sport uses), 6/picnic site* **					
State (average 1000 acres)		1/acre, 10/picnic site**					
Amusement (Theme)		80/acre, 130/acre (summer only)**			8%	(6:4)	
San Diego Zoo		115/acre*					
Sea World		80/acre*					
RECREATION							
Beach, Ocean or Bay	[52:39:9]	600/1000 ft. shoreline, 60/acre*					6.3
Beach, Lake (fresh water)		50/1000 ft. shoreline, 5/acre*					
Bowling Center		30/1000 sq. ft., 300/acre, 30/lane **	7%	(7:3)	11%	(4:6)	
Campground		4/campsite**	4%		8%		
Golf Course		7/acre, 40/hole, 700/course* **	7%	(8:2)	9%	(3:7)	
Driving Range only		70/acre, 14/tee box*	3%	(7:3)	9%	(5:5)	
Marinas		4/berth, 20/acre* **	3%	(3:7)	7%	(6:4)	
Multi-purpose (miniature golf, video arcade, batting cage, etc.)		90/acre	2%		8%		
Racquetball/Health Club		30/1000 sq. ft., 300/acre, 40/court*	4%	(6:4)	9%	(6:4)	
Tennis Courts		16/acre, 30/court**	5%		11%	(5:5)	
Sports Facilities							
Outdoor Stadium		50/acre, 0.2/seat*					
Indoor Arena		30/acre, 0.1/seat*					
Racetrack		40/acre, 0.6 seat*					
Theaters (multiplex w/matinee)	[66:17:17]	80/1000 sq. ft., 1.8/seat, 360/screen*	10%		8%	(6:4)	6.1
RESIDENTIAL	[86:11:3]						7.9
Estate, Urban or Rural (average 1-2 DU/acre)		12/dwelling unit *[d]	8%	(3:7)	10%	(7:3)	
Single Family Detached (average 3-6 DU/acre)		10/dwelling unit *[d]	8%	(3:7)	10%	(7:3)	
Condominium (or any multi-family 6-20 DU/acre)		8/dwelling unit *[d]	8%	(2:8)	10%	(7:3)	
Apartment (or any multi-family units more than 20 DU/acre)		6/dwelling unit *[d]	8%	(2:8)	9%	(7:3)	
Military Housing (off-base, multi-family)							
(less than 6 DU/acre)		8/dwelling unit	7%	(3:7)	9%	(6:4)	
(6-20 DU/acre)		6/dwelling unit	7%	(3:7)	9%	(6:4)	
Mobile Home							
Family		5/dwelling unit, 40/acre*	8%	(3:7)	11%	(6:4)	
Adults Only		3/dwelling unit, 20/acre*	9%	(3:7)	10%	(6:4)	
Retirement Community		4/dwelling unit**	5%	(4:6)	7%	(6:4)	
Congregate Care Facility		2.5/dwelling unit**	4%	(6:4)	8%	(5:5)	
RESTAURANT[s]	[51:37:12]						4.7
Quality		100/1000 sq. ft., 3/seat, 500/acre* **	1%	(6:4)	8%	(7:3)	
Sit-down, high turnover		160/1000 sq. ft., 6/seat, 1000/acre* **	8%	(5:5)	8%	(6:4)	
Fast Food (w/drive-through)		650/1000 sq. ft., 20/seat, 3000/acre* **	7%	(5:5)	7%	(5:5)	
Fast Food (without drive-through)		700/1000 sq. ft.**	5%	(6:4)	7%	(5:5)	
Delicatessen (7am-4pm)		150/1000 sq. ft., 11/seat*	9%	(6:4)	3%	(3:7)	
TRANSPORTATION							
Bus Depot		25/1000 sq. ft.**					
Truck Terminal		10/1000 sq. ft., 7/bay, 80/acre**	9%	(4:6)	8%	(5:5)	
Waterport/Marine Terminal		170/berth, 12/acre**					
Transit Station (Light Rail w/parking)		300/acre, 2½/parking space (4/occupied)**	14%	(7:3)	15%	(3:7)	
Park & Ride Lots		400/acre (600/paved acre), 5/parking space (8/occupied)* **	14%	(7:3)	15%	(3:7)	

* Primary source: *San Diego Traffic Generators.*

* Other sources: *ITE Trip Generation Report [6th Edition]*, Trip Generation Rates (other agencies and publications), various SANDAG & CALTRANS studies, reports and estimates.

[P] Trip category percentage ratios are daily from local household surveys, often cannot be applied to very specific land uses, and do not include non-resident drivers (draft SANDAG *Analysis of Trip Diversion*, revised November, 1990):
PRIMARY - one trip directly between origin and primary destination.
DIVERTED - linked trip (having one or more stops along the way to a primary destination) whose distance compared to direct distance ≥ 1 mile.
PASS-BY - undiverted or diverted < 1 mile.

[L] Trip lengths are average weighted for all trips to and from general land use site. (All trips system-wide average length = 6.9 miles)

[c] Fitted curve equation: $Ln(T) = 0.502\ Ln(x) + 6.945$

[d] Fitted curve equation: $Ln(T) = 0.756\ Ln(x) + 3.950$

T = total trips, x = 1,000 sq. ft.

[g] Fitted curve equation: $t = -2.169\ Ln(d) + 12.85$ t = trips/DU, d = density (DU/acre), DU = dwelling unit

[s] Suggested PASS-BY (undiverted or diverted < 1 mile) percentages for trip rate reductions only during P.M. peak period (based on combination of local data/review and Other sources**):

COMMERCIAL/RETAIL	
Regional Shopping Center	20%
Community " "	30%
Neighborhood " "	40%
Specialty Retail/Strip Commercial (other)	10%
Supermarket	40%
Convenience Market	50%
Discount Club/Store	30%
FINANCIAL	
Bank	25%
AUTOMOBILE	
Gasoline Station	50%
RESTAURANT	
Quality	10%
Sit-down high turnover	20%
Fast Food	40%

[T] Trip Reductions - In order to help promote regional "smart growth" policies, and acknowledge San Diego's expanding mass transit system, consider vehicle trip rate reductions (with proper documentation and necessary adjustments for peak periods). The following are some examples:

[1] A 5% daily trip reduction for land uses with transit access or near transit stations accessible within 1/4 mile.

[2] Up to 10% daily trip reduction for mixed-use developments where residential and commercial retail are combined (demonstrate mode split of walking trips to replace vehicular trips).

County of San Diego Level of Service Thresholds

TABLE 1

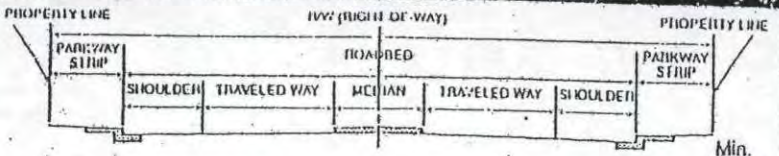
AVERAGE DAILY VEHICLE TRIPS

CIRCULATION ELEMENT ROADS		LEVEL OF SERVICE				
CLASS	X-SECTION	A	B	C	D	E
Expressway	126/146	<36,000	<54,000	<70,000	<86,000	<108,000
Prime Arterial	102/122	<22,200	<37,000	<44,600	<50,000	<57,000
Major Road	78/98	<14,800	<24,700	<29,600	<33,400	<37,000
Collector	64/84	<13,700	<22,800	<27,400	<30,800	<34,200
Town Collector	54/74	<3,000	<6,000	<9,500	<13,500	<19,000
Light Collector	40/60	<1,900	<4,100	<7,100	<10,900	<16,200
Rural Collector	40/84	<1,900	<4,100	<7,100	<10,900	<16,200
Rural Light Collector	40/60	<1,900	<4,100	<7,100	<10,900	<16,200
Recreational Parkway	40/100	<1,900	<4,100	<7,100	<10,900	<16,200
Rural Mountain	40/100	<1,900	<4,100	<7,100	<10,900	<16,200

NON – CIRCULATION ELEMENT ROADS		LEVEL OF SERVICE				
CLASS	X-SECTION	A	B	C	D	E
Residential Collector	40/60	*	*	<4,500	*	*
Residential Road	36/56	*	*	<1,500	*	*
Residential Cul-de-sac or Loop Road	32/52	*	*	< 200	*	*

*Levels of service are not applied to residential streets since their primary purpose is to serve abutting lots, not carry through traffic. Levels of service normally apply to roads carrying through traffic between major trip generators and attractors.

SUMMARY OF COUNTY OF SAN DIEGO PUBLIC ROAD STANDARDS†



CLASS	CIRCULATION ELEMENT ROAD CROSS-SECTIONS									AVERAGE DAILY VEHICLE TRIPS (ADT)				
										LEVEL OF SERVICE (LOS)				
	Median	Traveled way	Shoulder	Parkway strip	Roadbed	RW*	Min. curve radius	Max. grades	Min. design speed (mph)	A Free flow	B Steady flow	C Stable flow	D Approach unstable	E Unstable flow
EXPRESSWAY Divided highway with only selected public road access with full grade separations	34'	36'	10'	10'	126'	146'	1200'	6%	55	<36,000	<54,000	<70,000	<86,000	<100,000
PRIME ARTERIAL Divided highway, signalized intersections, access control, or extra lanes as required	14'	36'	8'	10'	102'	122'	1200'	6%	55	<22,200	<37,000	<44,600	<50,000	<57,000
MAJOR ROAD 4-lane divided road, access & parking controlled as necessary	14'	24'	8'	10'	78'	98'	1200'	7%	55	<14,800	<24,700	<29,600	<33,400	<37,000
COLLECTOR 4-lane undivided road	—	24'	8'	10'	64'	84'	700'	7%	45	<13,700	<22,800	<27,400	<30,800	<34,200
LIGHT COLLECTOR 2-lane undivided road	—	12'	8'	10'	40'	60'	700'	9%	45	<1,900	<4,100	<7,100	<10,900	<16,200
RURAL COLLECTOR 2-lane undivided road, extra R/W allows greater flexibility & upgrade	—	12'	8'	22'	40'	84'	500'	12%	40	<1,900	<4,100	<7,100	<10,900	<16,200
RURAL LIGHT COLLECTOR 2-lane undivided road, decreased "curve radii" standards	—	12'	8'	10'	40'	60'	500'	12%	40	<1,900	<4,100	<7,100	<10,900	<16,200
RURAL MOUNTAIN 2-lane undivided road appropriate only in rural mountain areas	—	12'	8'	30'	40'	100'	500'	12%	40	<1,900	<4,100	<7,100	<10,900	<16,200
RECREATIONAL PARKWAY Recreational routes for travel pleasure purposes	—	12'	8'	30'	40'	100'	400'	12%	25	<1,900	<4,100	<7,100	<10,900	<16,200
NON-CIRCULATION ROADS														
RESIDENTIAL COLLECTOR	—	12'	8'	10'	40'	60'	300'	12%	30	<4,500	Levels of service are not applied to non-circulation roads since their primary purpose is to serve abutting lots, not carry through traffic. Levels of service normally apply to roads carrying through traffic between major trip generators and attractors. Not all non-circulation road classifications are shown.			
RESIDENTIAL STREET	—	12'	6'	10'	36'	56'	200'	15%	30	<1,500				
RESIDENTIAL LOOP/CUL-DE-SAC	—	12'	4'	10'	32'	52'	200'	15%	30	<200				

*Additional pavement and R/W may be required for C.F. Collectors and I.I. Collectors in Industrial/Commercial Zones, 4 and 12 ft., respectively. C.F. roads needing additional turn lanes require an additional 12 to 14 ft. of pavement and R/W for each lane. C.E. roads designated with Bike Lanes will require an additional 10 ft. of pavement and R/W.

†For full standards, refer to Public Road Standards, adopted by the Board of Supervisors on 2/26/92

Excerpts from the Public Facility Element

Part XII
Public Facility Element
San Diego County General Plan

Adopted
March 13, 1991
Amended
January 12, 2005
GPA 04-010

Section 1 – Introduction XII-1-1
Section 2 – Coordination Among Facility Planning, Financing Programs and Land Use Planning XII-2-1
Section 3 – Parks and Recreation XII-3-1
Section 4 – Transportation XII-4-1
Section 5 – Flood Control XII-5-1
Section 6 – Solid Waste XII-6-1
Section 7 – Law Enforcement XII-7-1
Section 8 – Animal Control XII-8-1
Section 9 – Libraries XII-9-1
Section 10 – Schools XII-10-1
Section 11 – Fire Protection and Emergency Services XII-11-1
Section 12 – Wastewater XII-12-1
Section 13 – Water Provision Systems XII-13-1
Section 14 – Child Care XII-14-1
Section 15 – Courts and Jails XII-15-1
Section 16 – Social Services XII-16-1
Section 17 – Health XII-17-1
Section 18 – Senior Services XII-18-1
Section 19 – County Administration XII-19-1
Section 20 – Facilities Located in City Spheres XII-20-1
Section 21 – County Trails XII-21-1

This Element was partially funded through the Community Development Block Grant program

BICYCLE FUNDING

Developer Exactions and Contributions

Many of the bikeways that are constructed in the unincorporated area are built by property owners as a condition of development. When a project is located on a roadway designated as a bikeway in the Circulation Element, the developer is required to construct the bikeway that abuts his property.

Transportation Sales Tax

The collection of the transportation sales tax (TransNet) is providing the San Diego region with $1 million per year (for 20 years) for the improvement and expansion of bicycle facilities. In FY89-90, the County received $210,000 from TransNet to fund the development of additional bikeways and related facilities in the unincorporated area.

Federal and State Funds

State Transportation Development Act Funds provide approximately $1 million per year to the region for bicycle facility improvements within road rights-of-way. In FY89-90 the County share of this money was $460,000. SANDAG reviews all of the projects requesting funding from this source and determines which will be funded. Funds from the State Bike Lane Account are available on a competitive basis for bicycle facility improvements serving commuter cyclists. The maximum amount that an agency can be granted in one year from this source is $90,000.

ISSUES

1. **Increases in the amount of automobile use have resulted in increased congestion on the region's roadways.**

   Discussion: The dramatic rise in automobile use has far surpassed the ability of the County and other jurisdictions to upgrade and maintain the highway and road system. As the number of vehicles on the roadways has increased, the expansion of existing roadways and the construction of new roadways has not kept pace. Between 1978 and 1988, automobile registrations increased by 64% while increases in local street and road mileage only rose by 16%. As a result, certain roadways are functioning at a Level of Service "E" or "F" on a routine basis.

   A LOS "C", which allows for stable traffic flow with room to maneuver, is a generally accepted level to strive for in new development. At this level, traffic generally flows smoothly, although freedom to maneuver within the roadway is somewhat restricted and lane changes require additional care.

However, there are some cases where development cannot achieve a LOS "C" on off-site roadways. For instance, there are areas where the existing development pattern precludes the addition of lanes or other mitigation or when the community is opposed to certain improvements to maintain a LOS "C". Additionally, there are existing roadways in the County that are currently operating below a LOS "C". Such cases are currently exceptions and generally occur when there is insufficient right-of-way to expand or modify a roadway or when the existing development in the area has generated more traffic than anticipated. In these cases a Level of Service "D" is acceptable on off-site roadways. At this level, small increases in flow cause substantial deterioration in service. Freedom to maneuver is limited and minor incidents can cause substantial interruption in the traffic flow.

When the roadway system reaches a LOS "E" or "F", or new development would push it to LOS "E" or "F", new development should not be approved unless the project can mitigate the LOS "E" or contribute a fair share to a program to mitigate the project's impacts, unless a statement of overriding findings can be made.

In order to control the amount of traffic on the roadways, and subsequently the amount of congestion, it is necessary to apply the LOS measurement to all roads that are impacted by a proposed project. The effect of a project on the road system varies from project to project. Due to the size and type of project, the type and capacity of roads serving the project, the amount of traffic generated by the development and the existing development pattern, the impact will vary from one project to another. To apply a LOS standard to only major or larger capacity roads or to within a specified geographic distance of a project could result in an inadequate review of the impacts of a project and create the potential for increased congestion. Therefore, project impacts should be assessed on a case-by-case basis.

2. **New development has a regionwide impact on transportation facilities extending beyond jurisdictional boundaries.**

Discussion: New development, regardless of the type, results in additional trips being taken on the region's transportation facilities. When development occurs, the automobile trips generated by the development are not restricted to the area immediately surrounding the development. Rather, the trips are made throughout the region. These trips not only increase the level of congestion on the transportation facilities in the community where the development is located, but also on the facilities in surrounding jurisdictions, and throughout the entire region.

GOALS, OBJECTIVES, POLICIES AND IMPLEMENTATION MEASURES

GOAL

A SAFE, CONVENIENT, AND ECONOMICAL INTEGRATED TRANSPORTATION SYSTEM INCLUDING A WIDE RANGE OF TRANSPORTATION MODES.

OBJECTIVE 1:

A Level of Service "C" or better on County Circulation Element roads.

Policy 1.1: New development shall provide needed roadway expansion and improvements on-site to meet the demand created by the development, and to maintain a Level of Service "C" on Circulation Element Roads during peak traffic hours. New development shall provide off-site improvements designed to contribute to the overall achievement of a Level of Service "D" on Circulation Element Roads.

Implementation Measure 1.1.1: Review all development proposals to determine both their short-term and long-term impacts on the roadway system. The area of impact will be determined based on the size, type and location of the project; the traffic generated by the project; and the existing circulation and development pattern in the area. [DPW, DPLU]

Implementation Measure 1.1.2: Require, as a condition of approval of discretionary projects, improvements or other measures necessary to mitigate traffic impacts to avoid reduction in the existing Level of Service below "C" on on-site Circulation Element roads except within the Otay Ranch project as defined in the Otay Subregional Plan Text, Volume 2. [DPLU, DPW]

Implementation Measure 1.1.3: Require, as a condition of approval of discretionary projects which have a significant impact on roadways, improvements or other measures necessary to mitigate traffic impacts to avoid reduction in the existing Level of Service below "D" on off-site and on-site abutting Circulation Element roads. New development that would significantly impact congestion on roads at LOS "E" or "F", either currently or as a result of the project, will be denied unless improvements are scheduled to increase the LOS to "D" or better or appropriate mitigation is provided . Appropriate mitigation would include a fair share contribution in the form of road improvements or a fair share contribution to an established program or project. If impacts cannot be mitigated, the project will be denied unless a specific statement of overriding findings is made pursuant to Section 15091(b) and 15093 of the State CEQA Guidelines. [DPLU, DPW]

Implementation Measure 1.1.4: Whenever possible on development proposals, require that access to parcels adjacent to roads shown on the Circulation Element be limited to side streets in order to maintain through traffic flow. [DPW, DPLU]

Policy 1.2: General Plan Amendments and Rezones shall be reviewed to ensure that any proposed increases in density or intensity of use will not prevent the planned Circulation Element road system from operating at its planned Level of Service at buildout.

OBJECTIVE 2:

Equitable sharing of funding for transportation facilities.

Policy 2.1: New development shall be required to contribute its fair share toward financing transportation facilities.

Implementation Measure 2.1.1: Apply the Bridge and Thoroughfare Fee to all areas of the County and/or establish an unincorporated area traffic impact fee to support construction of the Circulation Element roadway and bikeway system in the unincorporated area to the extent necessitated by new development. [DPW]

Implementation Measure 2.1.2: Assist and support the development of a regional transportation impact fee to finance regional transportation improvements necessitated by new development. [DPLU, DPW]

Policy 2.2: The County will actively work to reduce existing transportation facilities deficiencies.

Implementation Measure 2.2.1: Seek new and additional sources of funding to help finance improvements and maintenance of County transportation facilities. [DPW]

Implementation Measure 2.2.2: Seek the County's fair share of state transportation bond issues, Proposition A sales tax funds, and other state and federal funding programs. [DPW]

OBJECTIVE 3:

A transportation system that is coordinated and integrated with the transportation facilities and plans of surrounding jurisdictions.

POLICY 3.1: The expansion of County transportation facilities will be coordinated with transportation plans of adjacent jurisdictions.

Implementation Measure 3.1.1: Coordinate with other jurisdictions in the review of planned transportation routes and facilities of regional or subregional importance to ensure compatibility between County, city and state plans. [DPLU, DPW]

Implementation Measure 3.1.2: Refer all discretionary development projects within city spheres of influence, within 1 mile of a city boundary, or within a city's designated planning review area to the appropriate city for a determination of the impact on city transportation facilities. [DPLU]

Implementation Measure 3.1.3: Establish a cooperative mechanism to reconcile differences between the County Circulation Element and that of neighboring cities. [DPLU]

Implementation Measure 3.1.4: Provide input to SANDAG during the development of regional transportation plans. [DPW, DPLU]

Implementation Measure 3.1.5: Coordinate with CalTrans in the review of planned improvements to State highways to ensure conformance to State requirements. [DPW, DPLU]

OBJECTIVE 4:

Reduction in the demand on the road system through increased public use of alternate forms of transportation or other means.

Policy 4.1: The use of alternate forms of transportation such as public transit and car/van pools will be supported and encouraged to reduce both roadway congestion and pollution.

Implementation Measure 4.1.1: In areas where there are likely to be a large number of prospective users, coordinate the planning of all new transit routes or route changes with established development patterns and land use plans to efficiently serve existing and future transit generators. [DPW, DPLU]

Implementation Measure 4.1.2: Work cooperatively with other jurisdictions and public transportation agencies, including the Metropolitan Transit Development Board and the North County Transit District, to provide a coordinated and integrated transit service network, including completion of the regional transit centers program. [DPW]

Implementation Measure 4.1.3: Consider the inclusion of public restrooms in the construction of new transit centers. [DPW]

Implementation Measure 4.1.4: Seek to increase transit service funds consistent with population growth and passenger demand. [DPW]

Implementation Measure 4.1.5: Site County facilities in close proximity to transit corridors, when feasible. [DGS, CAO, DPLU, DPW]

Implementation Measure 4.1.6: Establish incentive programs for employers to encourage their employees to utilize alternate forms of transportation. [DPW, DPLU, CAO]

Implementation Measure 4.1.7: Encourage employers to:

a) provide employees with subsidized transit passes;
b) establish carpool programs;
c) provide vehicles for employee van-pools;
d) provide preferential carpool parking;
e) provide secure storage facilities, showers and lockers to encourage employees to use bicycles;
f) use flex-time and staggered work hours;
g) allow employees to telecommute from home or satellite offices; and
h) participate in the commuter computer program.

[DPW, DPLU, CAO]

Implementation Measure 4.1.8: Develop fiscal and other incentives to promote the use of multi-modal means of transportation (e.g., bicycling to park-and-ride facilities). [DPW, DPLU, CAO]

Implementation Measure 4.1.9: Encourage pedestrian movement through urban design techniques, creating pedestrian-friendly environments and proper land use mix. [DPLU]

Policy 4.2: The County will ensure the development of its bikeway system and encourage its use.

Implementation Measure 4.2.1: Condition the approval of new development on dedication and construction of bikeways as indicated in the Circulation Element's Bicycle Network Plan. [DPLU, DPW]

Implementation Measure 4.2.2: Construct bikeways in areas where there are potentially large numbers of prospective users. [DPW]

Implementation Measure 4.2.3: Acquire cost-effective rights-of-way and/or negotiate for the use of existing rights-of-way or easements for bikeways (e.g., abandoned railroad rights-of-way, pipeline/ powerline easements, flood control channels). [DPW, DPLU]

Implementation Measure 4.2.4: Provide bicycle-carrying racks on public transportation vehicles when a need is demonstrated. [DPW]

Implementation Measure 4.2.5: Require secure bicycle storage facilities at new commercial centers, public centers, industrial centers, transit centers, airports and multi-family developments. [DPLU, DPW]

Policy 4.3: Consider the need for transit improvements in Large Scale Projects.

Implementation Measure 4.3.1: Refer applications for Large Scale Projects to the County Transit System for recommendations on transit facility needs. [DPLU, DPW]

Implementation Measure 4.3.2: Condition the approval of Large Scale Projects on the provision of accessible transit stops and other transit related improvements, as appropriate. [DPLU, DPW]

Policy 4.4: Ensure the provision of bicycle facilities and other needed bikeway related improvements in new development.

Implementation Measure 4.4.1: Refer applications for Large Scale Projects to the County Bikeway Coordinator for recommendations on requirements for the provision of bikeway facilities to serve the project. [DPLU, DPW]

OBJECTIVE 5:

Assurance of compatible land uses around County airports.

Policy 5.1: The County will ensure that land uses surrounding County airports are compatible with the operation of the airport.

Implementation Measure 5.1.1: *Complete the development of* Comprehensive Land Use Plans for each County airport. [DPW]

Implementation Measure 5.1.2: Review all applications for discretionary projects, building permit applications, general plan amendments and rezones located within the boundaries of an airport's Comprehensive Land Use Plan (CLUP) for compatibility with the plan as a basis for project approval. [DPW, DPLU]

County of San Diego's *Guidelines for Determining Significance*

COUNTY OF SAN DIEGO

GUIDELINES FOR DETERMINING SIGNIFICANCE

TRANSPORTATION AND TRAFFIC

LAND USE AND ENVIRONMENT GROUP

Department of Planning and Land Use
Department of Public Works

September 26, 2006

APPROVAL

I hereby certify that these **Guidelines for Determining Significance and Report Format and Content Requirements for Transportation and Traffic** are a part of the County of San Diego, Land Use and Environment Group's Guidelines for Determining Significance and Technical Report Format and Content Requirements and were considered by the Director of Planning and Land Use, in coordination with the Director of Public Works on the 26th day of September, 2006.

GARY PRYOR
Director of Planning and Land Use

JOHN SNYDER
Director of Public Works

Attest: ERIC GIBSON
Deputy Director of Planning and Land Use

I hereby certify that these **Guidelines for Determining Significance and Report Format and Content Requirements for Transportation and Traffic** are a part of the County of San Diego, Land Use and Environment Group's Guidelines for Determining Significance and Technical Report Format and Content Requirements and have hereby been approved by the Deputy Chief Administrative Officer (DCAO) of the Land Use and Environment Group on the 26th day of September, 2006. The Director of Planning and Land Use is authorized to approve revisions to these Guidelines for Determining Significance and Report Format and Content Requirements for Transportation and Traffic, except any revisions to Chapter 4.0 of the Guidelines for Determining Significance for Cultural Resources must be approved by the Deputy CAO.

Approved, September 26, 2006

CHANDRA WALLAR
Deputy CAO

EXPLANATION

These Guidelines for Determining Significance for Traffic and information presented herein are used by County staff in their review of discretionary projects and environmental documents pursuant to the California Environmental Quality Act (CEQA). These Guidelines present a range of quantitative, qualitative, and performance levels for particular environmental effects. Normally, (in the absence of substantial evidence to the contrary), non-compliance with a particular standard stated in these Guidelines will usually mean the project will result in a significant effect, whereas compliance will normally mean the effect will be determined to be "less than significant." Section 15064(b) of the State CEQA Guidelines states:

> "The determination whether a project may have a significant effect on the environment calls for careful judgment on the part of the public agency involved, based to the extent possible on factual and scientific data. An ironclad definition of significant effect is not always possible because the significance of an activity may vary with the setting."

These Guidelines assist in providing a consistent, objective and predictable evaluation of significant effects. These Guidelines are not binding on any decision-maker and should not be substituted for the use of independent judgment to determine significance or the evaluation of evidence in the record. The County reserves the right to request further, project specific, information in its evaluation of a project's environmental effects and to modify these Guidelines in the event a scientific discovery or factual data alters the common application of a Guideline. In addition, evaluations to verify the applicability of the significance guidelines for individual project conditions may be necessary. Additional evaluations may include analysis of vehicle headways, speeds, average gaps, queues, delay, or other factors.

3.4 Hazards to Pedestrians or Bicyclists

Increased traffic generated or redistributed by a proposed project may cause a significant traffic operational impact to pedestrians or bicyclists and result in potential hazards. These hazards can occur for a variety reasons including:

- A design feature or physical configurations on a road segment or at an intersection that may adversely affect the visibility of pedestrians or bicyclists to drivers entering and exiting the site, and the visibility of cars to pedestrians and bicyclists;
- High amount of pedestrian activity at the project access points.
- Precluding or substantially hindering of the provision of a planned bike lane or pedestrian facility on a roadway adjacent to the project site.
- The physical conditions of the project site and surrounding area, such as curves, slopes, walls, landscaping or other barriers may result in vehicle/pedestrian, vehicle/bicycle conflicts.
- The project may result in a substantial increase in pedestrian or bicycle activity without the presence of adequate facilities.

3.5 Parking Capacity

Typical adverse effects on parking occur when an adequate number of spaces are not incorporated in a project design. The regulations are intended to require adequate off-street parking and loading, thereby reducing traffic congestion, allowing more efficient utilization of on-street parking, promoting more efficient loading operations, and reducing the use of public streets for loading purposes. Additionally, the regulations are intended to minimize the secondary effects of vehicles. These may include vehicular noise or visual impacts from headlights and unscreened parked vehicles. Unscreened parked vehicles are a particular concern when parking adjoins or is adjacent to residential areas or preserve systems that are sensitive to noise and lighting.

4.0 GUIDELINES FOR DETERMINING IMPACT SIGNIFICANCE

This section provides guidance for evaluating adverse environmental effects a project may have on traffic. The guidelines for determining significance are organized into eight categories: road segments, intersections, ramps, congestion management plan, hazards due to an existing transportation design feature, hazards to pedestrians or bicyclists, parking capacity, and alternative transportation. A discussion of how to evaluate project and cumulative level impacts is also included in the Transportation and Traffic Report Format and Content Requirement.

4.1 Road Segments

Pursuant to the County's General Plan Public Facilities Element (PFE), new development must provide improvements or other measures to mitigate traffic impacts to avoid:

(a) Reduction in Level of Service (LOS) below "C" for on-site Circulation Element roads;

(b) Reduction in LOS below "D" for off-site and on-site abutting Circulation Element roads; and

(c) "Significantly impacting congestion" on roads that operate at LOS "E" or "F". If impacts cannot be mitigated, the project will be denied unless a statement of overriding findings is made pursuant to the State CEQA Guidelines. The PFE, however, does not include specific guidelines/thresholds for determining the amount of additional traffic that would "significantly impact congestion" on such roads, as that phrase is used in item (c) above.

The County has created the following guidelines to evaluate likely traffic impacts of a proposed project for road segments and intersections serving that project site, for *purposes of determining whether the development would "significantly impact* congestion" on the referenced LOS E and F roads. The guidelines are summarized in Table 1. The thresholds in Table 1 are based upon average operating conditions on County roadways. It should be noted that these thresholds only establish general guidelines, and that the specific project location must be taken into account in conducting an analysis of traffic impact from new development.

On-site Circulation Element Roads

PFE, Transportation, Policy 1.1 states that "new development shall provide needed roadway expansion and improvements on-site to meet demand created by the development, and to maintain a Level of Service C on Circulation Element Roads during peak traffic hours". Pursuant to this policy, a significant traffic impact would result if:

- ***The additional or redistributed ADT generated by the proposed land development project will cause on-site Circulation Element Roads to operate below LOS C during peak traffic hours except within the Otay Ranch project as defined in the Otay Subregional Plan Text, Volume 2. PFE, Implementation Measure 1.1.2.***

Off-site Circulation Element Roads

PFE, Transportation, Policy 1.1 also states that "new development shall provide needed roadway expansion and improvements off-site to meet demand created

by the development, and to maintain a Level of Service D on Circulation Element Roads." "New development that would significantly impact congestion on roads operating at LOS E or F, either currently or as a result of the project, will be denied unless improvements are scheduled to improve the LOS to D or better or appropriate mitigation is provided." The PFE, however, does not specify what would significantly impact congestion or establish criteria for evaluating when increased traffic volumes would significantly impact congestion. The following significance guidelines provided are the County's preferred method for evaluating whether or not increased traffic volumes generated or redistributed from a proposed project will "significantly impact congestion" on County roads, operating at LOS E or F, either currently or as a result of the project.

Traffic volume increases from public or private projects that result in one or more of the following criteria will have a significant traffic volume or level of service traffic impact on a road segment, unless specific facts show that there are other circumstances that mitigate or avoid such impacts:

- *The additional or redistributed ADT generated by the proposed project will significantly increase congestion on a Circulation Element Road or State Highway currently operating at LOS E or LOS F, or will cause a Circulation Element Road or State Highway to operate at a LOS E or LOS F as a result of the proposed project as identified in Table 1, or*

- *The additional or redistributed ADT generated by the proposed project will cause a residential street to exceed its design capacity.*

Table 1
Measures of Significant Project Impacts to Congestion on Road Segments
Allowable Increases on Congested Road Segments

Level of service	Two-lane road	Four-lane road	Six-lane road
LOS E	200 ADT	400 ADT	600 ADT
LOS F	100 ADT	200 ADT	300 ADT

Notes:
1. By adding proposed project trips to all other trips from a list of projects, this same table must be used to determine if total cumulative impacts are significant. If cumulative impacts are found to be significant, each project that contributes any trips must mitigate a share of the cumulative impacts.
2. The County may also determine impacts have occurred on roads even when a project's traffic or cumulative impacts do not trigger an unacceptable level of service, when such traffic uses a significant amount of remaining road capacity.

The first significance criterion listed in Table 1 addresses roadways presently operating at LOS E. Based on these criteria, an impact from new development on an LOS E road would be reached when the increase in average daily trips (ADT) on a two-lane road exceeds 200 ADT. Using SANDAG's "Brief Guide for Vehicular Traffic Generation Rates for the San Diego Region" for most discretionary projects this would generate less than 25 peak hour trips. On average, during peak hour conditions, this would be

only one additional car every 2.4 minutes. Therefore, the addition of 200 ADT, in most cases, would result in changes to traffic flow that would not be noticeable to the average driver and therefore would not constitute a significant impact on the roadway. Significance criteria were also established for four-lane and six-lane roads operating at LOS E and are based upon the above 24 hour ADT significance criterion established for two-lane roads. The two-lane road criterion was doubled to determine impacts to four-lane roads and tripled to determine impacts to six-lane roads. This was considered to be conservative since the 24 hour per lane road capacity for a 4-lane road is more than double that of a two-lane road and the per lane capacity of a six-lane road is more than triple that of the two-lane road. For LOS E roads, the additional significance criteria are 400 ADT for a four-lane road and 600 ADT for a six-lane road. Similar to criterion for two-lane roads, the 400 ADT for a 4-lane road and 600 ADT for a 6-lane road criteria would generate less than 25 per lane peak hour trips for most discretionary projects. On average, during peak hour conditions, this would be only one additional car per lane every 2.4 minutes. The addition of 200 ADT per lane (400 ADT for a 4 lane road or 600 ADT for a 6 lane road) , in most cases, would result in changes to traffic flow that would not be noticeable to the average driver and therefore would not constitute a significant impact on the roadway. Road capacities based upon level of service for County roads (two-lane, four-lane and six-lane) are provided in Attachment A.

The second significance criteria listed in Table 1 addresses roadways presently operating at LOS F. Under LOS F congested conditions, small changes and disruptions to the traffic flow on County Circulation Element Roads can have a greater effect on traffic operations when compared to other LOS conditions. In order to better account for potential effects of increased traffic on LOS F roads more stringent significance criteria was established when compared to that for LOS E. Based on this guidance, an impact from new development on an LOS F road would be reached when the increase in average daily trips (ADT) on a two-lane road exceeds 100. Again, using SANDAG's "Brief Guide for Vehicular Traffic Generation Rates for the San Diego Region" for most discretionary projects this would generate less than 12.5 peak hour trips. On average, during peak hour conditions, this would be only one additional car every 4.8 minutes. The addition of 100 ADT, in most cases, would not be noticeable to the average driver and therefore would not constitute a significant impact on the roadway. The same approach used to determine significance criteria for four-lane and six-lane roads operating at LOS E was used to determine appropriate significance criteria for four-lane and six-lane roads operating at LOS F. Based on this approach, the significance criteria for a four-lane road (200 ADT) and for a six-lane road (300 ADT) would generate less than 12.5 per lane peak hour trips for most discretionary projects. On average, during peak hour conditions, this would be only one additional car per lane every 4.8 minutes. The addition of 100 per lane ADT (200 ADT for a 4-lane road and 300 ADT for a 6-lane road) would, in most cases, not be noticeable to the average driver and therefore would not constitute a significant impact on the roadway. In summary, under extremely congested LOS F conditions, small changes and disruptions to the traffic flow can significantly affect traffic operations and additional project traffic can increase the likelihood or frequency of these events. Therefore, the LOS F ADT significance criteria was set at 100 ADT (50% of the LOS E threshold) to provide a higher level of assurance

that the traffic allowed under the threshold would not significantly impact traffic operation on the road segment.

Non-Circulation Element Residential Streets

Levels of service are not applied to residential streets since their primary purpose is to serve abutting lots and not to carry through traffic, however, for projects that will substantially increase traffic volumes on residential streets, a comparison of the traffic volumes on the residential streets with the recommended design capacity must be provided. Recommended design capacities for residential non-Circulation Element streets are provided in the San Diego County Public and Private Road Standards. Traffic volume that exceeds the design capacity on residential streets may impact residences and should be analyzed on a case-by-case basis.

4.2 Intersections

This section provides guidance for evaluating adverse environmental effects a project may have on signalized and unsignalized intersections.

4.2.1 Signalized

Traffic volume increases from public or private projects that result in one or more of the following criteria will have a significant traffic volume or level of service traffic impact on a road segment:

- ***The additional or redistributed ADT generated by the proposed project will significantly increase congestion on a signalized intersection currently operating at LOS E or LOS F, or will cause a signalized intersection to operate at a LOS E or LOS F as identified in Table 2.***

Table 2
Measures of Significant Project Impacts to Congestion on Intersections
Allowable Increases on Congested Intersections

Level of service	Signalized	Unsignalized
LOS E	Delay of 2 seconds	20 peak hour trips on a critical movement
LOS F	Delay of 1 second, or 5 peak hour trips on a critical movement	5 peak hour trips on a critical movement

Notes:

1. **A critical movement is one that is experiencing excessive queues.**
2. **By adding proposed project trips to all other trips from a list of projects, these same tables are used to determine if total cumulative impacts are significant. If cumulative impacts are found to be significant, each project that contributes any trips must mitigate a share of the cumulative impacts.**
3. **The County may also determine impacts have occurred on roads even when a project's traffic or cumulative impacts do not trigger an unacceptable level of service, when such traffic uses a significant amount of remaining road capacity.**

The significance criterion for signalized intersections identified in Table 2 allows an increase in the overall delay at an intersection operating at LOS E of two seconds. This is consistent with the capacity threshold contained in the SANDAG's CMP and guidelines established by the City of San Diego. A delay of two seconds is a small fraction of the typical cycle length for a signalized intersection that ranges between 60 and 120 seconds. The likelihood of increased queues forming due to the additional two seconds of delay is low. Therefore, an increased wait time of two seconds, on average, would result in changes to traffic flow that would not be noticeable to the average driver. *Therefore the significance guideline for intersections operating at LOS E is 2 seconds.*

The primary significance criterion for signalized intersections operating at LOS F conditions was based upon increased delay at the intersection. Under LOS F congested conditions, small changes and disruptions to the traffic flow to signalized intersections can have a greater effect on overall intersection operations when compared to other LOS conditions. In order to better account for potential effects of increased traffic at signalized intersections operating at LOS F, a more stringent guideline was established when compared to signalized intersection operating at LOS E. A significance guideline of an increased delay of 1 second was established for signalized intersections operating at LOS F. An increase in the overall delay at an intersection of one second, on average, would result in changes to traffic flow that would not be noticeable to the average driver. Therefore the significance guideline for intersections operating at LOS F is 1 second.

Signalized intersections operating at LOS F also have the potential for substantial queuing at specific turning movements that may detrimentally effect overall intersection and/or road segment operations. Thus, an increase of peak hour trips to a critical move was also established as a secondary significance criterion for signalized intersections. A critical movement would be a movement or a lane at an intersection that is experiencing queuing or substantial delay and is affecting the overall operation of the intersection. The increase in peak hour trips to a critical move is a measurement of how many cars can be added to an existing queue. The addition of five trips (peak hour) per critical movement will normally be considered a significant impact. This significance criterion was selected because the five additional trips spread out over the peak hour would not significantly increase the length of an existing queue and would not be noticeable to the average driver (one trip every 12 minutes or 720 seconds). For LOS E intersections, the 5 peak hour trips to a critical movement would not be noticeable to the average driver since the one additional trip during the 12 minute interval on average would clear the traffic signal cycles well within the 12 minute period. It should also be noted that if the 5 additional peak hour trips arrived at the same time these trips would also clear the traffic cycle and existing queue lengths would be re-established.

4.2.2 Unsignalized

The operating parameters and conditions for unsignalized intersections differ dramatically from those of signalized intersections. Very small volume increases on one leg or turn and/or through movement of an unsignalized intersection can substantially affect the calculated delay for the entire intersection. Significance criteria for unsignalized intersections are based upon a minimum number of trips added to a critical movement at an unsignalized intersection.

Traffic volume increases from public or private projects that result in one or more of the following criteria will have a significant traffic volume or level of service traffic impact on a road segment:

- ***The additional or redistributed ADT generated by the proposed project will add 20 or more peak hour trips to a critical movement of an unsignalized intersection, and cause an unsignalized intersection to operate below LOS D, or***

- ***The additional or redistributed ADT generated by the proposed project will add 20 or more peak hour trips to a critical movement of an unsignalized intersection currently operating at LOS E, or***

- ***The additional or redistributed ADT generated by the proposed project will add 5 or more peak hour trips to a critical movement of an unsignalized intersection, and cause the unsignalized intersection to operate at LOS F, or***

- ***The additional or redistributed ADT generated by the proposed project will add 5 or more peak hour trips to a critical movement of an unsignalized intersection currently operating at LOS F, or***

- ***Based upon an evaluation of existing accident rates, the signal priority list, intersection geometrics, proximity of adjacent driveways, sight distance or other factors, it is found that the generation rate is less than those specified above, and would significantly impact the operations of the intersection.***

The significance guidelines for unsignalized intersections identify a minimum number of trips added to a critical movement at an unsignalized intersection. Since the operations of unsignalized intersections under congested conditions are heavily influenced by traffic volume increases on critical moves, the significance guidelines for unsignalized intersections were based upon the number of trips added to a critical movement. This guideline directly relates to the number of vehicles that can be added to an existing queue that forms at the intersection. A significance criteria of twenty trips (peak hour) per critical movement was used for LOS E conditions. Although delays drivers experience under LOS E condition may be noticeable, they are not yet considered

unacceptable. The twenty trips spread out over the peak hour would not likely cause the intersection delay or existing queue lengths to become unacceptable. The twenty trips (peak hour) would not be noticeable to the average driver. A significance guideline of five trips (peak hour) per critical movement was used for LOS F conditions. The five trips spread out over the peak hour would not significantly increase the length of an existing queue and would not be noticeable to the average driver.

The operations of unsignalized intersections under congested conditions are heavily influenced by traffic volume increases on critical moves. Therefore, the significance guidelines for unsignalized intersections are based upon the number of peak hour trips added to a critical movement at that intersection. This guideline examines the number of vehicles that may be added to an existing queue that forms at the intersection by the additional traffic generated by a project. In LOS E situations, the delays that drivers experience are noticeable, but are not considered excessive. A peak hour increase of twenty trips to the critical movement of an unsignalized intersection would be, on average, one additional car every 3.0 minutes or 180 seconds. Assuming the average wait time for a vehicle in the critical movement queue is less than 3.0 minutes, which is typical for LOS E condition, this would not be noticeable to the average driver and would not be considered a significant impact.

For LOS F conditions, a significance threshold of five trips (peak hour) per critical movement was used. The five trips spread out over the peak hour would not significantly increase the length of an existing queue and would not be noticeable to the average driver. Five trips spread out over an hour would be one car every 12 minutes. This typically exceeds the average wait time in the queue and would not be noticeable to the average driver.

4.3 Ramps

Additional or redistributed ADT generated by the proposed project may significantly increase congestion at a freeway ramp. Caltrans' "Guide for the Preparation of Traffic Impact Studies" states that an operational analysis based upon Caltrans Highway Design Manual should be used in the evaluation of the ramps and in the preparation of the operational analysis that Caltrans' Ramp Metering Guidelines should be used. However, specific criteria for the determination of an impact at a ramp are not provided in the above documents.

The CMP includes guidelines for the determination of traffic impacts at a ramp. These guidelines are summarized in Table 3. Table 3 may be used as a guide in determining significant increases in congestion on ramps and for addressing congestion management plan impacts. Other factors that may be considered include ramp metering, location (rural vs. urban), ramp design, and the proximity of adjacent intersections. Coordination with Caltrans and the local jurisdiction should be conducted to determine appropriate impact criteria for the specific ramps being assessed.

4.4 Congestion Management Plan

Projects that generate over 2,400 ADT or 200 peak hour trips, must comply with the traffic study requirements of SANDAG's Congestion Management Plan. Trip distributions for these projects must also use the current regional computer traffic model. Projects that must prepare a CMP analysis should also follow the CMP traffic impact analysis guidelines. A summary of these guidelines is provided in Table 3.

Table 3
Measure of Significant Project Traffic Impacts for Circulation Element Roads, Signalized Intersections, and Ramps

Level of Service With Project	Allowable Change Due to Project Impact						
	Freeways		Roadway Segments*		Intersections**	Ramps***	Ramps with >15 min. delay
	V/C	Speed (mph)	V/C	Speed (mph)	Delay (sec.)	Delay (min.)	Delay (min.)
E & F	0.01	1	0.02	1	2	-	2

* For County arterials, which are not identified in SANDAG's Regional Transportation Plan and Congestion Management Plan as regionally significant arterials, significance may be measured based upon an increase in average daily trips. The allowable change in ADT due to project impacts in this instance would be identified in Table 1.

** Signalized intersections.

*** See the Transportation and Traffic Report Format and Content Requirements for guidance on ramp metering analysis.

KEY

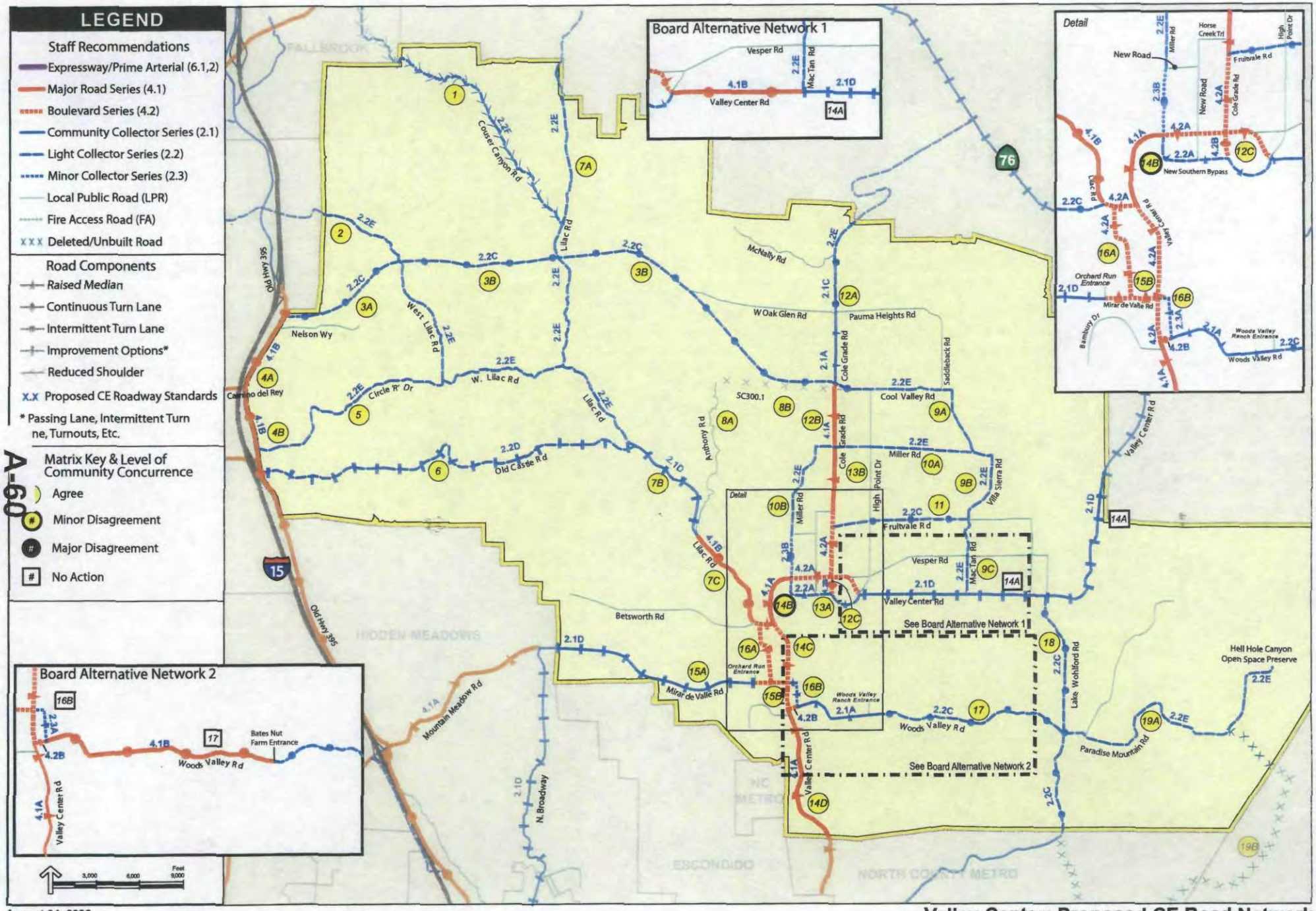
V/C	=	Volume to Capacity ratio
Speed	=	Speed measured in miles per hour
Delay	=	Average stopped delay per vehicle measured in seconds, or minutes
LOS	=	Level of Service
ADT	=	Average Daily Trips

4.5 Hazards Due to an Existing Transportation Design Feature

Many roadways and intersections in the County were designed and constructed prior to the adoption of current road design standards. The design of the roadways and intersections, while adequate for existing traffic volumes, may pose an increased risk if traffic volumes substantially increase along the road segment or at the intersection as a result of the proposed project. Increased traffic generated or redistributed by a proposed project may cause a significant traffic operational impact to an existing transportation design feature. Therefore, it is necessary to evaluate potential hazards to an existing transportation design feature.

The determination of significant hazards to an existing transportation design feature shall be on a case-by-case basis, considering the following factors:

GP2020 Roadway Network & Volumes



August 24, 2006

Valley Center: Proposed CE Road Network

County of San Diego General Plan Update

DRAFT Land Use Alternative Board Endorsed Network LOS and Volume Plot

VALLEY CENTER Area

2030 Incorporated Network
Recommended Unincorporated Network 4
Model Run 11/17/06
Without I-15 Speed Adjustments
Draft Land Use Table 10/24/06
With NEW External Trip Distribution
With 250K Cordon Volume and
Proportionally Reduced Commute Travel
With 10+2 I-15

Levels of Service:

- A - C
- D
- E
- F

- Non-Circulation Element
- Zone Connector
- Traffic Analysis Zones

A-61

...sted Volumes:

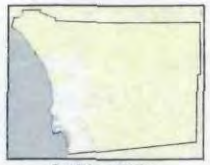
- Adjusted Volume

Level of Service Calculations

Peak Hour Standards for State Facilities
New County Daily ADT LOS Standards for non-State:

6.1	84	36000	54000	70000	86000	108000
6.2	75	22300	37000	44000	50000	57000
4.1A	74	14800	24700	28800	33400	37000
4.1B	66	13700	22800	27400	30800	34200
4.1C	69	14800	24700	28800	33400	37000
4.1D	61	13700	22800	27400	30800	34200
4.2A	63	14800	24700	28800	33400	37000
4.2A	68	8700	12800	16000	27000	32000
4.2B	71	8000	10800	17200	28000	30000
4.3C	41	2500	5400	8800	12500	16000
2.1A	58	2800	6600	10300	15000	20000
2.1B	64	3000	6000	9600	13600	18000
2.1C	64	3000	6000	9600	13600	18000
2.1D	62	3000	6000	9600	13600	18000
2.1E	48	1800	4100	7100	10800	16200
2.2A	64	3000	6000	9600	13600	18000
2.2B	66	3000	6000	9600	13600	18000
2.2C	66	3000	6000	9600	13600	18000
2.2D	60	3000	6000	9600	13600	18000
2.2E	45	1800	4100	7100	10800	16200
2.2F	45	1800	3500	5800	8700	16200
2.3A	54	1400	3000	5100	8000	13800
2.3B	56	1400	3000	5100	8000	13800
2.3C	42	1350	2700	4800	7000	11300
LPR	56	1350	2700	4800	7000	11300
LPR	34	1350	2700	4800	7000	11300

This traffic forecast is based on propietary information of the County of San Diego and was produced to test the County's proposed DRAFT and BOARD land use assumptions. These data do not reflect SANDAG's 2030 Mobility Emphasis Cities/County Forecast.

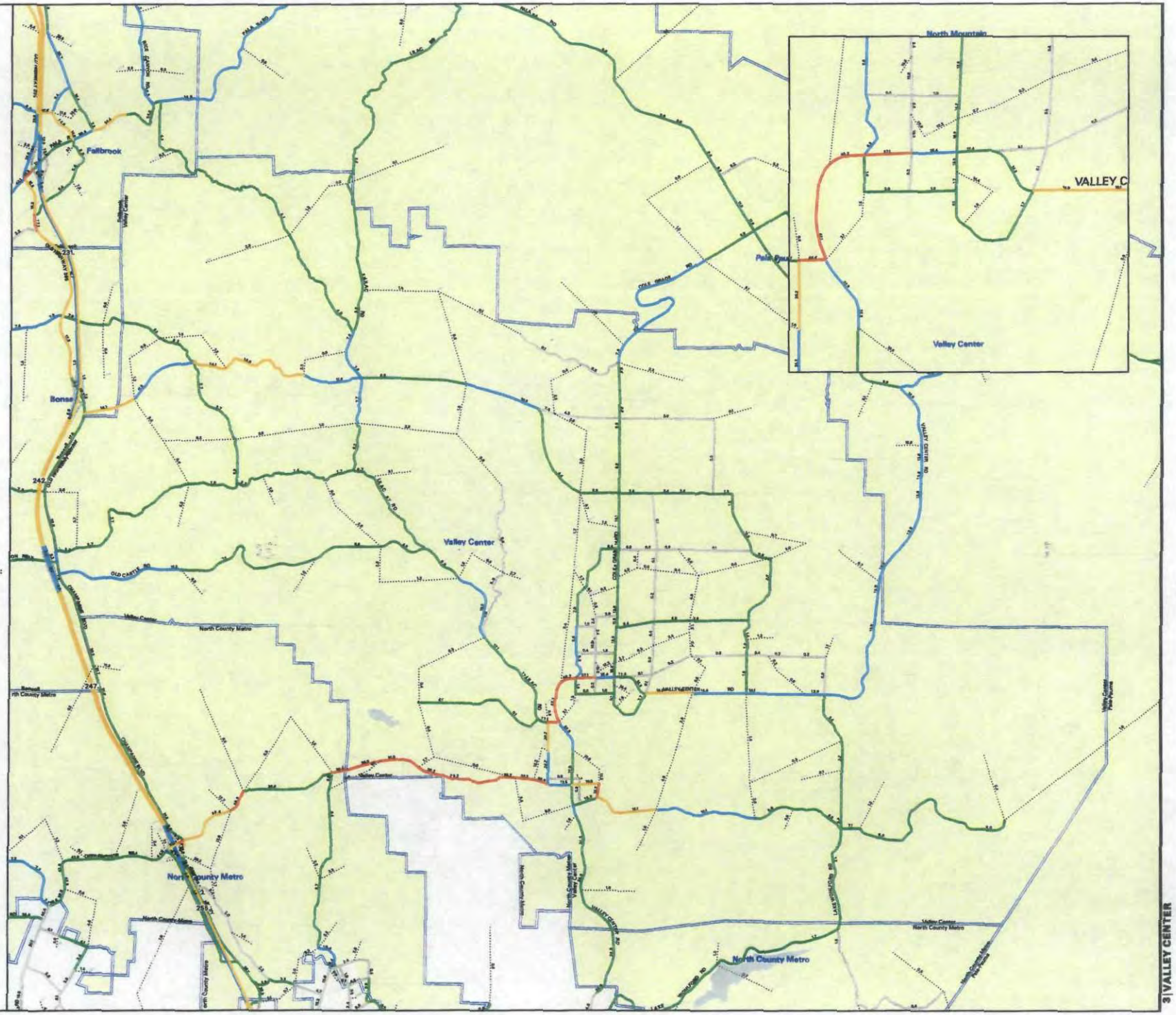


San Diego Region

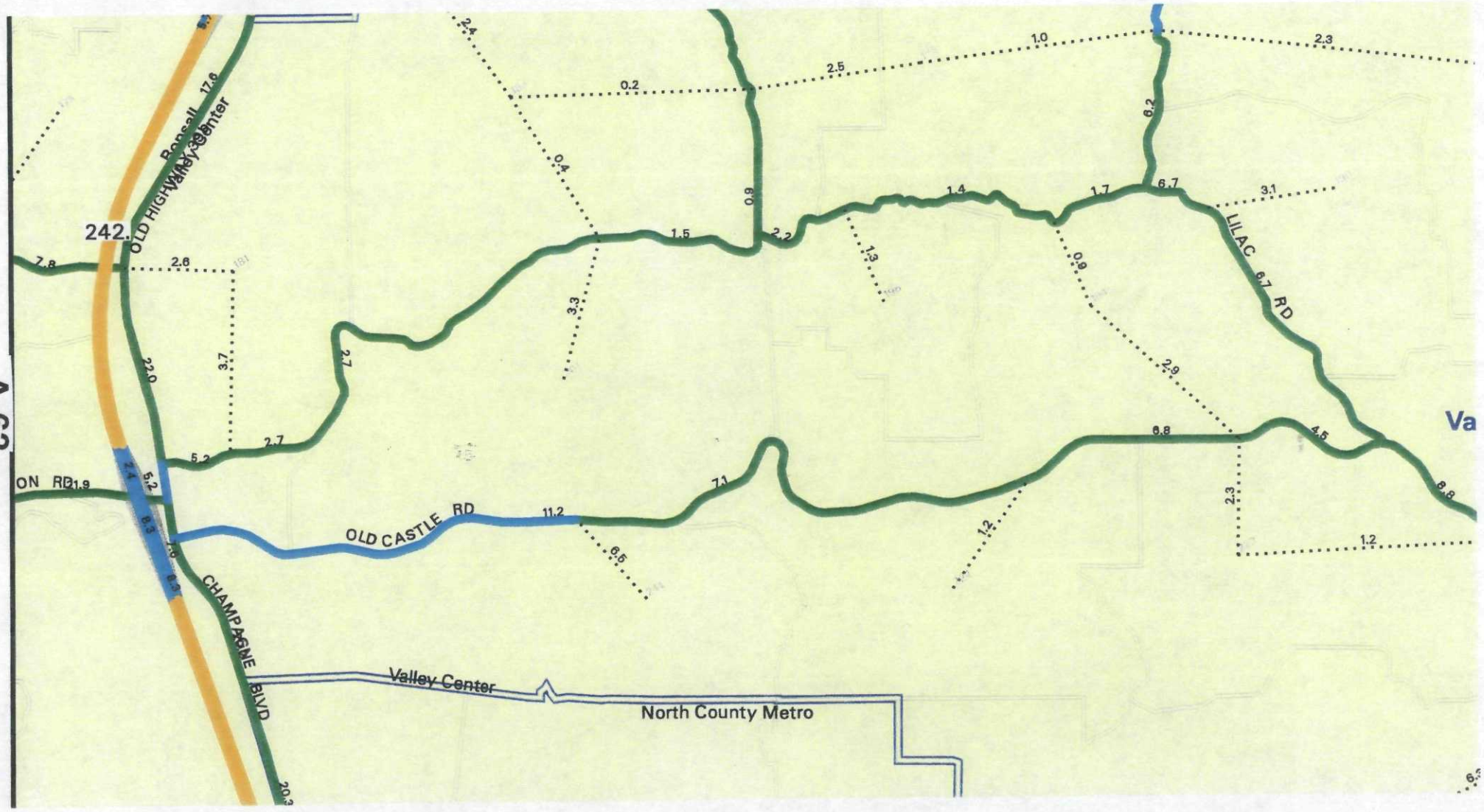
Feet 0 1,000 2,000
Meters 120 360 600

SANDAG

November 20, 2006



3|VALLEY CENTER



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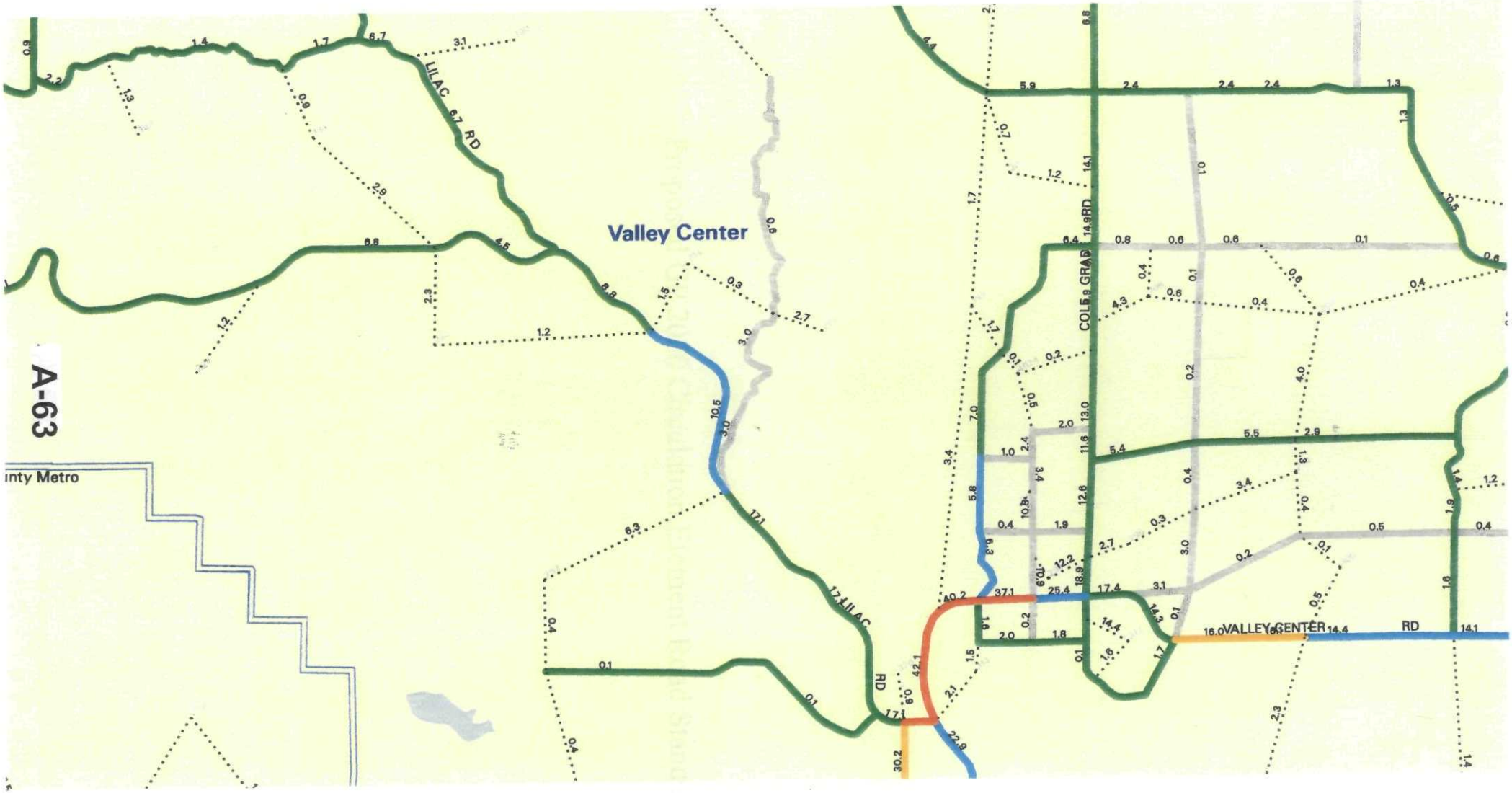
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PROPOSED GP2020
CIRCULATION ELEMENT (CE) ROAD STANDARDS

This document reflects revisions made to the CE Road Standards as a result of the February 4, 2006 Steering Committee Meeting. The intent is to provide community planning group representatives with the information necessary to develop a preferred road network based on road standards in this document.

Steering Committee Comments

On February 4, 2006 the Steering Committee voted to endorse the proposed GP2020 CE Road Standards, with the provision that a Design Manual will be developed that addresses other road design issues identified by community representatives. The Steering Committee also made minor requests for changes that are reflected in Summary Table 1:

- Separate road types were added for two-lane roads with continuous turn lanes (see 2.1B, 2.2B and 2.3B).
- Existing names were retained for the Expressway, Prime Arterial and Major Road.

However, we did not accommodate the group's request to retain the existing, four-lane Collector Road name (a four-lane road) in order to avoid confusion between that road and the Community Collector, Light Collector and Minor Collector (two-lane roads).

Summary Table 1

The proposed CE Road Standards in Summary Table 1 are organized into a hierarchy of roads ranging from six to two lanes. They include existing, modified, and new CE road classifications. Proposed CE road standards are organized by the number of travel lanes and by design speed, which are important factors when determining road capacity and road design. Variations on road types were developed by adding options such as medians or dedicated turn lanes.

Summary Table 1 also includes some updated threshold capacities, which are based on Level of Service (LOS) D, the Board endorsed standard for GP2020. Traffic volumes that exceed the threshold capacity will generate levels of service E or F on County roads.

Summary Table 1 contains more than one design speed option for two and four-lane roads. As the design speed decreases, the parkway size increases. Wider parkways are well suited to two locations: Villages and highly constrained areas in Rural Lands. Typical parkways range from 10 feet for roads with higher design speeds (Major Road Series, Community Collector Road Series) to 14 feet for roads with the lowest design speeds (Minor Collector Series).

Relationship to Previous Standards

Use the right hand column of the table to determine how the names for existing and new standards are related. In some cases, newly proposed GP2020 standards for Backcountry Communities are reintroduced with a new name.

Only one previous road type, the Rural Mountain Road, is not represented by a proposed road standard. However, the 2.3 Minor Collector road series would be an appropriate substitute for the Rural Mountain Road in rural, mountainous areas with low traffic volumes.

Summary Table 1: Proposed CE Road Standards

CE Road Series	Travel Lanes	Design Speed	No.	Name for Road Classification	Road Components	Threshold Capacity (ADT)	Minimum ROW (feet)[1]	Relationship to Public Road Standards
6.1 Expressway	6 lanes	65 mph	6.1	Expressway	Median[2] / Grade-Separated Interchange	86,000	146'	Same as existing Expressway
6.2 Prime Arterial	6 lanes	65 mph	6.2	Prime Arterial	Median / At-Grade Interchange	50,000	122'	Same as existing Prime Arterial
4.1 Major Road Series	4 lanes	55 mph	4.1A	Major Road with Raised Median	Raised Median	33,400	98'	Same as existing Major Road
			4.1B	Major Road with Intermittent Turn Lanes	Intermittent Turn Lanes	30,800	84' to 98'	Same as existing Collector Road[3]
4.2 Boulevard Series	4 lanes	40 mph	4.2A	Boulevard with Raised Median	Raised Median	27,000	106'	New standard
			4.2B	Boulevard with Intermittent Turn Lane	Intermittent Turn Lanes	25,000	92' to 106'	New standard
2.1 Community Collector Series	2 lanes	45 mph	2.1A	Community Collector with Raised Median	Raised Median	15,000	74'	Similar to existing Town Collector (except higher design speed)
			2.1B	Community Collector with Continuous Turn Lane	Continuous Turn Lane	13,500	74'	
			2.1C	Community Collector with Intermittent Turn Lane	Intermittent Turn Lanes	13,500	60' to 74'	New standard
			2.1D	Community Collector with Passing Lane Option[4]	Passing Lane Option	13,500	84'	Similar to existing Rural Collector
			2.1E	Community Collector	None	10,900	60'	Same as existing Light Collector

1 The minimum ROW for a 4.2 Boulevard, 2.2 Light Collector and 2.3 Minor Collector may be reduced if located in an area that is already developed. A reduced ROW can be achieved by using a 10' minimum parkway. This solution should not be used where adequate ROW is available for the 12' or 14' parkway standard.

2 Medians for Expressways and Prime Arterials are typically raised or depressed, and are defined in the County's Public Road Standards.

3 The current Public Road Standards provide for intermittent turn lanes for a 4-lane Collector Road.

4 See footnote 4 (page 5).

CE Road Series	Travel Lanes	Design Speed	No.	Name for Road Classification	Road Components	Threshold Capacity (ADT)	Minimum ROW (feet)[1]	Relationship to Public Road Standards
2.2 Light Collector Series	2 lanes	40 mph	2.2A	Light Collector with Raised Median	Raised Median	13,500	78'	Similar to existing Town Collector (except wider parkway, ROW)
			2.2B	Light Collector with *Continuous Turn Lane*	Continuous Turn Lane	13,500	78'	
			2.2C	Light Collector with Intermittent Turn Lanes	Intermittent Turn Lanes	13,500	64' to 78'	New Standard
			2.2D	Light Collector with Passing Lane Option[5]	Passing Lane Option	13,500	88'	Similar to existing Rural Collector
			2.2E	Light Collector	None	10,900	64'	Similar to existing Rural Light Collector
			2.2F	Light Collector with Reduced Shoulder	Reduced Shoulder	8,700	52'	New Standard (Similar to previous Rural Minor Road)
2.3 Minor Collector Series	2 lanes	35 mph	2.3A	Minor Collector with Raised Median	Raised Median	8,000	82'	New Standard
			2.3B	Minor Collector with Intermittent Turn Lane	Intermittent Turn Lane	8,000	68' to 82'	New Standard
			2.3C	Minor Collector	None	7,000	68'	New Standard

5 2.1D and 2.2D road classifications have a wider ROW to accommodate an optional passing lane. However, this road classification could also accommodate other road improvements (intermittent turn lanes, medians, etc.) to improve traffic flow and increase road capacity. Staff recommendations will indicate when other types of road improvements are recommended for the 2.1D and 2.2D road classifications.

Summary Table 2: Location Guide

This table provides guidance on where to locate different CE road classifications during the GP2020 mapping process. ***Within each group, road types are listed in order of preference.*** In general, road classifications with lower design speeds are recommended for two locations. The first is Semi-Rural or Rural Lands characterized by steep slopes (or other physical constraints). The second is Villages, where lower design speeds and wider parkways are provided to slow traffic and to provide adequate space for walkways, landscape buffers, and bike paths within a Village.

Lanes:	Village / Village Core[6]	Semi-Rural	Rural Lands
6 Lane	*Limited use only*: 6.1 Expressway or 6.2 Prime Arterial	6.1 Expressway or 6.2 Prime Arterial	6.1 Expressway or 6.2 Prime Arterial
4 Lane	*1st Choice*: 4.2 Boulevard Series *Limited use only*: 4.1 Major Road Series	*1st Choice*: 4.1 Major Road Series *2nd Choice*: 4.2 Boulevard Series	*1st Choice*: 4.1 Major Road Series *Limited use only*: 4.2 Boulevard Series
2 Lane	*1st Choice*: 2.3 Minor Collector Series *2nd Choice*: 2.2 Light Collector Series *Limited use only*: 2.1 Community Collector Series	*1st Choice*: 2.2 Light Collector Series *2nd Choice*: 2.1 Community Collector Series *Limited use only*: 2.3 Minor Collector Series	*Few Constraints*: 2.1 Community Collector Series *Some Constraints*: 2.2 Light Collector Series *High Constraints*: 2.3 Minor Collector Series

This table should be used in conjunction with other mapping criteria prepared for GP2020, which include forecast traffic volumes, adjacent land uses and community preferences. In order to develop a rational network, road mapping should consider the *predominant* topography or land use patterns, and a change in road classification should occur only at road intersections or another easily identifiable location in the network.

6 Please note that passing lanes are not appropriate for a Village.

Preliminary Information: Non-Circulation Element Roads

At the request of several Steering Committee members, preliminary information for two additional roads was added to the CE Road Standards handout:

- **Local Public Road**: Local Public Roads may be shown on *the regional CE Map when used to resolve road capacity* problems within the CE network or when used to link CE roads together into a complete network. Local Public Roads may be shown on a community plan map when they form an important part of a community-wide or town center road network. Community plan maps can also include new road alignments that are being proposed to improve connectivity within a community. Standards for this road type are located in the County's "Public Road Standards".
- **Fire Access Road**: The Fire Access Road offers a secondary ingress/egress route during fire emergencies. *Locations would be identified in community plans.* Road standards for fire emergency routes, and policies for gated roads, will be addressed outside the General Plan process.

A minimum ROW for Local Public Roads and Fire Access Roads on the CE map will be defined prior to finalizing the Circulation Element Map. At this time, assume a minimum 60 foot minimum ROW for Local Public Roads on the CE map.

Type of Non-CE Road	Travel Lanes	Design Speed	Medians, Passing Lanes, and Dedicated Turn Lane Options	Threshold Capacity (ADT)	Minimum ROW (feet)
Local Public Road	2	Minimum 30 mph	Depends on the type of Local Public Road	4,500	60 '
Fire Access Road	2	TBD	None	Not Applicable	TBD

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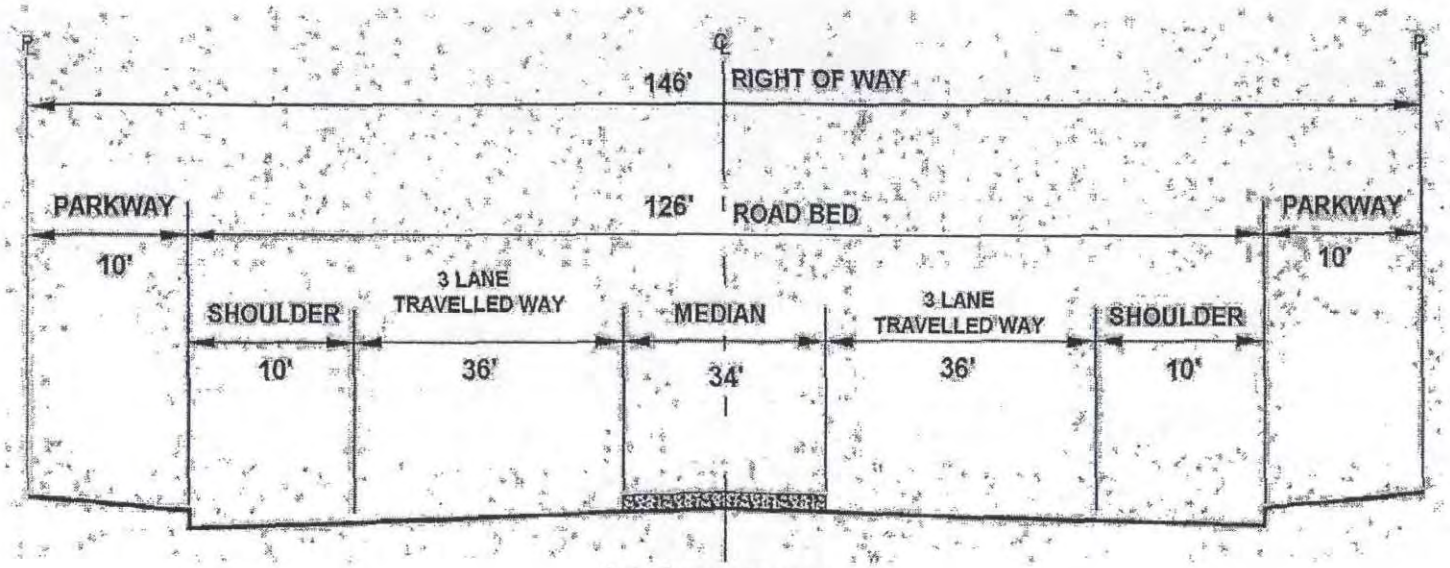
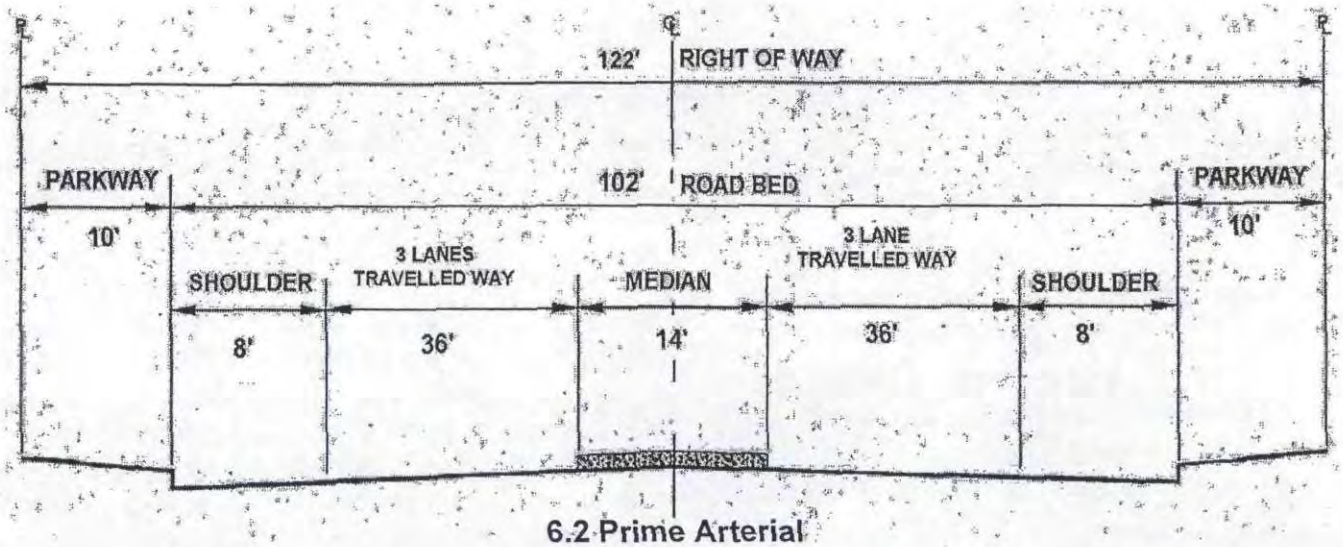
Road Standard Descriptions

The pages that follow contain detailed descriptions for each road standard. Cross sections are included to illustrate the size and organization of all road components. See the Glossary of Terms for an explanation of terms used in the diagrams.

Please note that a wider Right-of-Way (ROW) will be required for bike lanes identified in the Bicycle Master Plan. Areas called Parkways contain landscaping, utilities, and trails or bicycle paths as required. Additional width may be required for trails (called "pathways" in the Trails Master Plan).



6.1 Expressway



6.2 Prime Arterial

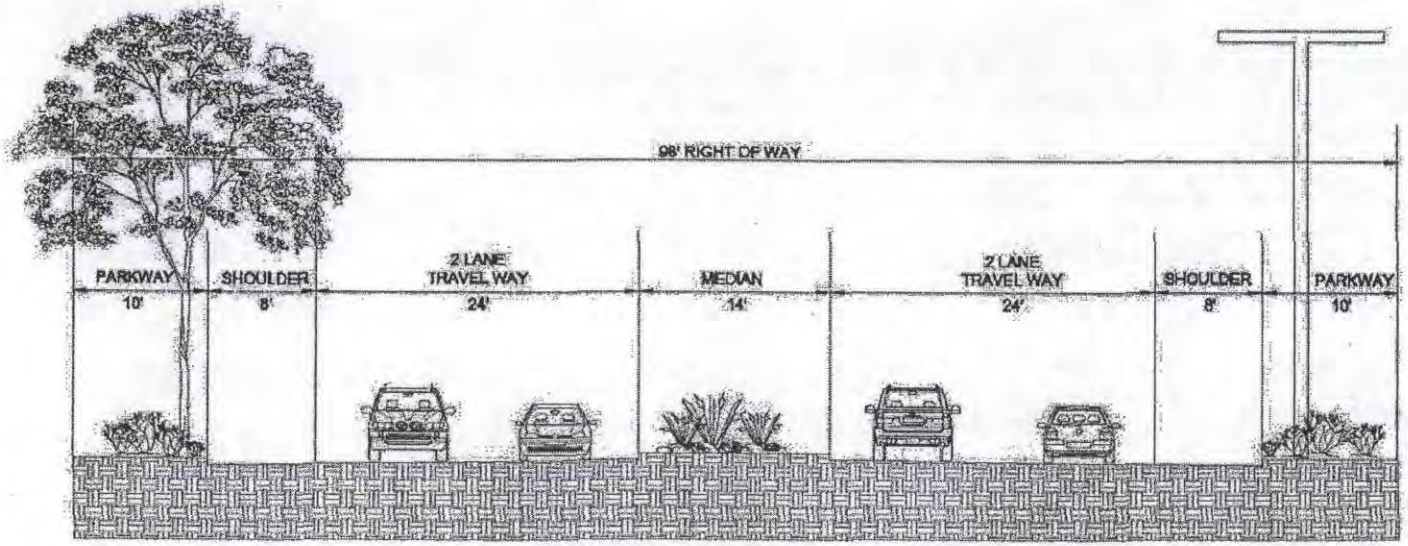
6.1 EXPRESSWAY / 6.2 PRIME ARTERIAL

There are two types of 6-lane road classifications, which are designed to accommodate high speed and high volume traffic. Typically, these roadways should be located outside Villages and in areas with limited physical constraints. The median serves as a separation between travel ways, instead of an area for turning or entering adjacent property.

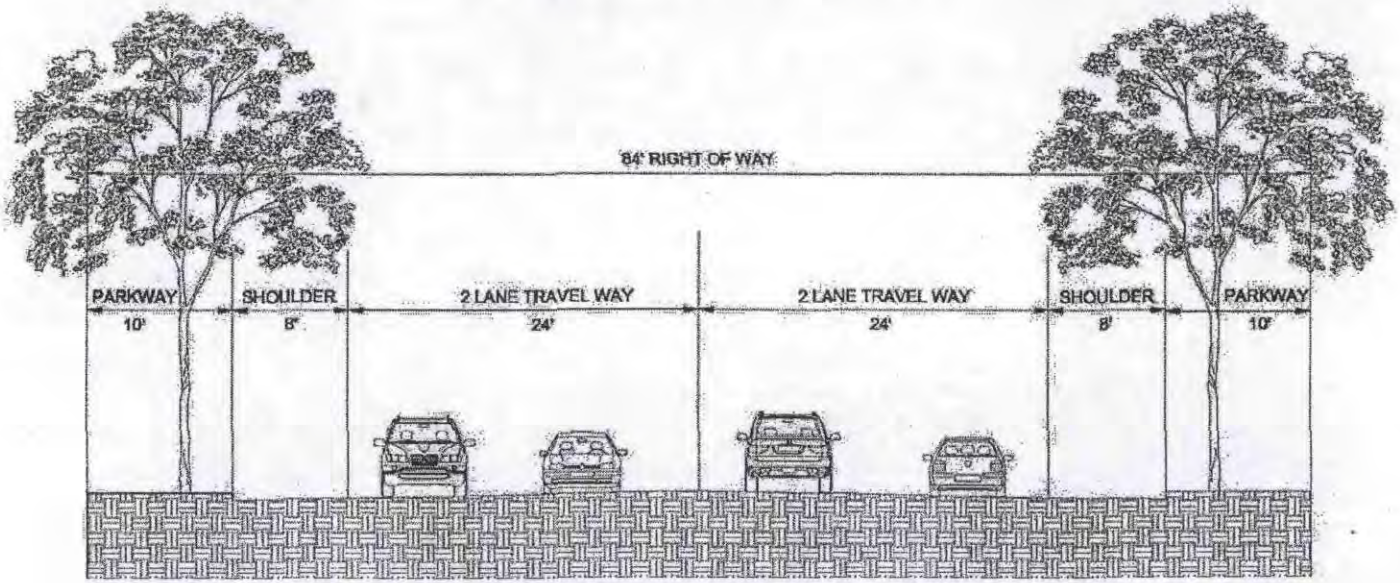
6.1 Expressway is the same as the existing Expressway standard — a divided, multi-lane roadway with a wide median and grade separated interchanges. This road type is similar to a CALTRANS Freeway facility.

6.2 Prime Arterial is the same as the existing Prime Arterial standard — a divided, multi-lane roadway with a median and at-grade interchanges.

	Minimum Standards		Description
	6.1 Expressway	6.2 Prime Arterial	
Design Speed	65 mph	65 mph	
Threshold Capacity	86,000 ADT	50,000 ADT	
ROW	146 '	122 '	
Travel Way	72 '	72 '	6 travel lanes, 12' each
Medians	34 '	14 '	Raised, depressed or flat with optional surface treatments or landscaping
Shoulder	10 '	8 '	Primarily serve as vehicle recovery areas, and parking is restricted.
Parkway	10 '	10 '	10' parkway includes landscaping and utilities as required.
Interchanges	Grade Separated	At-Grade	



4.1 A - Major Road with Raised Median



4.1 B – Major Road with Intermittent Turn Lanes

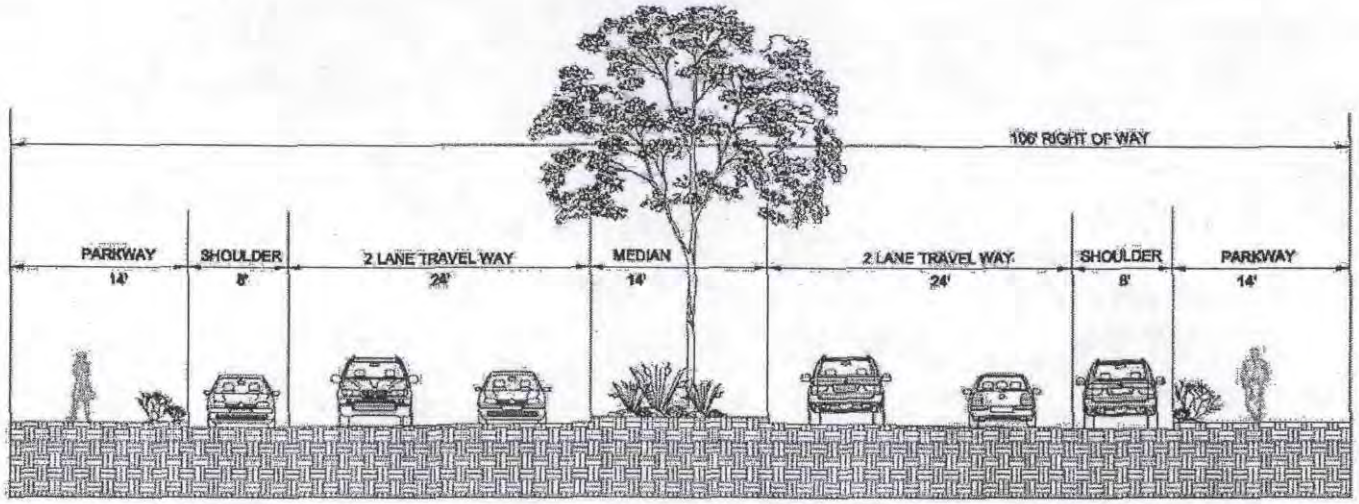
4.1 MAJOR ROAD SERIES

The Major Road is a four-lane roadway that primarily serves medium to high volumes of traffic. Because of its high design speed, this road should typically be located in physically unconstrained areas and its use in Villages should be limited to industrial or heavy commercial areas with low levels of pedestrian and bicycle traffic.

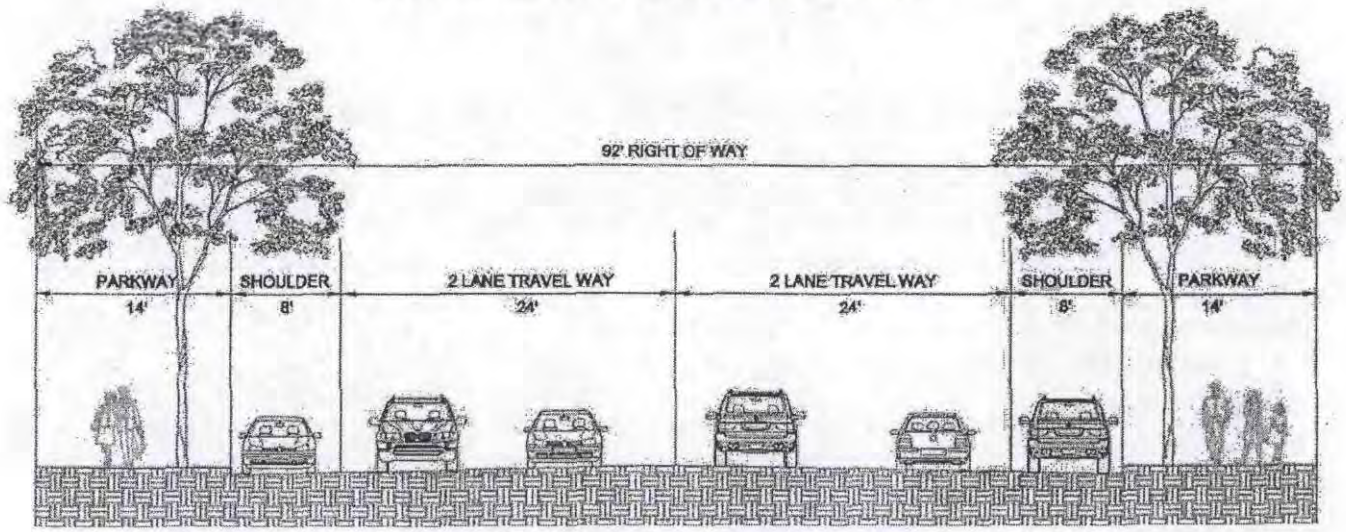
4.1A – Major Road with Raised Median (existing Major Road standard) is appropriate for regional travel between communities where higher traffic volumes are forecast. Potential applications include state highways such as SR67.

4.1B – Major Road with Intermittent Turn Lanes is the same as the existing Collector Road standard (the current Public Road Standards provide for intermittent turn lanes for a 4-lane Collector Road). It will typically be used in areas where turning movements are infrequent or where ROW is limited.

	Minimum Standards		Description
	4.1A – Major Road with Raised Median	4.1B – Major Road with Intermittent Turn Lanes	
Design Speed	55 mph	55 mph	
Threshold Capacity	33,400 ADT	30,800 ADT	
ROW	98 '	84 ' (to 98')	ROW increases to 98' for intermittent turn lanes.
Travel Way	48 '	48 '	4 travel lanes, 12' each
Medians	14 '	None	Median is raised, depressed or flat with optional surface treatments or landscaping
Shoulder	8 '	8 '	Parking restriction should be considered due to high speed travel.
Parkway	10 '	10 '	Typically contains landscaping and utilities. Additional width may be required for trails (pathways).



4.2 A – Boulevard with Raised Median



4.2 B – Boulevard with Intermittent Turn Lane

4.2 BOULEVARD SERIES

The Boulevard Series is a four-lane roadway with a low design speed and a wider parkway that should be used in Villages where higher traffic volumes are combined with on-street parking, pedestrian, bicycle and transit activities. The Boulevard Series can also be used in rural areas that are constrained by slopes or where the community requests a context sensitive solution.

4.2A - Boulevard with Raised Median has a wide parkway that accommodates non-motorized circulation. The median controls access, provides dedicated turn lanes, and increases road capacity. Potential applications include four-lane roadways that traverse villages in Ramona and Valley Center.

4.2B - Boulevard with Intermittent Turn Lane has a wide parkway that accommodates non-motorized circulation. This road would typically be used where turning movements are infrequent or where ROW is limited.

	Minimum Standards		Description
	4.2A – Boulevard with Raised Median	4.2B – Boulevard /w Intermittent Turn Lane	
Design Speed	40 mph	40 mph	
Threshold Capacity	27,000 ADT	25,000 ADT	
ROW	106 '	92 ' to 106 '	ROW will increase where bike lanes are required. ROW for Boulevard 4.2B will increase to 106' at intersections to accommodate a dedicated turn lane.
Travel Way	48 '	48 '	4 travel lanes, 12' each
Medians	14 '	None	14' median is typically raised or depressed with surface treatments or landscaping.
Shoulder	8 '	8 '	Add additional width for bicycle lanes, as required.
Parkway	14'	14 '	Typically contains landscaping, utilities, walkways and/or bicycle paths. Additional width may be required for trails.

TWO LANE ROADS

2.1 Community Collector Series

2.2 Light Collector Series

2.3 Minor Collector Series

Typical cross sections are located on pages 20 and 21

2.1 COMMUNITY COLLECTOR SERIES

The Community Collector Series is a two-lane roadway that primarily serves motorized traffic. Because of the higher design speed, it is appropriate for areas with few physical constraints and areas with little pedestrian, bicycle or other non-motorized traffic. See pages 20 and 21 for cross sections.

2.1A - Community Collector with Raised Median provides more capacity, controls turn movements and improves flow.

2.1B – Community Collector with Continuous Turn Lane improves traffic flow in areas with multiple curb cuts.

2.1C - Community Collector with Intermittent Turn Lane provides more capacity and improves traffic flow.

2.1D - Community Collector with Passing Lane Option has a wider right-of-way for optional or periodic passing lanes to accommodate higher traffic volumes. This road type could be used for State Highways where physical constraints are limited. Please note that passing lanes are not appropriate for Villages. If road improvements (intermittent turn lanes, medians, etc.) other than passing lanes are recommended for 2.1D, that will be indicated in staff recommendations.

2.1E - Community Collector has no special features. It accommodates low to medium traffic volumes in areas where non-motorized traffic and physical constraints are limited.

	Community Collector Series: Minimum Standards					Description
	2.1A Raised Median	2.1B Continuous Turn Lane	2.1C Intermittent Turn Lane	2.1D Passing Lane Option	2.1E (No features)	
Design Speed	45 mph	45 mph	45 mph	45 mph	45 mph	
Threshold Capacity (ADT)	15,000	13,500	13,500	13,500	10,900	
ROW	74'	74'	60' to 74'	84'	60'	Wider ROW required for 2.1C for turn lanes at intersections.
Travel Way	24'	24'	24'	24'	24'	2 travel lanes, 12' each (plus optional passing lane for 2.1D)
Medians	14'	14'	None	None	None	Design Manual will address treatments.
Shoulder	8'	8'	8'	8'	8'	Add additional width for bicycle lanes.
Parkway	10'	10'	10'	22'	10'	2.1D is wider for passing lane option.

2.2 LIGHT COLLECTOR SERIES

Light Collectors are 2-lane roads with a lower design speed and wider parkway than the Community Collector standard. They can be used in rural areas with medium physical constraints or in urbanized areas with moderate levels of non-motorized circulation. See pages 20 and 21 for cross sections.

2.2A - Light Collector with Raised Median has a median that provides more capacity, controls turn movements and improves traffic flow.

2.2B - Light Collector with Continuous Turn Lane improves traffic flow in areas with multiple curb cuts.

2.2C – Light Collector with Intermittent Turn Lanes has intermittent, dedicated turn lanes that provide more capacity and improve traffic flow.

2.2D - Light Collector with Passing Lane Option has a wider right-of-way for optional passing lanes. It can be used for roads within the State Highway system that traverse through physically constrained land, but passing lanes would not be appropriate in Villages. If road improvements other than passing lanes (intermittent turn lanes, medians, etc.) are recommended for 2.1D, that will be indicated in staff recommendations.

2.2E - Light Collector has no special features. It accommodates low to medium traffic volumes where non-motorized traffic and physical constraints are limited.

2.2 F - Light Collector with Reduced Shoulder has a two foot shoulder, a rolled curb with graded pathway, and a narrow right-of-way.

	Light Collector Series: Minimum Standards						Description
	2.2A Raised Median	2.2B Continuous Turn Lane	2.2C Intermittent Turn Lanes	2.2D Passing lane option	2.2E (No Features)	2.2F Reduced shoulder	
Design Speed	40 mph	40 mph	40 mph	40 mph	40 mph	40 mph	
Threshold Capacity (ADT)	13,500	13,500	13,500	13,500	10,900	8,700	
ROW	78'	78'	64' to 78'	88'	64'	52'	Wide ROW for 2.2D accommodates turn lanes at intersections
Travel Way	24'	24'	24'	24'	24'	24'	2 travel lanes, 12' each (plus optional passing lane for 2.2A)
Medians	14'	14'	None	None	None	None	Design Manual will address treatments.
Shoulder	8'	8'	8'	8'	8'	2'	Add 5' for bicycle lanes, if required
Parkway	12'	12'	12'	24'	12'	12'	

2.3 MINOR COLLECTOR SERIES

The Minor Collector is a two-lane roadway with a very low design speed that is appropriate for rural areas that are highly constrained and for areas within a Village with heavy pedestrian, bicycle and transit activities. This standard could also be used in Semi-Rural areas with high levels of "side friction", or access from adjacent parcels.

Minor Collectors have a wide parkway that, in rural areas, can be used to grade slopes and improve visibility or to improve tight curves. In more urbanized areas, the wide parkway can be used for pedestrian and bicycle paths and for landscape buffers between vehicular and non-vehicular circulation. See pages 20 and 21 for cross sections.

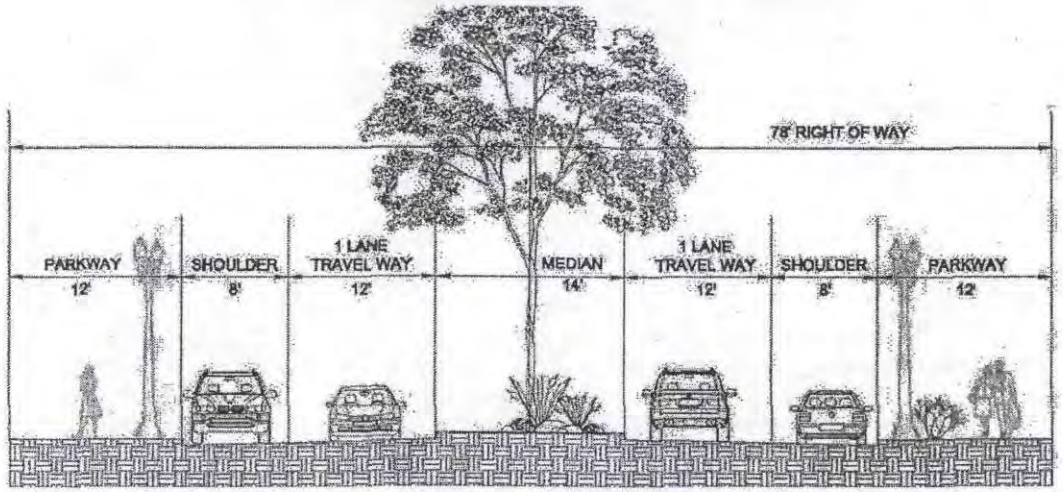
2.3A - Minor Collector with Raised Median has a raised or depressed median with dedicated turn lanes and controlled turn movements that improve traffic flow and add rural character when the median is landscaped.

2.3B - Minor Collector with Intermittent Turn Lane improves traffic flow in areas with multiple curb cuts.

2.3C – Minor Collector has no additional features and is primarily intended for residential neighborhoods or for rural areas with steep slopes and physical constraints.

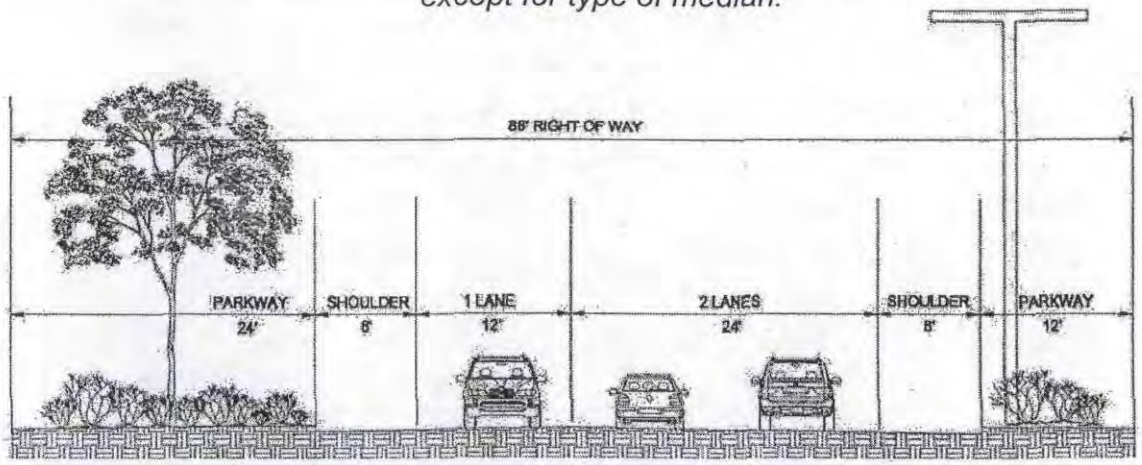
	Minor Collector Series: Minimum Standards			Description
	2.3A Raised Median	2.3B Intermittent Turn Lane	2.3C (No Features)	
Design Speed	35 mph	35 mph	35 mph	
Threshold Capacity (ADT)	8,000 ADT	8,000 ADT	7,000 ADT	
ROW	82 '	82 '	68 '	Wider ROW required for bike lanes.
Travel Way	24'	24'	24'	2 travel lanes, 12' each
Medians	14'	14'	None	Median is typically raised or depressed with optional surface treatments or landscaping
Shoulder	8'	8'	8'	Add 5' for bike lanes, if required
Parkway	14'	14'	14'	Parkway includes landscaping, utilities, trails or bicycle paths, as required

TYPICAL CROSS SECTIONS
2.2 Light Collector Series



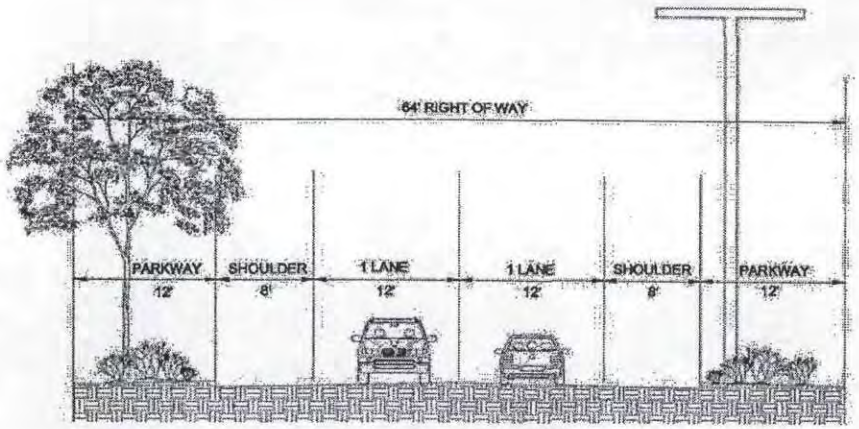
2.2A - Light Collector with Raised Median

Cross Section for 2.2B, Light Collector with Continuous Turn Lane, is similar except for type of median.



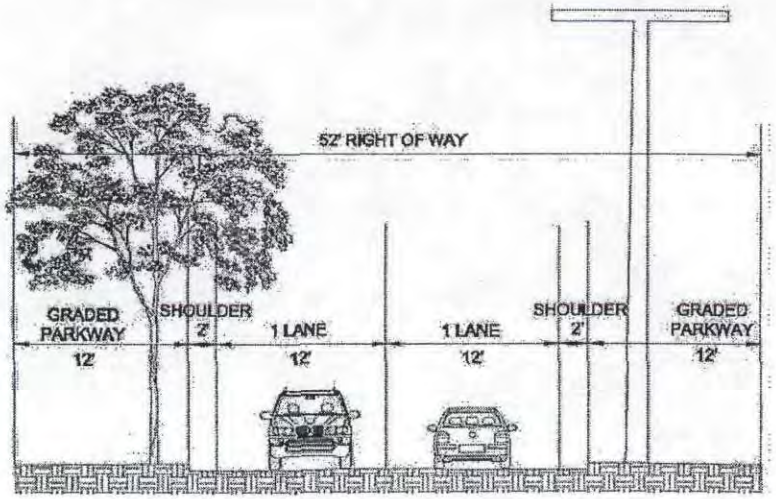
2.2D - Light Collector with Passing Lane Option

Shown with passing lane in one direction.



2.2E - Light Collector

Cross section for 2.2 C is similar except at intersections, which contain a 14' dedicated turn lane that produces a wider ROW.



2.2F - Light Collector with Reduced Shoulder

2.1 Community Collector
2.2 Minor Collector Series

Typical cross sections for the Community Collector and Minor Collector series are the same as those shown for the Light Collector Series *except* for the parkway width and right-of-way. Typical parkway widths are:

- 2.1 Community Collector = 10'
- 2.2 Light Collector = 12'
- 2.3 Minor Collector = 14'

Note: The minimum ROW for a 2.2 Light Collector and 2.3 Minor Collector may be reduced if located in an area that is already developed. A reduced ROW can be achieved by using a 10' minimum parkway. This solution should not be used where adequate ROW is available for the 12' or 14' parkway standard.

Glossary of Terms

Alignment: A planning term used to identify the general location of a current or future roadway. For future roadways, it is intended to describe a designated area or buffer set aside so a specific alignment can be determined as the need is established.

Average Daily Trips (ADT's): The total traffic volume during a given period divided by the number of days in that period. ADT volumes can be determined by continuous traffic counts or periodic counts.

Bike Lanes: Bike lanes are paved areas located between the travel lane(s) and shoulder. Bike lane locations are identified on the County's Bicycle Master Plan, and will require wider paved shoulders and outside travel way.

Curve Radius: A geometric design feature of the roadway. The curve radius can determine safety features and design speed of a given segment of road.

Capacity: The measure of a transportation facility's ability to accommodate a moving stream of people or vehicles in a given time period. Capacity and Level of Service (LOS) are analyzed separately and are not simply related to each other; both must be fully considered to evaluate the overall operation of a facility.

Collector: Collector roads are designed to collect traffic from local streets and direct that traffic into larger arterials or regional expressways. In rural areas, collector routes serve intra-county rather than statewide travel. In urban areas, collector streets provide direct access to neighborhoods and arterials.

Design Speed: The design speed of a roadway dictates which geometric design standards are used such as stopping sight distance, radius of curves, and banking (super-elevation) of road surfaces.

Expressway: A controlled access, divided arterial highway for through traffic, the intersections of which are usually separated from other roadways by differing grades.

Freeway: A divided arterial highway designed for the unimpeded flow of large traffic volumes. Access to a freeway is rigorously controlled and intersection grade separations are required.

Grade: The slope (ratio of change in elevation to change in distance) of a roadway typically given in percent. *For example, a 2% grade represents 2-feet of elevation change over a 100-foot distance.*

Level of Service: A qualitative measure describing operational conditions within a traffic stream and the motorists' perceptions of those conditions. For example, LOS A represents free flow, almost complete freedom to maneuver within the traffic stream. LOS F represents forced flow, more vehicles are attempting to use the freeway than can be served resulting in stop and go traffic.

Local Road/Street: A road or street intended for access to adjacent properties.

Median: The portion of the roadway that separates opposing directions of traffic. It can be raised, landscaped or level with the roadway, with turn features added intermittently or used as a continuous left turn lane.

Multimodal (transportation): Generally refers to all modes of transportation, including motorized and non-motorized forms. Non-motorized modes within the unincorporated County typically include bus transit, pedestrian walking or jogging, biking, and equestrian movements.

Right of Way (ROW): The overall width of the roadway components, technically the area from property line to property line. These areas are predominately used for vehicular transportation and may also contain pedestrian walkway, utility easements, railroad crossings, and/or on-street parking areas.

Road Bed – The specified width of pavement of the roadbed measured from curb face to curb face. In the absence of curbs, the pavement width is measured from the edges of the roadbed. The roadbed or pavement width is typically utilized for vehicular traffic.

Parkway: The area from shoulder edge to the property line. Parkway width requirements can increase if bike lanes or other facilities/amenities are indicated on countywide master plans.

Public Road: Any road under the jurisdiction of and maintained by a public authority such as Federal, State or County jurisdictions, which is open to public travel.

Shoulder: The area between the travel lanes and the parkway, which is usually set aside for parking, bicycle lanes and emergency pull-off.

Sidewalk: A paved pedestrian walkway, generally located within the parkway.

Trail: A marked, graded or paved non-motorized path, typically removed from vehicular roadways that are primarily recreational in nature. Trails can also serve as alternative modes of transportation. Trail characteristics vary depending upon location and type of use.

Threshold Capacity: The maximum capacity a road can carry at an acceptable level of service (defined by County policy as LOS A through D). Traffic volumes above this threshold indicate an unacceptable level of service (LOS E, F).

Travelled Way: The lanes of a roadway which the moving vehicles travel; does not include medians.

Valley Center Road CIP Info

Valley Center Road Improvements, Phase 2
Banbury Drive to Cole Grade Road

Update #63
October 27, 2008

1 Project Description

In December 2005, the County of San Diego Department of Public Works started Phase 2 of this project. Phase 2 involves improvements 1 mile south of Banbury Drive to Cole Grade Road. As the lowest qualified bidder, Archer Western Contractors, Ltd. is the contractor for this $34.1m project.

Four Lanes Open on the Grade: November 2008
Four Lanes Open near Cole Grade Road: January 2009
Estimated Project Completion: Late Summer 2009
General Daytime Work Hours: 7:00 am - 4:00 pm*
*Depending on the type of work conducted, hours may vary slightly.

If you have any questions, or would like to receive project updates please contact:

Email: DestreeL@CollaborativeServices.biz

2 Upcoming Construction Activity

During the weeks of October 27 and November 3, the contractor will perform the following daytime operations:

Segment 1: Valley Center Grade to Woods Valley Road
- Complete installation of median trench drains
- Compete guard rail construction
- Complete final paving and striping of southbound lanes of the Valley Center Grade

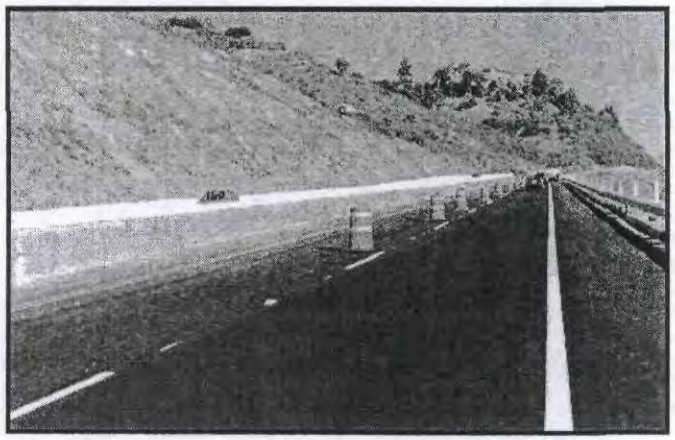
Segment 2: Woods Valley Road to Old Road
- Continue rock slope protection and hydroseeding in Moosa Creek near Sunday Drive
- SDG&E, AT&T, and Mediacom continue to prepare for relocating their overhead cables to underground conduits

Segment 3: Old Road to Miller Road
- Continue utility undergrounding work
- Continue installing 24" water line
- Continue curb and gutter installation
- Grade for concrete bridge approach slabs
- Continue grading and rock slope protection at Keys Creek Bridge
- Continue earthwork at Miller Road

Segment 4: Miller Road to Cole Grade Road
- Continue to underground utility conduits and facilities
- Continue to install storm drains and headwalls
- Install water line facilities
- Grade for curb and gutter near Cole Grade Road

For all segments, continue maintaining and installing erosion control devices as necessary.

3 Construction Photo



The nearly completed northbound lanes in Segment 1.

4 Construction and Traffic Impacts

Temporary Traffic Control
Please observe and note the new traffic signs and traffic configurations along the project. The route for traffic during construction changes on a regular basis. We appreciate your adherence to the signage for your safety and the safety of others.

General Traffic Control Info
One lane traffic control with a flagging operation will be in place periodically from 9am - 3pm M - F. Traffic delays can be expected during these hours. Please allow extra time while driving through the construction zone and observe the posted speed limits.

Traffic fines are doubled in construction zones. For safety and to avoid penalties, please slow down and use caution when traveling through the construction zone.

Please also watch the changeable message signs (CMS) that are located along Valley Center Road for project information and daily traffic impacts.

Thank you for your patience and cooperation as we work to improve your community.

Questions? Call 1-619-232-2640

APPENDIX B

- Approved/Pending Project Data

TRAFFIC STUDY

FOR

WELK RESORT CANYON VILLAS
(TM 5313RPL/R03-004/S03-029/LOG NO. 79-08-099A)

IN THE
COUNTY OF SAN DIEGO

Submitted To:

THE WELK GROUP
100 East San Marcos Boulevard, Suite 100
San Marcos, CA 92069

Submitted By:

Darnell & Associates, Inc.
43300 Business Park Drive, Suite A-204
Temecula, CA 92590
951-699-8209

November 6, 2008
030312-Canyon Villas-Rpt 7 (Nov 2008)/11-08

SECTION I – INTRODUCTION

PROJECT DESCRIPTION

The Welk Resort Canyon Villas project proposes a 2-lot subdivision (TM 5313 RPL4) of a 20.89-acre site in the Lawrence Welk Village Specific Plan (SPA 86-001) property located on the north side of Welk View Drive just east of Champagne Boulevard in the County of San Diego. Figure 1 shows the regional location of the project and Figure 2 shows the proposed site plan.

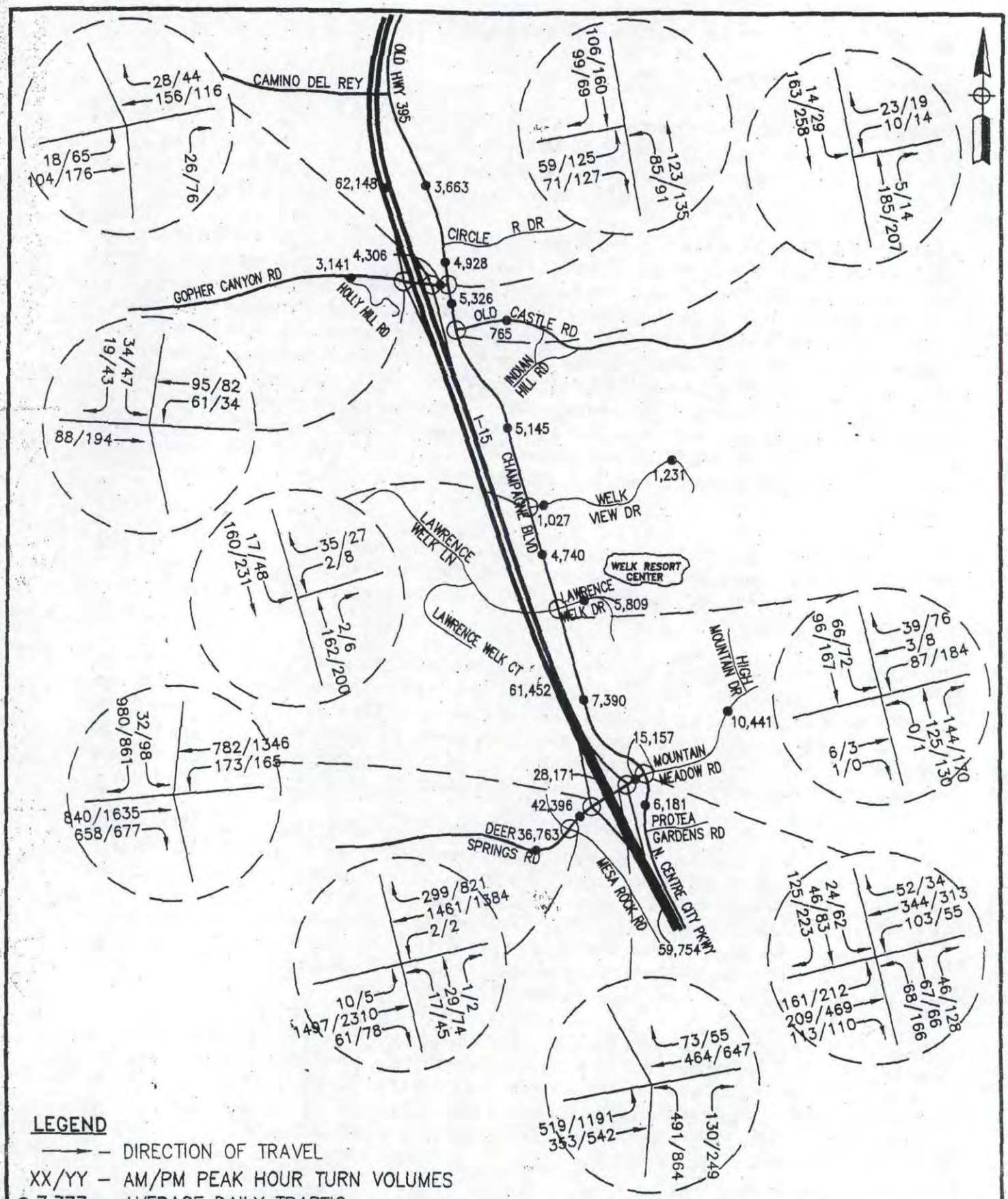
As illustrated in Figure 2, Lot 1 of the proposed subdivision will consist of a gross of 9.25 acres and Lot 2 will consist of a gross of 11.64 acres. A portion of Lot 1 (5.3 acres/68%) is proposed to be developed with 177 time-share units located within two buildings, Building A and Building B. Building A is a 2- and 3-story building structure containing 34 two-bedroom lock-off units and 44 two bedroom non-lock-off units. Building B is a 2- and 3-story building structure containing 25 two-bedroom lock-off units and 15 two bedroom non-lock-off units. Since the two-bedroom lock-off units could be occupied by two separate time-share owners at the same time, for the purpose of the traffic analysis all two-bedroom lock-off units were counted as two (2) individual units. Thus throughout the report, Building A was considered to have 112 units (34 lock-off units x 2 + 44 non-lock-off units = 112 units) and Building B was considered to have 65 units (25 lock-off units x 2 + 15 non-lock-off units = 65 units) with the full project being considered to have 177 units (112 units from Building A + 65 units from Building B = 177 units).

The portion of Lot 1 adjacent to Champagne Boulevard (3.95 acres) includes previously dedicated biological open space easements and a flowage easement for South Fork Moosa Creek. Lot 2 (11.64 acres) encompasses the biological open space area that was dedicated as required by the approval of SPA 86-001.

The proposed project will require a re-zone to change the height designator "G" (35 feet and 2 stories) to "Q" (60 feet and any number of stories). The current zoning with a maximum of two (2) stories would allow for the development of approximately 112 time-share units. Therefore, the proposed project re-zone will increase the total number of units allowed on the site by approximately 128 units (i.e. 240 proposed - 112 allowed = 128). A more in depth description of the proposed re-zone is provided in the Environmental Impact Report (EIR) for the Canyon Villas project.

The Lawrence Welk Village Specific Plan Amendment 86-001 (SPA 86-001) approved in 1986 permitted the use of a 10.71-acre visitor-commercial center on the "Squires Ranch" portion of the specific plan area that is proposed to be occupied by the Canyon Villas project. Uses approved for the visitor-commercial center on the western portion of the "Squire's Ranch" property (the site of the proposed Canyon Villas project) include a theater for stage plays, a visitor orientation center, motel-resort facilities, a staging area for tour buses, or retail shops. No design details were provided in SPA 86-001 for the visitor-commercial center. The site is zoned Visitor Serving Commercial (C-42), which allows development to proceed upon approval of a site plan to assure consistency with the goals of SPA 86-001.

The Traffic Study and accompanying Environmental Impact Report (EIR) [Log No. 86-8-2] that was prepared for SPA 86-001 assumed that the Canyon Villas project site would generate 500 daily trips per acre or 5,455 average daily trips (ADT) (i.e. 500 x 10.91 = 5,455). As illustrated in Section III, the proposed Canyon Villas project is estimated to generate 1,211 ADT which is 4,234 ADT fewer than what was included in the certified EIR for SPA 86-001. (A copy of excerpts from the 1986 Traffic Study for SPA 86-001 are provided in Appendix A.)

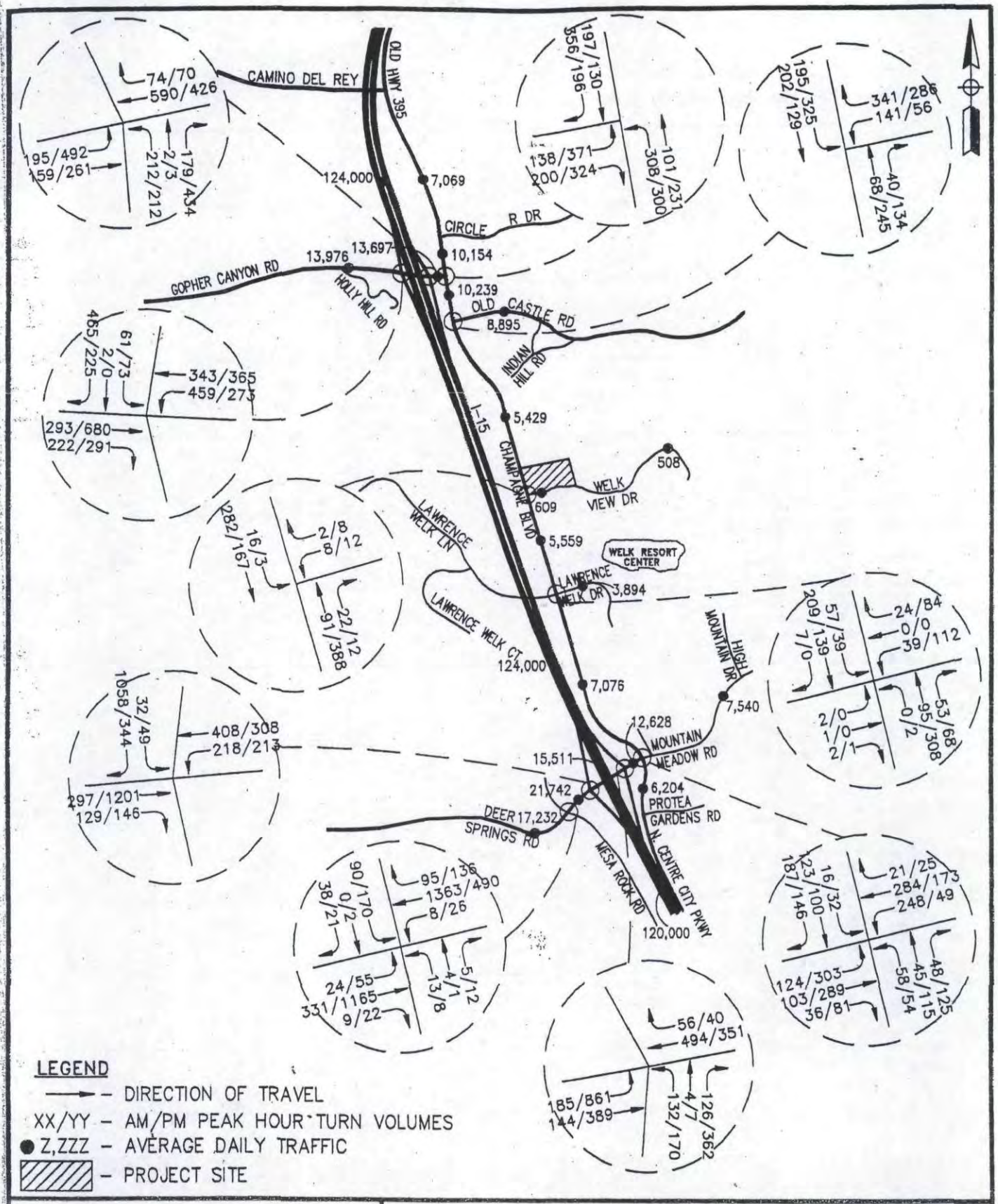


Darnell & ASSOCIATES, INC.

030312DD.dwg 11-07-08 SN/VLS

FIGURE 8

CUMULATIVE PROJECTS TRAFFIC VOLUMES



LEGEND

- DIRECTION OF TRAVEL
- XX/YY – AM/PM PEAK HOUR TURN VOLUMES
- ● Z,ZZZ – AVERAGE DAILY TRAFFIC
- PROJECT SITE

Darnell & ASSOCIATES, INC.

030312DD.dwg 2-21-08 SN

FIGURE 4

EXISTING (2007) TRAFFIC VOLUMES

Average Daily Traffic Volumes

Prepared by: Southland Car Counters

Volumes for: Tuesday, October 25, 2005 City: Escondido Project #: 05-4276-002

Location: Old Hwy 395 btwn Circle R Drive and Gopher Canyon Rd

AM Period	NB		SB		EB	WB		PM Period	NB		SB		EB	WB	
00:00	8		2					12:00	64		67				
00:15	8		3					12:15	64		68				
00:30	4		2					12:30	58		79				
00:45	9	29	2	9			38	12:45	74	260	64	278			538
01:00	4		0					13:00	50		73				
01:15	3		0					13:15	87		65				
01:30	5		5					13:30	78		71				
01:45	2	14	2	7			21	13:45	66	281	68	277			558
02:00	3		3					14:00	72		67				
02:15	5		2					14:15	77		68				
02:30	2		1					14:30	89		62				
02:45	2	12	3	9			21	14:45	88	326	72	269			595
03:00	1		1					15:00	83		75				
03:15	4		0					15:15	84		74				
03:30	3		3					15:30	110		89				
03:45	4	12	2	6			18	15:45	124	401	88	326			727
04:00	5		6					16:00	108		90				
04:15	2		6					16:15	141		96				
04:30	6		7					16:30	145		99				
04:45	4	17	14	33			50	16:45	118	512	80	365			877
05:00	6		23					17:00	149		62				
05:15	5		43					17:15	141		82				
05:30	7		62					17:30	121		62				
05:45	14	32	69	197			229	17:45	138	549	77	283			832
06:00	17		81					18:00	120		76				
06:15	27		92					18:15	114		77				
06:30	50		124					18:30	123		57				
06:45	54	148	105	402			550	18:45	114	471	55	265			736
07:00	79		130					19:00	99		37				
07:15	62		121					19:15	69		40				
07:30	65		136					19:30	83		26				
07:45	64	270	147	534			804	19:45	53	304	24	127			431
08:00	72		125					20:00	64		20				
08:15	58		105					20:15	49		17				
08:30	64		89					20:30	45		14				
08:45	57	251	100	419			670	20:45	32	190	11	62			252
09:00	56		87					21:00	48		10				
09:15	61		91					21:15	49		16				
09:30	59		78					21:30	42		13				
09:45	44	220	80	336			556	21:45	40	179	10	49			228
10:00	57		76					22:00	32		7				
10:15	45		91					22:15	33		4				
10:30	47		66					22:30	25		15				
10:45	51	200	86	319			519	22:45	22	112	7	33			145
11:00	50		66					23:00	25		8				
11:15	69		50					23:15	15		2				
11:30	51		63					23:30	11		4				
11:45	48	218	61	240			458	23:45	10	61	9	23			84
Total Vol.		1423		2511			**3934**			3646		2357			**6003**

Daily Totals

NB	SB	EB	WB	Combined
5069	4868			**9937**

	AM			PM		
Split %	36.2%	63.8%	39.6%	60.7%	39.3%	60.4%
Peak Hour	07:00	07:00	07:00	15:45	15:45	15:45
Volume	270	534	804	553	373	891
P.H.F.	0.85	0.91	0.95	0.90	0.94	0.91

Volumes for: Tuesday, April 01, 2003 City: Fallbrook Project #: 03-0511-001

Location: Old Hwy 395 north of Gopher Canyon Rd

AM Period	NB		SB		EB	WB		PM Period	NB		SB		EB	WB	
00:00	8		4					12:00	68		81				
00:15	6		1					12:15	75		64				
00:30	5		3					12:30	79		62				
00:45	3	22	2	10			32	12:45	60	282	67	274			556
01:00	3		0					13:00	76		79				
01:15	4		0					13:15	72		64				
01:30	3		2					13:30	74		68				
01:45	2	12	0	2			14	13:45	101	323	67	278			601
02:00	2		0					14:00	89		76				
02:15	0		4					14:15	93		73				
02:30	5		0					14:30	96		88				
02:45	1	8	2	6			14	14:45	81	359	72	309			668
03:00	2		0					15:00	109		76				
03:15	2		6					15:15	126		77				
03:30	6		2					15:30	120		95				
03:45	0	10	7	15			25	15:45	122	477	76	324			801
04:00	4		7					16:00	131		90				
04:15	9		7					16:15	130		76				
04:30	6		13					16:30	134		87				
04:45	8	27	30	57			84	16:45	111	506	89	342			848
05:00	16		44					17:00	135		63				
05:15	18		68					17:15	130		73				
05:30	22		98					17:30	111		59				
05:45	23	79	81	291			370	17:45	130	506	51	246			752
06:00	48		95					18:00	107		72				
06:15	66		106					18:15	103		61				
06:30	75		136					18:30	94		49				
06:45	87	276	118	455			731	18:45	76	380	47	229			609
07:00	36		147					19:00	62		45				
07:15	56		157					19:15	54		27				
07:30	68		152					19:30	53		19				
07:45	67	227	145	601			828	19:45	49	218	14	105			323
08:00	51		91					20:00	41		21				
08:15	71		92					20:15	41		15				
08:30	58		95					20:30	38		18				
08:45	51	231	86	364			595	20:45	53	173	19	73			246
09:00	54		97					21:00	48		17				
09:15	52		75					21:15	45		17				
09:30	64		92					21:30	49		12				
09:45	60	230	73	337			567	21:45	36	178	13	59			237
10:00	48		81					22:00	22		15				
10:15	64		72					22:15	24		9				
10:30	70		92					22:30	17		7				
10:45	58	240	76	321			561	22:45	10	73	4	35			108
11:00	56		66					23:00	12		5				
11:15	65		65					23:15	13		1				
11:30	71		68					23:30	10		2				
11:45	66	258	71	270			528	23:45	6	41	7	15			56
Total Vol.		1620		2729			**4349**			3516		2289			**5805**

Daily Totals

NB	SB	EB	WB	Combined
5136	5018			10154

	AM			PM		
Split %	37.2%	62.8%	42.8%	60.5%	39.4%	57.2%
Peak Hour	11:45	07:00	07:00	15:45	16:00	16:00
Volume	288	601	828	506	342	848
P.H.F.	0.9	0.96	0.94	0.98	0.95	0.96

Volumes for: Tuesday, October 02, 2007 City: Escondido Project #: 07-4192-003

Location: Champagne Blvd btwn Gopher Canyon Rd and Old Castle Rd

AM Period	NB		SB		EB	WB		PM Period	NB		SB		EB	WB	
00:00	7		9					12:00	77		51				
00:15	8		6					12:15	77		56				
00:30	7		5					12:30	69		48				
00:45	7	29	4	24			53	12:45	73	296	50	205			501
01:00	9		2					13:00	56		58				
01:15	8		3					13:15	66		73				
01:30	5		2					13:30	76		62				
01:45	1	23	11	18			41	13:45	48	246	76	269			515
02:00	5		3					14:00	74		62				
02:15	10		2					14:15	87		69				
02:30	5		4					14:30	91		76				
02:45	1	21	3	12			33	14:45	101	353	73	280			633
03:00	3		0					15:00	72		72				
03:15	1		1					15:15	96		73				
03:30	4		4					15:30	84		86				
03:45	4	12	1	6			18	15:45	107	359	109	340			699
04:00	6		3					16:00	91		112				
04:15	4		4					16:15	111		107				
04:30	9		4					16:30	128		103				
04:45	11	30	13	24			54	16:45	134	464	119	441			905
05:00	16		9					17:00	111		104				
05:15	18		11					17:15	121		103				
05:30	43		22					17:30	99		111				
05:45	38	115	33	75			190	17:45	88	419	107	425			844
06:00	44		39					18:00	97		98				
06:15	48		55					18:15	73		95				
06:30	66		85					18:30	72		86				
06:45	91	249	93	272			521	18:45	70	312	69	348			660
07:00	76		92					19:00	77		62				
07:15	77		84					19:15	53		50				
07:30	95		98					19:30	58		42				
07:45	108	356	77	351			707	19:45	56	244	57	211			455
08:00	94		91					20:00	30		51				
08:15	103		77					20:15	36		40				
08:30	90		71					20:30	24		32				
08:45	100	387	65	304			691	20:45	42	132	35	158			290
09:00	76		63					21:00	33		25				
09:15	69		65					21:15	38		31				
09:30	68		57					21:30	32		32				
09:45	83	296	47	232			528	21:45	22	125	35	123			248
10:00	76		54					22:00	43		34				
10:15	59		75					22:15	45		28				
10:30	65		67					22:30	29		20				
10:45	69	269	52	248			517	22:45	40	157	11	93			250
11:00	72		62					23:00	19		12				
11:15	66		52					23:15	17		10				
11:30	88		47					23:30	21		13				
11:45	70	296	43	204			500	23:45	15	72	6	41			113
Total Vol.		2083		1770			**3853**			3179		2934			**6113**

Daily Totals

NB	SB	EB	WB	Combined
5262	4704			**9966**

	AM			PM		
Split %	54.1%	45.9%	38.7%	52.0%	48.0%	61.3%
Peak Hour	07:30	06:45	07:30	16:30	16:00	16:30
Volume	400	367	743	494	441	923
P.H.F.	0.93	0.94	0.96	0.90	0.93	0.91

Prepared by: Southland Car Counters

Volumes for: Tuesday, October 25, 2005 City: Escondido Project #: 05-4276-003

Location: Champagne Blvd btwn Gopher Canyon Rd and Old Castle Rd

AM Period	NB		SB		EB	WB		PM Period	NB		SB		EB	WB	
00:00	5		9					12:00	69		78				
00:15	7		6					12:15	77		49				
00:30	7		4					12:30	78		72				
00:45	6	25	1	20			45	12:45	82	306	69	268			574
01:00	5		5					13:00	86		67				
01:15	6		5					13:15	86		72				
01:30	6		3					13:30	70		85				
01:45	6	23	4	17			40	13:45	64	306	98	322			628
02:00	3		3					14:00	87		91				
02:15	7		2					14:15	81		76				
02:30	7		0					14:30	88		71				
02:45	5	22	1	6			28	14:45	83	339	79	317			656
03:00	3		2					15:00	83		87				
03:15	7		4					15:15	91		78				
03:30	5		3					15:30	88		104				
03:45	1	16	1	10			26	15:45	118	380	111	380			760
04:00	3		4					16:00	123		130				
04:15	3		3					16:15	102		97				
04:30	12		7					16:30	123		141				
04:45	20	38	7	21			59	16:45	117	465	101	469			934
05:00	21		9					17:00	115		87				
05:15	18		15					17:15	120		99				
05:30	34		17					17:30	108		127				
05:45	23	96	46	87			183	17:45	92	435	103	416			851
06:00	48		40					18:00	91		102				
06:15	48		70					18:15	80		71				
06:30	54		90					18:30	79		77				
06:45	77	227	103	303			530	18:45	52	302	51	301			603
07:00	80		104					19:00	71		47				
07:15	68		113					19:15	35		61				
07:30	62		140					19:30	47		43				
07:45	105	315	113	470			785	19:45	27	180	45	196			376
08:00	76		113					20:00	33		46				
08:15	73		84					20:15	28		34				
08:30	72		102					20:30	28		41				
08:45	84	305	77	376			681	20:45	30	119	23	144			263
09:00	79		81					21:00	28		26				
09:15	74		71					21:15	20		47				
09:30	74		103					21:30	24		21				
09:45	71	298	98	353			651	21:45	17	89	27	121			210
10:00	76		61					22:00	23		30				
10:15	60		82					22:15	16		17				
10:30	60		68					22:30	16		15				
10:45	83	279	72	283			562	22:45	10	65	22	84			149
11:00	78		64					23:00	28		9				
11:15	74		54					23:15	11		10				
11:30	66		71					23:30	15		11				
11:45	74	292	71	260			552	23:45	1	55	8	38			93
Total Vol.		1936		2206			**4142**			3041		3056			**6097**

Daily Totals

NB	SB	EB	WB	Combined
4977	5262			**10239**

	AM			PM		
Split %	46.7%	53.3%	40.5%	49.9%	50.1%	59.5%
Peak Hour	07:45	07:15	07:15	16:30	15:15	15:45
Volume	325	479	790	475	479	945
P.H.F.	0.78	0.89	0.91	0.96	0.85	0.89

Volumes for: Tuesday, October 02, 2007 City: Escondido Project #: 07-4192-004

Location: Champagne Blvd btwn Old Castle Rd and Welk View Dr

AM Period	NB		SB		EB	WB		PM Period	NB		SB		EB	WB	
00:00	4		1					12:00	52		34				
00:15	0		1					12:15	40		30				
00:30	4		3					12:30	50		39				
00:45	2	10	0	5			15	12:45	31	173	25	128			301
01:00	1		2					13:00	36		29				
01:15	1		0					13:15	47		28				
01:30	3		0					13:30	30		30				
01:45	0	5	1	3			8	13:45	37	150	48	135			285
02:00	1		1					14:00	47		27				
02:15	2		2					14:15	52		43				
02:30	0		0					14:30	61		41				
02:45	1	4	1	4			8	14:45	52	212	52	163			375
03:00	2		0					15:00	66		26				
03:15	0		1					15:15	59		35				
03:30	0		1					15:30	61		35				
03:45	2	4	2	4			8	15:45	72	258	39	135			393
04:00	0		1					16:00	71		43				
04:15	1		5					16:15	87		44				
04:30	1		2					16:30	97		48				
04:45	2	4	10	18			22	16:45	85	340	30	165			505
05:00	4		8					17:00	95		42				
05:15	5		15					17:15	80		41				
05:30	2		25					17:30	87		38				
05:45	7	18	30	78			96	17:45	63	325	31	152			477
06:00	8		37					18:00	46		31				
06:15	12		60					18:15	47		30				
06:30	17		64					18:30	53		32				
06:45	28	65	82	243			308	18:45	43	189	32	125			314
07:00	19		68					19:00	35		18				
07:15	24		84					19:15	36		9				
07:30	29		75					19:30	26		16				
07:45	22	94	63	290			384	19:45	21	118	15	58			176
08:00	19		67					20:00	18		11				
08:15	37		62					20:15	8		9				
08:30	26		67					20:30	17		10				
08:45	23	105	52	248			353	20:45	29	72	12	42			114
09:00	24		58					21:00	21		15				
09:15	38		47					21:15	23		11				
09:30	39		41					21:30	13		8				
09:45	41	142	41	187			329	21:45	18	75	11	45			120
10:00	38		40					22:00	15		10				
10:15	20		36					22:15	15		5				
10:30	38		42					22:30	7		5				
10:45	33	129	31	149			278	22:45	8	45	7	27			72
11:00	44		32					23:00	6		3				
11:15	29		32					23:15	7		4				
11:30	50		35					23:30	5		3				
11:45	30	153	32	131			284	23:45	4	22	3	13			35
Total Vol.		733		1360			**2093**			1979		1188			**3167**

Daily Totals

NB	SB	EB	WB	Combined
2712	2548			**5260**

	AM			PM		
Split %	35.0%	65.0%	39.8%	62.5%	37.5%	60.2%
Peak Hour	11:30	06:45	06:45	16:15	5:45	16:15
Volume	172	309	409	364	174	528
P.H.F.	0.83	0.93	0.93	0.91	0.91	0.91

Average Daily Traffic Volumes

Prepared by: Southland Car Counters

Volumes for: Wednesday, October 26, 2005 City: Escondido Project #: 05-4276-004

Location: Champagne Blvd btwn Old Castle Rd and Welk View Dr

AM Period	NB		SB		EB	WB		PM Period	NB		SB		EB	WB	
00:00	3		1					12:00	41		48				
00:15	1		2					12:15	30		44				
00:30	1		2					12:30	41		32				
00:45	1	6	1	6			12	12:45	47	159	33	157			316
01:00	5		1					13:00	49		43				
01:15	0		1					13:15	35		33				
01:30	0		0					13:30	57		37				
01:45	3	8	1	3			11	13:45	38	179	47	160			339
02:00	0		2					14:00	32		49				
02:15	2		2					14:15	50		37				
02:30	2		0					14:30	52		37				
02:45	1	5	0	4			9	14:45	51	185	44	167			352
03:00	1		1					15:00	44		38				
03:15	1		0					15:15	50		40				
03:30	2		1					15:30	63		28				
03:45	1	5	0	2			7	15:45	82	239	56	162			401
04:00	0		2					16:00	54		48				
04:15	2		0					16:15	76		55				
04:30	1		2					16:30	86		42				
04:45	1	4	4	8			12	16:45	101	317	49	194			511
05:00	1		8					17:00	91		40				
05:15	2		7					17:15	91		23				
05:30	1		13					17:30	87		35				
05:45	1	5	19	47			52	17:45	95	364	47	145			509
06:00	3		35					18:00	80		37				
06:15	6		30					18:15	67		34				
06:30	10		61					18:30	50		27				
06:45	16	35	67	193			228	18:45	62	259	26	124			383
07:00	22		64					19:00	37		21				
07:15	32		78					19:15	30		13				
07:30	18		86					19:30	19		15				
07:45	22	94	112	340			434	19:45	34	120	10	59			179
08:00	19		113					20:00	21		11				
08:15	19		86					20:15	14		13				
08:30	20		57					20:30	19		6				
08:45	19	77	62	318			395	20:45	18	72	9	39			111
09:00	25		62					21:00	18		6				
09:15	26		52					21:15	22		5				
09:30	31		48					21:30	28		7				
09:45	40	122	48	210			332	21:45	16	84	3	21			105
10:00	29		40					22:00	8		8				
10:15	24		49					22:15	21		10				
10:30	35		43					22:30	13		4				
10:45	23	111	48	180			291	22:45	5	47	5	27			74
11:00	46		37					23:00	8		3				
11:15	42		35					23:15	15		1				
11:30	38		40					23:30	7		6				
11:45	40	166	39	151			317	23:45	8	38	1	11			49
Total Vol.		638		1462			**2100**			2063		1266			**3329**

Daily Totals

NB	SB	EB	WB	Combined
2701	2728			**5429**

	AM			PM		
Split %	30.4%	69.6%	38.7%	62.0%	38.0%	61.3%
Peak Hour	11:00	07:30	07:15	16:45	16:45	16:15
Volume	166	397	480	370	201	540
P.H.F.	0.90	0.88	0.90	0.91	0.90	0.90

Volumes for: Tuesday, October 02, 2007 City: Escondido Project #: 07-4192-008

Location: Gopher Canyon Rd btwn Hollyhill Rd & I-15 SB Ramp

AM Period	NB	SB	EB		WB			PM Period	NB	SB	EB		WB		
00:00			16		17			12:00			64		64		
00:15			10		8			12:15			58		53		
00:30			11		9			12:30			59		67		
00:45			7	44	15	49	93	12:45			56	237	75	259	496
01:00			8		7			13:00			67		54		
01:15			4		7			13:15			60		80		
01:30			5		5			13:30			79		62		
01:45			6	23	1	20	43	13:45			84	290	57	253	543
02:00			7		7			14:00			86		71		
02:15			5		4			14:15			87		76		
02:30			4		7			14:30			95		75		
02:45			1	17	2	20	37	14:45			99	367	70	292	659
03:00			6		5			15:00			115		79		
03:15			1		1			15:15			112		81		
03:30			1		5			15:30			118		100		
03:45			6	14	5	16	30	15:45			165	510	117	377	887
04:00			4		2			16:00			202		128		
04:15			7		5			16:15			239		146		
04:30			14		11			16:30			251		149		
04:45			17	42	14	32	74	16:45			272	964	156	579	1543
05:00			21		23			17:00			246		131		
05:15			40		28			17:15			235		158		
05:30			56		48			17:30			253		123		
05:45			74	191	81	180	371	17:45			261	995	131	543	1538
06:00			89		93			18:00			179		126		
06:15			115		107			18:15			152		111		
06:30			120		133			18:30			145		93		
06:45			127	451	187	520	971	18:45			145	621	82	412	1033
07:00			126		196			19:00			98		67		
07:15			131		158			19:15			90		61		
07:30			144		194			19:30			86		49		
07:45			121	522	165	713	1235	19:45			77	351	48	225	576
08:00			117		172			20:00			62		41		
08:15			140		145			20:15			59		28		
08:30			92		127			20:30			44		40		
08:45			103	452	112	556	1008	20:45			48	213	34	143	356
09:00			94		112			21:00			37		39		
09:15			86		89			21:15			61		49		
09:30			70		82			21:30			47		34		
09:45			75	325	71	354	679	21:45			44	189	22	144	333
10:00			58		59			22:00			39		33		
10:15			61		68			22:15			37		36		
10:30			69		71			22:30			31		26		
10:45			78	266	79	277	543	22:45			26	133	31	126	259
11:00			70		67			23:00			22		32		
11:15			67		58			23:15			16		15		
11:30			63		54			23:30			21		22		
11:45			65	265	68	247	512	23:45			18	77	11	80	157
Total Vol.				2612		2984	**5596**					4947		3433	**8380**

Daily Totals

NB	SB	EB	WB	Combined
		7559	6417	**13976**

	AM			PM		
Split %	46.7%	53.3%	40.0%	59.0%	41.0%	60.0%
Peak Hour	06:45	06:45	06:45	16:15	16:30	16:30
Volume	528	735	1263	1008	594	1598
P.H.F.	0.92	0.94	0.93	0.93	0.94	0.93

Average Daily Traffic Volumes

Prepared by: Southland Car Counters

Volumes for: Tuesday, October 25, 2005 City: Escondido Project #: 05-4276-005

Location: Gopher Canyon Rd btwn Honeyhill Rd and I-15

AM Period	NB	SB	EB		WB			PM Period	NB	SB	EB		WB		
00:00			11		13			12:00			66		60		
00:15			6		14			12:15			63		70		
00:30			10		10			12:30			56		62		
00:45			4	31	10	47	78	12:45			69	254	56	248	502
01:00			2		13			13:00			58		71		
01:15			6		11			13:15			67		55		
01:30			3		6			13:30			76		67		
01:45			7	18	10	40	58	13:45			87	288	71	264	552
02:00			1		4			14:00			93		77		
02:15			1		7			14:15			100		69		
02:30			3		5			14:30			70		86		
02:45			2	7	6	22	29	14:45			94	357	80	312	669
03:00			4		5			15:00			99		86		
03:15			2		7			15:15			95		107		
03:30			3		13			15:30			129		100		
03:45			2	11	4	29	40	15:45			141	464	115	408	872
04:00			7		8			16:00			159		122		
04:15			10		6			16:15			172		108		
04:30			8		16			16:30			201		101		
04:45			14	39	18	48	87	16:45			205	737	130	461	1198
05:00			11		29			17:00			198		116		
05:15			33		35			17:15			178		116		
05:30			49		61			17:30			214		113		
05:45			48	141	96	221	362	17:45			226	816	118	463	1279
06:00			49		116			18:00			192		149		
06:15			79		143			18:15			128		106		
06:30			93		175			18:30			120		110		
06:45			111	332	227	661	993	18:45			119	559	85	450	1009
07:00			92		193			19:00			95		97		
07:15			83		162			19:15			81		81		
07:30			89		210			19:30			66		50		
07:45			86	350	212	777	1127	19:45			56	298	45	273	571
08:00			94		177			20:00			42		38		
08:15			83		153			20:15			47		34		
08:30			87		104			20:30			49		42		
08:45			73	337	100	534	871	20:45			40	178	42	156	334
09:00			69		115			21:00			32		41		
09:15			74		92			21:15			48		25		
09:30			76		78			21:30			41		51		
09:45			75	294	73	358	652	21:45			36	157	39	156	313
10:00			65		65			22:00			33		35		
10:15			68		54			22:15			22		23		
10:30			66		69			22:30			18		22		
10:45			78	277	73	261	538	22:45			21	94	23	103	197
11:00			70		62			23:00			20		34		
11:15			68		61			23:15			11		22		
11:30			60		53			23:30			15		32		
11:45			74	272	84	260	532	23:45			16	62	21	109	171
Total Vol.				2109		3258	**5367**					4264		3403	**7667**

Daily Totals

NB	SB	EB	WB	Combined
		6373	6661	**13034**

	AM			PM		
Split %	39.5%	60.7%	41.2%	55.6%	44.4%	58.8%
Peak Hour	06:30	06:45	06:45	17:00	17:15	17:15
Volume	379	792	1167	[illegible]	[illegible]	1306
P.H.F.	0.85	0.87	0.86	0.90	0.83	0.95

Volumes for: Tuesday, October 02, 2007 City: Escondido Project #: 07-4192-009

Location: Gopher Canyon Rd btwn I-15 NB Ramp & Champagne Blvd-Old Hwy 395

AM Period	NB	SB	EB		WB			PM Period	NB	SB	EB		WB		
00:00			16		8			12:00			80		114		
00:15			7		12			12:15			113		97		
00:30			11		9			12:30			91		70		
00:45			11	45	1	30	75	12:45			103	387	83	364	751
01:00			7		3			13:00			108		86		
01:15			7		5			13:15			77		99		
01:30			8		3			13:30			82		98		
01:45			7	29	9	20	49	13:45			96	363	108	391	754
02:00			4		2			14:00			108		117		
02:15			6		3			14:15			100		112		
02:30			4		1			14:30			130		107		
02:45			1	15	1	7	22	14:45			116	454	89	425	879
03:00			3		2			15:00			106		109		
03:15			5		5			15:15			147		137		
03:30			2		1			15:30			150		139		
03:45			4	14	1	9	23	15:45			176	579	124	509	1088
04:00			7		6			16:00			152		124		
04:15			6		18			16:15			213		109		
04:30			14		25			16:30			180		112		
04:45			12	39	42	91	130	16:45			147	692	137	482	1174
05:00			15		58			17:00			144		118		
05:15			33		82			17:15			139		144		
05:30			58		96			17:30			125		108		
05:45			49	155	100	336	491	17:45			132	540	92	462	1002
06:00			58		90			18:00			131		90		
06:15			77		80			18:15			122		90		
06:30			82		75			18:30			111		81		
06:45			69	286	89	334	620	18:45			107	471	70	331	802
07:00			72		116			19:00			107		52		
07:15			62		128			19:15			72		61		
07:30			74		137			19:30			96		48		
07:45			72	280	146	527	807	19:45			71	346	42	203	549
08:00			106		154			20:00			64		37		
08:15			94		182			20:15			72		41		
08:30			77		166			20:30			60		37		
08:45			69	346	141	643	989	20:45			48	244	32	147	391
09:00			89		124			21:00			71		30		
09:15			122		98			21:15			47		30		
09:30			170		123			21:30			63		26		
09:45			165	546	84	429	975	21:45			49	230	28	114	344
10:00			121		95			22:00			50		25		
10:15			96		97			22:15			35		25		
10:30			69		81			22:30			26		18		
10:45			80	366	85	358	724	22:45			23	134	19	87	221
11:00			96		96			23:00			25		16		
11:15			75		66			23:15			29		20		
11:30			76		94			23:30			28		16		
11:45			80	327	93	349	676	23:45			18	100	9	61	161
Total Vol.				2448		3133	**5581**					4540		3576	**8116**

Daily Totals

NB	SB	EB	WB	Combined
		6988	6709	**13697**

	AM			PM		
Split %	43.9%	56.1%	40.7%	55.9%	44.1%	59.3%
Peak Hour	07:45	07:45	07:45	15:45	15:45	15:45
Volume	578	648	997	721	524	1190
P.H.F.	0.85	0.89	0.90	0.85	0.94	0.92

Average Daily Traffic Volumes

Prepared by: Southland Car Counters

Volumes for: Tuesday, October 25, 2005 City: Escondido Project #: 05-4276-006

Location: Gopher Canyon Rd btwn I-15 and Old Hwy 395/Champagne Blvd

AM Period	NB	SB	EB		WB			PM Period	NB	SB	EB		WB		
00:00			14		4			12:00			88		71		
00:15			15		8			12:15			70		88		
00:30			9		9			12:30			66		96		
00:45			9	47	3	24	71	12:45			72	296	81	336	632
01:00			10		2			13:00			90		92		
01:15			5		5			13:15			90		73		
01:30			5		4			13:30			100		91		
01:45			4	24	3	14	38	13:45			119	399	81	337	736
02:00			4		4			14:00			108		97		
02:15			5		1			14:15			115		75		
02:30			1		2			14:30			97		92		
02:45			1	11	5	12	23	14:45			101	421	83	347	768
03:00			2		3			15:00			114		101		
03:15			5		3			15:15			114		99		
03:30			3		5			15:30			112		96		
03:45			8	18	3	14	32	15:45			151	491	129	425	916
04:00			8		6			16:00			129		92		
04:15			5		5			16:15			134		117		
04:30			8		12			16:30			126		87		
04:45			7	28	17	40	68	16:45			136	525	98	394	919
05:00			6		45			17:00			136		94		
05:15			11		51			17:15			131		101		
05:30			11		86			17:30			135		85		
05:45			28	56	72	254	310	17:45			155	557	88	368	925
06:00			33		98			18:00			139		104		
06:15			40		95			18:15			157		101		
06:30			62		115			18:30			138		96		
06:45			91	226	106	414	640	18:45			143	577	71	372	949
07:00			91		116			19:00			110		54		
07:15			74		111			19:15			97		53		
07:30			77		129			19:30			102		37		
07:45			95	337	148	504	841	19:45			93	402	37	181	583
08:00			98		110			20:00			81		25		
08:15			75		107			20:15			86		33		
08:30			96		114			20:30			52		20		
08:45			71	340	112	443	783	20:45			56	275	18	96	371
09:00			89		127			21:00			58		30		
09:15			89		100			21:15			70		13		
09:30			105		97			21:30			67		26		
09:45			77	360	100	424	784	21:45			54	249	16	85	334
10:00			91		104			22:00			53		9		
10:15			87		88			22:15			43		7		
10:30			62		88			22:30			33		22		
10:45			77	317	108	388	705	22:45			29	158	11	49	207
11:00			78		95			23:00			40		19		
11:15			86		68			23:15			14		8		
11:30			75		94			23:30			22		8		
11:45			76	315	87	344	659	23:45			7	83	7	42	125
Total Vol.				2079		2875	**4954**					4433		3033	**7465**

Daily Totals

NB	SB	EB	WB	Combined
		6512	5907	12419

	AM			PM		
Split %	42.1%	58.0%	39.9%	59.4%	40.6%	60.1%
Peak Hour	07:45	07:00	07:45	17:45	15:00	17:45
Volume	364	544	843	557	421	978
P.H.F.	0.93	0.85	0.87	0.94	0.8[illegible]	0.95

Volumes for: Tuesday, October 02, 2007 City: Escondido Project #: 07-4192-010

Location: Old Castle Rd btwn Champagne Blvd & Indian Hill Rd

AM Period	NB	SB	EB		WB			PM Period	NB	SB	EB		WB		
00:00			13		9			12:00			66		59		
00:15			11		9			12:15			56		54		
00:30			6		5			12:30			54		51		
00:45			6	36	6	29	65	12:45			68	244	51	215	459
01:00			8		9			13:00			59		38		
01:15			1		6			13:15			67		53		
01:30			4		4			13:30			91		54		
01:45			12	25	3	22	47	13:45			65	282	48	193	475
02:00			7		6			14:00			55		62		
02:15			2		9			14:15			59		83		
02:30			5		4			14:30			71		62		
02:45			2	16	4	23	39	14:45			70	255	89	296	551
03:00			1		1			15:00			49		71		
03:15			4		3			15:15			76		78		
03:30			1		4			15:30			84		86		
03:45			5	11	2	10	21	15:45			110	319	104	339	658
04:00			0		6			16:00			113		90		
04:15			4		3			16:15			111		84		
04:30			1		12			16:30			124		96		
04:45			6	11	11	32	43	16:45			131	479	84	354	833
05:00			11		18			17:00			106		61		
05:15			6		29			17:15			118		88		
05:30			10		41			17:30			129		67		
05:45			14	41	36	124	165	17:45			120	473	70	286	759
06:00			23		56			18:00			106		72		
06:15			30		51			18:15			107		50		
06:30			48		78			18:30			102		52		
06:45			52	153	97	282	435	18:45			108	423	51	225	648
07:00			61		90			19:00			80		39		
07:15			68		97			19:15			54		11		
07:30			65		121			19:30			62		7		
07:45			64	258	113	421	679	19:45			64	260	12	69	329
08:00			56		130			20:00			58		8		
08:15			50		101			20:15			53		2		
08:30			52		95			20:30			54		3		
08:45			50	208	116	442	650	20:45			40	205	5	18	223
09:00			43		102			21:00			34		3		
09:15			55		72			21:15			39		3		
09:30			49		70			21:30			42		6		
09:45			49	196	75	319	515	21:45			45	160	2	14	174
10:00			38		73			22:00			46		4		
10:15			54		56			22:15			30		5		
10:30			68		64			22:30			32		3		
10:45			55	215	66	259	474	22:45			13	121	2	14	135
11:00			64		47			23:00			14		3		
11:15			60		49			23:15			11		1		
11:30			60		69			23:30			25		1		
11:45			48	232	53	218	450	23:45			12	62	1	6	68
Total Vol.				1402		2181	**3583**					3283		2029	**5312**

Daily Totals

NB	SB	EB	WB	Combined
		4685	4210	**8895**

	AM			PM		
Split %	39.1%	60.9%	40.3%	61.8%	38.2%	59.7%
Peak Hour	07:00	07:30	07:15	16:45	15:45	16:00
Volume	258	465	714	484	374	833
P.H.F.	0.95	0.96	0.96	0.92	0.90	0.95

Prepared by:

National Data & Surveying Services

N-S STREET: I-15 SB Ramps DATE: 9/26/2007 LOCATION: City of Escondido

E-W STREET: Gopher Canyon Rd DAY: WEDNESDAY PROJECT# 07-4191-001

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	0	0	0.5	0.5	1	0	1	0	1	2	0	
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM				12	0	109		74	54	119	62		430
7:15 AM				17	1	154		69	56	113	75		485
7:30 AM				18	0	120		55	58	112	72		435
7:45 AM				14	1	82		89	54	115	99		454
8:00 AM				13	0	88		84	51	94	86		416
8:15 AM				14	0	78		65	50	79	57		343
8:30 AM				17	2	62		61	46	99	70		357
8:45 AM				12	2	58		54	41	89	65		321
9:00 AM													
9:15 AM													
9:30 AM													
9:45 AM													
10:00 AM													
10:15 AM													
10:30 AM													
10:45 AM													
11:00 AM													
11:15 AM													
11:30 AM													
11:45 AM													
TOTAL VOLUMES =	NL 0	NT 0	NR 0	SL 117	ST 6	SR 751	EL 0	ET 551	ER 410	WL 820	WT 586	WR 0	TOTAL 3241

AM Peak Hr Begins at: 700 AM

PEAK VOLUMES =	0	0	0	61	2	465	0	287	222	459	308	0	1804
PEAK HR. FACTOR:		0.000			0.767			0.890			0.896		0.930

CONTROL: 1 WAY STOP (SB)

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: I-15 SB Ramps DATE: 9/26/2007 LOCATION: City of Escondido

E-W STREET: Gopher Canyon Rd DAY: WEDNESDAY PROJECT# 07-4191-001

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	0	0	0.5	0.5	1	0	1	0	1	2	0	
1:00 PM													
1:15 PM													
1:30 PM													
1:45 PM													
2:00 PM													
2:15 PM													
2:30 PM													
2:45 PM													
3:00 PM													
3:15 PM													
3:30 PM													
3:45 PM													
4:00 PM				15		66		138	94	61	84		458
4:15 PM				20		59		170	63	72	83		467
4:30 PM				19		70		186	91	66	90		522
4:45 PM				17		52		157	68	65	81		440
5:00 PM				19		52		144	71	73	111		470
5:15 PM				18		51		193	61	69	86		478
5:30 PM				8		50		188	58	59	82		445
5:45 PM				9		32		165	60	40	83		389
6:00 PM													
6:15 PM													
6:30 PM													
6:45 PM													
TOTAL VOLUMES =	0	0	0	125	0	432	0	1341	566	505	700	0	3669

PM Peak Hr Begins at: 430 PM

PEAK VOLUMES =	0	0	0	73	0	225	0	680	291	273	368	0	1910
PEAK HR. FACTOR:		0.000			0.837			0.876			0.871		0.915

CONTROL: 1 WAY STOP (SB)

Prepared by:

National Data & Surveying Services

N-S STREET: I-15 NB Ramps DATE: 9/26/2007 LOCATION: City of Escondido

E-W STREET: Gopher Canyon Rd DAY: WEDNESDAY PROJECT# 07-4191-002

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0.5	0.5	1	0	0	0	1	2	0	0	2	0	
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM	49	0	41				50	41			139	12	332
7:15 AM	40	1	48				40	45			141	22	337
7:30 AM	46	0	47				39	35			137	16	320
7:45 AM	72	1	41				51	45			139	19	368
8:00 AM	54	0	43				65	34			121	17	334
8:15 AM	42	4	41				39	36			96	18	276
8:30 AM	40	2	31				45	36			131	19	304
8:45 AM	45	1	34				36	34			102	16	268
9:00 AM													
9:15 AM													
9:30 AM													
9:45 AM													
10:00 AM													
10:15 AM													
10:30 AM													
10:45 AM													
11:00 AM													
11:15 AM													
11:30 AM													
11:45 AM													
TOTAL VOLUMES =	388	9	326	0	0	0	365	306	0	0	1006	139	2539

AM Peak Hr Begins at: 715 AM

PEAK VOLUMES =	212	2	179	0	0	0	195	159	0	0	538	74	1359
PEAK HR. FACTOR:		0.862			0.000			0.894			0.939		0.923

CONTROL: 1 WAY STOP (NB)

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: I-15 NB Ramps DATE: 9/26/2007 LOCATION: City of Escondido

E-W STREET: Gopher Canyon Rd DAY: WEDNESDAY PROJECT# 07-4191-002

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0.5	0.5	1	0	0	0	1	2	0	0	2	0	
1:00 PM													
1:15 PM													
1:30 PM													
1:45 PM													
2:00 PM													
2:15 PM													
2:30 PM													
2:45 PM													
3:00 PM													
3:15 PM													
3:30 PM													
3:45 PM													
4:00 PM	39	2	83				94	59			109	15	401
4:15 PM	46	3	83				129	55			103	23	442
4:30 PM	51	0	95				130	70			107	32	485
4:45 PM	41	1	107				118	56			107	12	442
5:00 PM	69	2	115				110	54			109	17	476
5:15 PM	51	0	117				134	74			101	9	486
5:30 PM	43	0	90				146	57			95	16	447
5:45 PM	42	2	95				101	59			81	20	400
6:00 PM													
6:15 PM													
6:30 PM													
6:45 PM													
TOTAL VOLUMES =	NL 382	NT 10	NR 785	SL 0	ST 0	SR 0	EL 962	ET 484	ER 0	WL 0	WT 812	WR 144	TOTAL 3579

PM Peak Hr Begins at: 430 PM

PEAK VOLUMES =	212	3	434	0	0	0	492	254	0	0	424	70	1889
PEAK HR. FACTOR:		0.872			0.000			0.897			0.888		0.972

CONTROL: 1 WAY STOP (NB)

Prepared by:

National Data & Surveying Services

N-S STREET: Champagne Blvd-Old Hwy DATE: 9/25/2007 LOCATION: City of Escondido

E-W STREET: Gopher Canyon Rd DAY: TUESDAY PROJECT# 07-4191-003

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	2	0	0	1	1	1	0	1	0	0	0	
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM													
7:00 AM	76	23			53	93	38		42				325
7:15 AM	77	22			45	96	31		56				327
7:30 AM	83	27			61	96	34		56				357
7:45 AM	72	28			38	71	32		42				283
8:00 AM	70	18			46	52	32		48				266
8:15 AM	52	12			40	70	39		38				251
8:30 AM	48	21			28	60	34		36				227
8:45 AM	53	27			29	68	21		38				236
9:00 AM													
9:15 AM													
9:30 AM													
9:45 AM													
10:00 AM													
10:15 AM													
10:30 AM													
10:45 AM													
11:00 AM													
11:15 AM													
11:30 AM													
11:45 AM													
TOTAL VOLUMES =	531	178	0	0	340	606	261	0	356	0	0	0	2272

AM Peak Hr Begins at: 700 AM

PEAK VOLUMES =	308	100	0	0	197	356	135	0	196	0	0	0	1292
PEAK HR. FACTOR:		0.927			0.881			0.919			0.000		0.905

CONTROL: Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Champagne Blvd-Old Hwy DATE: 9/25/2007 LOCATION: City of Escondido

E-W STREET: Gopher Canyon Rd DAY: TUESDAY PROJECT# 07-4191-003

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	2	0	0	1	1	1	0	1	0	0	0	
1:00 PM													
1:15 PM													
1:30 PM													
1:45 PM													
2:00 PM													
2:15 PM													
2:30 PM													
2:45 PM													
3:00 PM													
3:15 PM													
3:30 PM													
3:45 PM													
4:00 PM	79	52			29	44	79		68				351
4:15 PM	79	43			31	62	90		71				376
4:30 PM	74	46			30	38	84		72				344
4:45 PM	79	60			39	45	83		76				382
5:00 PM	68	48			30	51	85		75				357
5:15 PM	44	46			34	62	81		78				345
5:30 PM	56	41			25	55	69		84				330
5:45 PM	47	42			24	48	82		83				326
6:00 PM													
6:15 PM													
6:30 PM													
6:45 PM													
TOTAL VOLUMES =	NL 526	NT 378	NR 0	SL 0	ST 242	SR 405	EL 653	ET 0	ER 607	WL 0	WT 0	WR 0	TOTAL 2811

PM Peak Hr Begins at: 415 PM

PEAK VOLUMES =	300	197	0	0	130	196	342	0	294	0	0	0	1459
PEAK HR. FACTOR:		0.894			0.876			0.988			0.000		0.955

CONTROL: Signalized

Prepared by:

National Data & Surveying Services

N-S STREET: Champagne Blvd

E-W STREET: Old Castle Rd

DATE: 9/25/2007

DAY: TUESDAY

LOCATION: City of Escondido

PROJECT# 07-4191-004

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	1	1	0	0	0	0	0	1	1	
6:00 AM													
6:15 AM													
6:30 AM													
6:45 AM										30		69	219
7:00 AM		21	11	42	46					50		84	266
7:15 AM		15	12	53	52					42		92	274
7:30 AM		17	8	59	56					25		83	214
7:45 AM		21	9	35	41					24		82	230
8:00 AM		15	11	48	50					32		61	187
8:15 AM		6	10	34	44					31		61	180
8:30 AM		17	9	34	28					32		55	184
8:45 AM		21	6	37	33								
9:00 AM													
9:15 AM													
9:30 AM													
9:45 AM													
10:00 AM													
10:15 AM													
10:30 AM													
10:45 AM													
11:00 AM													
11:15 AM													
11:30 AM													
11:45 AM													
TOTAL VOLUMES =	NL 0	NT 133	NR 76	SL 342	ST 350	SR 0	EL 0	ET 0	ER 0	WL 266	WT 0	WR 587	TOTAL 1754

AM Peak Hr Begins at: 715 AM

PEAK VOLUMES =	0	68	40	195	199	0	0	0	0	141	0	341	984
PEAK HR. FACTOR:		0.900			0.857			0.000			0.899		0.898

CONTROL: 1 Way Stop (WB)

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

N-S STREET: Champagne Blvd DATE: 9/25/2007 LOCATION: City of Escondido

E-W STREET: Old Castle Rd DAY: TUESDAY PROJECT# 07-4191-004

	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
LANES:	0	1	0	1	1	0	0	0	0	0	1	1	
1:00 PM													
1:15 PM													
1:30 PM													
1:45 PM													
2:00 PM													
2:15 PM													
2:30 PM													
2:45 PM													
3:00 PM													
3:15 PM													
3:30 PM													
3:45 PM													
4:00 PM		61	35	78	23					22		69	288
4:15 PM		59	41	76	28					13		76	293
4:30 PM		55	30	80	25					11		63	264
4:45 PM		70	28	91	35					10		78	312
5:00 PM		55	25	85	28					13		57	263
5:15 PM		57	29	106	25					9		45	271
5:30 PM		34	32	96	21					14		58	255
5:45 PM		41	36	102	17					3		60	259
6:00 PM													
6:15 PM													
6:30 PM													
6:45 PM													
TOTAL VOLUMES =	NL 0	NT 432	NR 256	SL 714	ST 202	SR 0	EL 0	ET 0	ER 0	WL 95	WT 0	WR 506	TOTAL 2205

PM Peak Hr Begins at: 400 PM

PEAK VOLUMES =	0	245	134	325	111	0	0	0	0	56	0	286	1157
PEAK HR. FACTOR:		0.948			0.865			0.000			0.940		0.927

CONTROL: 1 Way Stop (WB)

TRAFFIC STUDY

FOR

VALLEY CENTER ROAD FUELING STATION
(S03-023, ER 03-08-016)

in the County of San Diego

Submitted To:

United Oil Company
17311 South Main Street
Gardena, CA 90248-4611

Submitted By:

Darnell & Associates, Inc.
1446 Front Street, Third Floor
San Diego, CA 92101-3425
619-233-9373

January 12, 2007
060806-ValleyCenter-UnitedOil-RPT 2 (Jan 2007)

SECTION IV - NEAR TERM CUMULATIVE PROJECTS

NEAR TERM CUMULATIVE W/O PROJECT CONDITIONS

Approved /Pending Projects

Other approved/pending projects traffic was generated through research of County records in the project area. The research generated over 190 applications from the County of San Diego within the Valley Center area. These projects were identified for traffic generators as many projects included unmanned wireless antennae, home additions, patios, or other non-traffic generators. The cumulative project count list for traffic generators was reduced to approximately 100 projects to be included in the cumulative analysis.

A detailed listing of all projects considered for analysis is provided in Appendix B.

Cumulative Approved/Pending Projects Traffic

Cumulative projects were divided into traffic analysis zones based on location and traffic was generated and distributed based on each land use density and zone proximity. Cumulative project traffic zones and related trip generation are also provided in Appendix B. Distribution of traffic was conducted and assigned to the study area intersections and roadway segments. Where traffic reports were available, information from those studies was used to determine cumulative project traffic distribution and assignment.

Ambient Growth

A growth rate of 2% per year for three (3) years was added to the base volume to account for projects which may not be included in the cumulative list, or those small projects which may be processed after the date of this study.

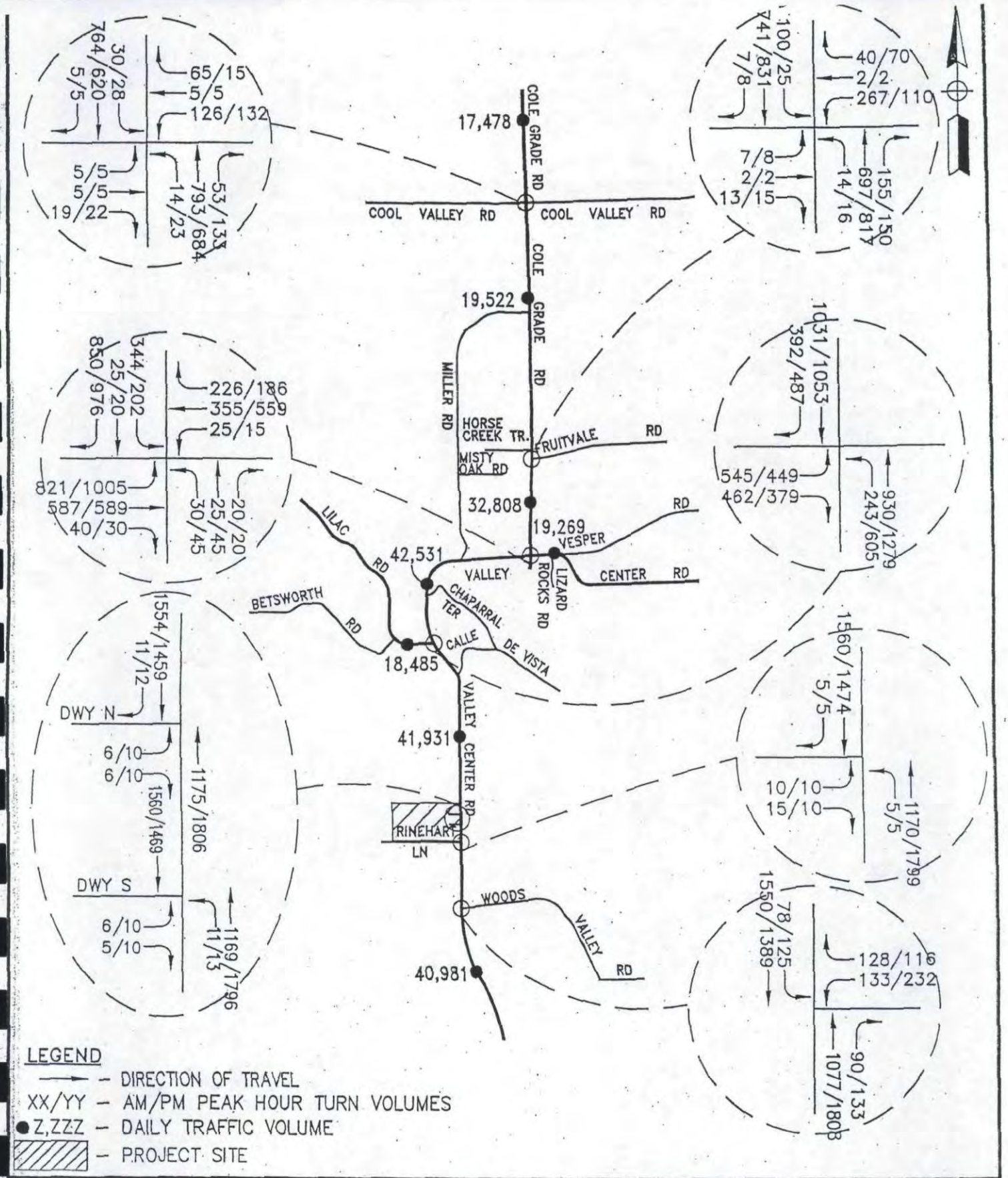
The cumulative project traffic was added to the existing traffic volumes plus the growth rate. The resulting cumulative project traffic volumes (without the proposed project) are shown on Figure 8.

Capital Improvement Program & Approved Projects Conditions of Approval

The County of San Diego has a planned and budgeted Capital Improvement Program (CIP) under construction to improve Valley Center Road to four-lane major standards to approximately Lilac Road. When these improvements are completed, this section of Valley Center Road will have the capacity equivalent to a four-lane major road, 37,000 daily trips (LOS D). The remaining segments from Lilac Road to Cole Grade Road are part of the County's Phase II CIP project, which is fully funded. The Valley Center CIP is expected to be completed by December 2008. See Appendix A for the detailed project update for the Valley Center Road CIP project. (A copy of the striping and plan-and-profile plans for Valley Center Road in the vicinity of the project is provided in Appendix H.)

As a part of the Valley Center Road widening project, the intersection of Lilac Road and Valley Center Road will also be improved. Lilac Road is designated as a four-lane Collector Road on the County's Circulation Element. The improvements on Lilac Road will add a lane in each direction to the existing two lanes for several hundred feet. The widening also includes a transition section that will extend the total improved section to approximately 800 feet west of Valley Center Road.

In addition, the Orchard Run project (TM 5087) is conditioned to improve the south side of Lilac Road just west of the County improvement project prior to occupancy. The conditions of approval for this tentative map require the construction of an additional eastbound lane across the project's frontage and a westbound left turn lane at the project entrance on Lilac Road, including a transition section.



Darnell & ASSOCIATES, INC.

060806BB.dwg 1-11-07 SN

FIGURE 8

NEAR TERM CUMULATIVE WITHOUT PROJECT TRAFFIC VOLUMES

The combination of these two projects and the transitions sections will provide two eastbound lanes, one westbound lane including left turn pockets from Valley Center Road to Betsworth Road. The cross-section of this segment of Lilac Road will be equivalent to a Town Collector Road. As a Town Collector, the capacity of this segment will be 13,500 ADT at LOS D and 19,000 ADT at LOS E.

One of the pending projects included in the cumulative analysis (the Valley Center Church) will modify the intersection and traffic signal at the Cole Grade Road/Fruitvale Road intersection to create the west leg and convert the intersection from a T-intersection to a four-legged intersection.

The near term cumulative analysis assumed the existing lane configurations on all roadway segments and intersections, with the exception of the Cole Grade Road/Fruitvale Road intersection. The Cole Grade Road/Fruitvale Road intersection was assumed to be improved in accordance with the improvements proposed by the Valley Center Church project.

NEAR TERM CUMULATIVE WITH PROJECT CONDITIONS

New project traffic was added to the near term base condition. The resulting near term cumulative plus project traffic volumes are shown on Figure 9.

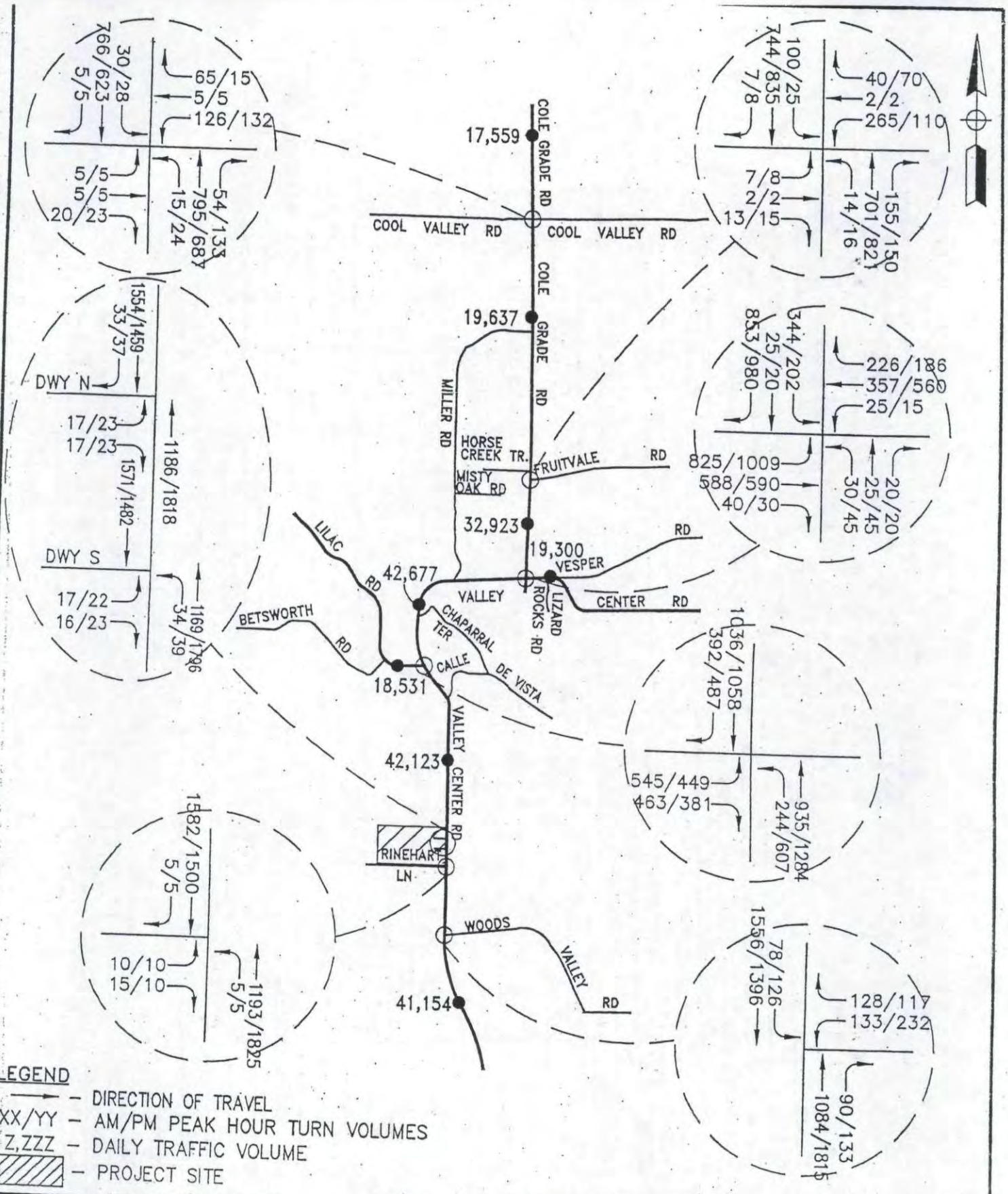


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FIGURE 9

NEAR TERM CUMULATIVE + PROJECT WEEKDAY TRAFFIC VOLUMES

TRAFFIC ANALYSIS ZONE A

TAZ	County Processing #	Project Name	LAND USE	SIZE	SANDAG TRIP GENERATION RATES							SANDAG TRIP GENERATION CALCULATIONS						
					ADT	AM PEAK			PM PEAK			ADT	AM PEAK			PM PEAK		
						TOT	IN	OUT	TOT	IN	OUT		TOT	IN	OUT	TOT	IN	OUT
A	02-015	Clark/Ubben AD																
A	MUP-01-007	CP-9596																
A	MUP-01-016	Dugger Day Care	Day Care	135 stu	5	0.17	0.50	0.50	0.18	0.50	0.50	675	115	57	57	122	61	61
A	MUP-04-041																	
A	MUP-98-007	CP-567																
A	MUP-98-026	Cole Grade Park	Mult-Use Park	8.96 ac	50	0.13	0.50	0.50	0.09	0.50	0.50	448	58	29	29	40	20	20
A	P-00-039	CP-9201																
A	P-03-083	Valley Center Church	Church/School															
A	SP-108015	Harold Johnson										766	110	66	44	121	48	73
A	STP-00-024																	
A	STP-01-006	Skyridge Estates-Phases II	Estate Lot	2 du	12	0.08	0.30	0.70	0.10	0.70	0.30	24	2	1	1	2	2	1
A	STP-02-006	Countryside Veterinary	Veterinary Care	3.28 ksf	5	0.02	0.70	0.30	0.10	0.50	0.30	16	0	0	0	2	1	1
	STP-02-071	Sreckovic Mini Sotrage	Mini Storage	6 ksf	2	0.06	0.50	0.50	0.09	0.50	0.50	12	1	0	0	1	1	1
	TM-4944	HL Land Development	Estate Lot	11 du	12	0.08	0.30	0.70	0.10	0.70	0.30	132	11	3	7	13	9	4
	TM-5150	Tavolada TM	Estate Lot	8 du	12	0.08	0.30	0.70	0.10	0.70	0.30	96	8	2	5	10	7	3
	TM-5173	Lorinda	Estate Lot	176 du	12	0.08	0.30	0.70	0.10	0.70	0.30	2112	169	51	118	211	148	63
A	TM-5222	El Cidro Ranch	Estate Lot	14 du	12	0.08	0.30	0.70	0.10	0.70	0.30	168	13	4	9	17	12	5
A	TM-5251	Cool Valley Ranch	Estate Lot	6 du	12	0.08	0.30	0.70	0.10	0.70	0.30	72	6	2	4	7	5	2
A	TM-5263	Beck Specific Plan	Estate Lot	51 du	12	0.08	0.30	0.70	0.10	0.70	0.30	612	49	15	34	61	43	18
A	TM-5272	Wilhite Subdivision	Estate Lot	11 du	12	0.08	0.30	0.70	0.10	0.70	0.30	132	11	3	7	13	9	4
A	TM-5273	Camino De Oro	Estate Lot	7 du	12	0.08	0.30	0.70	0.10	0.70	0.30	84	7	2	5	8	6	3
A	TPM-20101																	
A	TPM-20343	Blue Ribbon Farms	No Description															
A	TPM-20352	Silverado Subdivision	Estate Lot	4 du	12	0.08	0.30	0.70	0.10	0.70	0.30	48	4	1	3	5	3	1
A	TPM-20360	George	Estate Lot	4 du	12	0.08	0.30	0.70	0.10	0.70	0.30	48	4	1	3	5	3	1
A	TPM-20419	Nicolay Trust	Estate Lot	2 du	12	0.08	0.30	0.70	0.10	0.70	0.30	24	2	1	1	2	2	1
A	TPM-20480	Choufa	Estate Lot	5 du	12	0.08	0.30	0.70	0.10	0.70	0.30	60	5	1	3	6	4	2
A	TPM-20602	Veltri TPM	Estate Lot	4 du	12	0.08	0.30	0.70	0.10	0.70	0.30	48	4	1	3	5	3	1
A	TPM-20623	Finlayson TPM	Estate Lot	4 du	12	0.08	0.30	0.70	0.10	0.70	0.30	48	4	1	3	5	3	1
A	TPM-20635	CP-11731																
A	TPM-20707	Thornton	Estate Lot	3 du	12	0.08	0.30	0.70	0.10	0.70	0.30	36	3	1	2	4	3	1
A	TPM-20738	Christman TPM	Estate Lot	4 du	12	0.08	0.30	0.70	0.10	0.70	0.30	48	4	1	3	5	3	1
A	TPM-20748	Parami Co TPM	Estate Lot	3 du	12	0.08	0.30	0.70	0.10	0.70	0.30	36	3	1	2	4	3	1
A	TPM-20803	Brown TPM	Estate Lot	1 du	12	0.08	0.30	0.70	0.10	0.70	0.30	12	1	0	1	1	1	0
A	ZAP-00-094	Ellis	Estate Lot	1 du	12	0.08	0.30	0.70	0.10	0.70	0.30	12	1	0	1	1	1	0
A	ZAP-03-001	Archer	Single Family	1 du	10	0.08	0.30	0.70	0.10	0.70	0.30	10	1	0	1	1	1	0

A	ZAP-03-019	Newmark	Single Family	1 du	10	0.08	0.30	0.70	0.10	0.70	0.30	10	1	0	1	1	1	0
A	ZAP-04-012	Banuelos	Single Family	1 du	10	0.08	0.30	0.70	0.10	0.70	0.30	10	1	0	1	1	1	0
A		V.C. Towne Square	Commercial	MIXED								15774	710			1252		
A		Pauma Casino	Casino	40 ksf	100	0.10			0.15			4000	400	200	200	600	300	300
A		Rincon Casino	Casino	14 ksf	100	0.10			0.15			1400	140	70	70	210	105	105
TOTAL TRAFFIC ZONE A												26973	1845	516	618	2736	807	677

TRAFFIC ANALYIS ZONE B

TAZ	County Processing #	Project Name	LAND USE	SIZE	SANDAG TRIP GENERATION RATES							SANDAG TRIP GENERATION CALCULATIONS						
						AM PEAK			PM PEAK				AM PEAK			PM PEAK		
					ADT	TOT	IN	OUT	TOT	IN	OUT	ADT	TOT	IN	OUT	TOT	IN	OUT
B	MUP-01-018	CP-9943																
B	P-03-105	Miller Dog Boarding	Dog Boarding	2.4 ksf	5	0.02	0.70	0.30	0.10	0.50	0.50	12	0	0	0	1	1	1
B	STP-03-021	Automotive Specialists	Automotive	3.891 ksf	20	0.08	0.70	0.30	0.11	0.40	0.60	78	6	4	2	9	3	5
B	TM-5152	Country Meadows	Estate Lot	8 du	12	0.08	0.30	0.70	0.10	0.70	0.30	96	8	2	5	10	7	3
B	TM-5212	Wizard Way	Estate Lot	5 du	12	0.08	0.30	0.70	0.10	0.70	0.30	60	5	1	3	6	4	2
B	TM-5232	Vesper Grove Estates	Single Family	7 du	10	0.08	0.30	0.70	0.10	0.70	0.30	70	6	2	4	7	5	2
B	TPM-20438	Gilbert	Estate Lot	2 du	12	0.08	0.30	0.70	0.10	0.70	0.30	24	2	1	1	2	2	1
B	TPM-20462	Jarvis TPM	Estate Lot	1 du	12	0.08	0.30	0.70	0.10	0.70	0.30	12	1	0	1	1	1	0
B	TPM-20659	Bannock/CP-12815																
B	TPM-20661	Kastner TPM	Estate Lot	2 du	12	0.08	0.30	0.70	0.10	0.70	0.30	24	2	1	1	2	2	1
B	TPM-20689	Viking Grove TPM	Estate Lot	1 du	12	0.08	0.30	0.70	0.10	0.70	0.30	12	1	0	1	1	1	0
B	TPM-20690	Stehly	Estate Lot	5 du	12	0.08	0.30	0.70	0.10	0.70	0.30	60	5	1	3	6	4	2
B	ZAP-00-085	Oliver-Reed	Estate Lot	1 du	12	0.08	0.30	0.70	0.10	0.70	0.30	12	1	0	1	1	1	0
	ZAP-02-027	Carrico	Estate Lot	1 du	12	0.08	0.30	0.70	0.10	0.70	0.30	12	1	0	1	1	1	0
		Lizard Rock mini-storage	Mini Storage	81.125 ksf								168	10	5	5	16	8	7
		TOTAL TRAFFIC ZONE B										640	47	19	28	64	39	24

TRAFFIC ANALYIS ZONE C																		
					SANDAG TRIP GENERATION RATES							SANDAG TRIP GENERATION CALCULATIONS						
						AM PEAK			PM PEAK				AM PEAK			PM PEAK		
TAZ	County Processing #	Project Name	LAND USE	SIZE	ADT	TOT	IN	OUT	TOT	IN	OUT	ADT	TOT	IN	OUT	TOT	IN	OUT
C	00-029	Cote Day Care																
C	MUP-97-007	CP-10229																
C	MUP-97-146																	
C	P-00-023	CP-484																
C	P-03-133	Gaines	Estate Lot	1 du	12	0.08	0.30	0.70	0.10	0.70	0.30	12	1	0	1	1	1	0
C	STP-03-022																	
C	STP-03-023																	
C	T-14434																	
C	TM-5003	Mangrum/Van Dusen	Estate Lot	26 du	12	0.08	0.30	0.70	0.10	0.70	0.30	312	25	7	17	31	22	9
C	TM-5004	Woods Valley Ranch	Resid/Golf	MIXED								3216	245	71	174	322	207	115
C	TM-5047	Live Oak Ranch	Estate Lot	149 du	12	0.08	0.30	0.70	0.10	0.70	0.30	1788	143	43	100	179	125	54
C	TM-5175	Oak Woodlands	Single Family	65 du	10	0.08	0.30	0.70	0.10	0.70	0.30	650	52	16	36	65	46	20
	TM-5176	Hidden Meadows	Single Family	77 du	10	0.08	0.30	0.70	0.10	0.70	0.30	770	62	18	43	77	54	23
	TM-5305	Reynolds	Estate Lot	22 du	12	0.08	0.30	0.70	0.10	0.70	0.30	264	21	6	15	26	18	8
	TM-5308	DKST, LLC	Estate Lot	13 du	12	0.08	0.30	0.70	0.10	0.70	0.30	156	12	4	9	16	11	5
C	TPM-20362	Wren	Estate Lot	2 du	12	0.08	0.30	0.70	0.10	0.70	0.30	24	2	1	1	2	2	1
C	TPM-20780	Chavez	Estate Lot	3 du	12	0.08	0.30	0.70	0.10	0.70	0.30	36	3	1	2	4	3	1
C	TPM-20813	Paris	Estate Lot	1 du	12	0.08	0.30	0.70	0.10	0.70	0.30	12	1	0	1	1	1	0
C	TPM-20820																	
C		San Pasqual Casino	Casino	20.16 ksf	100	0.10			0.15			2016	202	101	101	302	151	151
TOTAL TRAFFIC ZONE C												9256	769	269	500	1026	640	387

TRAFFIC ANALYSIS ZONE D																		
TAZ	County Processing #	Project Name	LAND USE	SIZE	SANDAG TRIP GENERATION RATES							SANDAG TRIP GENERATION CALCULATIONS						
					ADT	AM PEAK			PM PEAK			ADT	AM PEAK			PM PEAK		
						TOT	IN	OUT	TOT	IN	OUT		TOT	IN	OUT	TOT	IN	OUT
D	02-001	CP-12488																
D	STP-02-074																	
D	TM-5301	Village Square	Our#020309															
D	TM-5403	Ryder	Estate Lot	79 du	12	0.08	0.30	0.70	0.10	0.70	0.30	948	76	23	53	95	66	28
D	TPM-20470	Tabbs Residential	Single Family	3 du	12	0.08	0.30	0.70	0.10	0.70	0.30	36	3	1	2	4	3	1
TOTAL TRAFFIC ZONE D												984	79	24	55	98	69	30

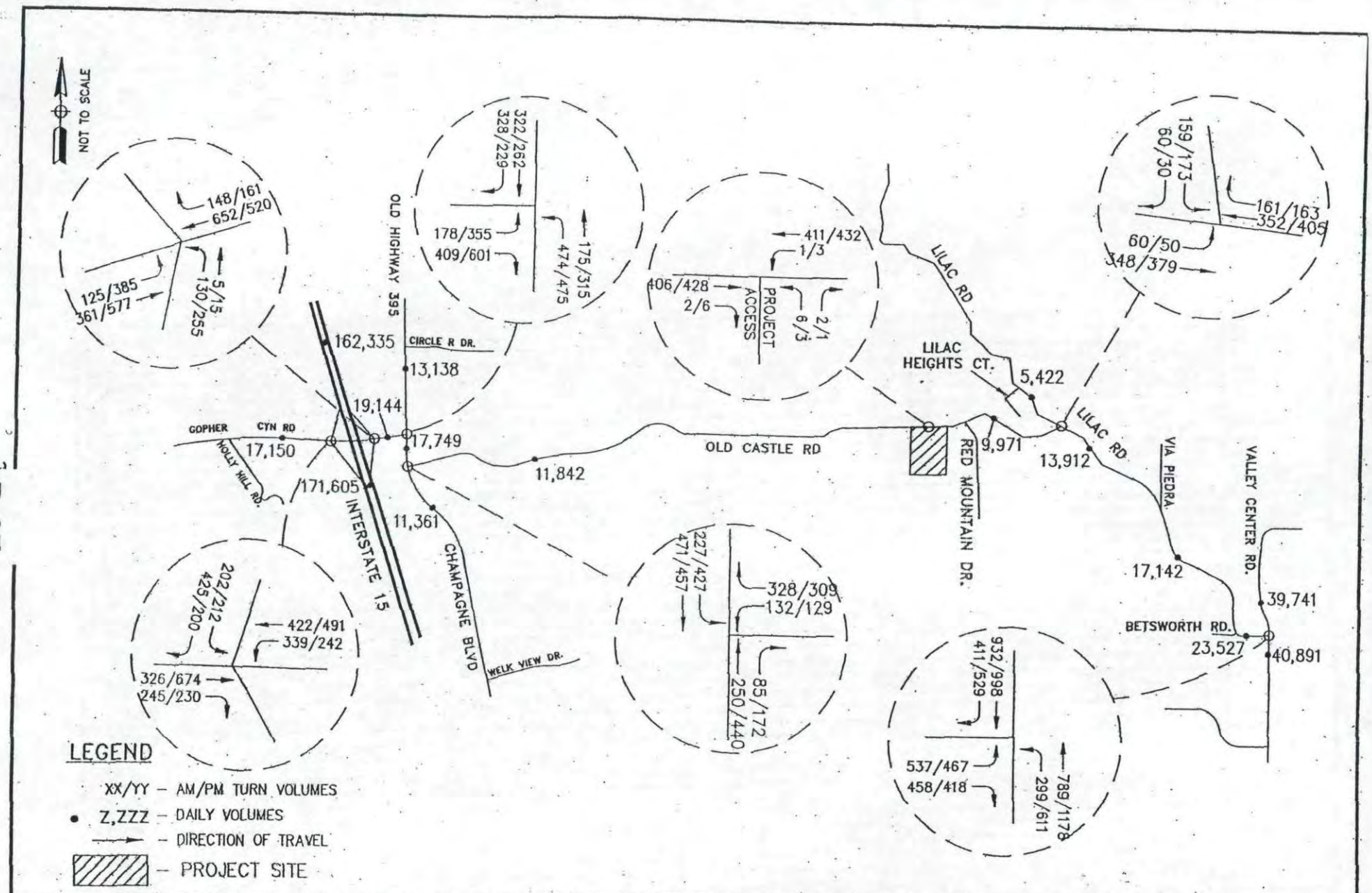
TRAFFIC ANALYSIS ZONE E

TAZ	County Processing #	Project Name	LAND USE	SIZE	SANDAG TRIP GENERATION RATES							SANDAG TRIP GENERATION CALCULATIONS						
						AM PEAK			PM PEAK				AM PEAK			PM PEAK		
					ADT	TOT	IN	OUT	TOT	IN	OUT	ADT	TOT	IN	OUT	TOT	IN	OUT
E	02-038	Baskins																
E	P-77-092	New Alternative	Estate Lot	5 du	12	0.08	0.30	0.70	0.10	0.70	0.30	60	5	1	3	6	4	2
E	P-99-020	Blueberry Hill Manor	Group Care	9 bd								9	2	1	1	2	1	1
E	TM-4957	Wynn	Estate Lot	19 du	12	0.08	0.30	0.70	0.10	0.70	0.30	228	18	5	13	23	16	7
E	TM-5001	Polito	Estate Lot	18 du	12	0.08	0.30	0.70	0.10	0.70	0.30	216	17	5	12	22	15	6
E	TM-5014	Lilac Mountain Ranch	Estate Lot	22 du	12	0.08	0.30	0.70	0.10	0.70	0.30	264	21	6	15	26	18	8
E	TM-5087	Orchard Run	Mix Res	MIXED								3423	273	55	218	343	240	103
E	TM-5129	Haviland	Estate Lot	10 du	12	0.08	0.30	0.70	0.10	0.70	0.30	120	10	3	7	12	8	4
E	TM-5177	Brook Forest	Estate Lot	57 du	12	0.08	0.30	0.70	0.10	0.70	0.30	684	55	16	38	68	48	21
E	TM-5359	Saiki Family LLC	Estate Lot	9 du	12	0.08	0.30	0.70	0.10	0.70	0.30	108	9	3	6	11	8	3
E	TM-5385	Empire/Bernard	Single Family	365 du	10	0.08	0.30	0.70	0.10	0.70	0.30	3650	292	88	204	365	256	110
E	TMP-20595	Shart	Estate Lot	4 du	12	0.08	0.30	0.70	0.10	0.70	0.30	48	4	1	3	5	3	1
E	TPM-19952	Holdgrafer	Estate Lot	2 du	12	0.08	0.30	0.70	0.10	0.70	0.30	24	2	1	1	2	2	1
	TPM-20423	Double K	Estate Lot	3 du	12	0.08	0.30	0.70	0.10	0.70	0.30	36	3	1	2	4	3	1
	TPM-20435	Tuomi	Estate Lot	2 du	12	0.08	0.30	0.70	0.10	0.70	0.30	24	2	1	1	2	2	1
	TPM-20450	Free	Estate Lot	4 du	12	0.08	0.30	0.70	0.10	0.70	0.30	48	4	1	3	5	3	1
	TPM-20460	Farmer	Estate Lot	5 du	12	0.08	0.30	0.70	0.10	0.70	0.30	60	5	1	3	6	4	2
E	TPM-20596	Rockefeller	Estate Lot	2 du	12	0.08	0.30	0.70	0.10	0.70	0.30	24	2	1	1	2	2	1
E	TPM-20637																	
E	TPM-20676	Johnson	Estate Lot	1 du	12	0.08	0.30	0.70	0.10	0.70	0.30	12	1	0	1	1	1	0
E	TPM-20677	Wafford	Estate Lot	3 du	12	0.08	0.30	0.70	0.10	0.70	0.30	36	3	1	2	4	3	1
E	TPM-20680	Leake																
E	TPM-20712																	

Intersection	Movement	Existing (2006)		Project Traffic		Existing + Project		Ex+Ambient Growth		Cum. Projects		NTC w/o Project		NTC + Project	
		AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
Cole Grade @ Cool Valley	EBL	1	0	0	0	1	0	5	5	0	0	5	5	5	5
	EBT	0	0	0	0	0	0	5	5	0	0	5	5	5	5
	EBR	2	0	1	1	3	1	5	5	14	17	19	22	20	23
	WBL	95	51	0	0	95	51	105	55	21	77	126	132	126	132
	WBT	1	0	0	0	1	0	5	5	0	0	5	5	5	5
	WBR	59	14	0	0	59	14	65	15	0	0	65	15	65	15
	NBL	1	3	1	1	2	4	5	5	9	18	14	23	15	24
	NBT	560	421	2	3	562	424	595	450	198	234	793	684	795	687
	NBR	25	98	1	0	26	98	30	105	23	28	53	133	54	133
	SBL	22	23	0	0	22	23	25	25	5	3	30	28	30	28
	SBT	548	345	2	3	550	348	585	370	179	250	764	620	766	623
	SBR	0	0	0	0	0	0	5	5	0	0	5	5	5	5
Cole Grade @ Fruitvale	EBL	0	0	0	0	0	0	0	0	7	8	7	8	7	8
	EBT	0	0	0	0	0	0	0	0	2	2	2	2	2	2
	EBR	0	0	0	0	0	0	0	0	13	15	13	15	13	15
	WBL	246	102	0	0	246	102	265	110	0	0	265	110	265	110
	WBT	0	0	0	0	0	0	0	0	2	2	2	2	2	2
	WBR	37	64	0	0	37	64	40	70	0	0	40	70	40	70
	NBL	0	0	0	0	0	0	0	0	14	16	14	16	14	16
	NBT	446	513	4	4	450	517	475	545	222	272	697	817	701	821
	NBR	142	138	0	0	142	138	155	150	0	0	155	150	155	150
	SBL	94	20	0	0	94	20	100	25	0	0	100	25	100	25
	SBT	501	464	3	4	504	468	535	495	206	336	741	831	744	835
	SBR	0	0	0	0	0	0	0	0	7	8	7	8	7	8
Cole Grade @ Valley Center	EBL	399	516	4	4	403	520	425	550	396	455	821	1005	825	1009
	EBT	439	474	1	1	440	475	470	505	117	84	587	589	588	590
	EBR	35	28	0	0	35	28	40	30	0	0	40	30	40	30
	WBL	20	12	0	0	20	12	25	15	0	0	25	15	25	15
	WBT	275	390	2	1	277	391	295	415	60	144	355	559	357	560
	WBR	147	81	0	0	147	81	160	90	66	96	226	186	226	186
	NBL	24	40	0	0	24	40	30	45	0	0	30	45	30	45
	NBT	23	38	0	0	23	38	25	45	0	0	25	45	25	45
	NBR	17	18	0	0	17	18	20	20	0	0	20	20	20	20
	SBL	253	109	0	0	253	109	270	120	74	82	344	202	344	202
	SBT	23	18	0	0	23	18	25	20	0	0	25	20	25	20
	SBR	476	444	3	4	479	448	505	475	345	501	850	976	853	980
Valley Center @ Lilac	EBL	328	267	0	0	328	267	350	285	195	164	545	449	545	449
	EBT	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	EBR	179	176	1	2	180	178	190	190	272	189	462	379	463	381
	WBL	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	WBT	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	WBR	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NBL	98	257	1	2	99	259	105	275	138	310	243	605	244	607
	NBT	586	831	5	5	591	836	625	885	305	394	930	1279	935	1284
	NBR	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	SBL	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	SBT	689	621	5	5	694	626	735	660	296	393	1031	1053	1036	1058
	SBR	254	233	0	0	254	233	270	250	122	237	392	487	392	487
Valley Center @ Project North Access	EBL	6	7	11	13	17	20	6	10			6	10	17	23
	EBT			0	0	0	0					0	0	0	0
	EBR	6	6	11	13	17	19	6	10			6	10	17	23
	WBL			0	0	0	0					0	0	0	0
	WBT			0	0	0	0					0	0	0	0
	WBR			0	0	0	0					0	0	0	0
	NBL	0	0	0	0	0	0	0	0			0	0	0	0
	NBT	594	934	11	12	605	946	635	1002	540	804	1175	1806	1186	1818
	NBR			0	0	0	0					0	0	0	0
	SBL			0	0	0	0					0	0	0	0
	SBT	860	751	0	0	860	751	914	790	640	669	1554	1459	1554	1459
	SBR	11	12	22	25	33	37	11	12			11	12	33	37
Valley Center @ Project South Access	EBL	6	7	11	12	17	19	6	10			6	10	17	22
	EBT			0	0	0	0					0	0	0	0
	EBR	5	6	11	13	16	19	5	10			5	10	16	23
	WBL			0	0	0	0					0	0	0	0
	WBT			0	0	0	0					0	0	0	0
	WBR			0	0	0	0					0	0	0	0
	NBL	11	13	23	26	34	39	11	13			11	13	34	39
	NBT	588	927	0	0	588	927	629	992	540	804	1169	1796	1169	1796
	NBR			0	0	0	0					0	0	0	0
	SBL			0	0	0	0					0	0	0	0
	SBT	866	757	11	13	877	770	920	800	640	669	1560	1469	1571	1482
	SBR	0	0	0	0	0	0	0	0			0	0	0	0
Valley Center @ Rinehart	EBL	5	6	0	0	5	6	10	10			10	10	10	10
	EBT	0	0	0	0	0	0	0	0			0	0	0	0
	EBR	10	6	0	0	10	6	15	10			15	10	15	10
	WBL	0	0	0	0	0	0	0	0			0	0	0	0
	WBT	0	0	0	0	0	0	0	0			0	0	0	0
	WBR	0	0	0	0	0	0	0	0			0	0	0	0
	NBL	0	2	0	0	0	2	5	5			5	5	5	5
	NBT	594	934	23	26	617	960	630	995	540	804	1170	1799	1193	1825
	NBR	0	0	0	0	0	0	0	0			0	0	0	0
	SBL	0	0	0	0	0	0	0	0			0	0	0	0
	SBT	867	759	22	26	889	785	920	805	640	669	1560	1474	1582	1500
	SBR	4	4	0	0	4	4	5	5			5	5	5	5
Valley Center @ Woods Valley	EBL	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	EBT	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	EBR	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	WBL	85	198	0	0	85	198	95	210	38	22	133	232	133	232
	WBT	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	WBR	99	90	0	1	99	91	105	100	23	16	128	116	128	117
	NBL	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	NBT	542	962	7	7	549	969	575	1020	502	788	1077	1808	1084	1815
	NBR	69	114	0	0	69	114	75	125	15	8	90	133	90	133
	SBL	60	99	0	1	60	100	65	105	13	20	78	125	78	126
	SBT	868	696	6	7	874	703	925	740	625	649	1550	1389	1556	1396
	SBR	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table B-1
List of Cumulative Projects

TAZ	County Processing #	Project Name	Project Description	Project Location	Project Status
A	MUP 01-016	Dugger Day Care	135 Student Day Care Center	Eastside of Cole Grade Road just north of White Star Lane, Valley Center	Approved
A	MUP 98-026	Cole Grade Park	8.96 Acre Multi-Use Park	Valley Center	
A	P 03-083	Valley Center Church	Valley Center Community Church w/Pre-School	Southwest Corner of Cole Grade Road & Fruitvale Rd, Valley Center	Pending
A	STP 01-006	Skyridge Estates-Phases II	2 ER Dus	Valley Center	
A	STP 02-006	Countryside Veterinary	3,280 SF Veterinary Care	Valley Center	
A	STP 02-071	Sreckovic Mini Sotrage	6,000 SF Min-Storage	Valley Center	
A	TM 4944	HL Land Development	11 ER Dus	Valley Center	
A	TM 5150	Tavolada TM	8 ER Dus	Valley Center	
A	TM 5173	Lorinda	176 ER Dus	Valley Center	
A	TM 5222	El Cidro Ranch	14 ER Dus	Off Saddleback Rd, North of Cool Valley Rd - Valley Center	Pending
A	TM 5251	Cool Valley Ranch	6 ER Dus	Valley Center	
A	TM 5263	Beck Specific Plan	51 ER Dus	Off Pauma Heights Rd, East of Cole Grade Road - Valley Center	Pending
A	TM 5272	Wilhite Subdivision	11 ER Dus	Valley Center	
A	TM 5273	Camino De Oro	7 ER Dus	Valley Center	
A	TPM 20352	Silverado Subdivision	4 ER Dus	Valley Center	
A	TPM 20360	George	4 ER Dus	Valley Center	
A	TPM 20419	Nicolay Trust	2 ER Dus	Valley Center	
A	TPM 20480	Choufa	5 ER Dus	Valley Center	
A	TPM 20602	Velusi TPM	4 ER Dus	Valley Center	
A	TPM 20623	Finlayson TPM	4 ER Dus	Valley Center	
A	TPM 20707	Thornton	3 ER Dus	Valley Center	
A	TPM 20738	Christman TPM	4 ER Dus	Valley Center	
A	TPM 20748	Paramj Co TPM	3 ER Dus	Valley Center	
A	TPM 20803	Brown TPM	1 ER Du	Valley Center	
A	ZAP 00-094	Ellis	1 ER Du		
A	ZAP 03-001	Archer	1 SF Du		
A	ZAP 03-019	Newmark	1 SF Du		
A	ZAP 04-012	Banuelos	1 SF Du		
A		V.C. Towne Square	Mixed Use Commercial w/Condominiums	NW Corner of Valley Center Road & Cole Grade Rd - Valley Center	Pending
A		Pauma Casino	40,000 SF Casino Expansion		
A		Rincon Casino	14,000 SF Casino Expansion		
B	P 03-105	Miller Dog Boarding	2,400 SF Dog Boarding	Valley Center	
B	STP 03-021	Automotive Specialists	3,891 SF Auto Repair	Off Lizard Rock, s/o Valley Center Rd	Pending
B	TM 5152	Country Meadows	8 ER Dus	Valley Center	
B	TM 5212	Wizard Way	5 ER Dus	Valley Center	
B	TM 5232	Vesper Grove Estates	7 SF Dus	Valley Center	
B	TPM 20438	Gilbert	2 ER Dus	Valley Center	
B	TPM 20462	Jarvis TPM	1 ER Du	Valley Center	
B	TPM 20661	Kastner TPM	2 ER Dus	Valley Center	
B	TPM 20689	Viking Grove TPM	1 ER Du	Valley Center	
B	TPM 20690	Stehly	5 ER Dus	Valley Center	
B	ZAP 00-085	Oliver-Reed	1 ER Du	Valley Center	
B	ZAP 02-027	Carrico	1 ER Du	Valley Center	
B		Lizard Rock mini-storage	81,125 SF Mini-Storage	Off Lizard Rock, s/o Valley Center Rd	



Darnell & ASSOCIATES, INC.

030705BB.dwg 2-10-05 CDJ

FIGURE 9

NEAR TERM CUMULATIVE WITH PROJECT TRAFFIC VOLUMES

Table B-1 (Cont.)
List of Cumulative Projects

TAZ	County Processing #	Project Name	Project Description	Project Location	Project Status
C	P 03-133	Gaines	1 ER Du		
C	TM 5003	Mangrum/Van Dusen	26 ER Dus		
C	TM 5004	Woods Valley Ranch	Mixed Use - Residential/Golf Course		
C	TM 5047	Live Oak Ranch			
C	TM 5176		77 SF Dus		
C	TM 5305	Reynolds	22 ER Dus		
C	TM 5308	DKST, LLC	13 ER Dus		
C	TPM 20362	Wien	2 ER Dus		
C	TPM 20780	Chavez	3 ER Dus		
C	TPM 20813	Paris	1 ER Du		
C		San Pasqual Casino	20,160 SF Casino Expansion		
D	TM 5403	Ryder	79 ER Dus		
D	TPM 20470	Tebbs Residential	3 ER Dus		
E	P 77-092	New Alternative	5 ER Dus	Valley Center	
E	P-99-020	Blueberry Hill Manor	9 Bed Group Care	Valley Center	
E	TM 4957	Wynn	19 ER Dus	Valley Center	
E	TM 5001	Polito	18 ER Dus	Valley Center	
E	TM 5014	Lilac Mountain Ranch	22 ER Dus	Valley Center	
E	TM 5087	Orchard Run	Mixed Residential	Valley Center	
E	TM 5129	Haviland	10 ER Dus	Valley Center	
E	TM 5177	Brook Forest	57 ER Dus	Located off Betsworth Rd, SW of Lilac Rd	Pending
E	TM 5385	Empire/Bernard	365 SF Dus	Valley Center	
E	TPM 19952	Holdgrafer	2 ER Dus	Valley Center	
E	TPM 20423	Double K	3 ER	Valley Center	
E	TPM 20435	Tuomi	2 ER Dus	Valley Center	
E	TPM 20450	Free	4 ER Dus	Valley Center	
E	TPM 20460	Farmer	5 ER Dus	Valley Center	
E	TPM 20595	Shart	4 ER Dus	Valley Center	
E	TPM 20596	Rockefeller	2 ER Dus	Valley Center	
E	TPM 20676	Johnson	1 ER Du	Valley Center	
E	TPM 20677	Walford	3 ER Dus	Valley Center	
F	P.M 18430 (APN 186-502-13)	Paxton-Mountain Meadows	3 ER Dus	NW Corner of Mountain Meadow-Hidden Meadows/Mountain Meadow	Pending
F	SPA 99-002/TM 5175 RPL	Hidden Meadows II	Residential Subdivision Consisting of 20 ER Dus, 203 SFR Dus	Off Mountain Meadow Rd & Hidden Meadows Dr	Under Construction
F	TM 4967	Heritage Valley Estates (Rayford Drive)	10 ER Dus		
F	TM 5088	TM 5088	12 ER Dus		
F	TM 5174/TPM 20453 RPL	The Oaks	11 ER Dus	NE Corner of Meadow Glen Way & Oak Ranch Rd	Needs Traffic Analysis
F	TM 5335	Washington Meadows	12 SFR Dus	SE Corner of Mountain Meadow-Hidden Meadows/Mountain Meadow Rd	Pending
F	TPM 20226 TE	Hidden Meadows	4 ER Dus	c/o Mountain Meadow Rd	Approved
F	TPM 20290RPL	Raisigel/Fejeran	4 ER Dus	Along Welcome View Lane	Approved
F	TPM 20398RA	Meadows 35	4 ER Dus	Terminus of High Vista Rd	Approved
F	TPM 20409	Odell	2 ER Dus	Off of Calle de la Reina Rd	Approved
F	TPM 20441	Welcome View	2 ER Dus	west side of Welcome View Ln, n/o Sandhurst Way	Pending
F	TPM 20558 & TPM 20566	Piro/Cibe TMs	6 ER Dus	High Mountain Dr, 250 n/o Mountain Meadow Rd	
G	SPA 86-001/TM 4605	Rim Rock	172 SFR Dus	Off Welk Highlands Road, n/o Mountain Meadow Rd	Approved

Table B-1 (Cont.)
List of Cumulative Projects

TAZ	County Processing #	Project Name	Project Description	Project Location	Project Status
H	SP 94-002	Champagne Gardens	84.9 Ac. Resort-Oriented/Visitor Serving Commercial	Located off Champagne Blvd between Old Castle Rd & Welk View Dr	Approved
H	TM 5264RPL	Choi TM	8 ER Dus	e/o I-15, northwest of Welk View Dr	Pending
I	P 83-060	Villas on the Green	210 Time Share Units	Off Lawrence Welk Drive	Under Construction
I	TM 5313	Canyon Villas	240 Time-Share Units	North side of Welk View Drive e/o Champagne Blvd	Pending
J	PAA 04-003	Pappas	500 Medium & Low-density SF Dus, 80 ksf Office Space/Employment Center	NE Corner of SR-76 & I-15	Pending
I	SPA 99-005/TM 5187/R99-020	Pala Mesa Highlands	197 ER Dus, 2 parks	West side of Pala Road west of I-15	Pending
K	TM 5338	Passerelle	698 SF Dus, 252 Senior Housing Units, 4 Ac. Town Center, 1500 ksf Office	e/o I-15 & n/o Pala Rd	Pending
K	TM 5354	Meadow Wood (Formerly Pankey)	1,244 MF Dus on 390 Acres	e/o I-15 & n/o Pala Rd	Pending
L	SPA 03-005	Pala Mesa Resort	357 Hotel Rooms	w/o Old Hwy 395 & s/o Canonita Dr, n/o SR-76	Pending
M	TM 5037RA	Rancho Comargo	39 ER Dus		
M	TM 5276RPL	West Lilac Farms I&II	28 ER Dus	Located off Via Ararat & Aqueduct Rd, s/o West Lilac Rd	Pending
M	TPM 20541	Woodhead Minor Residential	4 ER Dus	South Side of Ararat Way, East Side of Nira Ln	Approved in Nov. 2001
M	TPM 20799	Caminito Quieto	4 ER Dus	Off Caminito Quieto, s/o West Lilac Rd	Pending
M	TPM 20830	Hukari	4 ER Dus	Northerly Terminus of Mountain View Road, w/o I-15	Pending
N	ER 04-02-014	Brooks & Kiersey Driveway	1 ER Du		
N	MUP 90-026M	Roper Equestrian Ranch	Equestrian Center w/associated uses; 1 SFR DU & Farm Laborers Housing	Terminus of Quarry Rd	Approved 12/20/90
N	TM 5283	Merriam West Ranch	33 ER Dus	South side of Quarry Rd, w/o Twin Oaks Valley Rd	Pending
N	TPM 20327 RPL1	Arena Brouwer	4 ER Dus		
N	TPM 20660	Rimsa TM	2 ER Dus	On Camino Catalfa	
N	TPM 20846	Pizzuto	3 ER Dus		
N		Twin Oaks Valley Water Treatment Plant	Water Treatment Plant	North end of Twin Oaks Valley Rd	
N		Walnut Grove Park	112 Acre Neighborhood Park	SW Corner of Buena Creek Rd & Twin Oaks Valley Rd	
O		Center Life Planning & Research	Training Facility		
P	TM 5132	Via Conca D'Oro Residential	6 SFR Dus	Eastside of Via Conca D'Oro, between Emma Lane & Via Paradise	Approved 11/29/01
P	TPM 20469	Plamondon TPM/Emma Estates	3 ER Dus	3640 Emma Lane	Approved 07/17/02
P		Sugarbush	49 ER Dus	Twin Oaks Valley Rd, e/o Monte Vista	
Q	TM 4793	Scenic Estates	8 ER Dus	s/o Buena Creek Rd, w/o Sugarbush	Pending
R	TM 5113	Camino Elena	11 ER Dus	Western Terminus of High Vista Dr, n/o Mountain Meadow	
S	SPA 00-001/TM 5193	Mountain Gate	156 ER Dus	Off Mountain Meadow Rd	Approved
T		Discovery Valley Equestrian & Canine Center	Equestrian Center for 197 Horses, and Canine Daycare for 96 Dogs	Northeasterly side of the Twin Oaks Valley Rd/Deer Springs Rd intersection	
U	P 03-004	Casa de Amparo Group Care Facility	11.43 Acre Group Care Facility	Off Buena Creek Road between Twin Oaks Valley Road & Sunny Vista Lane	Pending
V	TM 5134	Garden Villas	148 Condominium Time-Shares	Southside of Welk View Drive e/o Champagne Blvd	Pending
W	TSM 398	Del Roy Drive Residential	36 Total SFR Dus, 33 units are constructed, 3 are currently under construction	South Side of Del Roy Drive (APN 218-330-04 & 25)	Under Construction
W	TSM 412	Malone Street Residential	14 SFR Dus	South Side of Via Las Bris at northerly terminus of Malone St, n/o Del Roy Dr	
W	TSM 414	Mulberry Residential	33 SFR Dus	West side of Mulberry Drive & Rose Ranch	Under Construction
W	TSM 430	Sycamore/Cox Residential	18 SFR Dus	Sycamore/Cox (APN 182-131-01 & 15)	
X	TM 5359	Keys Creek Estates	9 ER Dus	Off Via Piedra, north of Lilac Rd & w/o Valley Center Rd	Pending
Y	TM 5381	Stonegate (Merriam)	2.1 Ac. Specialty Commercial, 10.8 Ac. Neighborhood Commercial, 1,239 MF Dus, & 1,152 SF Dus	North side of Deer Springs Rd between Sarer Ln & I-15	Pending

Table B - 2 Cumulative Project's Trip Generation Summary

TAZ	County Processing #	Project Name	Land Use	Size	Unit	SANDAG TRIP GENERATION RATES							SANDAG TRIP GENERATION CALCULATIONS						
						ADT	AM PEAK			PM PEAK			ADT	AM PEAK			PM PEAK		
							TOTAL	IN	OUT	TOTAL	IN	OUT		TOTAL	IN	OUT	TOTAL	IN	OUT
A	MUP 01-016	Duggee Day Care	Day Care	135	stu	5	17%	50%	50%	18%	50%	50%	675	115	58	57	122	61	61
A	MUP 98-026	Cole Grade Park	Multi-Use Park	8.96	ac	50	13%	50%	50%	9%	50%	50%	448	58	29	29	40	20	20
A	P 03-083	Valley Center Church	Church/School										766	110	66	44	121	48	73
A	STP 01-006	Skyridge Estates-Phase II	Estate Lot	2	du	12	8%	30%	70%	10%	70%	30%	24	2	1	1	2	1	1
A	STP 02-006	Countryside Veterinary	Veterinary Care	3.28	ksf	5	2%	70%	30%	10%	50%	50%	16	0	0	0	2	1	1
A	STP 02-071	Stockovic Mini Storage	Mini Storage	6	ksf	2	6%	50%	50%	9%	50%	50%	12	1	1	0	1	1	0
A	TM 4944	HL Land Development	Estate Lot	11	du	12	8%	30%	70%	10%	70%	30%	132	11	3	8	13	9	4
A	TM 5150	Tavolada TM	Estate Lot	8	du	12	8%	30%	70%	10%	70%	30%	96	8	2	6	10	7	3
A	TM 5173	Lorinda	Estate Lot	176	du	12	8%	30%	70%	10%	70%	30%	2,112	169	51	118	211	148	63
A	TM 5222	El Cidro Ranch	Estate Lot	14	du	12	8%	30%	70%	10%	70%	30%	168	13	4	9	17	12	5
A	TM 5251	Cool Valley Ranch	Estate Lot	6	du	12	8%	30%	70%	10%	70%	30%	72	6	2	4	7	5	2
A	TM 5263	Beck Specific Plan	Estate Lot	51	du	12	8%	30%	70%	10%	70%	30%	612	49	15	34	61	43	18
A	TM 5272	Wilhite Subdivision	Estate Lot	11	du	12	8%	30%	70%	10%	70%	30%	132	11	3	8	13	9	4
A	TM 5273	Camino De Oro	Estate Lot	7	du	12	8%	30%	70%	10%	70%	30%	84	7	2	5	8	6	2
A	TPM 20352	Silverado Subdivision	Estate Lot	4	du	12	8%	30%	70%	10%	70%	30%	48	4	1	3	5	4	1
A	TPM 20360	George	Estate Lot	4	du	12	8%	30%	70%	10%	70%	30%	48	4	1	3	5	4	1
A	TPM 20419	Nicolay Trust	Estate Lot	2	du	12	8%	30%	70%	10%	70%	30%	24	2	1	1	2	1	1
A	TPM 20480	Choufa	Estate Lot	5	du	12	8%	30%	70%	10%	70%	30%	60	5	2	3	6	4	2
A	TPM 20602	Velloi TPM	Estate Lot	4	du	12	8%	30%	70%	10%	70%	30%	48	4	1	3	5	4	1
A	TPM 20623	Finlayson TPM	Estate Lot	4	du	12	8%	30%	70%	10%	70%	30%	48	4	1	3	5	4	1
A	TPM 20707	Thornton	Estate Lot	3	du	12	8%	30%	70%	10%	70%	30%	36	3	1	2	4	3	1
A	TPM 20738	Christensen TPM	Estate Lot	4	du	12	8%	30%	70%	10%	70%	30%	48	4	1	3	5	4	1
A	TPM 20748	Paraisi Co TPM	Estate Lot	3	du	12	8%	30%	70%	10%	70%	30%	36	3	1	2	4	3	1
A	TPM 20803	Brown TPM	Estate Lot	1	du	12	8%	30%	70%	10%	70%	30%	12	1	0	1	1	1	0
A	ZAP 00-094	Ellis	Estate Lot	1	du	12	8%	30%	70%	10%	70%	30%	12	1	0	1	1	1	0
A	ZAP 03-001	Archer	Single Family	1	du	10	8%	30%	70%	10%	70%	30%	10	1	0	1	1	1	0
A	ZAP 03-019	Newmark	Single Family	1	du	10	8%	30%	70%	10%	70%	30%	10	1	0	1	1	1	0
A	ZAP 04-012	Benuelos	Single Family	1	du	10	8%	30%	70%	10%	70%	30%	10	1	0	1	1	1	0
A		V.G. Towne Square	Commercial	MIXED									15,774	710			1,252		
A		Pauma Casino	Casino	40	ksf	100	10%			15%			4,000	400	200	200	600	300	300
A		Rincon Casino	Casino	14	ksf	100	10%			15%			1,400	140	70	70	210	105	105
		Total Traffic Zone A											26,973	1,848	517	621	2,736	812	672

TAZ	County Processing #	Project Name	Land Use	Size	Unit	SANDAG TRIP GENERATION RATES							SANDAG TRIP GENERATION CALCULATIONS						
						ADT	AM PEAK			PM PEAK			ADT	AM PEAK			PM PEAK		
							TOTAL	IN	OUT	TOTAL	IN	OUT		TOTAL	IN	OUT	TOTAL	IN	OUT
B	P 03-105	Miller Dog Boarding	Dog Boarding	2.4	ksf	5	2%	70%	30%	10%	50%	50%	12	0	0	0	1	1	0
B	STP 03-021	Automotive Specialists	Automotive	3.891	ksf	20	8%	70%	30%	11%	40%	60%	78	6	4	2	9	4	5
B	TM 5152	Country Meadows	Estate Lot	8	du	12	8%	30%	70%	10%	70%	30%	96	8	2	6	10	7	3
B	TM 5212	Wizard Way	Estate Lot	5	du	12	8%	30%	70%	10%	70%	30%	60	5	2	3	6	4	2
B	TM 5232	Vesper Grove Estates	Single Family	7	du	10	8%	30%	70%	10%	70%	30%	70	6	2	4	7	5	2
B	TPM 20438	Gilbert	Estate Lot	2	du	12	8%	30%	70%	10%	70%	30%	24	2	1	1	2	1	1
B	TPM 20462	Jarvis TPM	Estate Lot	1	du	12	8%	30%	70%	10%	70%	30%	12	1	0	1	1	1	0
B	TPM 20661	Kastner TPM	Estate Lot	2	du	12	8%	30%	70%	10%	70%	30%	24	2	1	1	2	1	1
B	TPM 20689	Viking Grove TPM	Estate Lot	1	du	12	8%	30%	70%	10%	70%	30%	12	1	0	1	1	1	0
B	TPM 20690	Stahly	Estate Lot	5	du	12	8%	30%	70%	10%	70%	30%	60	5	2	3	6	4	2
B	ZAP 00-085	Oliver-Read	Estate Lot	1	du	12	8%	30%	70%	10%	70%	30%	12	1	0	1	1	1	0
B	ZAP 02-027	Carrico	Estate Lot	1	du	12	8%	30%	70%	10%	70%	30%	12	1	0	1	1	1	0
B		Lizard Rock mini-storage	Mini Storage	81.125	ksf								168	10	5	5	16	8	7
		Total Traffic Zone B											640	48	19	29	63	39	23

TAZ	County Processing #	Project Name	Land Use	Size	Unit	SANDAG TRIP GENERATION RATES							SANDAG TRIP GENERATION CALCULATIONS						
						ADT	AM PEAK			PM PEAK			ADT	AM PEAK			PM PEAK		
							TOTAL	IN	OUT	TOTAL	IN	OUT		TOTAL	IN	OUT	TOTAL	IN	OUT
C	P 03-133	Gaines	Estate Lot	1	du	12	8%	30%	70%	10%	70%	30%	12	1	0	1	1	1	0
C	TM 5003	Magnum/Van Dusen	Estate Lot	26	du	12	8%	30%	70%	10%	70%	30%	312	25	8	17	31	22	9
C	TM 5004	Woods Valley Ranch	Resid/Golf	MIXED									3,216	245	71	174	322	207	115
C	TM 5047	Live Oak Ranch	Estate Lot	149	du	12	8%	30%	70%	10%	70%	30%	1,788	143	43	100	179	125	54
C	TM 5176	0	Single Family	77	du	10	8%	30%	70%	10%	70%	30%	770	62	19	43	77	54	23
C	TM 5305	Reynolds	Estate Lot	22	du	12	8%	30%	70%	10%	70%	30%	264	21	6	15	26	18	8
C	TM 5308	DKST, LLC	Estate Lot	13	du	12	8%	30%	70%	10%	70%	30%	156	12	4	8	16	11	5
C	TPM 20362	Wren	Estate Lot	2	du	12	8%	30%	70%	10%	70%	30%	24	2	1	1	2	1	1
C	TPM 20780	Chavez	Estate Lot	3	du	12	8%	30%	70%	10%	70%	30%	36	3	1	2	4	3	1
C	TPM 20813	Paris	Estate Lot	1	du	12	8%	30%	70%	10%	70%	30%	12	1	0	1	1	1	0
C		San Pasqual Casino	Casino	20.16	ksf	100	10%			15%			2,016	202	101	101	302	151	151
		Total Traffic Zone C											8,606	717	254	463	961	594	367

Table B - 2 Cumulative Project's Trip Generation Summary
(cont)

TAZ	County Processing #	Project Name	Land Use	Size	Unit	SANDAG TRIP GENERATION RATES							SANDAG TRIP GENERATION CALCULATIONS						
						ADT	AM PEAK			PM PEAK			ADT	AM PEAK			PM PEAK		
							TOTAL	IN	OUT	TOTAL	IN	OUT		TOTAL	IN	OUT	TOTAL	IN	OUT
D	TM 5403	Ryder	Estate Lot	79	du	12	8%	30%	70%	10%	70%	30%	948	76	23	53	95	67	28
D	TPM 20470	Tebbs Residential	Single Family	3	du	12	8%	30%	70%	10%	70%	30%	36	3	1	2	4	3	1
Total Traffic Zone D													984	79	24	55	99	70	29

TAZ	County Processing #	Project Name	Land Use	Size	Unit	SANDAG TRIP GENERATION RATES							SANDAG TRIP GENERATION CALCULATIONS						
						ADT	AM PEAK			PM PEAK			ADT	AM PEAK			PM PEAK		
							TOTAL	IN	OUT	TOTAL	IN	OUT		TOTAL	IN	OUT	TOTAL	IN	OUT
E	P 77-092	New Alternative	Estate Lot	5	du	12	8%	30%	70%	10%	70%	30%	60	5	2	3	6	4	2
E	P 99-020	Blueberry Hill Manor	Group Care	9	bd								9	2	1	1	2	1	1
E	TM 4957	Wyna	Estate Lot	19	du	12	8%	30%	70%	10%	70%	30%	228	18	5	13	23	16	7
E	TM 5001	Polito	Estate Lot	18	du	12	8%	30%	70%	10%	70%	30%	216	17	5	12	22	15	7
E	TM 5014	Lilac Mountain Ranch	Estate Lot	22	du	12	8%	30%	70%	10%	70%	30%	264	21	6	15	26	18	8
E	TM 5087	Orchard Run	Mix Res	MIXED									3,433	273	55	218	343	240	103
E	TM 5129	Haviland	Estate Lot	10	du	12	8%	30%	70%	10%	70%	30%	120	10	3	7	12	8	4
E	TM 5177	Brook Forest	Estate Lot	57	du	12	8%	30%	70%	10%	70%	30%	684	55	17	38	68	48	20
E	TM 5385	Empire/Bernard	Single Family	365	du	10	8%	30%	70%	10%	70%	30%	3,650	292	88	204	365	256	109
E	TPM 19952	Holdgrafer	Estate Lot	2	du	12	8%	30%	70%	10%	70%	30%	24	2	1	1	2	1	1
E	TPM 20423	Double K	Estate Lot	3	du	12	8%	30%	70%	10%	70%	30%	36	3	1	2	4	3	1
E	TPM 20435	Tuomi	Estate Lot	2	du	12	8%	30%	70%	10%	70%	30%	24	2	1	1	2	1	1
E	TPM 20450	Fice	Estate Lot	4	du	12	8%	30%	70%	10%	70%	30%	48	4	1	3	5	4	1
E	TPM 20460	Farmer	Estate Lot	5	du	12	8%	30%	70%	10%	70%	30%	60	5	2	3	6	4	2
E	TPM 20595	Shaw	Estate Lot	4	du	12	8%	30%	70%	10%	70%	30%	48	4	1	3	5	4	1
E	TPM 20596	Rockefeller	Estate Lot	2	du	12	8%	30%	70%	10%	70%	30%	24	2	1	1	2	1	1
E	TPM 20676	Johnson	Estate Lot	1	du	12	8%	30%	70%	10%	70%	30%	12	1	0	1	1	1	0
E	TPM 20677	Walfoid	Estate Lot	3	du	12	8%	30%	70%	10%	70%	30%	36	3	1	2	4	3	1
Total Traffic Zone E													8,966	719	191	528	898	628	270

TAZ	County Processing #	Project Name	Land Use	Size	Unit	SANDAG TRIP GENERATION RATES							SANDAG TRIP GENERATION CALCULATIONS						
						ADT	AM PEAK			PM PEAK			ADT	AM PEAK			PM PEAK		
							TOTAL	IN	OUT	TOTAL	IN	OUT		TOTAL	IN	OUT	TOTAL	IN	OUT
F	P M 18430 (APN 186-592-13)	Paxton-Mountain Meadows	Estate Lot	3	du	12	8%	30%	70%	10%	70%	30%	36	3	1	2	4	3	1
F	SPA 99-002/TM 5175 RPL	Hidden Meadows II	Mixed Residential										2,270	181	54	127	227	160	67
F	TM 4967	Heritage Valley Estates (Rayford Drive)	Estate Lot	10	du	12	8%	30%	70%	10%	70%	30%	120	10	3	7	12	8	4
F	TM 5088	TM 5088	Estate Lot	12	du	12	8%	30%	70%	10%	70%	30%	144	12	4	8	14	10	4
F	TM 5174/TPM 20453 RPL	The Oaks	Single Family	11	du	10	8%	30%	70%	10%	70%	30%	110	9	3	6	11	8	3
F	TM 5335	Washington Meadows	Estate Lot	12	du	12	8%	30%	70%	10%	70%	30%	144	12	4	8	14	10	4
F	TPM 20226 TE	Hidden Meadows	Estate Lot	4	du	12	8%	30%	70%	10%	70%	30%	48	4	1	3	5	4	1
F	TPM 20290RPL	Raisigel/Feloran	Single Family	4	du	10	8%	30%	70%	10%	70%	30%	40	3	1	2	4	3	1
F	TPM 20398RA	Meadows 35	Estate Lot	4	du	12	8%	30%	70%	10%	70%	30%	48	4	1	3	5	4	1
F	TPM 20409	Odell	Estate Lot	2	du	12	8%	30%	70%	10%	70%	30%	24	2	1	1	2	1	1
F	TPM 20441	Welcome View	Estate Lot	2	du	12	8%	30%	70%	10%	70%	30%	24	2	1	1	2	1	1
F	TPM 20558 & TPM 20566	Pira/Ciba TMs	Estate Lot	6	du	12	8%	30%	70%	10%	70%	30%	72	6	2	4	7	5	2
Total Traffic Zone F													3,080	248	76	172	307	217	90

TAZ	County Processing #	Project Name	Land Use	Size	Unit	SANDAG TRIP GENERATION RATES							SANDAG TRIP GENERATION CALCULATIONS						
						ADT	AM PEAK			PM PEAK			ADT	AM PEAK			PM PEAK		
							TOTAL	IN	OUT	TOTAL	IN	OUT		TOTAL	IN	OUT	TOTAL	IN	OUT
G	SPA 86-001/TM 4605	Rim Rock	Single Family	172	du	10	8%	30%	70%	10%	70%	30%	1,720	138	41	97	172	120	52
Total Traffic Zone G													1,720	138	41	97	172	120	52

TAZ	County Processing #	Project Name	Land Use	Size	Unit	SANDAG TRIP GENERATION RATES							SANDAG TRIP GENERATION CALCULATIONS						
						ADT	AM PEAK			PM PEAK			ADT	AM PEAK			PM PEAK		
							TOTAL	IN	OUT	TOTAL	IN	OUT		TOTAL	IN	OUT	TOTAL	IN	OUT
H	SP 94-002	Champagne Gardens	Mixed										8,360	387	54	333	1,138	637	501
H	TM 5264RPL	Choi TM	Estate Lot	8	du	12	8%	30%	70%	10%	70%	30%	96	8	2	6	10	7	3
Total Traffic Zone H													8,456	395	56	339	1,148	644	504

TAZ	County Processing #	Project Name	Land Use	Size	Unit	SANDAG TRIP GENERATION RATES							SANDAG TRIP GENERATION CALCULATIONS						
						ADT	AM PEAK			PM PEAK			ADT	AM PEAK			PM PEAK		
							TOTAL	IN	OUT	TOTAL	IN	OUT		TOTAL	IN	OUT	TOTAL	IN	OUT
I	P 83-060	Villas on the Green	Time-Share	210	Units	1.39	9%	50%	50%	10%	50%	50%	292	26	13	13	29	15	14
I	TM 5313	Canyon Villas	Time-Share	240	Units	1.39	9%	50%	50%	10%	50%	50%	334	30	15	15	33	17	16
Total Traffic Zone I													626	56	28	28	62	32	30

Table B - 2 Cumulative Project's Trip Generation Summary (Cont.)

TAZ	County Processing #	Project Name	Land Use	Size	Unit	SANDAG TRIP GENERATION RATES							SANDAG TRIP GENERATION CALCULATIONS						
						ADT	AM PEAK			PM PEAK			ADT	AM PEAK			PM PEAK		
							TOTAL	IN	OUT	TOTAL	IN	OUT		TOTAL	IN	OUT	TOTAL	IN	OUT
J	PAA 04-003	Pappas	Mixed Residential & Office										6,600	624	322	302	708	392	316
J	SPA 99-005/TM 5187/R99-020	Pala Mesa Highlands	Estate Lot	197	du	12	8%	30%	70%	10%	70%	30%	2,364	189	57	132	236	165	71
Total Traffic Zone J													8,964	813	379	434	944	557	387

TAZ	County Processing #	Project Name	Land Use	Size	Unit	SANDAG TRIP GENERATION RATES							SANDAG TRIP GENERATION CALCULATIONS						
						ADT	AM PEAK			PM PEAK			ADT	AM PEAK			PM PEAK		
							TOTAL	IN	OUT	TOTAL	IN	OUT		TOTAL	IN	OUT	TOTAL	IN	OUT
K	TM 5338	Passerelle	Mixed										24,846	2,830	2,085	745	3,054	1,020	2,034
K	TM 5354	Meadow Wood (Formerly Pankey)	Single Family	1244	du	10	8%	30%	70%	10%	70%	30%	12,440	995	299	696	1,244	871	373
Total Traffic Zone K													37,286	3,825	2,384	1,441	4,298	1,891	2,407

TAZ	County Processing #	Project Name	Land Use	Size	Unit	SANDAG TRIP GENERATION RATES							SANDAG TRIP GENERATION CALCULATIONS						
						ADT	AM PEAK			PM PEAK			ADT	AM PEAK			PM PEAK		
							TOTAL	IN	OUT	TOTAL	IN	OUT		TOTAL	IN	OUT	TOTAL	IN	OUT
L	SPA 03-005	Pala Mesa Resort	Hotel	357	Rooms	8	5%	60%	40%	7%	40%	60%	2,856	143	86	57	200	80	120
Total Traffic Zone L													2,856	143	86	57	200	80	120

TAZ	County Processing #	Project Name	Land Use	Size	Unit	SANDAG TRIP GENERATION RATES							SANDAG TRIP GENERATION CALCULATIONS						
						ADT	AM PEAK			PM PEAK			ADT	AM PEAK			PM PEAK		
							TOTAL	IN	OUT	TOTAL	IN	OUT		TOTAL	IN	OUT	TOTAL	IN	OUT
M	TM 5037RA	Rancho Comargo	Estate Lot	39	du	12	8%	30%	70%	10%	70%	30%	468	37	11	26	47	33	14
M	TM 5276RPL	West Lilac Farms I & II	Estate Lot	28	du	12	8%	30%	70%	10%	70%	30%	336	27	8	19	34	24	10
M	TPM 20541	Woodhead Minor Residential	Estate Lot	4	du	12	8%	30%	70%	10%	70%	30%	48	4	1	3	5	4	1
M	TPM 20799	Caminito Quieto	Estate Lot	4	du	12	8%	30%	70%	10%	70%	30%	48	4	1	3	5	4	1
M	TPM 20830	Hukari	Estate Lot	4	du	12	8%	30%	70%	10%	70%	30%	48	4	1	3	5	4	1
Total Traffic Zone M													948	76	22	54	96	69	27

TAZ	County Processing #	Project Name	Land Use	Size	Unit	SANDAG TRIP GENERATION RATES							SANDAG TRIP GENERATION CALCULATIONS						
						ADT	AM PEAK			PM PEAK			ADT	AM PEAK			PM PEAK		
							TOTAL	IN	OUT	TOTAL	IN	OUT		TOTAL	IN	OUT	TOTAL	IN	OUT
N	ER D4-02-014	Brooks & Kersey Driveway	Estate Lot	1	du	12	8%	30%	70%	10%	70%	30%	12	1	0	1	1	1	0
N	MUP 90-026M	Roper Equestrian Ranch	Estate Lot	1	du	12	8%	30%	70%	10%	70%	30%	12	1	0	1	1	1	0
N	TM 5283	Morrison West Ranch	Estate Lot	33	du	12	8%	30%	70%	10%	70%	30%	396	32	10	22	40	28	12
N	TPM 20327 RPL1	Arena Brouwer	Estate Lot	4	du	12	8%	30%	70%	10%	70%	30%	48	4	1	3	5	4	1
N	TPM 20660	Rimas TM	Estate Lot	2	du	12	8%	30%	70%	10%	70%	30%	24	2	1	1	2	1	1
N	TPM 20846	Fuzzolo	Estate Lot	3	du	12	8%	30%	70%	10%	70%	30%	36	3	1	2	4	3	1
N		Twin Oaks Valley Water Treatment Plant	Water Treatment Plant	1	plant	160	8%	30%	70%	10%	70%	30%	160	13	4	9	16	11	5
N		Walnut Grove Park	Park	112	ac	5	4%	50%	50%	8%	50%	50%	560	22	11	11	45	23	22
Total Traffic Zone N													1,248	78	28	50	114	72	42

TAZ	County Processing #	Project Name	Land Use	Size	Unit	SANDAG TRIP GENERATION RATES							SANDAG TRIP GENERATION CALCULATIONS						
						ADT	AM PEAK			PM PEAK			ADT	AM PEAK			PM PEAK		
							TOTAL	IN	OUT	TOTAL	IN	OUT		TOTAL	IN	OUT	TOTAL	IN	OUT
O		Center Life Planning & Research											600	186	154	32	122	0	122
Total Traffic Zone O													600	186	154	32	122	0	122

TAZ	County Processing #	Project Name	Land Use	Size	Unit	SANDAG TRIP GENERATION RATES							SANDAG TRIP GENERATION CALCULATIONS						
						ADT	AM PEAK			PM PEAK			ADT	AM PEAK			PM PEAK		
							TOTAL	IN	OUT	TOTAL	IN	OUT		TOTAL	IN	OUT	TOTAL	IN	OUT
P	TM 5132	Via Conca D'Oro Residential	Single Family	6	du	10	8%	30%	70%	10%	70%	30%	60	5	2	3	6	4	2
P	TPM 20469	Plamondon TPM/Emma Estates	Estate Lot	3	du	12	8%	30%	70%	10%	70%	30%	36	3	1	2	4	3	1
P		Sugarbush	Single Family	59	du	10	8%	30%	70%	10%	70%	30%	590	47	14	33	59	41	18
Total Traffic Zone P													686	55	17	38	69	48	21

TAZ	County Processing #	Project Name	Land Use	Size	Unit	SANDAG TRIP GENERATION RATES							SANDAG TRIP GENERATION CALCULATIONS						
						ADT	AM PEAK			PM PEAK			ADT	AM PEAK			PM PEAK		
							TOTAL	IN	OUT	TOTAL	IN	OUT		TOTAL	IN	OUT	TOTAL	IN	OUT
Q	TM 4793	Scenic Estates	Estate Lot	8	du	12	8%	30%	70%	10%	70%	30%	96	8	2	6	10	7	3
Total Traffic Zone Q													96	8	2	6	10	7	3

Table B - 2 Cumulative Project's Trip Generation Summary
(Cont.)

TAZ	County Processing #	Project Name	Land Use	Size	Unit	SANDAG TRIP GENERATION RATES							SANDAG TRIP GENERATION CALCULATIONS						
						ADT	AM PEAK			PM PEAK			ADT	AM PEAK			PM PEAK		
							TOTAL	IN	OUT	TOTAL	IN	OUT		TOTAL	IN	OUT	TOTAL	IN	OUT
R	TM 5113	Camino Elena	Estate Lot	11	du	12	8%	30%	70%	10%	70%	30%	132	11	3	8	13	9	4
Total Traffic Zone R													132	11	3	8	13	9	4

TAZ	County Processing #	Project Name	Land Use	Size	Unit	SANDAG TRIP GENERATION RATES							SANDAG TRIP GENERATION CALCULATIONS						
						ADT	AM PEAK			PM PEAK			ADT	AM PEAK			PM PEAK		
							TOTAL	IN	OUT	TOTAL	IN	OUT		TOTAL	IN	OUT	TOTAL	IN	OUT
S	SPA 00-001/TM 5193	Mountain Gate	Estate Lot	156	du	12	8%	30%	70%	10%	70%	30%	1,872	150	45	105	187	131	56
Total Traffic Zone S													1,872	150	45	105	187	131	56

TAZ	County Processing #	Project Name	Land Use	Size	Unit	SANDAG TRIP GENERATION RATES							SANDAG TRIP GENERATION CALCULATIONS						
						ADT	AM PEAK			PM PEAK			ADT	AM PEAK			PM PEAK		
							TOTAL	IN	OUT	TOTAL	IN	OUT		TOTAL	IN	OUT	TOTAL	IN	OUT
T		Discovery Valley Equestrian & Canine Center	Equestrian & Canine Center										550	99	64	35	131	53	78
Total Traffic Zone T													550	99	64	35	131	53	78

TAZ	County Processing #	Project Name	Land Use	Size	Unit	SANDAG TRIP GENERATION RATES							SANDAG TRIP GENERATION CALCULATIONS						
						ADT	AM PEAK			PM PEAK			ADT	AM PEAK			PM PEAK		
							TOTAL	IN	OUT	TOTAL	IN	OUT		TOTAL	IN	OUT	TOTAL	IN	OUT
U	P 03-004	Casa de Amparo Group Care Facility	Group Care										416	55	29	26	58	28	30
Total Traffic Zone U													416	55	29	26	58	28	30

TAZ	County Processing #	Project Name	Land Use	Size	Unit	SANDAG TRIP GENERATION RATES							SANDAG TRIP GENERATION CALCULATIONS						
						ADT	AM PEAK			PM PEAK			ADT	AM PEAK			PM PEAK		
							TOTAL	IN	OUT	TOTAL	IN	OUT		TOTAL	IN	OUT	TOTAL	IN	OUT
V	TM 5134	Garden Villas	Time-Share Condominium	148	Units	8	8%	20%	80%	10%	70%	30%	1,184	95	19	76	118	83	35
Total Traffic Zone V													1,184	95	19	76	118	83	35

TAZ	County Processing #	Project Name	Land Use	Size	Unit	SANDAG TRIP GENERATION RATES							SANDAG TRIP GENERATION CALCULATIONS						
						ADT	AM PEAK			PM PEAK			ADT	AM PEAK			PM PEAK		
							TOTAL	IN	OUT	TOTAL	IN	OUT		TOTAL	IN	OUT	TOTAL	IN	OUT
W	TSM 398	Del Roy Drive Residential	Single Family	3	du	10	8%	30%	70%	10%	70%	30%	30	2	1	1	3	2	1
W	TSM 412	Malone Street Residential	Single Family	14	du	10	8%	30%	70%	10%	70%	30%	140	11	3	8	14	10	4
W	TSM 414	Mulberry Residential	Single Family	33	du	10	8%	30%	70%	10%	70%	30%	330	26	8	18	33	23	10
W	TSM 430	Sycamore/Cox Residential	Single Family	18	du	10	8%	30%	70%	10%	70%	30%	180	14	4	10	18	13	5
Total Traffic Zone W													680	53	16	37	68	48	20

TAZ	County Processing #	Project Name	Land Use	Size	Unit	SANDAG TRIP GENERATION RATES							SANDAG TRIP GENERATION CALCULATIONS						
						ADT	AM PEAK			PM PEAK			ADT	AM PEAK			PM PEAK		
							TOTAL	IN	OUT	TOTAL	IN	OUT		TOTAL	IN	OUT	TOTAL	IN	OUT
X	TM 5359	Keys Creek Estates	Estate Lot	9	du	12	8%	30%	70%	10%	70%	30%	108	9	3	6	11	8	3
Total Traffic Zone X													108	9	3	6	11	8	3

TAZ	County Processing #	Project Name	Land Use	Size	Unit	SANDAG TRIP GENERATION RATES							SANDAG TRIP GENERATION CALCULATIONS						
						ADT	AM PEAK			PM PEAK			ADT	AM PEAK			PM PEAK		
							TOTAL	IN	OUT	TOTAL	IN	OUT		TOTAL	IN	OUT	TOTAL	IN	OUT
Y	TM 5381	Stonegate (Merrium)	Mixed Residential & Commercial										35,232	2,258	761	1,497	3,515	2,186	1,329
Total Traffic Zone Y													35,232	2,258	761	1,497	3,515	2,186	1,329

	SANDAG TRIP GENERATION CALCULATIONS						
	ADT	AM PEAK			PM PEAK		
		TOTAL	IN	OUT	TOTAL	IN	OUT
Total Traffic Zones A-X (No Stonegate)	117,677	9,904	4,457	4,737	12,885	6,240	5,392
Total Traffic Zones A-Y (With Stonegate)	152,909	12,162	5,218	6,234	16,400	8,426	6,721

Table B-3 Cumulative Project's Trip Distribution

Roadway Segment	Total Traffic Zone A			Total Traffic Zone B			Total Traffic Zone C			Total Traffic Zone D		
	% Distribution		Zone	% Distribution		Zone	% Distribution		Zone	% Distribution		Zone
	In	Out	ADT	In	Out	ADT	In	Out	ADT	In	Out	ADT
Interstate 15												
-Old Hwy 395 to Gopher Cyn Rd	4%	4%	1,079	4%	4%	26	4%	4%	344	4%	4%	39
-Gopher Cyn Rd to Deer Springs Rd	0%	0%	0	0%	0%	0	0%	0%	0	0%	0%	0
Gopher Canyon Rd												
-Holly Hill Rd to I-15	1%	1%	270	1%	1%	6	1%	1%	86	1%	1%	10
-I-15 SB Ramp to I-15 NB Ramp	5%	1%	809	5%	1%	19	5%	1%	258	5%	1%	30
-I-15 NB Ramp to Champagne Blvd-Old Hwy 395	5%	5%	1,349	5%	5%	32	5%	5%	430	5%	5%	49
Old Hwy 395												
-Circle R Dr to Gopher Cyn Rd	0%	0%	0	0%	0%	0	0%	0%	0	0%	0%	0
Champagne Blvd												
-Gopher Cyn Rd to Old Castle Rd	5%	5%	1,349	5%	5%	32	5%	5%	430	5%	5%	49
-Old Castle Rd to Welk View Drive	0%	0%	0	0%	0%	0	0%	0%	0	0%	0%	0
Old Castle Rd												
-Champagne Blvd to Project Access	5%	5%	1,349	5%	5%	32	5%	5%	430	5%	5%	49
-Project Access to Lilac Rd	5%	5%	1,349	5%	5%	32	5%	5%	430	5%	5%	49
Lilac Rd												
-Lilac Heights Ct to Old Castle Rd	2%	2%	539	2%	2%	13	2%	2%	172	2%	2%	20
-Old Castle Rd to Via Piedra	7%	7%	1,888	7%	7%	45	7%	7%	602	7%	7%	69
-Via Piedra to Betsworth	9%	9%	2,428	9%	9%	58	9%	9%	775	9%	9%	89
-Betsworth to Valley Center	10%	10%	2,697	10%	10%	64	10%	10%	861	10%	10%	98
Valley Center Rd												
-Vesper Rd to Cole Grade Rd	10%	10%	2,697	65%	65%	416	10%	10%	861	10%	10%	98
-Cole Grade Rd to Lilac Rd	40%	40%	10,789	40%	40%	256	25%	25%	2,152	60%	60%	590
-Lilac Rd to Mirar De Valle	30%	30%	8,092	30%	30%	192	35%	35%	3,012	50%	50%	492
Cole Grade Rd												
-Fruitvale Rd to Valley Center Rd	50%	50%	13,487	25%	25%	160	15%	15%	1,291	15%	15%	148

Table B-3 Cumulative Project's (Cont.) Trip Distribution

Roadway Segment	Total Traffic Zone E			Total Traffic Zone F			Total Traffic Zone G			Total Traffic Zone H		
	% Distribution		Zone	% Distribution		Zone	% Distribution		Zone	% Distribution		Zone
	In	Out	ADT	In	Out	ADT	In	Out	ADT	In	Out	ADT
Interstate 15												
-Old Hwy 395 to Gopher Cyn Rd	8%	8%	717	15%	15%	462	13%	13%	224	5%	5%	423
-Gopher Cyn Rd to Deer Springs Rd	0%	0%	0	15%	15%	462	9%	9%	155	0%	0%	0
Gopher Canyon Rd												
-Holly Hill Rd to I-15	2%	2%	179	0%	0%	0	16%	16%	275	18%	18%	1,522
-I-15 SB Ramp to I-15 NB Ramp	10%	2%	538	0%	0%	0	20%	16%	310	23%	18%	1,733
-I-15 NB Ramp to Champagne Blvd-Old Hwy 395	10%	10%	897	0%	0%	0	20%	20%	344	23%	23%	1,945
Old Hwy 395												
-Circle R Dr to Gopher Cyn Rd	0%	0%	0	0%	0%	0	13%	13%	224	14%	14%	1,184
Champagne Blvd												
-Gopher Cyn Rd to Old Castle Rd	10%	10%	897	10%	10%	308	33%	33%	568	37%	37%	3,129
-Old Castle Rd to Welk View Drive	0%	0%	0	10%	10%	308	33%	33%	568	48%	48%	4,059
Old Castle Rd												
-Champagne Blvd to Project Access	10%	10%	897	0%	0%	0	0%	0%	0	11%	11%	930
-Project Access to Lilac Rd	10%	10%	897	0%	0%	0	0%	0%	0	5%	5%	423
Lilac Rd												
-Lilac Heights Ct to Old Castle Rd	10%	10%	897	0%	0%	0	0%	0%	0	0%	0%	0
-Old Castle Rd to Via Piedra	20%	20%	1,793	0%	0%	0	0%	0%	0	5%	5%	423
-Via Piedra to Betsworth	35%	35%	3,138	0%	0%	0	0%	0%	0	5%	5%	423
-Betsworth to Valley Center	70%	70%	6,276	0%	0%	0	0%	0%	0	0%	0%	0
Valley Center Rd												
-Vesper Rd to Cole Grade Rd	10%	10%	897	0%	0%	0	0%	0%	0	0%	0%	0
-Cole Grade Rd to Lilac Rd	25%	25%	2,242	0%	0%	0	0%	0%	0	0%	0%	0
-Lilac Rd to Mirar De Valle	45%	45%	4,035	0%	0%	0	0%	0%	0	0%	0%	0
Cole Grade Rd												
-Fruitvale Rd to Valley Center Rd	15%	15%	1,345	0%	0%	0	0%	0%	0	0%	0%	0

Table B-3 Cumulative Project's (Cont.) Trip Distribution

Roadway Segment	Total Traffic Zone I			Total Traffic Zone J			Total Traffic Zone K			Total Traffic Zone L		
	% Distribution		Zone	% Distribution		Zone	% Distribution		Zone	% Distribution		Zone
	In	Out	ADT	In	Out	ADT	In	Out	ADT	In	Out	ADT
Interstate 15												
-Old Hwy 395 to Gopher Cyn Rd	6%	6%	38	40%	40%	3,586	26%	26%	9,694	35%	35%	1,000
-Gopher Cyn Rd to Deer Springs Rd	0%	0%	0	40%	40%	3,586	26%	26%	9,694	35%	35%	1,000
Gopher Canyon Rd												
-Holly Hill Rd to I-15	17%	17%	106	0%	0%	0	0%	0%	0	0%	0%	0
-I-15 SB Ramp to I-15 NB Ramp	23%	17%	125	0%	0%	0	0%	0%	0	0%	0%	0
-I-15 NB Ramp to Champagne Blvd-Old Hwy 395	23%	23%	144	0%	0%	0	0%	0%	0	0%	0%	0
Old Hwy 395												
-Circle R Dr to Gopher Cyn Rd	7%	7%	44	0%	0%	0	0%	0%	0	0%	0%	0
Champagne Blvd												
-Gopher Cyn Rd to Old Castle Rd	30%	30%	188	0%	0%	0	0%	0%	0	0%	0%	0
-Old Castle Rd to Welk View Drive	33%	33%	207	0%	0%	0	0%	0%	0	0%	0%	0
Old Castle Rd												
-Champagne Blvd to Project Access	3%	3%	19	0%	0%	0	0%	0%	0	0%	0%	0
-Project Access to Lilac Rd	2%	2%	13	0%	0%	0	0%	0%	0	0%	0%	0
Lilac Rd												
-Lilac Heights Ct to Old Castle Rd	0%	0%	0	0%	0%	0	0%	0%	0	0%	0%	0
-Old Castle Rd to Via Piedra	2%	2%	13	0%	0%	0	0%	0%	0	0%	0%	0
-Via Piedra to Betsworth	2%	2%	13	0%	0%	0	0%	0%	0	0%	0%	0
-Betsworth to Valley Center	2%	2%	13	0%	0%	0	0%	0%	0	0%	0%	0
Valley Center Rd												
-Vesper Rd to Cole Grade Rd	0%	0%	0	0%	0%	0	0%	0%	0	0%	0%	0
-Cole Grade Rd to Lilac Rd	1%	1%	6	0%	0%	0	0%	0%	0	0%	0%	0
-Lilac Rd to Mirar De Valle	1%	1%	6	0%	0%	0	0%	0%	0	0%	0%	0
Cole Grade Rd												
-Fruitvale Rd to Valley Center Rd	0%	0%	0	0%	0%	0	0%	0%	0	0%	0%	0

Table B-3 Cumulative Project's (cont.) Trip Distribution

Roadway Segment	Total Traffic Zone M			Total Traffic Zone N			Total Traffic Zone O			Total Traffic Zone P		
	% Distribution		Zone	% Distribution		Zone	% Distribution		Zone	% Distribution		Zone
	In	Out	ADT	In	Out	ADT	In	Out	ADT	In	Out	ADT
Interstate 15												
-Old Hwy 395 to Gopher Cyn Rd	27%	27%	256	11%	11%	137	10%	10%	60	10%	10%	69
-Gopher Cyn Rd to Deer Springs Rd	27%	27%	256	11%	11%	137	10%	10%	60	10%	10%	69
Gopher Canyon Rd												
-Holly Hill Rd to I-15	14%	14%	133	0%	0%	0	0%	0%	0	0%	0%	0
-I-15 SB Ramp to I-15 NB Ramp	14%	14%	133	0%	0%	0	0%	0%	0	0%	0%	0
-I-15 NB Ramp to Champagne Blvd-Old Hwy 395	14%	14%	133	0%	0%	0	0%	0%	0	0%	0%	0
Old Hwy 395												
-Circle R Dr to Gopher Cyn Rd	20%	20%	190	0%	0%	0	0%	0%	0	0%	0%	0
Champagne Blvd												
-Gopher Cyn Rd to Old Castle Rd	6%	6%	57	0%	0%	0	0%	0%	0	0%	0%	0
-Old Castle Rd to Welk View Drive	6%	6%	57	0%	0%	0	0%	0%	0	0%	0%	0
Old Castle Rd												
-Champagne Blvd to Project Access	0%	0%	0	0%	0%	0	0%	0%	0	0%	0%	0
-Project Access to Lilac Rd	0%	0%	0	0%	0%	0	0%	0%	0	0%	0%	0
Lilac Rd												
-Lilac Heights Ct to Old Castle Rd	0%	0%	0	0%	0%	0	0%	0%	0	0%	0%	0
-Old Castle Rd to Via Piedra	0%	0%	0	0%	0%	0	0%	0%	0	0%	0%	0
-Via Piedra to Betsworth	0%	0%	0	0%	0%	0	0%	0%	0	0%	0%	0
-Betsworth to Valley Center	0%	0%	0	0%	0%	0	0%	0%	0	0%	0%	0
Valley Center Rd												
-Vesper Rd to Cole Grade Rd	0%	0%	0	0%	0%	0	0%	0%	0	0%	0%	0
-Cole Grade Rd to Lilac Rd	0%	0%	0	0%	0%	0	0%	0%	0	0%	0%	0
-Lilac Rd to Mirar De Valle	0%	0%	0	0%	0%	0	0%	0%	0	0%	0%	0
Cole Grade Rd												
-Fruitvale Rd to Valley Center Rd	0%	0%	0	0%	0%	0	0%	0%	0	0%	0%	0

Table B-3 Cumulative Project's (cont) Trip Distribution

Roadway Segment	Total Traffic Zone Q			Total Traffic Zone R			Total Traffic Zone S			Total Traffic Zone T		
	% Distribution		Zone	% Distribution		Zone	% Distribution		Zone	% Distribution		Zone
	In	Out	ADT	In	Out	ADT	In	Out	ADT	In	Out	ADT
Interstate 15												
-Old Hwy 395 to Gopher Cyn Rd	7%	7%	7	10%	10%	13	12%	12%	225	15%	15%	83
-Gopher Cyn Rd to Deer Springs Rd	7%	7%	7	10%	10%	13	12%	12%	225	15%	15%	83
Gopher Canyon Rd												
-Holly Hill Rd to I-15	0%	0%	0	0%	0%	0	4%	4%	75	0%	0%	0
-I-15 SB Ramp to I-15 NB Ramp	0%	0%	0	0%	0%	0	4%	4%	75	0%	0%	0
-I-15 NB Ramp to Champagne Blvd-Old Hwy 395	0%	0%	0	0%	0%	0	4%	4%	75	0%	0%	0
Old Hwy 395												
-Circle R Dr to Gopher Cyn Rd	0%	0%	0	0%	0%	0	0%	0%	0	0%	0%	0
Champagne Blvd												
-Gopher Cyn Rd to Old Castle Rd	0%	0%	0	0%	0%	0	4%	4%	75	0%	0%	0
-Old Castle Rd to Welk View Drive	0%	0%	0	0%	0%	0	4%	4%	75	0%	0%	0
Old Castle Rd												
-Champagne Blvd to Project Access	0%	0%	0	0%	0%	0	0%	0%	0	0%	0%	0
-Project Access to Lilac Rd	0%	0%	0	0%	0%	0	0%	0%	0	0%	0%	0
Lilac Rd												
-Lilac Heights Ct to Old Castle Rd	0%	0%	0	0%	0%	0	0%	0%	0	0%	0%	0
-Old Castle Rd to Via Piedra	0%	0%	0	0%	0%	0	0%	0%	0	0%	0%	0
-Via Piedra to Betsworth	0%	0%	0	0%	0%	0	0%	0%	0	0%	0%	0
-Betsworth to Valley Center	0%	0%	0	0%	0%	0	0%	0%	0	0%	0%	0
Valley Center Rd												
-Vesper Rd to Cole Grade Rd	0%	0%	0	0%	0%	0	0%	0%	0	0%	0%	0
-Cole Grade Rd to Lilac Rd	0%	0%	0	0%	0%	0	0%	0%	0	0%	0%	0
-Lilac Rd to Mirar De Valle	0%	0%	0	0%	0%	0	0%	0%	0	0%	0%	0
Cole Grade Rd												
-Fruitvale Rd to Valley Center Rd	0%	0%	0	0%	0%	0	0%	0%	0	0%	0%	0

Table B-3 Cumulative Project's (Cont.) Trip Distribution

Roadway Segment	Total Traffic Zone U			Total Traffic Zone V			Total Traffic Zone W			Total Traffic Zone X		
	% Distribution		Zone	% Distribution		Zone	% Distribution		Zone	% Distribution		Zone
	In	Out	ADT	In	Out	ADT	In	Out	ADT	In	Out	ADT
Interstate 15												
-Old Hwy 395 to Gopher Cyn Rd	24%	24%	100	5%	5%	59	7%	7%	48	13%	13%	14
-Gopher Cyn Rd to Deer Springs Rd	24%	24%	100	0%	0%	0	7%	7%	48	0%	0%	0
Gopher Canyon Rd												
-Holly Hill Rd to I-15	0%	0%	0	13%	13%	154	0%	0%	0	2%	2%	2
-I-15 SB Ramp to I-15 NB Ramp	0%	0%	0	18%	13%	184	0%	0%	0	15%	2%	9
-I-15 NB Ramp to Champagne Blvd-Old Hwy 395	0%	0%	0	18%	18%	213	0%	0%	0	15%	15%	16
Old Hwy 395												
-Circle R Dr to Gopher Cyn Rd	0%	0%	0	6%	6%	71	0%	0%	0	0%	0%	0
Champagne Blvd												
-Gopher Cyn Rd to Old Castle Rd	0%	0%	0	24%	24%	284	0%	0%	0	15%	15%	16
-Old Castle Rd to Welk View Drive	0%	0%	0	26%	26%	308	0%	0%	0	0%	0%	0
Old Castle Rd												
-Champagne Blvd to Project Access	0%	0%	0	2%	2%	24	0%	0%	0	15%	15%	16
-Project Access to Lilac Rd	0%	0%	0	2%	2%	24	0%	0%	0	17%	17%	18
Lilac Rd												
-Lilac Heights Ct to Old Castle Rd	0%	0%	0	0%	0%	0	0%	0%	0	3%	3%	3
-Old Castle Rd to Via Piedra	0%	0%	0	2%	2%	24	0%	0%	0	20%	20%	22
-Via Piedra to Betsworth	0%	0%	0	2%	2%	24	0%	0%	0	80%	80%	86
-Betsworth to Valley Center	0%	0%	0	2%	2%	24	0%	0%	0	80%	80%	86
Valley Center Rd												
-Vesper Rd to Cole Grade Rd	0%	0%	0	0%	0%	0	0%	0%	0	10%	10%	11
-Cole Grade Rd to Lilac Rd	0%	0%	0	1%	1%	12	0%	0%	0	25%	25%	27
-Lilac Rd to Mirar De Valle	0%	0%	0	1%	1%	12	0%	0%	0	55%	55%	59
Cole Grade Rd												
-Fruitvale Rd to Valley Center Rd	0%	0%	0	0%	0%	0	0%	0%	0	15%	15%	16

Table B-3 Cumulative Project's (Cont.) Trip Distribution

Roadway Segment	Total Traffic Zone Y % Distribution In	Total Traffic Zone Y % Distribution Out	Total Traffic Zone Y Zone ADT	Total Cum Traffic w/o Zone Y (Stonegate)	Total Cum Traffic + Zone Y (Stonegate)
Interstate 15					
-Old Hwy 395 to Gopher Cyn Rd	11%	11%	3,876	18,703	22,579
-Gopher Cyn Rd to Deer Springs Rd	11%	11%	3,876	15,895	19,771
Gopher Canyon Rd					
-Holly Hill Rd to I-15	0%	0%	0	2,818	2,818
-I-15 SB Ramp to I-15 NB Ramp	0%	0%	0	4,223	4,223
-I-15 NB Ramp to Champagne Blvd-Old Hwy 395	0%	0%	0	5,627	5,627
Old Hwy 395					
-Circle R Dr to Gopher Cyn Rd	0%	0%	0	1,713	1,713
Champagne Blvd					
-Gopher Cyn Rd to Old Castle Rd	0%	0%	0	7,382	7,382
-Old Castle Rd to Welk View Drive	0%	0%	0	5,582	5,582
Old Castle Rd					
-Champagne Blvd to Project Access	0%	0%	0	3,746	3,746
-Project Access to Lilac Rd	0%	0%	0	3,235	3,235
Lilac Rd					
-Lilac Heights Ct to Old Castle Rd	0%	0%	0	1,644	1,644
-Old Castle Rd to Via Piedra	0%	0%	0	4,879	4,879
-Via Piedra to Betsworth	0%	0%	0	7,034	7,034
-Betsworth to Valley Center	0%	0%	0	10,119	10,119
Valley Center Rd					
-Vesper Rd to Cole Grade Rd	0%	0%	0	4,980	4,980
-Cole Grade Rd to Lilac Rd	0%	0%	0	16,074	16,074
-Lilac Rd to Mirar De Valle	0%	0%	0	15,900	15,900
Cole Grade Rd					
-Fruitvale Rd to Valley Center Rd	0%	0%	0	16,447	16,447

APPENDIX C

- Existing Conditions Analysis Worksheets

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	0	293	222	459	343	0	0	0	0	61	2	465
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	0	315	239	494	369	0	0	0	0	66	2	500
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												2
Median type								None			None	
Median storage veh)												
Upstream signal (ft)					855							
pX, platoon unblocked												
vC, conflicting volume	369			554			1857	1790	434	1790	1910	184
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	369			554			1857	1790	434	1790	1910	184
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			51			100	100	100	0	94	39
cM capacity (veh/h)	1186			1013			11	41	570	31	35	826

Direction, Lane #	EB 1	WB 1	WB 2	WB 3	SB 1
Volume Total	554	494	184	184	568
Volume Left	0	494	0	0	66
Volume Right	239	0	0	0	500
cSH	1700	1013	1700	1700	213
Volume to Capacity	0.33	0.49	0.11	0.11	2.66
Queue Length 95th (ft)	0	68	0	0	1217
Control Delay (s)	0.0	11.9	0.0	0.0	794.9
Lane LOS		B			F
Approach Delay (s)	0.0	6.8			794.9
Approach LOS					F

Intersection Summary			
Average Delay	230.4		
Intersection Capacity Utilization	67.9%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	0	680	291	273	365	0	0	0	0	73	0	225
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	739	316	297	397	0	0	0	0	79	0	245
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												2
Median type								None			None	
Median storage veh)												
Upstream signal (ft)					855							
pX, platoon unblocked												
vC, conflicting volume	397			1055			1811	1888	897	1888	2046	198
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	397			1055			1811	1888	897	1888	2046	198
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			55			100	100	100	0	100	70
cM capacity (veh/h)	1158			655			22	38	283	28	30	809

Direction, Lane #	EB 1	WB 1	WB 2	WB 3	SB 1
Volume Total	1055	297	198	198	324
Volume Left	0	297	0	0	79
Volume Right	316	0	0	0	245
cSH	1700	655	1700	1700	103
Volume to Capacity	0.62	0.45	0.12	0.12	3.13
Queue Length 95th (ft)	0	59	0	0	Err
Control Delay (s)	0.0	15.0	0.0	0.0	Err
Lane LOS		B			F
Approach Delay (s)	0.0	6.4			Err
Approach LOS					F

Intersection Summary			
Average Delay	1564.6		
Intersection Capacity Utilization	82.7%	ICU Level of Service	E
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	195	159	0	0	590	74	212	2	179	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	212	173	0	0	641	80	230	2	195	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)									2			
Median type								None			None	
Median storage veh)												
Upstream signal (ft)					375							
pX, platoon unblocked												
vC, conflicting volume	722			173			917	1318	86	1193	1278	361
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	722			173			917	1318	86	1193	1278	361
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	76			100			0	98	80	100	100	100
cM capacity (veh/h)	876			1401			184	118	955	91	125	636

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	NB 1
Volume Total	212	86	86	428	294	427
Volume Left	212	0	0	0	0	230
Volume Right	0	0	0	0	80	195
cSH	876	1700	1700	1700	1700	297
Volume to Capacity	0.24	0.05	0.05	0.25	0.17	1.44
Queue Length 95th (ft)	24	0	0	0	0	579
Control Delay (s)	10.4	0.0	0.0	0.0	0.0	248.1
Lane LOS	B					F
Approach Delay (s)	5.7			0.0		248.1
Approach LOS						F

Intersection Summary			
Average Delay	70.5		
Intersection Capacity Utilization	67.9%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	492	261	0	0	426	70	212	3	434	0	0	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	507	269	0	0	439	72	219	3	447	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)									2			
Median type								None			None	
Median storage veh)												
Upstream signal (ft)					375							
pX, platoon unblocked												
vC, conflicting volume	511			269			1503	1795	135	1626	1759	256
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	511			269			1503	1795	135	1626	1759	256
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	52			100			0	92	50	100	100	100
cM capacity (veh/h)	1050			1292			52	41	890	20	43	744

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	NB 1
Volume Total	507	135	135	293	219	669
Volume Left	507	0	0	0	0	219
Volume Right	0	0	0	0	72	447
cSH	1050	1700	1700	1700	1700	140
Volume to Capacity	0.48	0.08	0.08	0.17	0.13	4.77
Queue Length 95th (ft)	67	0	0	0	0	Err
Control Delay (s)	11.6	0.0	0.0	0.0	0.0	Err
Lane LOS	B					F
Approach Delay (s)	7.6			0.0		Err
Approach LOS						F

Intersection Summary			
Average Delay	3422.1		
Intersection Capacity Utilization	82.7%	ICU Level of Service	E
Analysis Period (min)	15		

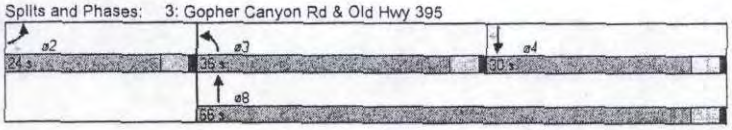
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1770	1583	1770	1863	1863	1583
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1770	1583	1770	1863	1863	1583
Satd. Flow (RTOR)		220				391
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	138	200	308	101	197	356
Adj. Flow (vph)	152	220	338	111	216	391
Lane Group Flow (vph)	152	220	338	111	216	391
Turn Type		Perm	Prot			Perm
Protected Phases	2		3	8	4	
Permitted Phases		2				4
Detector Phases	2	2	3	8	4	4
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	20.5	20.5	8.5	20.5	20.5	20.5
Total Split (s)	24.0	24.0	36.0	66.0	30.0	30.0
Total Split (%)	26.7%	26.7%	40.0%	73.3%	33.3%	33.3%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Recall Mode	C-Max	C-Max	None	Min	Min	Min
Act Effct Green (s)	41.2	41.2	20.8	40.8	15.9	15.9
Actuated g/C Ratio	0.46	0.46	0.23	0.45	0.18	0.18
v/c Ratio	0.19	0.26	0.82	0.13	0.66	0.65
Control Delay	18.3	4.0	40.8	10.4	43.4	8.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.3	4.0	40.8	10.4	43.4	8.8
LOS	B	A	D	B	D	A
Approach Delay	9.9			33.3	21.1	

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Approach LOS	A			C	C	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:EBL and 6:, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.82
Intersection Signal Delay: 22.0 — Intersection LOS: C
Intersection Capacity Utilization 45.8% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 3: Gopher Canyon Rd & Old Hwy 395



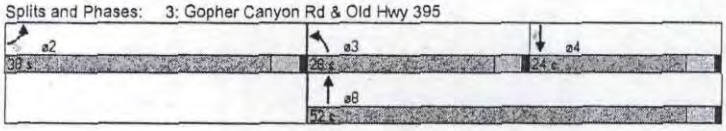
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1770	1583	1770	1863	1863	1583
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1770	1583	1770	1863	1863	1583
Satd. Flow (RTOR)		338				204
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	371	324	300	231	130	196
Adj. Flow (vph)	386	338	312	241	135	204
Lane Group Flow (vph)	386	338	312	241	135	204
Turn Type		Perm	Prot			Perm
Protected Phases	2		3	8	4	
Permitted Phases		2				4
Detector Phases	2	2	3	8	4	4
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	20.5	20.5	8.5	20.5	20.5	20.5
Total Split (s)	38.0	38.0	28.0	52.0	24.0	24.0
Total Split (%)	42.2%	42.2%	31.1%	57.8%	26.7%	26.7%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Recall Mode	C-Max	C-Max	None	Min	Min	Min
Act Effct Green (s)	45.8	45.8	20.2	36.2	12.0	12.0
Actuated g/C Ratio	0.51	0.51	0.22	0.40	0.13	0.13
v/c Ratio	0.43	0.35	0.79	0.32	0.54	0.53
Control Delay	17.5	3.0	41.1	17.1	44.1	10.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	17.5	3.0	41.1	17.1	44.1	10.3
LOS	B	A	D	B	D	B
Approach Delay	10.8			30.7	23.8	

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Approach LOS	B			C	C	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:EBL and 6:, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.79
Intersection Signal Delay: 20.3 — Intersection LOS: C
Intersection Capacity Utilization 54.0% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 3: Gopher Canyon Rd & Old Hwy 395



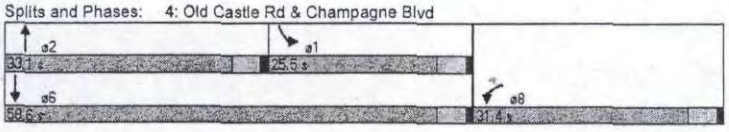
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850	0.951			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1583	1771	0	1770	1863
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1770	1583	1771	0	1770	1863
Satd. Flow (RTOR)		305	34			
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	141	341	68	40	195	202
Adj. Flow (vph)	157	379	76	44	217	224
Lane Group Flow (vph)	157	379	120	0	217	224
Turn Type		Perm			Prot	
Protected Phases	8		2		1	6
Permitted Phases		8				
Detector Phases	8	8	2		1	6
Minimum Initial (s)	4.0	4.0	4.0		4.0	4.0
Minimum Split (s)	20.5	20.5	20.5		8.5	20.5
Total Split (s)	31.4	31.4	33.1	0.0	25.5	58.6
Total Split (%)	34.9%	34.9%	36.8%	0.0%	28.3%	65.1%
Yellow Time (s)	3.5	3.5	3.5		3.5	3.5
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			*Yes*		*Yes*	
Recall Mode	None	None	C-Min		None	C-Min
Act Effct Green (s)	14.0	14.0	47.6		16.4	68.0
Actuated g/C Ratio	0.16	0.16	0.53		0.18	0.76
v/c Ratio	0.57	0.75	0.13		0.67	0.16
Control Delay	42.4	17.9	10.7		30.8	2.5
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	42.4	17.9	10.7		30.8	2.5
LOS	D	B	B		C	A
Approach Delay	25.1		10.7			16.4

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Approach LOS	C		B			B

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 54 (60%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.75
Intersection Signal Delay: 20.0 — Intersection LOS: C
Intersection Capacity Utilization 33.8% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 4: Old Castle Rd & Champagne Blvd



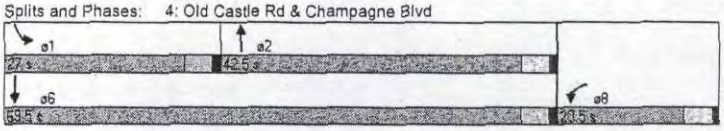
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850	0.952			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1583	1773	0	1770	1863
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1770	1583	1773	0	1770	1863
Satd. Flow (RTOR)		308	38			
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	56	286	245	134	325	129
Adj. Flow (vph)	60	308	263	144	349	139
Lane Group Flow (vph)	60	308	407	0	349	139
Turn Type		Perm			Prot	
Protected Phases	8		2		1	6
Permitted Phases		8				
Detector Phases	8	8	2		1	6
Minimum Initial (s)	4.0	4.0	4.0		4.0	4.0
Minimum Split (s)	20.5	20.5	20.5		8.5	20.5
Total Split (s)	20.5	20.5	42.5	0.0	27.0	69.5
Total Split (%)	22.8%	22.8%	47.2%	0.0%	30.0%	77.2%
Yellow Time (s)	3.5	3.5	3.5		3.5	3.5
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?			Yes		Yes	
Recall Mode	None	None	C-Min		None	C-Min
Act Effct Green (s)	9.6	9.6	45.9		22.6	72.4
Actuated g/C Ratio	0.11	0.11	0.51		0.25	0.80
v/c Ratio	0.32	0.69	0.44		0.79	0.09
Control Delay	40.3	13.3	17.1		41.0	1.4
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	40.3	13.3	17.1		41.0	1.4
LOS	D	B	B		D	A
Approach Delay	17.7		17.1			29.7

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Approach LOS	B		B			C

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 18 (20%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.79
Intersection Signal Delay: 22.1 — Intersection LOS: C
Intersection Capacity Utilization 52.4% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 4: Old Castle Rd & Champagne Blvd



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	60	270	240	85	130	65
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	68	307	273	97	148	74
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	369				716	273
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	369				716	273
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	94				61	90
cM capacity (veh/h)	1189				374	766

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1
Volume Total	68	307	273	97	222
Volume Left	68	0	0	0	148
Volume Right	0	0	0	97	74
cSH	1189	1700	1700	1700	451
Volume to Capacity	0.06	0.18	0.16	0.06	0.49
Queue Length 95th (ft)	5	0	0	0	66
Control Delay (s)	8.2	0.0	0.0	0.0	20.4
Lane LOS	A				C
Approach Delay (s)	1.5		0.0		20.4
Approach LOS					C

Intersection Summary			
Average Delay	5.3		
Intersection Capacity Utilization	37.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	55	215	290	120	85	30
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	65	253	341	141	100	35
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	482				724	341
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	482				724	341
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	94				73	95
cM capacity (veh/h)	1080				369	701

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1
Volume Total	65	253	341	141	135
Volume Left	65	0	0	0	100
Volume Right	0	0	0	141	35
cSH	1080	1700	1700	1700	421
Volume to Capacity	0.06	0.15	0.20	0.08	0.32
Queue Length 95th (ft)	5	0	0	0	34
Control Delay (s)	8.5	0.0	0.0	0.0	17.5
Lane LOS	A				C
Approach Delay (s)	1.7		0.0		17.5
Approach LOS					C

Intersection Summary			
Average Delay	3.1		
Intersection Capacity Utilization	35.1%	ICU Level of Service	A
Analysis Period (min)	15		

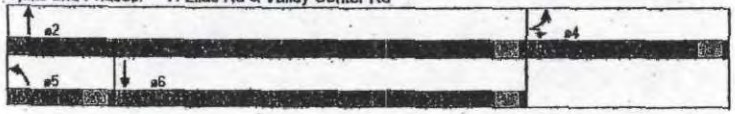
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50	50	50	50	
Trailing Detector (ft)	0	0	0	0	0	
Turning Speed (mph)	15	9	15			9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850			0.963	
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1770	1583	1770	1863	1794	0
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1770	1583	1770	1863	1794	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		195			29	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)	55			45	45	
Link Distance (ft)	1108			1318	1724	
Travel Time (s)	13.7			20.0	26.1	
Volume (vph)	340	185	105	605	710	265
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	358	195	111	637	747	279
Group Flow (vph)	358	195	111	637	1026	0
Type		Perm	Prot			
ected Phases	4		5	2	6	
nitted Phases		4				
l Split (s)	28.0	28.0	15.0	72.0	57.0	0.0
Effct Green (s)	22.0	22.0	9.9	64.9	53.6	
uated g/C Ratio	0.23	0.23	0.10	0.68	0.56	
v/c Ratio	0.87	0.38	0.61	0.50	1.00	
Control Delay	51.8	6.7	53.8	9.1	52.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay	51.8	6.7	53.8	9.1	52.0	
LOS	D	A	D	A	D	
Approach Delay	35.9			15.7	52.0	
Approach LOS	D			B	D	

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 95
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.00
Intersection Signal Delay: 36.5 — Intersection LOS: D
Intersection Capacity Utilization 88.2% — ICU Level of Service E
Analysis Period (min) 15

C-11

Splits and Phases: 7: Lilac Rd & Valley Center Rd



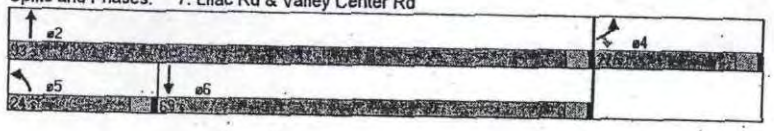
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50	50	50	50	
Trailing Detector (ft)	0	0	0	0	0	
Turning Speed (mph)	15	9	15			9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850			0.963	
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1770	1583	1770	1863	1794	0
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1770	1583	1770	1863	1794	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		206			25	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)	55			45	45	
Link Distance (ft)	1106			1318	1724	
Travel Time (s)	13.7			20.0	26.1	
Volume (vph)	275	185	265	860	640	240
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	306	206	294	956	711	267
Lane Group Flow (vph)	306	206	294	956	978	0
Turn Type		Perm	Prot			
Protected Phases	4		5	2	6	
Permitted Phases		4				
Total Split (s)	27.0	27.0	24.0	93.0	69.0	0.0
Act Effct Green (s)	22.4	22.4	20.0	89.0	65.0	
Actuated g/C Ratio	0.19	0.19	0.17	0.75	0.54	
v/c Ratio	0.92	0.44	0.99	0.69	0.99	
Control Delay	81.0	8.8	100.5	11.3	53.5	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay	81.0	8.8	100.5	11.3	53.5	
LOS	F	A	F	B	D	
Approach Delay	52.0			32.3	53.5	
Approach LOS	D			C	D	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 119.4
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.99
Intersection Signal Delay: 43.5 — Intersection LOS: D
Intersection Capacity Utilization 88.2% — ICU Level of Service E
Analysis Period (min) 15

Existing (2007) - PM
Lanes, Volumes, Timings
7: Lilac Rd & Valley Center Rd

Splits and Phases: 7: Lilac Rd & Valley Center Rd



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Darnell & Associates, Inc.
4/9/2007

APPENDIX D

- Existing + Project Conditions Analysis Worksheets

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	0	293	222	462	343	0	0	0	0	61	2	465
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	0	315	239	497	369	0	0	0	0	66	2	500
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												2
Median type								None			None	
Median storage veh)												
Upstream signal (ft)					855							
pX, platoon unblocked												
vC, conflicting volume	369			554			1863	1797	434	1797	1916	184
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	369			554			1863	1797	434	1797	1916	184
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			51			100	100	100	0	94	39
cM capacity (veh/h)	1186			1013			10	40	570	31	34	826

Direction, Lane #	EB 1	WB 1	WB 2	WB 3	SB 1
Volume Total	554	497	184	184	568
Volume Left	0	497	0	0	66
Volume Right	239	0	0	0	500
cSH	1700	1013	1700	1700	211
Volume to Capacity	0.33	0.49	0.11	0.11	2.69
Queue Length 95th (ft)	0	69	0	0	1224
Control Delay (s)	0.0	11.9	0.0	0.0	810.5
Lane LOS		B			F
Approach Delay (s)	0.0	6.8			810.5
Approach LOS					F

Intersection Summary			
Average Delay	234.6		
Intersection Capacity Utilization	68.1%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	0	680	291	274	365	0	0	0	0	74	0	225
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	739	316	298	397	0	0	0	0	80	0	245
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												2
Median type								None			None	
Median storage veh)												
Upstream signal (ft)					855							
pX, platoon unblocked												
vC, conflicting volume	397			1055			1814	1890	897	1890	2048	198
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	397			1055			1814	1890	897	1890	2048	198
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			55			100	100	100	0	100	70
cM capacity (veh/h)	1158			655			22	38	283	28	30	809

Direction, Lane #	EB 1	WB 1	WB 2	WB 3	SB 1
Volume Total	1055	298	198	198	325
Volume Left	0	298	0	0	80
Volume Right	316	0	0	0	245
cSH	1700	655	1700	1700	102
Volume to Capacity	0.62	0.45	0.12	0.12	3.19
Queue Length 95th (ft)	0	59	0	0	Err
Control Delay (s)	0.0	15.0	0.0	0.0	Err
Lane LOS		B			F
Approach Delay (s)	0.0	6.4			Err
Approach LOS					F

Intersection Summary			
Average Delay	1568.3		
Intersection Capacity Utilization	82.8%	ICU Level of Service	E
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	195	159	0	0	593	75	212	2	180	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	212	173	0	0	645	82	230	2	196	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)									2			
Median type								None			None	
Median storage veh)												
Upstream signal (ft)					375							
pX, platoon unblocked												
vC, conflicting volume	726			173			919	1323	86	1197	1282	363
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	726			173			919	1323	86	1197	1282	363
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	76			100			0	98	80	100	100	100
cM capacity (veh/h)	873			1401			184	117	955	90	124	634

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	NB 1
Volume Total	212	86	86	430	296	428
Volume Left	212	0	0	0	0	230
Volume Right	0	0	0	0	82	196
cSH	873	1700	1700	1700	1700	297
Volume to Capacity	0.24	0.05	0.05	0.25	0.17	1.44
Queue Length 95th (ft)	24	0	0	0	0	583
Control Delay (s)	10.4	0.0	0.0	0.0	0.0	250.4
Lane LOS	B					F
Approach Delay (s)	5.8			0.0		250.4
Approach LOS						F

Intersection Summary			
Average Delay	71.1		
Intersection Capacity Utilization	68.1%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	492	262	0	0	427	70	212	3	437	0	0	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	507	270	0	0	440	72	219	3	451	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)									2			
Median type								None			None	
Median storage veh)												
Upstream signal (ft)					375							
pX, platoon unblocked												
vC, conflicting volume	512			270			1505	1797	135	1627	1761	256
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	512			270			1505	1797	135	1627	1761	256
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	52			100			0	92	49	100	100	100
cM capacity (veh/h)	1049			1290			52	41	889	20	43	743

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	NB 1
Volume Total	507	135	135	293	219	672
Volume Left	507	0	0	0	0	219
Volume Right	0	0	0	0	72	451
cSH	1049	1700	1700	1700	1700	140
Volume to Capacity	0.48	0.08	0.08	0.17	0.13	4.79
Queue Length 95th (ft)	67	0	0	0	0	Err
Control Delay (s)	11.6	0.0	0.0	0.0	0.0	Err
Lane LOS	B					F
Approach Delay (s)	7.6			0.0		Err
Approach LOS						F

Intersection Summary			
Average Delay	3428.8		
Intersection Capacity Utilization	82.8%	ICU Level of Service	E
Analysis Period (min)	15		

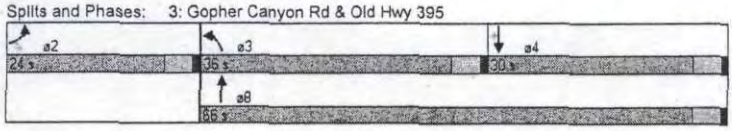
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1770	1583	1770	1863	1863	1583
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1770	1583	1770	1863	1863	1583
Satd. Flow (RTOR)		221				391
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	138	201	312	101	197	356
Adj. Flow (vph)	152	221	343	111	216	391
Lane Group Flow (vph)	152	221	343	111	216	391
Turn Type		Perm	Prot			Perm
Protected Phases	2		3	8	4	
Permitted Phases		2				4
Detector Phases	2	2	3	8	4	4
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	20.5	20.5	8.5	20.5	20.5	20.5
Total Split (s)	24.0	24.0	36.0	66.0	30.0	30.0
Total Split (%)	26.7%	26.7%	40.0%	73.3%	33.3%	33.3%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag			*Lead*		*Lag*	*Lag*
Lead-Lag Optimize?			Yes		Yes	Yes
Recall Mode	C-Max	C-Max	None	Min	Min	Min
Act Effct Green (s)	40.9	40.9	21.1	41.1	15.9	15.9
Actuated g/C Ratio	0.45	0.45	0.23	0.46	0.18	0.18
v/c Ratio	0.19	0.26	0.82	0.13	0.66	0.65
Control Delay	18.5	4.1	40.5	10.2	43.4	8.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.5	4.1	40.5	10.2	43.4	8.8
LOS	B	A	D	B	D	A
Approach Delay	10.0			33.1	21.1	

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Approach LOS	A			C	C	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:EBL and 6:, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.82
Intersection Signal Delay: 22.0 — Intersection LOS: C
Intersection Capacity Utilization 46.0% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 3: Gopher Canyon Rd & Old Hwy 395



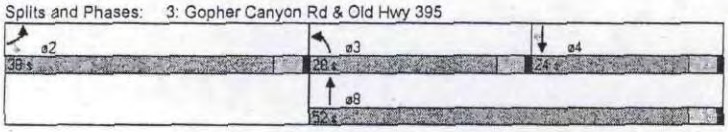
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1770	1583	1770	1863	1863	1583
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1770	1583	1770	1863	1863	1583
Satd. Flow (RTOR)		342				204
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	371	328	301	231	130	196
Adj. Flow (vph)	386	342	314	241	135	204
Lane Group Flow (vph)	386	342	314	241	135	204
Turn Type		Perm	Prot			Perm
Protected Phases	2		3	8	4	
Permitted Phases		2				4
Detector Phases	2	2	3	8	4	4
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	20.5	20.5	8.5	20.5	20.5	20.5
Total Split (s)	38.0	38.0	28.0	52.0	24.0	24.0
Total Split (%)	42.2%	42.2%	31.1%	57.8%	26.7%	26.7%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Recall Mode	C-Max	C-Max	None	Min	Min	Min
Act Effct Green (s)	45.7	45.7	20.3	36.3	12.0	12.0
Actuated g/C Ratio	0.51	0.51	0.23	0.40	0.13	0.13
v/c Ratio	0.43	0.35	0.79	0.32	0.54	0.53
Control Delay	17.6	3.0	41.3	17.1	44.1	10.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	17.6	3.0	41.3	17.1	44.1	10.3
LOS	B	A	D	B	D	B
Approach Delay	10.8			30.8	23.8	

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Approach LOS	B			C	C	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:EBL and 6:, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.79
Intersection Signal Delay: 20.3 — Intersection LOS: C
Intersection Capacity Utilization 54.1% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 3: Gopher Canyon Rd & Old Hwy 395



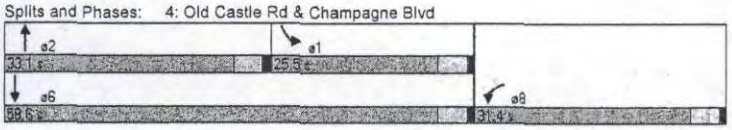
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850	0.951			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1583	1771	0	1770	1863
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1770	1583	1771	0	1770	1863
Satd. Flow (RTOR)		309	34			
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	141	345	68	40	196	202
Adj. Flow (vph)	157	383	76	44	218	224
Lane Group Flow (vph)	157	383	120	0	218	224
Turn Type		Perm			Prot	
Protected Phases	8		2		1	6
Permitted Phases		8				
Detector Phases	8	8	2		1	6
Minimum Initial (s)	4.0	4.0	4.0		4.0	4.0
Minimum Split (s)	20.5	20.5	20.5		8.5	20.5
Total Split (s)	31.4	31.4	33.1	0.0	25.5	58.6
Total Split (%)	34.9%	34.9%	36.8%	0.0%	28.3%	65.1%
Yellow Time (s)	3.5	3.5	3.5		3.5	3.5
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Recall Mode	None	None	C-Min		None	C-Min
Act Effct Green (s)	14.0	14.0	47.5		16.5	68.0
Actuated g/C Ratio	0.16	0.16	0.53		0.18	0.76
v/c Ratio	0.57	0.76	0.13		0.67	0.16
Control Delay	42.3	17.9	10.8		30.8	2.6
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	42.3	17.9	10.8		30.8	2.6
LOS	D	B	B		C	A
Approach Delay	25.0		10.8			16.5

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Approach LOS	C		B			B

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 54 (60%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.76
Intersection Signal Delay: 20.0 — Intersection LOS: C
Intersection Capacity Utilization 34.0% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 4: Old Castle Rd & Champagne Blvd



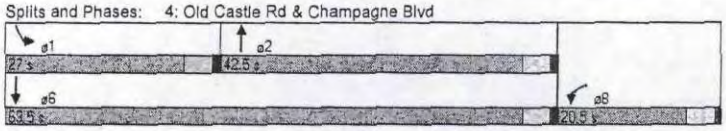
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850	0.952			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1583	1773	0	1770	1863
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1770	1583	1773	0	1770	1863
Satd. Flow (RTOR)		309	38			
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	56	287	245	134	329	129
Adj. Flow (vph)	60	309	263	144	354	139
Lane Group Flow (vph)	60	309	407	0	354	139
Turn Type		Perm			Prot	
Protected Phases	8		2		1	6
Permitted Phases		8				
Detector Phases	8	8	2		1	6
Minimum Initial (s)	4.0	4.0	4.0		4.0	4.0
Minimum Split (s)	20.5	20.5	20.5		8.5	20.5
Total Split (s)	20.5	20.5	42.5	0.0	27.0	69.5
Total Split (%)	22.8%	22.8%	47.2%	0.0%	30.0%	77.2%
Yellow Time (s)	3.5	3.5	3.5		3.5	3.5
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?			Yes		Yes	
Recall Mode	None	None	C-Min		None	C-Min
Act Effct Green (s)	9.6	9.6	45.7		22.7	72.4
Actuated g/C Ratio	0.11	0.11	0.51		0.25	0.80
v/c Ratio	0.32	0.69	0.44		0.79	0.09
Control Delay	40.2	13.3	17.1		41.0	1.4
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	40.2	13.3	17.1		41.0	1.4
LOS	D	B	B		D	A
Approach Delay	17.6		17.1			29.9

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Approach LOS	B		B			C

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 18 (20%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.79
Intersection Signal Delay: 22.2 — Intersection LOS: C
Intersection Capacity Utilization 52.6% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 4: Old Castle Rd & Champagne Blvd



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	60	271	241	85	130	65
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	68	308	274	97	148	74
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	370				718	274
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	370				718	274
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	94				60	90
cM capacity (veh/h)	1188				373	765

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1
Volume Total	68	308	274	97	222
Volume Left	68	0	0	0	148
Volume Right	0	0	0	97	74
cSH	1188	1700	1700	1700	450
Volume to Capacity	0.06	0.18	0.16	0.06	0.49
Queue Length 95th (ft)	5	0	0	0	67
Control Delay (s)	8.2	0.0	0.0	0.0	20.5
Lane LOS	A				C
Approach Delay (s)	1.5		0.0		20.5
Approach LOS					C

Intersection Summary			
Average Delay	5.3		
Intersection Capacity Utilization	37.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	55	216	292	120	85	30
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	65	254	344	141	100	35
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	485				727	344
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	485				727	344
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	94				73	95
cM capacity (veh/h)	1078				367	699

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1
Volume Total	65	254	344	141	135
Volume Left	65	0	0	0	100
Volume Right	0	0	0	141	35
cSH	1078	1700	1700	1700	419
Volume to Capacity	0.06	0.15	0.20	0.08	0.32
Queue Length 95th (ft)	5	0	0	0	34
Control Delay (s)	8.6	0.0	0.0	0.0	17.6
Lane LOS	A				C
Approach Delay (s)	1.7		0.0		17.6
Approach LOS					C

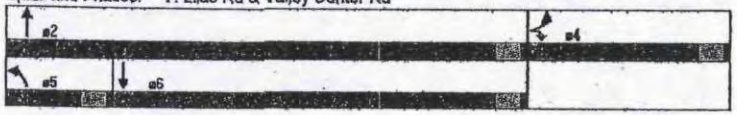
Intersection Summary			
Average Delay	3.1		
Intersection Capacity Utilization	35.2%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50	50	50	50	
Trailing Detector (ft)	0	0	0	0	0	
Turning Speed (mph)	15	9	15			9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850			0.963	
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1770	1583	1770	1863	1794	0
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1770	1583	1770	1863	1794	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		195			29	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)	55			45	45	
Link Distance (ft)	1106			1318	1724	
Travel Time (s)	13.7			20.0	26.1	
Volume (vph)	341	185	105	605	710	266
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	359	195	111	637	747	280
Lane Group Flow (vph)	359	195	111	637	1027	0
Turn Type		Perm	Prot			
Protected Phases	4		5	2	6	
Permitted Phases		4				
Total Split (s)	28.0	28.0	15.0	72.0	57.0	0.0
[illegible] Effct Green (s)	22.0	22.0	9.9	64.9	53.6	
[illegible]ated g/C Ratio	0.23	0.23	0.10	0.68	0.56	
[illegible]Ratio	0.88	0.38	0.61	0.50	1.00	
[illegible]trol Delay	52.0	6.7	53.8	9.1	52.4	
[illegible]ue Delay	0.0	0.0	0.0	0.0	0.0	
[illegible]l Delay	52.0	6.7	53.8	9.1	52.4	
[illegible]	D	A	D	A	D	
[illegible]roach Delay	36.1			15.7	52.4	
Approach LOS	D			B	D	

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 95
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.00
Intersection Signal Delay: 36.8 — Intersection LOS: D
Intersection Capacity Utilization 88.3% — ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 7: Lilac Rd & Valley Center Rd

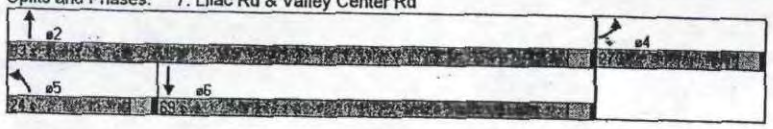


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50	50	50	50	
Trailing Detector (ft)	0	0	0	0	0	
Turning Speed (mph)	15	9	15			9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850			0.963	
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1770	1583	1770	1863	1794	0
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1770	1583	1770	1863	1794	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		206			25	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)	55			45	45	
Link Distance (ft)	1106			1318	1724	
Travel Time (s)	13.7			20.0	26.1	
Volume (vph)	276	185	266	860	640	241
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	307	206	296	956	711	268
Lane Group Flow (vph)	307	206	296	956	979	0
Turn Type		Perm	Prot			
Protected Phases	4		5	2	6	
Permitted Phases		4				
Total Split (s)	27.0	27.0	24.0	93.0	69.0	0.0
Act Effct Green (s)	22.5	22.5	20.0	89.0	65.0	
Actuated g/C Ratio	0.19	0.19	0.17	0.74	0.54	
v/c Ratio	0.92	0.44	1.00	0.69	0.99	
Control Delay	81.2	8.8	102.2	11.3	53.8	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay	81.2	8.8	102.2	11.3	53.8	
LOS	F	A	F	B	D	
Approach Delay	52.1			32.8	53.8	
Approach LOS	D			C	D	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 119.5
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.00
Intersection Signal Delay: 43.9 — Intersection LOS: D
Intersection Capacity Utilization 88.4% — ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 7: Lilac Rd & Valley Center Rd



APPENDIX E

- Cumulative w/o Project Conditions Analysis Worksheets

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	0	410	235	548	461	0	0	0	0	100	5	514
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	0	441	253	589	496	0	0	0	0	108	5	553
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												2
Median type								None			None	
Median storage veh)												
Upstream signal (ft)					855							
pX, platoon unblocked												
vC, conflicting volume	496			694			2273	2241	567	2241	2368	248
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	496			694			2273	2241	567	2241	2368	248
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			34			100	100	100	0	55	27
cM capacity (veh/h)	1064			898			2	14	467	11	12	752

Direction, Lane #	EB 1	WB 1	WB 2	WB 3	SB 1
Volume Total	694	589	248	248	666
Volume Left	0	589	0	0	108
Volume Right	253	0	0	0	553
cSH	1700	898	1700	1700	60
Volume to Capacity	0.41	0.66	0.15	0.15	11.04
Queue Length 95th (ft)	0	127	0	0	Err
Control Delay (s)	0.0	16.3	0.0	0.0	Err
Lane LOS		C			F
Approach Delay (s)	0.0	8.9			Err
Approach LOS					F

Intersection Summary			
Average Delay	2726.9		
Intersection Capacity Utilization	82.1%	ICU Level of Service	E
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	0	929	310	323	478	0	0	0	0	128	5	283
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	0	999	333	347	514	0	0	0	0	138	5	304
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												2
Median type								None			None	
Median storage veh)												
Upstream signal (ft)					855							
pX, platoon unblocked												
vC, conflicting volume	514			1332			2272	2374	1166	2374	2541	257
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	514			1332			2272	2374	1166	2374	2541	257
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			32			100	100	100	0	38	59
cM capacity (veh/h)	1048			514			3	11	187	8	9	742

Direction, Lane #	EB 1	WB 1	WB 2	WB 3	SB 1
Volume Total	1332	347	257	257	447
Volume Left	0	347	0	0	138
Volume Right	333	0	0	0	304
cSH	1700	514	1700	1700	25
Volume to Capacity	0.78	0.68	0.15	0.15	17.63
Queue Length 95th (ft)	0	126	0	0	Err
Control Delay (s)	0.0	25.4	0.0	0.0	Err
Lane LOS		D			F
Approach Delay (s)	0.0	10.2			Err
Approach LOS					F

Intersection Summary			
Average Delay	1697.0		
Intersection Capacity Utilization	103.0%	ICU Level of Service	G
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	228	282	0	0	784	108	225	5	215	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	248	307	0	0	852	117	245	5	234	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)									2			
Median type								None			None	
Median storage veh)												
Upstream signal (ft)					375							
pX, platoon unblocked												
vC, conflicting volume	970			307			1228	1772	153	1562	1713	485
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	970			307			1228	1772	153	1562	1713	485
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	65			100			0	90	73	100	100	100
cM capacity (veh/h)	706			1251			98	53	865	37	58	528

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	NB 1
Volume Total	248	153	153	568	401	484
Volume Left	248	0	0	0	0	245
Volume Right	0	0	0	0	117	234
cSH	706	1700	1700	1700	1700	169
Volume to Capacity	0.35	0.09	0.09	0.33	0.24	2.87
Queue Length 95th (ft)	39	0	0	0	0	1088
Control Delay (s)	12.8	0.0	0.0	0.0	0.0	898.0
Lane LOS	B					F
Approach Delay (s)	5.7			0.0		898.0
Approach LOS						F

Intersection Summary			
Average Delay	217.9		
Intersection Capacity Utilization	82.1%	ICU Level of Service	E
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	590	467	0	0	576	122	225	5	533	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	641	508	0	0	626	133	245	5	579	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)									2			
Median type								None			None	
Median storage veh)												
Upstream signal (ft)					375							
pX, platoon unblocked												
vC, conflicting volume	759			508			2103	2549	254	2232	2483	379
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	759			508			2103	2549	254	2232	2483	379
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	24			100			0	16	22	100	100	100
cM capacity (veh/h)	849			1053			11	6	746	1	7	618

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	NB 1
Volume Total	641	254	254	417	341	829
Volume Left	641	0	0	0	0	245
Volume Right	0	0	0	0	133	579
cSH	849	1700	1700	1700	1700	35
Volume to Capacity	0.76	0.15	0.15	0.25	0.20	23.47
Queue Length 95th (ft)	181	0	0	0	0	Err
Control Delay (s)	21.1	0.0	0.0	0.0	0.0	Err
Lane LOS	C					F
Approach Delay (s)	11.8			0.0		Err
Approach LOS						F

Intersection Summary			
Average Delay	3034.8		
Intersection Capacity Utilization	103.0%	ICU Level of Service	G
Analysis Period (min)	15		

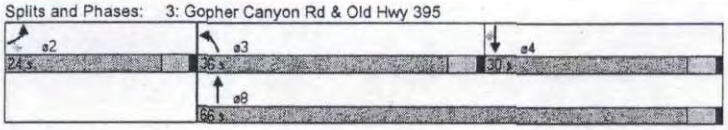
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1770	1583	1770	1863	1863	1583
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1770	1583	1770	1863	1863	1583
Satd. Flow (RTOR)		316				391
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	205	288	413	234	317	479
Adj. Flow (vph)	225	316	454	257	348	526
Lane Group Flow (vph)	225	316	454	257	348	526
Turn Type		Perm	Prot			Perm
Protected Phases	2		3	8	4	
Permitted Phases		2				4
Detector Phases	2	2	3	8	4	4
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	20.5	20.5	8.5	20.5	20.5	20.5
Total Split (s)	24.0	24.0	36.0	66.0	30.0	30.0
Total Split (%)	26.7%	26.7%	40.0%	73.3%	33.3%	33.3%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Recall Mode	C-Max	C-Max	None	Min	Min	Min
Act Effct Green (s)	29.0	29.0	27.1	53.0	21.9	21.9
Actuated g/C Ratio	0.32	0.32	0.30	0.59	0.24	0.24
v/c Ratio	0.39	0.44	0.85	0.23	0.77	0.77
Control Delay	29.9	5.8	39.8	5.1	43.0	16.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.9	5.8	39.8	5.1	43.0	16.4
LOS	C	A	D	A	D	B
Approach Delay	15.8			27.3	27.0	

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Approach LOS	B			C	C	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:EBL and 6:, Start of Green
Natural Cycle: 65
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.85
Intersection Signal Delay: 24.2 — Intersection LOS: C
Intersection Capacity Utilization 60.9% — ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 3: Gopher Canyon Rd & Old Hwy 395



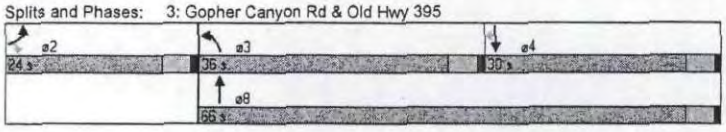
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1770	1583	1770	1863	1863	1583
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1770	1583	1770	1863	1863	1583
Satd. Flow (RTOR)		512				239
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	525	475	419	383	302	279
Adj. Flow (vph)	577	522	460	421	332	307
Lane Group Flow (vph)	577	522	460	421	332	307
Turn Type		Perm	Prot			Perm
Protected Phases	2		3	8	4	
Permitted Phases		2				4
Detector Phases	2	2	3	8	4	4
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	20.5	20.5	8.5	20.5	20.5	20.5
Total Split (s)	24.0	24.0	36.0	66.0	30.0	30.0
Total Split (%)	26.7%	26.7%	40.0%	73.3%	33.3%	33.3%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Recall Mode	C-Max	C-Max	None	Min	Min	Min
Act Effct Green (s)	29.3	29.3	27.9	52.7	20.8	20.8
Actuated g/C Ratio	0.33	0.33	0.31	0.59	0.23	0.23
v/c Ratio	1.00	0.61	0.84	0.39	0.77	0.56
Control Delay	73.2	6.7	48.2	7.4	44.3	11.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	73.2	6.7	48.2	7.4	44.3	11.3
LOS	E	A	D	A	D	B
Approach Delay	41.6			28.7	28.4	

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Approach LOS	D			C	C	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:EBL and 6:, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.00
Intersection Signal Delay: 34.0 — Intersection LOS: C
Intersection Capacity Utilization 78.2% — ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 3: Gopher Canyon Rd & Old Hwy 395



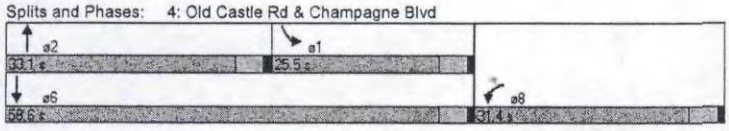
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850	0.978			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1583	1822	0	1770	1863
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1770	1583	1822	0	1770	1863
Satd. Flow (RTOR)		304	11			
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	160	384	263	50	223	382
Adj. Flow (vph)	178	427	292	56	248	424
Lane Group Flow (vph)	178	427	348	0	248	424
Turn Type		Perm			Prot	
Protected Phases	8		2		1	6
Permitted Phases		8				
Detector Phases	8	8	2		1	6
Minimum Initial (s)	4.0	4.0	4.0		4.0	4.0
Minimum Split (s)	20.5	20.5	20.5		8.5	20.5
Total Split (s)	31.4	31.4	33.1	0.0	25.5	58.6
Total Split (%)	34.9%	34.9%	36.8%	0.0%	28.3%	65.1%
Yellow Time (s)	3.5	3.5	3.5		3.5	3.5
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Recall Mode	None	None	C-Min		None	C-Min
Act Effct Green (s)	16.1	16.1	44.4		17.5	65.9
Actuated g/C Ratio	0.18	0.18	0.49		0.19	0.73
v/c Ratio	0.56	0.80	0.38		0.72	0.31
Control Delay	39.1	21.8	18.2		30.7	2.6
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	39.1	21.8	18.2		30.7	2.6
LOS	D	C	B		C	A
Approach Delay	26.9		18.2			12.9

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Approach LOS	C		B			B

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 54 (60%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.80
Intersection Signal Delay: 19.3 — Intersection LOS: B
Intersection Capacity Utilization 48.1% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 4: Old Castle Rd & Champagne Blvd



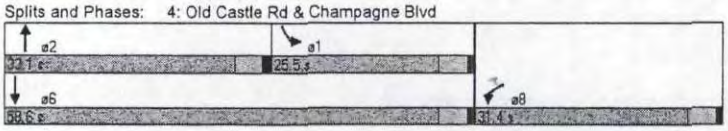
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850	0.966			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1583	1799	0	1770	1863
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1770	1583	1799	0	1770	1863
Satd. Flow (RTOR)		359	20			
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	75	323	479	160	370	407
Adj. Flow (vph)	83	359	532	178	411	452
Lane Group Flow (vph)	83	359	710	0	411	452
Turn Type		Perm			Prot	
Protected Phases	8		2		1	6
Permitted Phases		8				
Detector Phases	8	8	2		1	6
Minimum Initial (s)	4.0	4.0	4.0		4.0	4.0
Minimum Split (s)	20.5	20.5	20.5		8.5	20.5
Total Split (s)	31.4	31.4	33.1	0.0	25.5	58.6
Total Split (%)	34.9%	34.9%	36.8%	0.0%	28.3%	65.1%
Yellow Time (s)	3.5	3.5	3.5		3.5	3.5
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Recall Mode	None	None	C-Min		None	C-Min
Act Effct Green (s)	10.3	10.3	46.2		21.5	71.7
Actuated g/C Ratio	0.11	0.11	0.51		0.24	0.80
v/c Ratio	0.41	0.72	0.76		0.97	0.30
Control Delay	41.9	12.9	24.9		62.5	2.3
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	41.9	12.9	24.9		62.5	2.3
LOS	D	B	C		E	A
Approach Delay	18.3		24.9			31.0

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Approach LOS	B		C			C

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 54 (60%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.97
Intersection Signal Delay: 26.1 — Intersection LOS: C
Intersection Capacity Utilization 69.6% — ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 4: Old Castle Rd & Champagne Blvd



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	65	376	381	171	179	75
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	74	427	433	194	203	85
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	627				1008	433
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	627				1008	433
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	92				17	86
cM capacity (veh/h)	955				246	623

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1
Volume Total	74	427	433	194	289
Volume Left	74	0	0	0	203
Volume Right	0	0	0	194	85
cSH	955	1700	1700	1700	299
Volume to Capacity	0.08	0.25	0.25	0.11	0.96
Queue Length 95th (ft)	6	0	0	0	244
Control Delay (s)	9.1	0.0	0.0	0.0	81.6
Lane LOS	A				F
Approach Delay (s)	1.3		0.0		81.6
Approach LOS					F

Intersection Summary			
Average Delay	17.1		
Intersection Capacity Utilization	48.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	60	403	437	183	188	35
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	71	474	514	215	221	41
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	729				1129	514
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	729				1129	514
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	92				0	93
cM capacity (veh/h)	874				207	560

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1
Volume Total	71	474	514	215	262
Volume Left	71	0	0	0	221
Volume Right	0	0	0	215	41
cSH	874	1700	1700	1700	230
Volume to Capacity	0.08	0.28	0.30	0.13	1.14
Queue Length 95th (ft)	7	0	0	0	304
Control Delay (s)	9.5	0.0	0.0	0.0	147.3
Lane LOS	A				F
Approach Delay (s)	1.2		0.0		147.3
Approach LOS					F

Intersection Summary			
Average Delay	25.6		
Intersection Capacity Utilization	48.9%	ICU Level of Service	A
Analysis Period (min)	15		

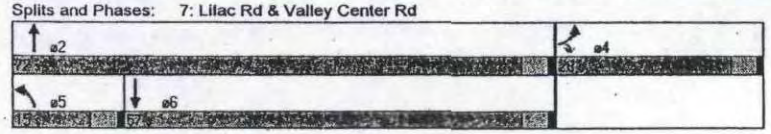
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50	50	50	50	
Trailing Detector (ft)	0	0	0	0	0	
Turning Speed (mph)	15	9	15			9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850			0.963	
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1770	1583	1770	1863	1794	0
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1770	1583	1770	1863	1794	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		234			29	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)	55			45	45	
Link Distance (ft)	1106			1318	1724	
Travel Time (s)	13.7			20.0	26.1	
Volume (vph)	570	478	254	970	1076	412
Peak Hour Factor	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*	*0.95*
Adj. Flow (vph)	600	503	267	1021	1133	434
Lane Group Flow (vph)	600	503	267	1021	1567	0
Turn Type		Perm	Prot			
Protected Phases	4		5	2	6	
Permitted Phases		4				
Total Split (s)	28.0	28.0	15.0	72.0	57.0	0.0
Act Effct Green (s)	24.0	24.0	11.0	68.0	53.0	
Actuated g/C Ratio	0.24	0.24	0.11	0.68	0.53	
v/c Ratio	1.41	0.90	1.37	0.81	1.63	
Control Delay	230.3	40.9	231.2	17.8	309.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay	230.3	40.9	231.2	17.8	309.1	
LOS	F	D	F	B	F	
Approach Delay	144.0			62.0	309.1	
Approach LOS	F			E	F	

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.63
Intersection Signal Delay: 182.7 *Intersection LOS: F*
Intersection Capacity Utilization 137.4% ICU Level of Service H
Analysis Period (min) 15

Cumulative (2010) w/o Project - AM
Lanes, Volumes, Timings 7: Lilac Rd & Valley Center Rd

Splits and Phases: 7: Lilac Rd & Valley Center Rd



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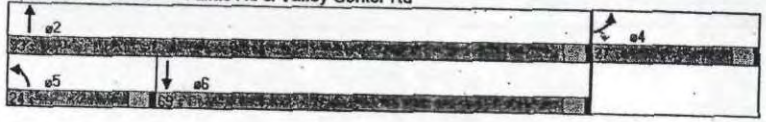
vsh
Darnell & Associates, Inc. 4/9/2007

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50	50	50	50	
Trailing Detector (ft)	0	0	0	0	0	
Turning Speed (mph)	15	9	15			9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850			0.958	
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1770	1583	1770	1863	1785	0
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1770	1583	1770	1863	1785	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		294			30	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)	55			45	45	
Link Distance (ft)	1106			1318	1724	
Travel Time (s)	13.7			20.0	26.1	
Volume (vph)	464	396	622	1339	1098	502
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	516	440	691	1488	1220	558
Lane Group Flow (vph)	516	440	691	1488	1778	0
Turn Type		Perm	Prot			
Protected Phases	4		5	2	6	
Permitted Phases		4				
Total Split (s)	27.0	27.0	24.0	93.0	69.0	0.0
Act Effct Green (s)	23.0	23.0	20.0	89.0	65.0	
Actuated g/C Ratio	0.19	0.19	0.17	0.74	0.54	
v/c Ratio	1.52	0.81	2.34	1.08	1.81	
Control Delay	284.0	28.2	638.3	65.4	392.6	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay	284.0	28.2	638.3	65.4	392.6	
LOS	F	C	F	E	F	
Approach Delay	166.3			247.1	392.6	
Approach LOS	F			F	F	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 2.34
Intersection Signal Delay: 284.0 Intersection LOS: F
Intersection Capacity Utilization 158.5% ICU Level of Service H
Analysis Period (min) 15

Splits and Phases: 7: Lilac Rd & Valley Center Rd



APPENDIX F

- Cumulative + Project Conditions Analysis Worksheets

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	0	410	235	551	461	0	0	0	0	100	5	514
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	0	441	253	592	496	0	0	0	0	108	5	553
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												2
Median type								None			None	
Median storage veh)												
Upstream signal (ft)					855							
pX, platoon unblocked												
vC, conflicting volume	496			694			2279	2248	567	2248	2374	248
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	496			694			2279	2248	567	2248	2374	248
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			34			100	100	100	0	54	27
cM capacity (veh/h)	1064			898			2	14	467	11	12	752

Direction, Lane #	EB 1	WB 1	WB 2	WB 3	SB 1
Volume Total	694	592	248	248	666
Volume Left	0	592	0	0	108
Volume Right	253	0	0	0	553
cSH	1700	898	1700	1700	59
Volume to Capacity	0.41	0.66	0.15	0.15	11.23
Queue Length 95th (ft)	0	128	0	0	Err
Control Delay (s)	0.0	16.4	0.0	0.0	Err
Lane LOS		C			F
Approach Delay (s)	0.0	8.9			Err
Approach LOS					F

Intersection Summary			
Average Delay	2723.4		
Intersection Capacity Utilization	82.2%	ICU Level of Service	E
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	0	929	310	324	478	0	0	0	0	129	5	283
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	0	999	333	348	514	0	0	0	0	139	5	304
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												2
Median type								None			None	
Median storage veh)												
Upstream signal (ft)					855							
pX, platoon unblocked												
vC, conflicting volume	514			1332			2274	2376	1166	2376	2543	257
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	514			1332			2274	2376	1166	2376	2543	257
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			32			100	100	100	0	37	59
cM capacity (veh/h)	1048			514			3	11	187	8	9	742

Direction, Lane #	EB 1	WB 1	WB 2	WB 3	SB 1
Volume Total	1332	348	257	257	448
Volume Left	0	348	0	0	139
Volume Right	333	0	0	0	304
cSH	1700	514	1700	1700	25
Volume to Capacity	0.78	0.68	0.15	0.15	17.90
Queue Length 95th (ft)	0	127	0	0	Err
Control Delay (s)	0.0	25.5	0.0	0.0	Err
Lane LOS		D			F
Approach Delay (s)	0.0	10.3			9999.0
Approach LOS					F

Intersection Summary

Average Delay	1699.7		
Intersection Capacity Utilization	103.1%	ICU Level of Service	G
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	228	282	0	0	787	109	225	5	216	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	248	307	0	0	855	118	245	5	235	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)									2			
Median type								None			None	
Median storage veh)												
Upstream signal (ft)					375							
pX, platoon unblocked												
vC, conflicting volume	974			307			1230	1776	153	1566	1717	487
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	974			307			1230	1776	153	1566	1717	487
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	65			100			0	90	73	100	100	100
cM capacity (veh/h)	704			1251			97	53	865	37	58	526

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	NB 1
Volume Total	248	153	153	570	404	485
Volume Left	248	0	0	0	0	245
Volume Right	0	0	0	0	118	235
cSH	704	1700	1700	1700	1700	168
Volume to Capacity	0.35	0.09	0.09	0.34	0.24	2.88
Queue Length 95th (ft)	40	0	0	0	0	1093
Control Delay (s)	12.9	0.0	0.0	0.0	0.0	903.8
Lane LOS	B					F
Approach Delay (s)	5.8			0.0		903.8
Approach LOS						F

Intersection Summary

Average Delay	219.2		
Intersection Capacity Utilization	82.2%	ICU Level of Service	E
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	590	468	0	0	577	122	225	5	536	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	641	509	0	0	627	133	245	5	583	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)									2			
Median type								None			None	
Median storage veh)												
Upstream signal (ft)					375							
pX, platoon unblocked												
vC, conflicting volume	760			509			2105	2551	254	2233	2485	380
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	760			509			2105	2551	254	2233	2485	380
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	24			100			0	15	22	100	100	100
cM capacity (veh/h)	848			1053			11	6	745	1	7	618

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	NB 1
Volume Total	641	254	254	418	342	833
Volume Left	641	0	0	0	0	245
Volume Right	0	0	0	0	133	583
cSH	848	1700	1700	1700	1700	35
Volume to Capacity	0.76	0.15	0.15	0.25	0.20	23.58
Queue Length 95th (ft)	182	0	0	0	0	Err
Control Delay (s)	21.1	0.0	0.0	0.0	0.0	Err
Lane LOS	C					F
Approach Delay (s)	11.8			0.0		Err
Approach LOS						F

Intersection Summary

Average Delay	3040.7		
Intersection Capacity Utilization	103.1%	ICU Level of Service	G
Analysis Period (min)	15		

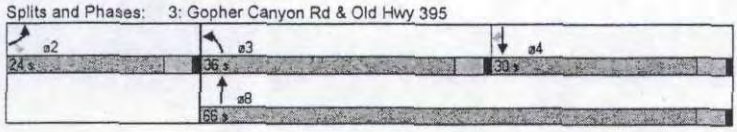
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1770	1583	1770	1863	1863	1583
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1770	1583	1770	1863	1863	1583
Satd. Flow (RTOR)		318				391
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	209	289	417	234	317	479
Adj. Flow (vph)	230	318	458	257	348	526
Lane Group Flow (vph)	230	318	458	257	348	526
Turn Type		Perm	Prot			Perm
Protected Phases	2		3	8	4	
Permitted Phases		2				4
Detector Phases	2	2	3	8	4	4
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	20.5	20.5	8.5	20.5	20.5	20.5
Total Split (s)	24.0	24.0	36.0	66.0	30.0	30.0
Total Split (%)	26.7%	26.7%	40.0%	73.3%	33.3%	33.3%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Recall Mode	C-Max	C-Max	None	Min	Min	Min
Act Effct Green (s)	28.9	28.9	27.3	53.1	21.8	21.8
Actuated g/C Ratio	0.32	0.32	0.30	0.59	0.24	0.24
v/c Ratio	0.40	0.44	0.85	0.23	0.77	0.77
Control Delay	30.1	5.8	39.7	5.1	43.2	16.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	*30.1*	*5.8*	*39.7*	*5.1*	*43.2*	*16.5*
LOS	C	A	D	A	D	B
Approach Delay	16.0			27.2	27.1	

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Approach LOS	B			C	C	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:EBL and 6:, Start of Green
Natural Cycle: 65
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.85
Intersection Signal Delay: 24.3 — Intersection LOS: C
Intersection Capacity Utilization 61.4% — ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 3: Gopher Canyon Rd & Old Hwy 395



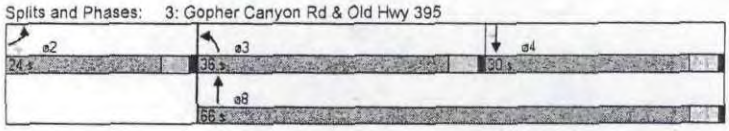
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1770	1583	1770	1863	1863	1583
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1770	1583	1770	1863	1863	1583
Satd. Flow (RTOR)		518				239
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	525	479	420	383	302	279
Adj. Flow (vph)	577	526	462	421	332	307
Lane Group Flow (vph)	577	526	462	421	332	307
Turn Type		Perm	Prot			Perm
Protected Phases	2		3	8	4	
Permitted Phases		2				4
Detector Phases	2	2	3	8	4	4
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	20.5	20.5	8.5	20.5	20.5	20.5
Total Split (s)	24.0	24.0	36.0	66.0	30.0	30.0
Total Split (%)	26.7%	26.7%	40.0%	73.3%	33.3%	33.3%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0
Lead/Lag			Lead		Lag	Lag
Lead-Lag Optimize?			Yes		Yes	Yes
Recall Mode	C-Max	C-Max	None	Min	Min	Min
Act Effct Green (s)	29.9	29.9	27.2	52.1	20.8	20.8
Actuated g/C Ratio	0.33	0.33	0.30	0.58	0.23	0.23
v/c Ratio	0.98	0.60	0.86	0.39	0.77	0.56
Control Delay	66.9	6.6	51.1	7.8	44.3	11.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	66.9	6.6	51.1	7.8	44.3	11.3
LOS	E	A	D	A	D	B
Approach Delay	38.1			30.4	28.4	

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Approach LOS	D			C	C	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 0 (0%), Referenced to phase 2:EBL and 6:, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.98
Intersection Signal Delay: 33.2 — Intersection LOS: C
Intersection Capacity Utilization 78.2% — ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 3: Gopher Canyon Rd & Old Hwy 395



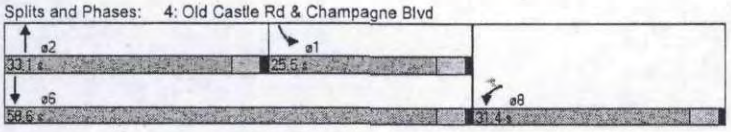
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850	0.978			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1583	1822	0	1770	1863
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1770	1583	1822	0	1770	1863
Satd. Flow (RTOR)		306	11			
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	160	388	263	50	224	382
Adj. Flow (vph)	178	431	292	56	249	424
Lane Group Flow (vph)	178	431	348	0	249	424
Turn Type		Perm			Prot	
Protected Phases	8		2		1	6
Permitted Phases		8				
Detector Phases	8	8	2		1	6
Minimum Initial (s)	4.0	4.0	4.0		4.0	4.0
Minimum Split (s)	20.5	20.5	20.5		8.5	20.5
Total Split (s)	31.4	31.4	33.1	0.0	25.5	58.6
Total Split (%)	34.9%	34.9%	36.8%	0.0%	28.3%	65.1%
Yellow Time (s)	3.5	3.5	3.5		3.5	3.5
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Recall Mode	None	None	C-Min		None	C-Min
Act Effct Green (s)	16.2	16.2	44.2		17.5	65.8
Actuated g/C Ratio	0.18	0.18	0.49		0.19	0.73
v/c Ratio	0.56	0.80	0.39		0.72	0.31
Control Delay	38.9	22.0	18.3		30.7	2.6
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	38.9	22.0	18.3		30.7	2.6
LOS	D	C	B		C	A
Approach Delay	26.9		18.3			13.0

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Approach LOS	C		B			B

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 54 (60%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.80
Intersection Signal Delay: 19.3 — Intersection LOS: B
Intersection Capacity Utilization 48.2% — ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 4: Old Castle Rd & Champagne Blvd



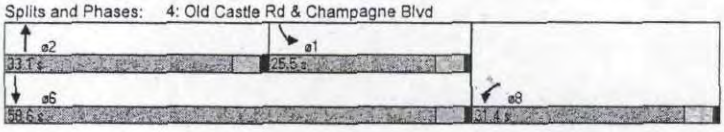
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850	0.966			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1770	1583	1799	0	1770	1863
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1770	1583	1799	0	1770	1863
Satd. Flow (RTOR)		360	20			
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Volume (vph)	75	324	479	160	374	407
Adj. Flow (vph)	83	360	532	178	416	452
Lane Group Flow (vph)	83	360	710	0	416	452
Turn Type		Perm			Prot	
Protected Phases	8		2		1	6
Permitted Phases		8				
Detector Phases	8	8	2		1	6
Minimum Initial (s)	4.0	4.0	4.0		4.0	4.0
Minimum Split (s)	20.5	20.5	20.5		8.5	20.5
Total Split (s)	31.4	31.4	33.1	0.0	25.5	58.6
Total Split (%)	34.9%	34.9%	36.8%	0.0%	28.3%	65.1%
Yellow Time (s)	3.5	3.5	3.5		3.5	3.5
All-Red Time (s)	1.0	1.0	1.0		1.0	1.0
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?			Yes		Yes	
Recall Mode	None	None	C-Min		None	C-Min
Act Effct Green (s)	10.3	10.3	46.2		21.5	71.7
Actuated g/C Ratio	0.11	0.11	0.51		0.24	0.80
v/c Ratio	0.41	0.72	0.76		0.98	0.30
Control Delay	41.9	12.9	24.9		65.7	2.3
Queue Delay	0.0	0.0	0.0		0.0	0.0
Total Delay	41.9	12.9	24.9		65.7	2.3
LOS	D	B	C		E	A
Approach Delay	18.3		24.9			32.7

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Approach LOS	B		C			C

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 54 (60%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.98
Intersection Signal Delay: 26.8 — Intersection LOS: C
Intersection Capacity Utilization 69.8% — ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 4: Old Castle Rd & Champagne Blvd



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	65	377	382	171	179	75
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	74	428	434	194	203	85
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	628				1010	434
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	628				1010	434
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	92				17	86
cM capacity (veh/h)	954				245	622

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1
Volume Total	74	428	434	194	289
Volume Left	74	0	0	0	203
Volume Right	0	0	0	194	85
cSH	954	1700	1700	1700	299
Volume to Capacity	0.08	0.25	0.26	0.11	0.97
Queue Length 95th (ft)	6	0	0	0	245
Control Delay (s)	9.1	0.0	0.0	0.0	82.4
Lane LOS	A				F
Approach Delay (s)	1.3		0.0		82.4
Approach LOS					F

Intersection Summary			
Average Delay	17.2		
Intersection Capacity Utilization	48.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	60	404	439	183	188	35
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	71	475	516	215	221	41
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	732				1133	516
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	732				1133	516
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	92				0	93
cM capacity (veh/h)	873				206	559

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	SB 1
Volume Total	71	475	516	215	262
Volume Left	71	0	0	0	221
Volume Right	0	0	0	215	41
cSH	873	1700	1700	1700	229
Volume to Capacity	0.08	0.28	0.30	0.13	1.15
Queue Length 95th (ft)	7	0	0	0	306
Control Delay (s)	9.5	0.0	0.0	0.0	149.5
Lane LOS	A				F
Approach Delay (s)	1.2		0.0		149.5
Approach LOS					F

Intersection Summary			
Average Delay	25.9		
Intersection Capacity Utilization	49.0%	ICU Level of Service	A
Analysis Period (min)	15		

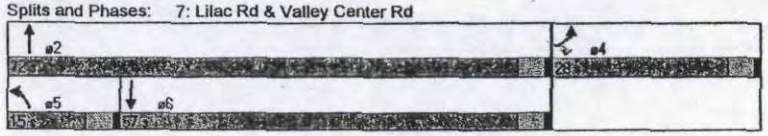
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50	50	50	50	
Trailing Detector (ft)	0	0	0	0	0	
Turning Speed (mph)	*15*	*9*	*15*			*9*
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850			0.963	
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1770	1583	1770	1863	1794	0
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1770	1583	1770	1863	1794	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		234			29	
Headway Factor	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*	*1.00*
Link Speed (mph)	55			45	45	
Link Distance (ft)	1106			1318	1724	
Travel Time (s)	13.7			20.0	26.1	
Volume (vph)	571	478	254	970	1076	413
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	601	503	267	1021	1133	435
Lane Group Flow (vph)	601	503	267	1021	1568	0
Turn Type		Perm	Prot			
Protected Phases	*4*		*5*	*2*	*6*	
Permitted Phases		4				
Total Split (s)	28.0	28.0	15.0	72.0	57.0	0.0
Act Effct Green (s)	24.0	24.0	11.0	68.0	53.0	
Actuated g/C Ratio	0.24	0.24	0.11	0.68	0.53	
v/c Ratio	1.41	0.90	1.37	0.81	1.63	
Control Delay	231.3	40.9	231.2	17.8	309.5	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay	231.3	40.9	231.2	17.8	309.5	
LOS	*F*	*D*	*F*	*B*	*F*	
Approach Delay	144.6			62.0	309.5	
Approach LOS	F			E	F	

Intersection Summary

Area Type: *Other*
Cycle Length: 100
Actuated Cycle Length: 100
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.63
Intersection Signal Delay: 183.0 — Intersection LOS: F
Intersection Capacity Utilization 137.5% — ICU Level of Service H
Analysis Period (min) 15

Cumulative (2010) + Project - AM
Lanes, Volumes, Timings
7: Lilac Rd & Valley Center Rd

Splits and Phases: 7: Lilac Rd & Valley Center Rd



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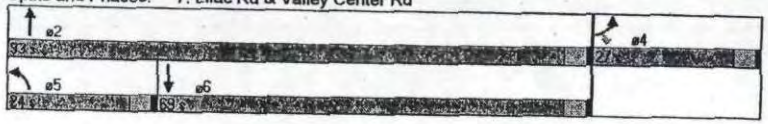
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50	50	50	50	
Trailing Detector (ft)	0	0	0	0	0	
Turning Speed (mph)	15	9	15			9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850			0.958	
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1770	1583	1770	1863	1785	0
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1770	1583	1770	1863	1785	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		294			30	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)	55			45	45	
Link Distance (ft)	1106			1318	1724	
Travel Time (s)	13.7			20.0	26.1	
Volume (vph)	465	396	623	1339	1098	503
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	517	440	692	1488	1220	559
Lane Group Flow (vph)	517	440	692	1488	1779	0
Turn Type		Perm	Prot			
Protected Phases	4		5	2	6	
Permitted Phases		4				
Total Split (s)	27.0	27.0	24.0	93.0	69.0	0.0
Act Effct Green (s)	23.0	23.0	20.0	89.0	65.0	
Actuated g/C Ratio	0.19	0.19	0.17	0.74	0.54	
v/c Ratio	1.53	0.81	2.35	1.08	1.81	
Control Delay	285.2	28.2	639.8	65.4	393.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	
Total Delay	285.2	28.2	639.8	65.4	393.1	
LOS	F	C	F	E	F	
Approach Delay	167.1			247.7	393.1	
Approach LOS	F			F	F	

Intersection Summary

Area Type: Other
Cycle Length: 120
Actuated Cycle Length: 120
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 2.35
Intersection Signal Delay: 284.6 — Intersection LOS: F
Intersection Capacity Utilization 158.7% — ICU Level of Service H
Analysis Period (min) 15

Cumulative (2010) + Project - PM
Lanes, Volumes, Timings
7: Lilac Rd & Valley Center Rd

Splits and Phases: 7: Lilac Rd & Valley Center Rd



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APPENDIX G

- Project Access Analysis Worksheets

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	330	1	1	305	4	1
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	375	1	1	347	5	1
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			376		724	376
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			376		724	376
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		99	100
cM capacity (veh/h)			1182		392	671

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	376	348	6
Volume Left	0	1	5
Volume Right	1	0	1
cSH	1700	1182	427
Volume to Capacity	0.22	0.00	0.01
Queue Length 95th (ft)	0	0	1
Control Delay (s)	0.0	0.0	13.5
Lane LOS		A	B
Approach Delay (s)	0.0	0.0	13.5
Approach LOS			B

Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	27.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	270	4	2	320	1	1
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	318	5	2	376	1	1
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			322		701	320
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			322		701	320
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	100
cM capacity (veh/h)			1237		404	721

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	322	379	2
Volume Left	0	2	1
Volume Right	5	0	1
cSH	1700	1237	518
Volume to Capacity	0.19	0.00	0.00
Queue Length 95th (ft)	0	0	0
Control Delay (s)	0.0	0.1	12.0
Lane LOS		A	B
Approach Delay (s)	0.0	0.1	12.0
Approach LOS			B

Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	28.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	441	1	1	456	4	1
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	501	1	1	518	5	1
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			502		1022	502
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			502		1022	502
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		98	100
cM capacity (veh/h)			1062		261	570

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	502	519	6
Volume Left	0	1	5
Volume Right	1	0	1
cSH	1700	1062	293
Volume to Capacity	0.30	0.00	0.02
Queue Length 95th (ft)	0	0	1
Control Delay (s)	0.0	0.0	17.5
Lane LOS		A	C
Approach Delay (s)	0.0	0.0	17.5
Approach LOS			C

Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	34.8%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	463	4	2	472	1	1
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	545	5	2	555	1	1
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			549		1107	547
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			549		1107	547
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		99	100
cM capacity (veh/h)			1020		232	537

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	549	558	2
Volume Left	0	2	1
Volume Right	5	0	1
cSH	1700	1020	324
Volume to Capacity	0.32	0.00	0.01
Queue Length 95th (ft)	0	0	1
Control Delay (s)	0.0	0.1	16.2
Lane LOS		A	C
Approach Delay (s)	0.0	0.1	16.2
Approach LOS			C

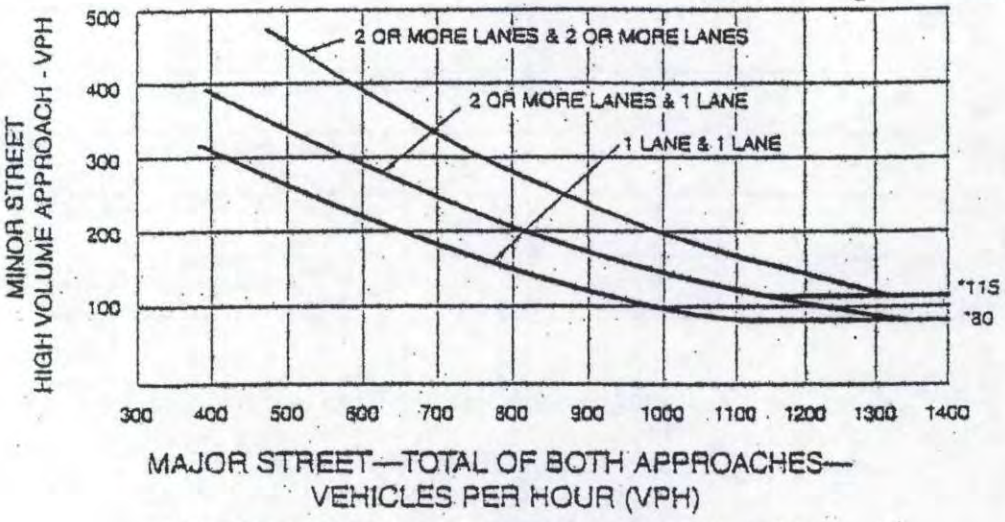
Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	36.4%	ICU Level of Service	A
Analysis Period (min)	15		

APPENDIX H

- Signal Warrant Worksheets

Figure 4C-1. Warrant 2, Four-Hour Vehicular Volume

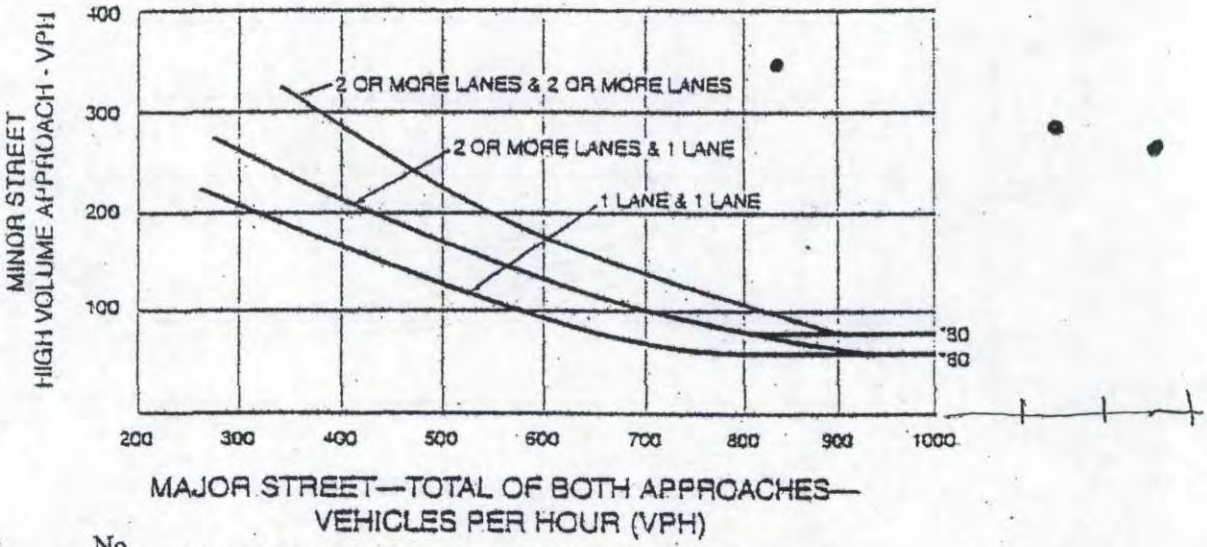
Existing (2005)



*Note: 115 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 80 vph applies as the lower threshold volume for a minor-street approach with one lane.

Figure 4C-2. Warrant 2, Four-Hour Vehicular Volume (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 70 km/h (40 mph) ON MAJOR STREET)



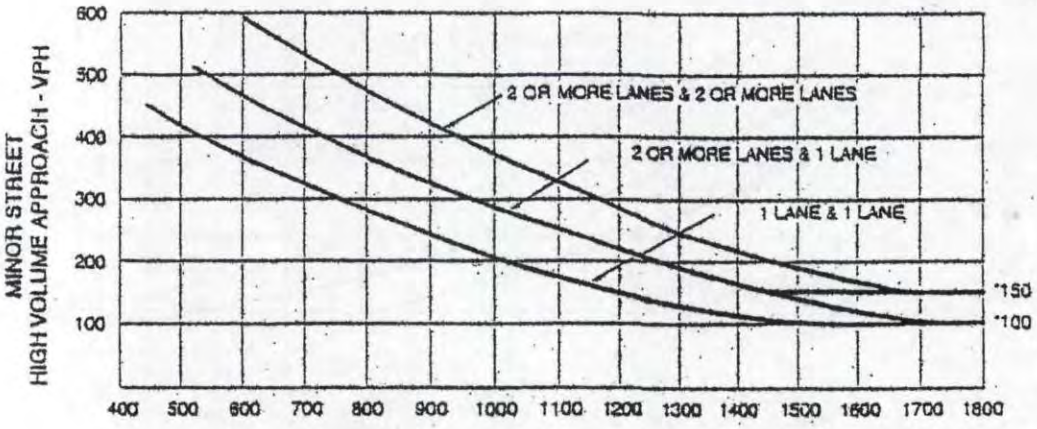
*Note: 80 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 60 vph applies as the lower threshold volume for a minor-street approach with one lane.

Satisfied? Yes [X] No [ ]

Street	Approach	Approach Lanes		Hourly Volume			
		One	2 or More	7-8 AM	8-9 AM	4-5 PM	5-6 PM
Gopher Cyn	Major Street - (Total of both Approaches)		X	1045	840	1159	1283
I-15 SB	Minor Street - (Highest Approach)		X	533	358	273	247

Gopher Cyn / I-15 SB Ramp

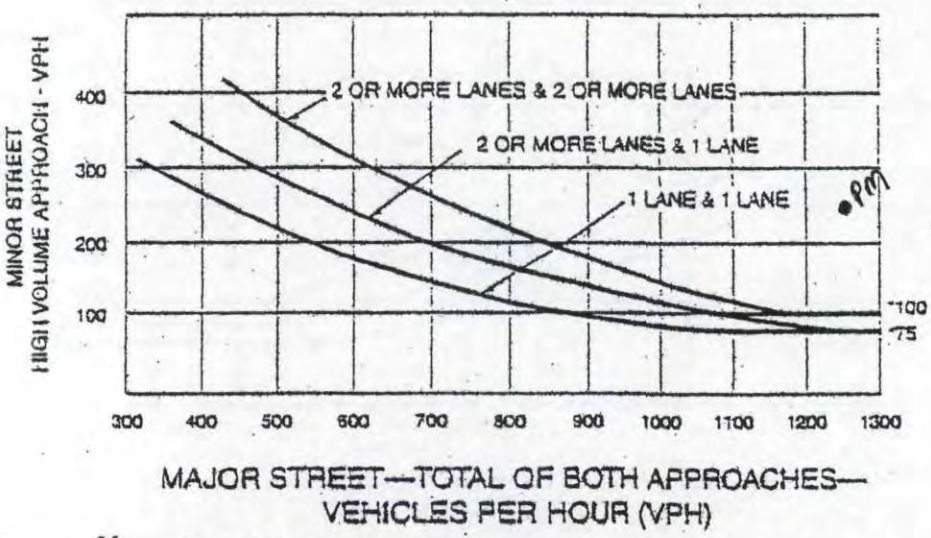
Figure 4C-3. Warrant 3, Peak Hour Existing (2005)



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

** Figure 4C-4. Warrant 3, Peak Hour (70% Factor)* AM

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 70 km/h (40 mph) ON MAJOR STREET)



*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

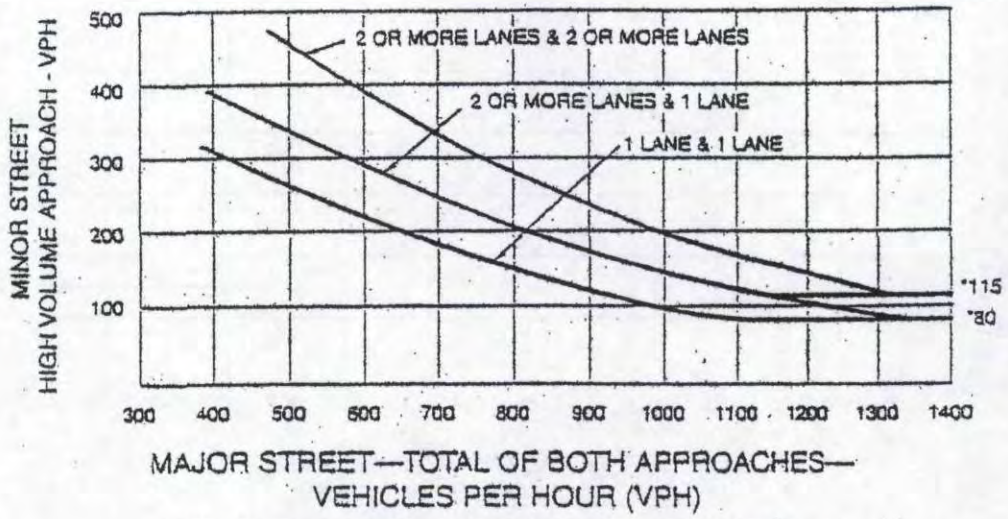
Satisfied? Yes [X] No [ ]

Street	Approach	Approach Lanes		Hourly Volume			
		One	2 or More	AM PK		PM PK	
Gopher Cyn	Major Street - (Total of both Approaches)		X	1045		1283	
I-15 SB	Minor Street - (Highest Approach)		X	533		247	

Gopher Cyn / I-15 SB Ramp

Figure 4C-1. Warrant 2, Four-Hour Vehicular Volume

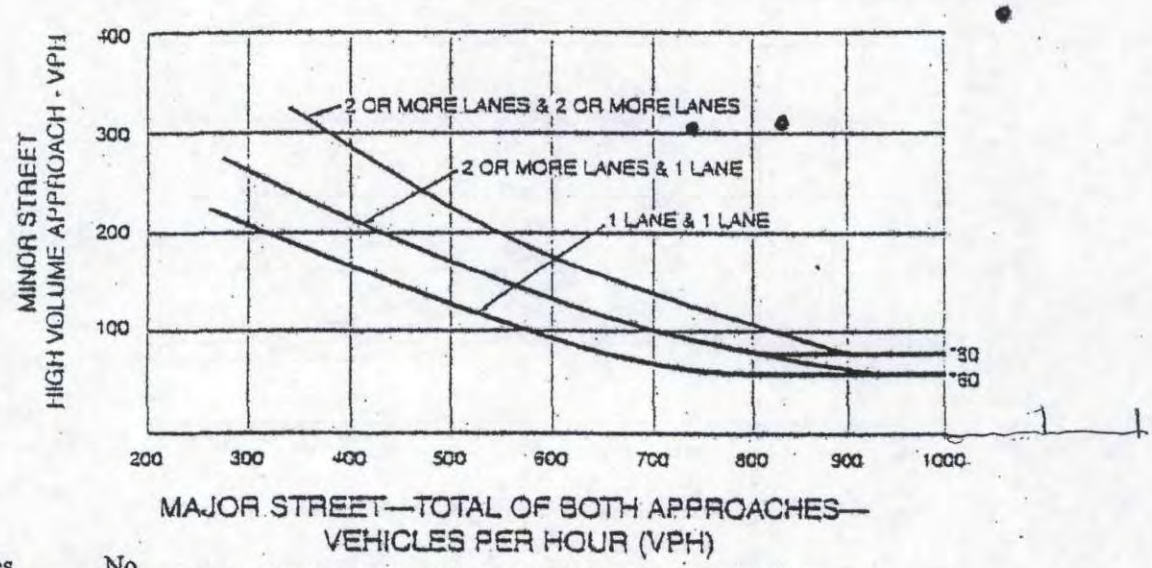
EXISTING (2005)



*Note: 115 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 80 vph applies as the lower threshold volume for a minor-street approach with one lane.

Figure 4C-2. Warrant 2, Four-Hour Vehicular Volume (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 70 km/h (40 mph) ON MAJOR STREET)



*Note: 80 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 60 vph applies as the lower threshold volume for a minor-street approach with one lane.

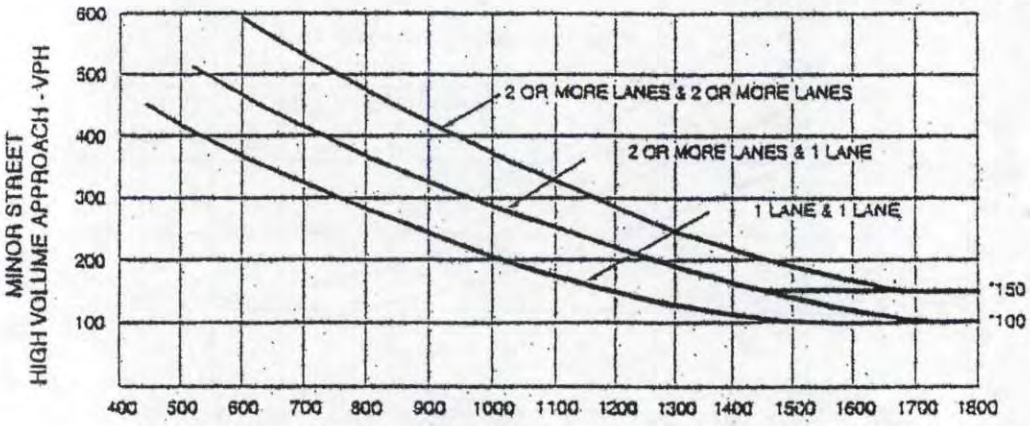
Satisfied? Yes [X] No [ ]

Street	Approach	Approach Lanes		Hourly Volume			
		One	2 or More	7-8 AM	8-9 AM	4-5 PM	5-6 PM
Gopher Cyn	Major Street - (Total of both Approaches)		X	835	732	1057	944
I-15 NB	Minor Street - (Highest Approach)		X	303	304	406	531

Gopher Cyn / I-15 NB Ramp

Figure 4C-3. Warrant 3, Peak Hour

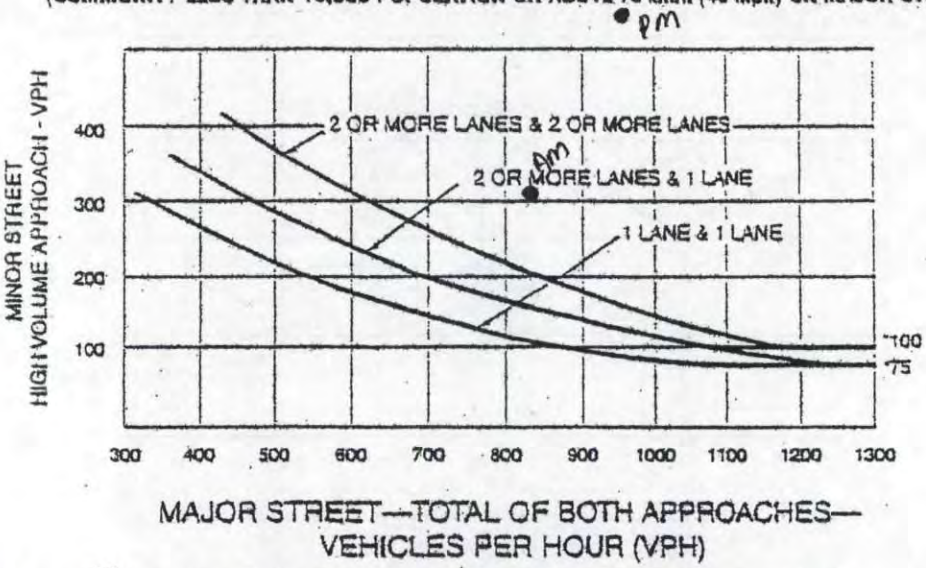
EXISTING (2005)



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

✱ *Figure 4C-4. Warrant 3, Peak Hour (70% Factor)*

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 70 km/h (40 mph) ON MAJOR STREET)



*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

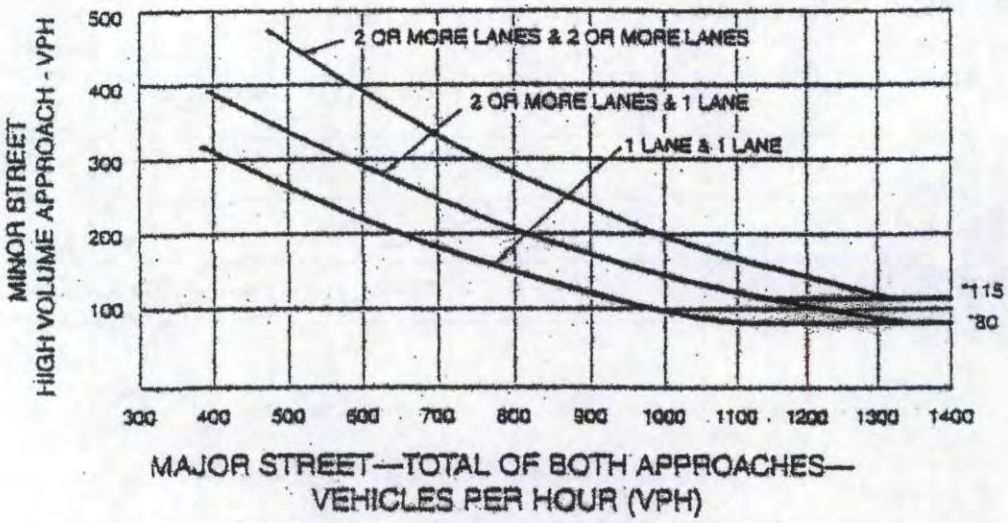
Satisfied? Yes [X] No [ ]

Street	Approach	Approach Lanes		Hourly Volume			
		One	2 or More	Am PK		pm PK	
Gopher Cyn	Major Street - (Total of both Approaches)		X	835		968	
I-15 NB	Minor Street - (Highest Approach)		X	303		557	

Gopher Cyn / I-15 NB Ramp

Figure 4C-1. Warrant 2, Four-Hour Vehicular Volume

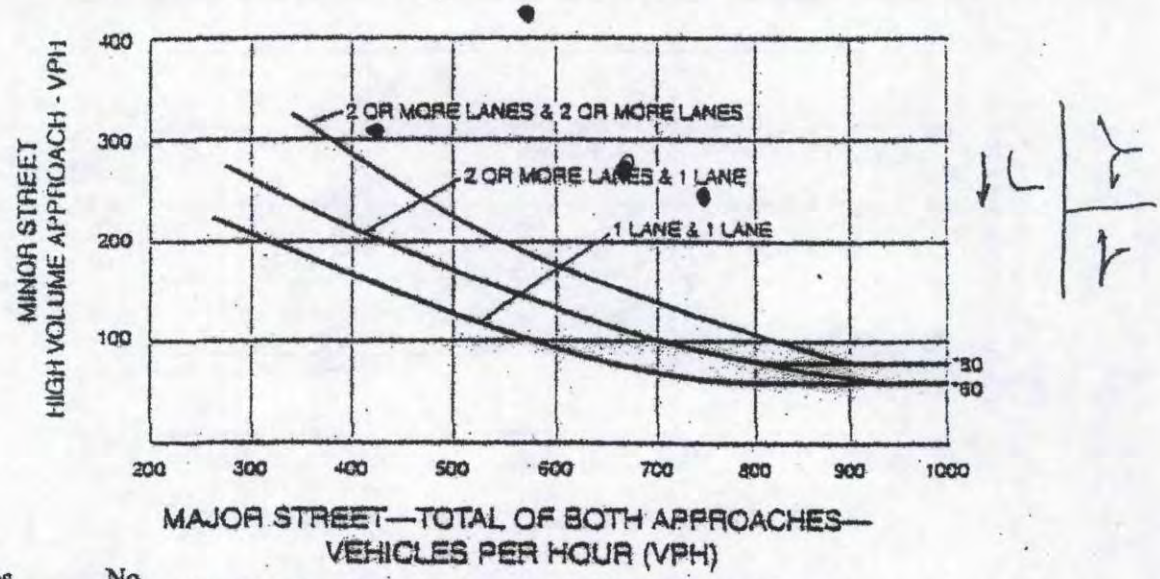
EXISTING (2005)



*Note: 115 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 80 vph applies as the lower threshold volume for a minor-street approach with one lane.

Figure 4C-2. Warrant 2, Four-Hour Vehicular Volume (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 70 km/h (40 mph) ON MAJOR STREET)



*Note: 80 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 60 vph applies as the lower threshold volume for a minor-street approach with one lane.

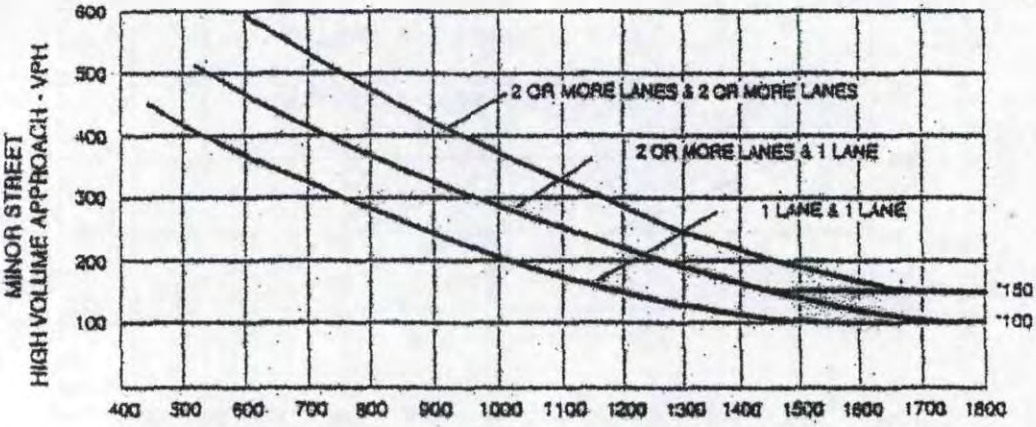
Satisfied? Yes [X] No [ ]

Street	Approach	Approach Lanes		Hourly Volume			
		One	2 or More	7-8 AM	8-9 AM	4-5 PM	5-6 PM
Champagne	Major Street - (Total of both Approaches)		X	587	418	752	666
Old Castle	Minor Street - (Highest Approach)	X		423	306	253	279

Champagne / Old Castle

Figure 4C-3. Warrant 3, Peak Hour

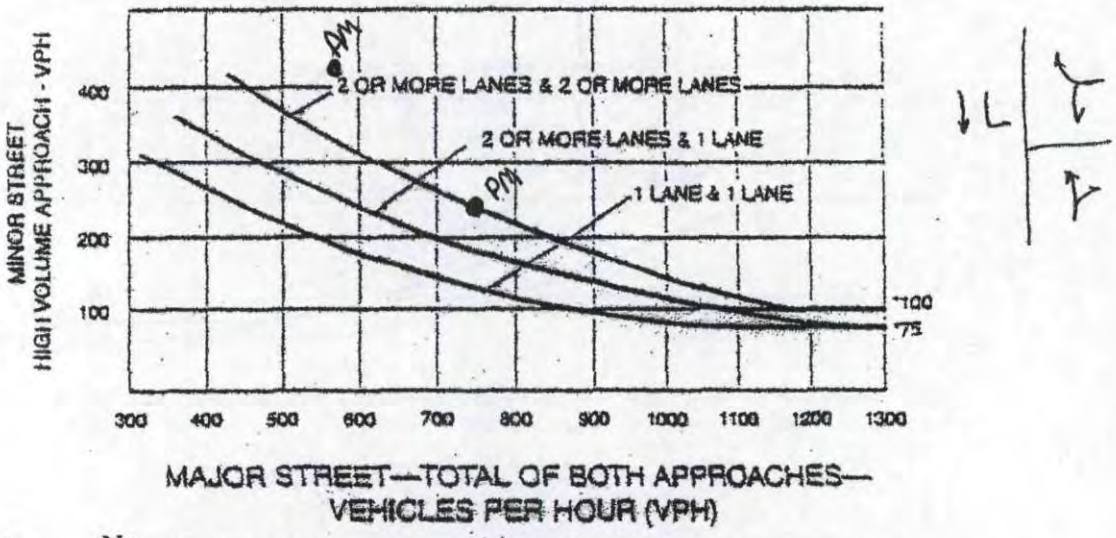
EXISTING (2005)



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 70 km/h (40 mph) ON MAJOR STREET)



*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Satisfied? Yes [X] No [ ]

Street	Approach	Approach Lanes		Hourly Volume			
		One	2 or More	AM PK		PM PK	
Champagne	Major Street - (Total of both Approaches)		X	587		752	
Old Castle	Minor Street - (Highest Approach)	X		423		253	

Champagne / Old Castle

APPENDIX I

- Mitigated Analysis Worksheets

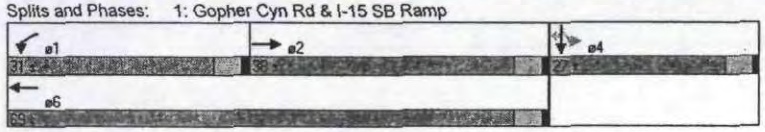
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	150		0	0		0	0		50
Storage Lanes	0		0	1		0	0		0	0		1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)		50		50	50					50	50	50
Trailing Detector (ft)		0		0	0					0	0	0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.948										0.850
Flt Protected				0.950							0.950	
Satd. Flow (prot)	0	1766	0	1770	3539	0	0	0	0	0	1770	1583
Flt Permitted				0.950							0.950	
Satd. Flow (perm)	0	1766	0	1770	3539	0	0	0	0	0	1770	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		37										382
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		55			55			30			30	
Link Distance (ft)		728			345			775			480	
Travel Time (s)		9.0			4.3			17.6			10.9	
Volume (vph)	0	354	224	339	473	0	0	0	0	101	0	545
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Adj. Flow (vph)	0	412	260	394	550	0	0	0	0	117	0	634
Lane Group Flow (vph)	0	672	0	394	550	0	0	0	0	0	117	634
Turn Type				Prot						Perm		Perm
Protected Phases		2		1	6						4	
Permitted Phases										4		4
Total Split (s)	0.0	38.0	0.0	31.0	69.0	0.0	0.0	0.0	0.0	27.0	27.0	27.0
Act Effct Green (s)		37.1		25.2	66.2						21.8	21.8
Actuated g/C Ratio		0.39		0.26	0.69						0.23	0.23
v/c Ratio		0.95		0.85	0.23						0.29	0.97
Control Delay		54.3		50.6	1.0						32.4	44.0
Queue Delay		0.0		2.2	0.1						0.0	0.0
Total Delay		54.3		52.7	1.2						32.4	44.0
LOS		D		D	A						C	D
Approach Delay		54.3			22.7						42.2	
Approach LOS		D			C						D	

Intersection Summary

Area Type: Other
Cycle Length: 96
Actuated Cycle Length: 96
Offset: 24 (25%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.97
Intersection Signal Delay: 37.9 Intersection LOS: D
Intersection Capacity Utilization 66.7% ICU Level of Service C
Analysis Period (min) 15

Cumulative (2010) + Project - AM - Mitigated
Lanes, Volumes, Timings 1: Gopher Cyn Rd & I-15 SB Ramp

Splits and Phases: 1: Gopher Cyn Rd & I-15 SB Ramp



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vsh 4/9/2007
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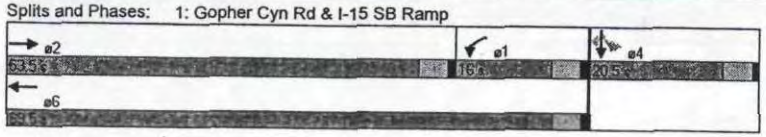
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000
Storage Length (ft)	0		0	150		0	0		0	0		50
Storage Lanes	0		0	1		0	0		0	0		1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)		50		50	50					50	50	50
Trailing Detector (ft)		0		0	0					0	0	0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.969										0.850
Flt Protected				0.950							0.950	
Satd. Flow (prot)	0	1900	0	1863	3725	0	0	0	0	0	1863	1667
Flt Permitted				0.950							0.950	
Satd. Flow (perm)	0	1900	0	1863	3725	0	0	0	0	0	1863	1667
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		27										245
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		55			55			30			30	
Link Distance (ft)		728			345			775			480	
Travel Time (s)		9.0			4.3			17.6			10.9	
Volume (vph)	0	849	255	249	446	0	0	0	0	141	0	235
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	0	903	271	265	474	0	0	0	0	150	0	250
Lane Group Flow (vph)	0	1174	0	265	474	0	0	0	0	0	150	250
Turn Type				Prot						Perm		Perm
Protected Phases		2		1	6						4	
Permitted Phases										4		4
Total Split (s)	0.0	53.5	0.0	16.0	69.5	0.0	0.0	0.0	0.0	20.5	20.5	20.5
Act Effct Green (s)		53.4		12.0	69.4						12.6	12.6
Actuated g/C Ratio		0.59		0.13	0.77						0.14	0.14
v/c Ratio		1.03		1.07	0.16						0.57	0.56
Control Delay		55.4		101.7	5.6						44.6	10.2
Queue Delay		4.5		0.0	0.0						0.9	0.0
Total Delay		59.9		101.7	5.6						45.4	10.2
LOS		E		F	A						D	B
Approach Delay		59.9			40.0						23.4	
Approach LOS		E			D						C	

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 13 (14%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.07
Intersection Signal Delay: 47.2 Intersection LOS: D
Intersection Capacity Utilization 87.7% ICU Level of Service E
Analysis Period (min) 15

Cumulative (2010) + Project - PM - Mitigated
Lanes, Volumes, Timings 1: Gopher Cyn Rd & I-15 SB Ramp

Splits and Phases: 1: Gopher Cyn Rd & I-15 SB Ramp



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vsh 4/9/2007
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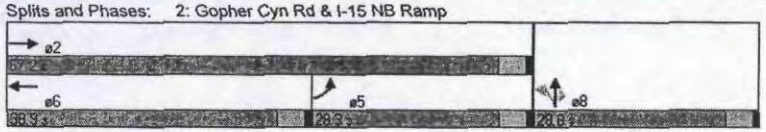
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	0		0	0		50	0		0
Storage Lanes	1		0	0		0	0		1	0		0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50			50		50	50	50			
Trailing Detector (ft)	0	0			0		0	0	0			
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.976				0.850			
Flt Protected	0.950							0.950				
Satd. Flow (prot)	1770	3539	0	0	3454	0	0	1770	1583	0	0	0
Flt Permitted	0.950							0.950				
Satd. Flow (perm)	1770	3539	0	0	3454	0	0	1770	1583	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					26				218			
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		55			55			30			30	
Link Distance (ft)		345			264			710			579	
Travel Time (s)		4.3			3.3			16.1			13.2	
Volume (vph)	195	259	0	0	648	124	164	0	237	0	0	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	205	273	0	0	682	131	173	0	249	0	0	0
Lane Group Flow (vph)	205	273	0	0	813	0	0	173	249	0	0	0
Turn Type	Prot						Perm		Perm			
Protected Phases	5	2			6			8				
Permitted Phases							8		8			
Total Split (s)	28.3	67.2	0.0	0.0	38.9	0.0	28.8	28.8	28.8	0.0	0.0	0.0
Act Effct Green (s)	24.3	73.2			44.9			14.8	14.8			
Actuated g/C Ratio	0.25	0.76			0.47			0.15	0.15			
v/c Ratio	0.46	0.10			0.50			0.63	0.58			
Control Delay	15.3	0.7			5.5			47.9	12.9			
Queue Delay	0.0	0.0			1.1			0.3	0.0			
Total Delay	15.3	0.7			6.6			48.2	13.0			
LOS	B	A			A			D	B			
Approach Delay		7.0			6.6			27.4				
Approach LOS		A			A			C				

Intersection Summary

Area Type: Other
Cycle Length: 96
Actuated Cycle Length: 96
Offset: 13 (14%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.63
Intersection Signal Delay: 11.8 Intersection LOS: B
Intersection Capacity Utilization 66.7% ICU Level of Service C
Analysis Period (min) 15

Cumulative (2010) + Project - AM - Mitigated
Lanes, Volumes, Timings 2: Gopher Cyn Rd & I-15 NB Ramp

Splits and Phases: 2: Gopher Cyn Rd & I-15 NB Ramp



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vsh 4/9/2007
Darnell & Associates, Inc.

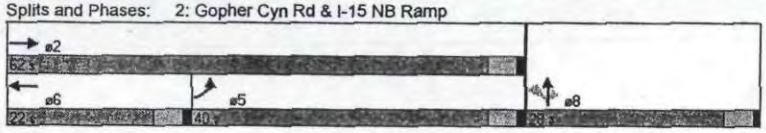
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000
Storage Length (ft)	150		0	0		0	0		50	0		0
Storage Lanes	1		0	0		0	0		1	0		0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50			50		50	50	50			
Trailing Detector (ft)	0	0			0		0	0	0			
Turning Speed (mph)	15		9	15		9	15		9	15		9
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.964				0.850			
Flt Protected	0.950							0.950				
Satd. Flow (prot)	1863	3725	0	0	3591	0	0	1863	1667	0	0	0
Flt Permitted	0.950							0.950				
Satd. Flow (perm)	1863	3725	0	0	3591	0	0	1863	1667	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)					42				357			
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)		55			55			30			30	
Link Distance (ft)		345			264			710			579	
Travel Time (s)		4.3			3.3			16.1			13.2	
Volume (vph)	495	496	0	0	484	152	212	0	495	0	0	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	556	557	0	0	544	171	238	0	556	0	0	0
Lane Group Flow (vph)	556	557	0	0	715	0	0	238	556	0	0	0
Turn Type	Prot						Perm		Perm			
Protected Phases	5	2			6			8				
Permitted Phases							8		8			
Total Split (s)	40.0	62.0	0.0	0.0	22.0	0.0	28.0	28.0	28.0	0.0	0.0	0.0
Act Effct Green (s)	36.0	63.2			23.2			18.8	18.8			
Actuated g/C Ratio	0.40	0.70			0.26			0.21	0.21			
v/c Ratio	0.75	0.21			0.75			0.61	0.88			
Control Delay	28.1	8.3			26.2			38.2	28.2			
Queue Delay	24.3	0.6			2.1			0.0	20.0			
Total Delay	52.4	8.9			28.3			38.2	48.2			
LOS	D	A			C			D	D			
Approach Delay		30.6			28.3			45.2				
Approach LOS		C			C			D				

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 66 (73%), Referenced to phase 2:EBT and 6:WBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.88
Intersection Signal Delay: 34.4 Intersection LOS: C
Intersection Capacity Utilization 87.7% ICU Level of Service E
Analysis Period (min) 15

Cumulative (2010) + Project - PM - Mitigated
Lanes, Volumes, Timings 2: Gopher Cyn Rd & I-15 NB Ramp

Splits and Phases: 2: Gopher Cyn Rd & I-15 NB Ramp



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vsh 4/9/2007
Darnell & Associates, Inc.

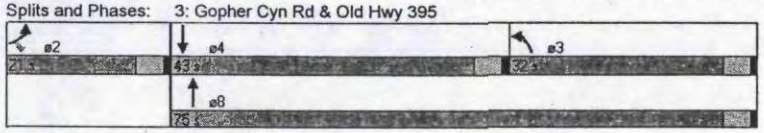
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	50	0	100			0
Storage Lanes	1	1	1			0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50	50	50	50	
Trailing Detector (ft)	0	0	0	0	0	
Turning Speed (mph)	15	9	15			9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850			0.938	
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1770	1583	1770	1863	1747	0
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1770	1583	1770	1863	1747	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		309			54	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)	55			55	55	
Link Distance (ft)	264			604	559	
Travel Time (s)	3.3			7.5	6.9	
Volume (vph)	214	287	458	208	360	306
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	230	309	492	224	387	329
Lane Group Flow (vph)	230	309	492	224	716	0
Turn Type		Perm	Prot			
Protected Phases	2		3	8	4	
Permitted Phases		2				
Total Split (s)	21.0	21.0	32.0	75.0	43.0	0.0
Act Effct Green (s)	17.8	17.8	27.8	70.2	38.4	
Actuated g/C Ratio	0.19	0.19	0.29	0.73	0.40	
v/c Ratio	0.70	0.57	0.96	0.16	0.98	
Control Delay	45.7	8.5	62.3	5.1	55.9	
Queue Delay	3.1	0.2	0.0	0.0	0.0	
Total Delay	48.8	8.7	62.3	5.1	55.9	
LOS	D	A	E	A	E	
Approach Delay	25.8			44.4	55.9	
Approach LOS	C			D	E	

Intersection Summary

Area Type: Other
Cycle Length: 96
Actuated Cycle Length: 96
Offset: 49 (51%), Referenced to phase 2:EBL and 6:, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.98
Intersection Signal Delay: 43.5 Intersection LOS: D
Intersection Capacity Utilization 84.9% ICU Level of Service E
Analysis Period (min) 15

Cumulative (2010) + Project - AM - Mitigated
Lanes, Volumes, Timings 3: Gopher Cyn Rd & Old Hwy 395

Splits and Phases: 3: Gopher Cyn Rd & Old Hwy 395



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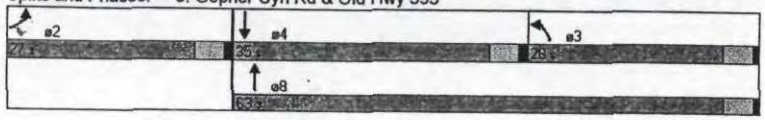
vsh 4/9/2007
Darnell & Associates, Inc.

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	2000	2000	2000	2000	2000	2000
Storage Length (ft)	50	0	100			0
Storage Lanes	1	1	1			0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50	50	50	50	
Trailing Detector (ft)	0	0	0	0	0	
Turning Speed (mph)	15	9	15			9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850			0.943	
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1863	1667	1863	1961	1849	0
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1863	1667	1863	1961	1849	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		586			44	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)	55			55	55	
Link Distance (ft)	264			604	559	
Travel Time (s)	3.3			7.5	6.9	
Volume (vph)	431	551	405	394	324	236
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	459	586	431	419	345	251
Lane Group Flow (vph)	459	586	431	419	596	0
Turn Type		Perm	Prot			
Protected Phases	2		3	8	4	
Permitted Phases		2				
Total Split (s)	27.0	27.0	28.0	63.0	35.0	0.0
Act Effct Green (s)	25.1	25.1	23.1	56.9	29.8	
Actuated g/C Ratio	0.28	0.28	0.26	0.63	0.33	
v/c Ratio	0.88	0.66	0.90	0.34	0.93	
Control Delay	53.0	9.3	23.9	1.6	49.8	
Queue Delay	55.0	0.7	14.1	0.0	2.0	
Total Delay	108.0	10.0	38.0	1.6	51.8	
LOS	F	A	D	A	D	
Approach Delay	53.0			20.1	51.8	
Approach LOS	D			C	D	

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 6 (7%), Referenced to phase 2:EBL and 6:, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.93
Intersection Signal Delay: 41.5 Intersection LOS: D
Intersection Capacity Utilization 83.9% ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 3: Gopher Cyn Rd & Old Hwy 395



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		0	50	
Storage Lanes	1	0		0	1	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50		50		50	50
Trailing Detector (ft)	0		0		0	0
Turning Speed (mph)	15	9		9	15	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.906		0.970			
Flt Protected	0.985				0.950	
Satd. Flow (prot)	1662	0	1807	0	1770	1863
Flt Permitted	0.985				0.950	
Satd. Flow (perm)	1662	0	1807	0	1770	1863
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)	138		16			
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)	55		55			55
Link Distance (ft)	1739		1904			604
Travel Time (s)	*21.6*		*23.6*			*7.5*
Volume (vph)	156	359	305	87	217	432
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	170	390	332	95	236	470
Lane Group Flow (vph)	560	0	427	0	236	470
Turn Type					Prot	
Protected Phases	8		2		1	6
Permitted Phases						
Total Split (s)	40.0	0.0	34.0	0.0	22.0	56.0
Act Effct Green (s)	30.1		37.6		16.3	57.9
Actuated g/C Ratio	0.31		0.39		0.17	0.60
v/c Ratio	0.91		0.59		0.79	0.42
Control Delay	43.1		29.0		37.2	5.6
Queue Delay	0.0		0.0		0.0	0.0
Total Delay	43.1		29.0		37.2	5.6
LOS	D		C		D	A
Approach Delay	43.1		29.0			16.2
Approach LOS	D		C			B

Intersection Summary

Area Type: Other
Cycle Length: 96
Actuated Cycle Length: 96
Offset: 64 (67%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.91
Intersection Signal Delay: 28.3 Intersection LOS: C
Intersection Capacity Utilization 74.1% ICU Level of Service D
Analysis Period (min) 15

Cumulative (2010) + Project - AM - Mitigated
Lanes, Volumes, Timings 4: Old Castle Rd & Champagne Blvd

Splits and Phases: 4: Old Castle Rd & Champagne Blvd

Y:\030705-BeauvisTentativeMap (STD)\Analysis\Synchro-04-08-07\Cum+Proj-AM-Mit-2.sy7
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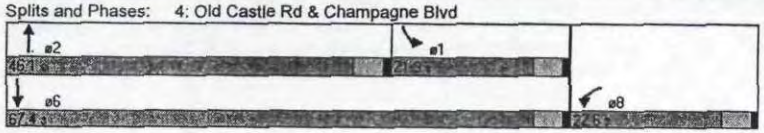
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		0	50	
Storage Lanes	1	0		0	1	
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50		50		50	50
Trailing Detector (ft)	0		0		0	0
Turning Speed (mph)	15	9		9	15	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.914		0.963			
Flt Protected	0.982				0.950	
Satd. Flow (prot)	1672	0	1794	0	1770	1863
Flt Permitted	0.982				0.950	
Satd. Flow (perm)	1672	0	1794	0	1770	1863
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)	89		28			
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Link Speed (mph)	55		55			55
Link Distance (ft)	1739		1904			604
Travel Time (s)	21.6		23.6			7.5
Volume (vph)	135	239	559	210	304	570
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	150	266	621	233	338	633
Lane Group Flow (vph)	416	0	854	0	338	633
Turn Type					Prot	
Protected Phases	8		2		1	6
Permitted Phases						
Total Split (s)	22.6	0.0	46.1	0.0	21.3	67.4
Act Effct Green (s)	18.6		42.1		17.3	63.4
Actuated g/C Ratio	0.21		0.47		0.19	0.70
v/c Ratio	1.00		1.00		0.99	0.48
Control Delay	74.3		55.7		79.4	6.9
Queue Delay	0.0		0.0		0.0	0.8
Total Delay	74.3		55.7		79.4	7.7
LOS	E		E		E	A
Approach Delay	74.3		55.7			32.7
Approach LOS	E		E			C

Intersection Summary

Area Type: Other
Cycle Length: 90
Actuated Cycle Length: 90
Offset: 43 (48%), Referenced to phase 2:NBT and 6:SBT, Start of Green
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.00
Intersection Signal Delay: 49.2 Intersection LOS: D
Intersection Capacity Utilization 91.2% ICU Level of Service F
Analysis Period (min) 15

Splits and Phases: 4: Old Castle Rd & Champagne Blvd



INTERSECTION

Signalized Intersection
CAPACITY ANALYSIS

INTERSECTION Gopher Cyn / I-15 SB

DIST. CO. RTE. P.M. _____

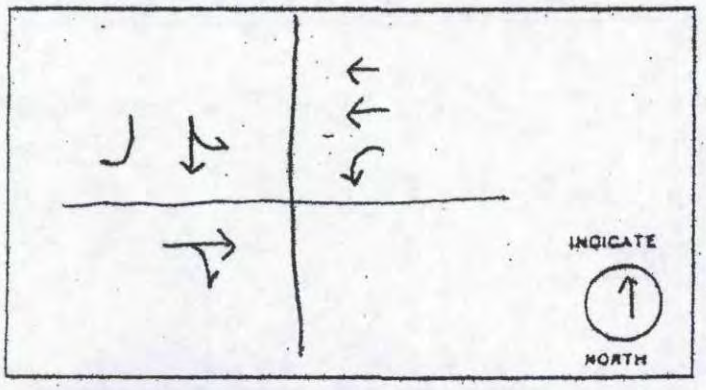
Cum (2010) + Project

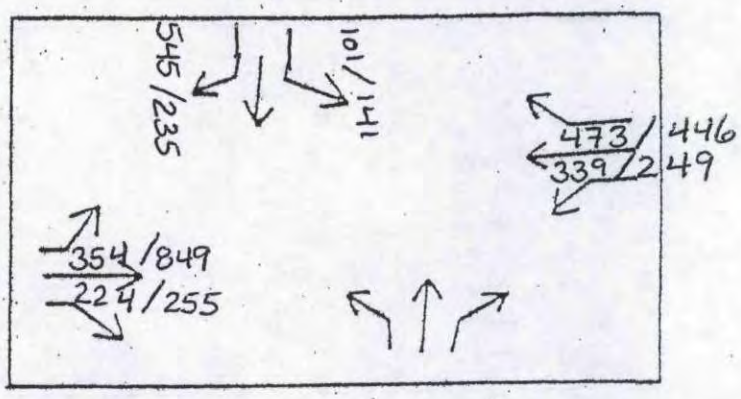
BY VSH DATE 04-08-07

Mit: w/ Signal

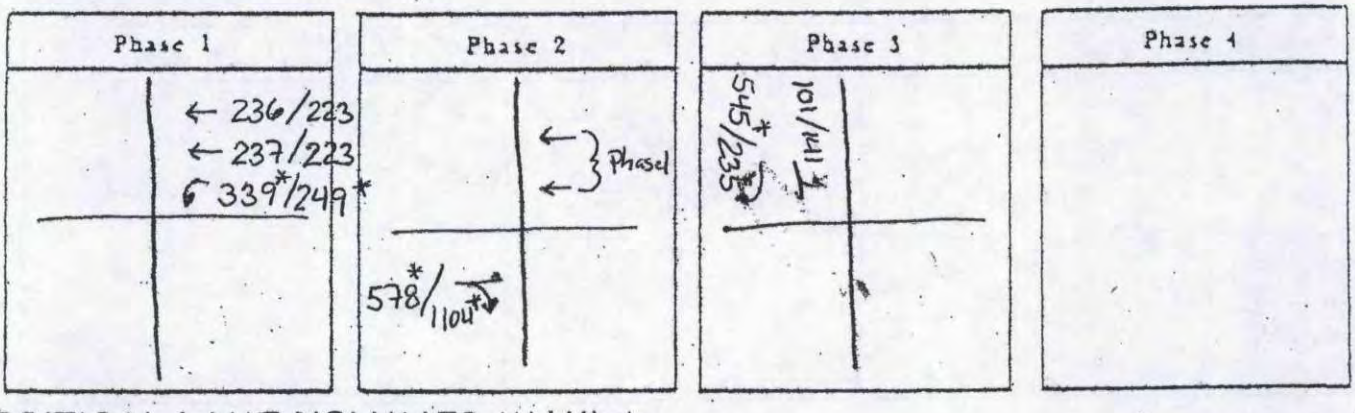
TIME _____ AM/PM

DIAGRAM AND TRAFFIC FLOWS:





LANE VOLUMES (ILV/hr):



CRITICAL LANE VOLUMES (ILV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
339/249	578/1104	545/235	

TOTAL OPERATING LEVEL (ILV/hr):

Σ
1462/1588

is . . .

☐ < 1200 ILV/hr.

☒ > 1200 but < 1500 ILV/hr. – AM

☒ > 1500 ILV/hr. (CAPACITY) – PM

REMARKS:

Signalized Intersection
CAPACITY ANALYSIS

INTERSECTION Gopher Cyn / I-15 NB

Cum (2010) + Project

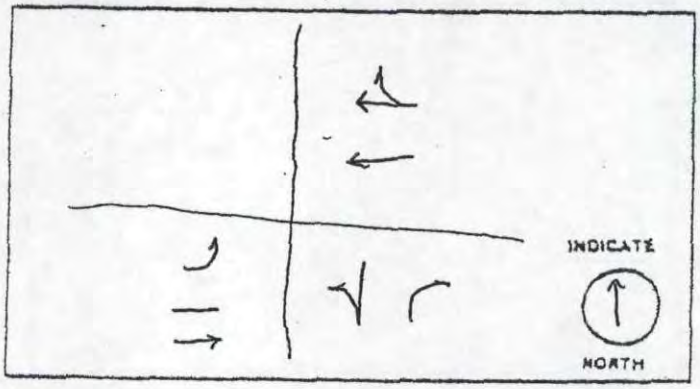
Mit: w/ Signal

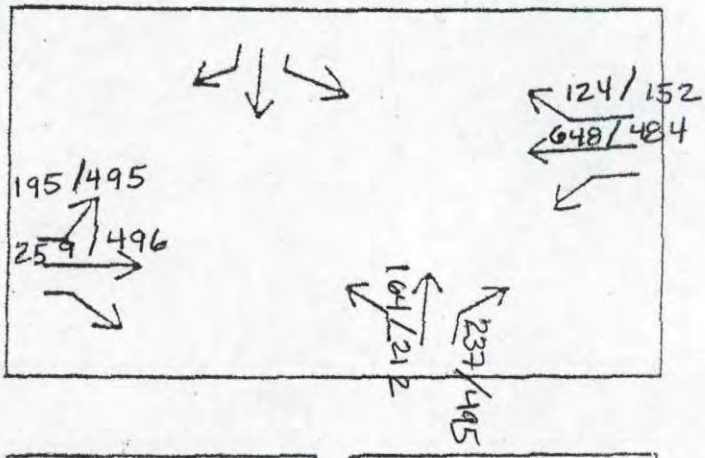
DIST. CO. RTE. P.M. _____

BY VSH DATE 04-08-07

TIME _____ AM/PM

DIAGRAM AND TRAFFIC FLOWS:





LANE VOLUMES (ILV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
195*/495* 130/248 129/248	386/318 386*/318*	164/212 237*/495*	

CRITICAL LANE VOLUMES (ILV/hr):

Phase 1	Phase 2	Phase 3	Phase 4
195/495	386/318	237/495	

TOTAL OPERATING LEVEL (ILV/hr):

Σ
818 / 1308

is . . .

☒ < 1200 ILV/hr. – AM

☒ > 1200 but < 1500 ILV/hr – PM

☐ > 1500 ILV/hr. (CAPACITY)

REMARKS:

APPENDIX J

- County of San Diego TIF Program Trip Generation Rates
- County of San Diego TIF Rates by Community Planning Area
- Excerpts from the County of San Diego's TIF Report

County of San Diego TIF Program Trip Generation Rates

County of San Diego

TRANSPORTATION IMPACT FEE PROGRAM

Trip Generation Rates

LAND USE CATEGORY	TRIP RATE (ADT)	PASS-BY VOLUME (%)	ADJUSTED TRIP RATE (ADT)
AGRICULTURE (OPEN SPACE)	2 / acre	2%	1.96 / acre
AIRPORT			
Commercial	70 / ksf	2%	68.6 / ksf
General Aviation	6 / acre	2%	5.88 / acre
Heliports	100 / acre	2%	98 / acre
AUTOMOBILE			
Car Wash			
Automatic	600 / acre	?	600 / acre
Self-serve	100 / wash stall	?	100 / wash stall
Gasoline			
with/Food Mart	160 / fueling space	28%	115.2 / fueling space
with/Food Mart & Car Wash	155 / fueling space	28%	111.6 / fueling space
Older Service Station Design	150 / fueling space	28%	108 / fueling space
Sales (Dealer & Repair)	50 / ksf	28%	36 / ksf
Auto Repair Center	20 / ksf	28%	14.4 / ksf
Auto Parts Sales	60 / ksf	28%	43.2 / ksf
Quick Lube	40 /	28%	28.8 /
Tire Store	25 / ksf	28%	18 / ksf
CEMETERY	5 / acre	?	5 / acre
CHURCH (OR SYNAGOGUE)	9 / ksf	11%	8.01 / ksf
COMMERCIAL/RETAIL			
Super Regional Shopping Center (More than 80 acres, more than 800,000 sq. ft., w/usually 3+ major stores)	35 / ksf	?	35 / ksf
Regional Shopping Center (40-80 acres, 400,000-800,000 sq. ft. w/usually 2+ major stores)	50 / ksf	11%	44.5 / ksf
Community Shopping Center (15-40 acres, 125,000-400,000 sq. ft., w/usually 1 major store, detached restaurant(s), grocery and drugstore)	80 / ksf	22%	62.4 / ksf
Neighborhood Shopping Center (Less than 15 acres, less than 125,000 sq. ft., w/usually grocery & drugstore, cleaners, beauty & barber shop, & fast food services)	120 / ksf	22%	93.6 / ksf
Commercial Shops			
Specialty Retail/Strip Commercial	40 / ksf	15%	34 / ksf
Electronics Superstore	50 / ksf	15%	42.5 / ksf
Factory Outlet	40 / ksf	15%	34 / ksf
Supermarket	150 / ksf	15%	127.5 / ksf
Drugstore	90 / ksf	15%	76.5 / ksf

County of San Diego

TRANSPORTATION IMPACT FEE PROGRAM

Trip Generation Rates

LAND USE CATEGORY	TRIP RATE (ADT)	PASS-BY VOLUME (%)	ADJUSTED TRIP RATE (ADT)
Convenience Market (15-16 hours)	500 / ksf	15%	425 / ksf
Convenience Market (24 hours)	700 / ksf	15%	595 / ksf
Convenience Market (w/gasoline pumps)	850 / ksf	15%	722.5 / ksf
Discount Club	60 / ksf	15%	51 / ksf
Discount Store	60 / ksf	15%	51 / ksf
Furniture store	6 / ksf	15%	5.1 / ksf
Lumber Store	30 / ksf	15%	25.5 / ksf
Home Improvement Superstore	40 / ksf	15%	34 / ksf
Hardware/Paint Store	60 / ksf	15%	51 / ksf
Garden Nursery	40 / ksf	15%	34 / ksf
Mixed Use: Commercial (w/supermarket)	110 / ksf	15%	93.5 / ksf
Mixed Use: Commercial/Residential	5 / unit	15%	4.25 / unit
EDUCATION			
University (4 years)	2.4 / student	0%	2.4 / student
Junior College (2 years)	1.2 / student	1%	1.19 / student
High School	1.3 / student	6%	1.22 / student
Middle/Junior High	1.4 / student	12%	1.23 / student
Elementary	1.6 / student	10%	1.44 / student
Day Care	5 / child	14%	4.3 / child
FINANCIAL			
Bank (Walk-In only)	150 / ksf	23%	115.5 / ksf
with Drive-Through	200 / ksf	23%	154 / ksf
Drive-Through only	250 / lane	23%	192.5 / lane
Drive-Through only (one-way)	125 / lane	23%	96.25 / lane
Savings & Loan	60 / ksf	23%	46.2 / ksf
Drive-Through only	100 / lane	23%	77 / lane
Drive-Through only (one-way)	50 / lane	23%	38.5 / lane
HOSPITAL			
General	20 / bed	2%	19.6 / bed
Convalescent/Nursing	3 / bed	2%	2.94 / bed
INDUSTRIAL			
Industrial/Business Park (commercial included)	16 / ksf	20%	12.8 / ksf
Industrial Park (no commercial)	8 / ksf	2%	7.84 / ksf
Industrial Plant (multiple shifts)	10 / ksf	3%	9.7 / ksf
Manufacturing/Assembly	4 / ksf	3%	3.88 / ksf
Warehousing	5 / ksf	3%	4.85 / ksf
Storage	2 / ksf	3%	1.94 / ksf
Science Research & Development	8 / ksf	3%	7.76 / ksf
Landfill & Recycling Center	6 / acre	3%	5.82 / acre
LIBRARY	50 / ksf	12%	44 / ksf

County of San Diego

TRANSPORTATION IMPACT FEE PROGRAM

Trip Generation Rates

LAND USE CATEGORY	TRIP RATE (ADT)	PASS-BY VOLUME (%)	ADJUSTED TRIP RATE (ADT)
LODGING			
Hotel (w/convention facilities/restaurant)	10 / room	4%	9.6 / room
Motel	9 / room	4%	8.64 / room
Resort Hotel	8 / room	4%	7.68 / room
Business Hotel	7 / room	4%	6.72 / room
MILITARY	2.5 / person	2%	2.45 / person
OFFICE			
Standard Commercial Office (less than 100,000 sq. ft.)	20 / ksf	4%	19.2 / ksf
Large (High-Rise) Commercial Office (more than 100,000 sq. ft., 6+ stories)	17 / ksf	3%	16.49 / ksf
Office Park (400,000+ sq. ft.)	12 / ksf	3%	11.64 / ksf
Single Tenant Office	14 / ksf	3%	13.58 / ksf
Corporate Headquarters	7 / ksf	3%	6.79 / ksf
Government (Civic Center)	30 / ksf	16%	25.2 / ksf
Post Office			
Central/Walk-In Only	90 / ksf	16%	75.6 / ksf
Community (not including mail drop lane)	200 / ksf	16%	168 / ksf
Community (w/mail drop lane)	300 / ksf	16%	252 / ksf
Mail Drop Lane only	1500 / lane	16%	1260 / lane
Mail Drop Lane only (one-way)	750 / lane	16%	630 / lane
Department of Motor Vehicles	180 / ksf	16%	151.2 / ksf
Medical-Dental	50 / ksf	10%	45 / ksf
PARKS			
City (developed w/meeting rooms and sports facilities)	50 / acre	6%	47 / acre
Regional (developed)	20 / acre	6%	18.8 / acre
Neighborhood/County (undeveloped)	5 / acre	6%	4.7 / acre
State (average 1000 acres)	1 / acre	6%	0.94 / acre
Amusement (Theme)	80 / acre	6%	75.2 / acre
San Diego Zoo	115 / acre	6%	108.1 / acre
Sea World	80 / acre	6%	75.2 / acre
RECREATION			
Beach, Ocean or Bay	600 / klf shore	9%	546 / klf shore
Beach, Lake (fresh water)	50 / klf shore	9%	45.5 / klf shore
Bowling Center	30 / ksf	9%	27.3 / ksf
Campground	4 / campsite	9%	3.64 / campsite
Golf Course	7 / acre	9%	6.37 / acre
Driving Range only	70 / acre	9%	63.7 / acre
Marinas	4 / berth	9%	3.64 / berth
Multi-purpose (miniature golf, video arcade, batting cage, etc.)	90 / acre	9%	81.9 / acre
Racquetball/Health Club	30 / ksf	9%	27.3 / ksf

County of San Diego

TRANSPORTATION IMPACT FEE PROGRAM

Trip Generation Rates

LAND USE CATEGORY	TRIP RATE (ADT)	PASS-BY VOLUME (%)	ADJUSTED TRIP RATE (ADT)
Tennis Courts	16 / acre	9%	14.56 / acre
Sports Facilities			
Outdoor Stadium	50 / acre	9%	45.5 / acre
Indoor Arena	30 / acre	9%	27.3 / acre
Racetrack	40 / acre	9%	36.4 / acre
Theaters (multiplex w/matinee)	80 / ksf	17%	66.4 / ksf
RESIDENTIAL			
Estate, Urban or Rural (average 1-2 DU/acre)	12 / unit	3%	11.64 / unit
Single Family Detached (average 3-6 DU/acre)	10 / unit	3%	9.7 / unit
Condominium (or any multi-family 6-20 DU/acre)	8 / unit	3%	7.76 / unit
Apartment (or any multi-family units more than 20 DU/acre)	6 / unit	3%	5.82 / unit
Military Housing (off-base, multifamily)			
(less than 6 DU/acre)	8 / unit	3%	7.76 / unit
(6-20 DU/acre)	6 / unit	3%	5.82 / unit
Mobile Home			
Family	5 / unit	3%	4.85 / unit
Adults Only	3 / unit	3%	2.91 / unit
Retirement Community	4 / unit	3%	3.88 / unit
Congregate Care Facility	2.5 / unit	3%	2.43 / unit
RESTAURANT			
Quality	100 / ksf	12%	88 / ksf
Sit-down, high turnover	160 / ksf	12%	140.8 / ksf
Fast Food (w/drive-through)	650 / ksf	12%	572 / ksf
Fast Food (without drive-through)	700 / ksf	12%	616 / ksf
Delicatessen (7am-4pm)	150 / ksf	12%	132 / ksf
TRANSPORTATION			
Bus Depot	25 / ksf	?	25 / ksf
Truck Terminal	10 / ksf	?	10 / ksf
Waterport/Marine Terminal	170 / berth	?	170 / berth
Transit Station (Light Rail w/parking)	300 / acre	?	300 / acre
Park & Ride Lots	400 / acre	?	400 / acre
Park & Ride Lots	5 / parking space	?	5 / parking space

County of San Diego TIF Rates by Community Planning Area

TIF AREA	COST PER SINGLE FAMILY DETACHED (SFD) RESIDENTIAL UNIT			
	Freeway Ramp	Local	Regional	Total per Unit
Alpine	$150	$1,812	$3,294	$5,256
Bonsall	$41	$6,312	$5,942	$12,295
Central Mountain	$3	$0	$2,195	$2,198
County Islands	$150	$0	$3,294	$3,444
Crest-Dehesa	$150	$1,008	$3,294	$4,452
Desert	$3	$312	$2,196	$2,511
Fallbrook	$41	$6,084	$5,942	$12,067
Jamul-Dulzura	$150	$2,184	$3,294	$5,628
Julian	$3	$0	$2,195	$2,198
Lakeside (includes Pepper Dr- Bostonia)	$150	$4,032	$3,294	$7,476
Mountain Empire	$3	$0	$2,195	$2,198
North County Metro	$41	$1,716	$5,942	$7,699
North Mountain	$3	$0	$2,195	$2,198
Otay	$150	$660	$3,294	$4,104
Pala-Pauma	$41	$1,176	$5,942	$7,159
Pendleton-De Luz	$41	$8	$5,942	$5,991
Rainbow	$41	$4,464	$5,942	$10,447
Ramona	$3	$5,940	$2,196	$8,139
San Dieguito	$41	$3,240	$5,942	$9,223
Spring Valley	$150	$660	$3,294	$4,104
Sweetwater	$150	$1,308	$3,294	$4,752
Valle De Oro	$150	$4,608	$3,294	$8,052
Valley Center	$41	$2,568	$5,942	$8,551

Excerpts from the County of San Diego's TIF Report

Appendix A
Existing Roadway Deficiencies

Appendix A
Base Year Deficiencies
County Facilities

CPA	Name	From Cross Street	To Cross Street	Existing Classification	Required Classification	Additional Lane Miles Required
Alpine	ALPINE	ALPINE MHP	BAY MDOWS/MARINO	Light Collector	Town Collector	0.11
Alpine	ALPINE	BAY MDOWS/MARINO	ROCK	Light Collector	Town Collector	0.31
Alpine	ALPINE	Eltinge	ALPINE MHP	Light Collector	Collector	0.56
Alpine	ALPINE	WEST VICTORIA	Eltinge	Light Collector	Collector	0.11
Alpine	ALPINE	ZONE CONNECTOR	ZONE CONNECTOR	Light Collector	Town Collector	0.17
Alpine	TAVERN	RAMP I-8 WB	RAMP I-8 EB	Light Collector	Collector	0.33
Alpine	VIA LA MANCHA	WILLOWS	RAMP I-8 EB	Light Collector	Collector	0.22
Alpine	WILLOWS	4058-INDIAN H C	HILLCREST	Light Collector	Town Collector	0.24
Alpine	WILLOWS	HILLCREST	WILLOWSIDE	Light Collector	Town Collector	0.12
Alpine	WILLOWS	VIA LA MANCHA	4058-INDIAN H C	Light Collector	Town Collector	0.21
Alpine	WILLOWS	WILLOWSIDE	VIEJAS GRADE	Light Collector	Collector	0.44
Barona	WILDCAT CANYON	ZONE CONNECTOR	ZONE CONNECTOR	Light Collector	Collector	5.75
Bonsall	EAST VISTA	EVERGREEN	HUTCHISON	Town Collector	Collector	0.67
Bonsall	EAST VISTA	HUTCHISON	ORMSBY/GOPHER CA	Town Collector	Collector	0.59
Bonsall	EAST VISTA	OLD RIVER	EVERGREEN	Town Collector	Collector	0.50
Bonsall	EAST VISTA	ORMSBY/GOPHER CA	STRAWBERRY HILL	Town Collector	Collector	0.43
Bonsall	EAST VISTA	OSBORNE	BARSBY	Light Collector	Collector	0.44
Bonsall	EAST VISTA	STRAWBERRY HILL	OSBORNE	Light Collector	Collector	0.89
Bonsall	MISSION	BLDG 4949	ZONE CONNECTOR	Light Collector	Collector	0.35
Bonsall	MISSION	ZONE CONNECTOR	PALA	Light Collector	Collector	0.15
Bonsall	OLIVEHILL	WEST LILAC	OLD RIVER	Light Collector	Town Collector	0.06
Bonsall	SANTA FE	BIRDFARM	UNKNOWN	Light Collector	Collector	0.51
County Islands	POMERADO	UNKNOWN	RAMP I-15 NB	Light Collector	Major	0.13
Crest-Dehesa	DEHESA	CALLE ENCANTO	VISTA GRANDE	Light Collector	Town Collector	0.32
Crest-Dehesa	DEHESA	HARBISON CANYON	ZONE CONNECTOR	Light Collector	Town Collector	0.25
Crest-Dehesa	DEHESA	WILLOW GLEN	UNKNOWN	Light Collector	Town Collector	0.42
Crest-Dehesa	DEHESA	ZONE CONNECTOR	SYCUAN	Light Collector	Town Collector	0.48
Crest-Dehesa	GREENFIELD	CANDLE	SYCAMORE	Light Collector	Collector	0.15
Crest-Dehesa	GREENFIELD	SYCAMORE	BROADWAY	Light Collector	Collector	0.30
Crest-Dehesa	SYCUAN	DEHESA	ZONE CONNECTOR	Light Collector	Town Collector	0.35
Fallbrook	AVIATION	UNKNOWN	MISSION	Light Collector	Town Collector	0.09
Fallbrook	FALLBROOK	MAIN	OLD STAGE	Light Collector	Town Collector	0.12
Fallbrook	FALLBROOK	MANDARIN	GOLDEN	Light Collector	Town Collector	0.27
Fallbrook	FALLBROOK	OLD STAGE	MANDARIN	Light Collector	Collector	0.25
Fallbrook	MAIN	ALVARADO	FIG	Light Collector	Town Collector	0.06

Appendix A
Base Year Deficiencies
County Facilities

CPA	Name	From Cross Street	To Cross Street	Existing Classification	Required Classification	Additional Lane Miles Required
Fallbrook	MAIN	AMMUNITION	CLEMMENS	Light Collector	Collector	0.25
Fallbrook	MAIN	AVIATION	AMMUNITION	Light Collector	Collector	0.38
Fallbrook	MAIN	COLLEGE	ZONE CONNECTOR	Light Collector	Collector	0.18
Fallbrook	MAIN	FALLBROOK	AVIATION	Light Collector	Collector	0.38
Fallbrook	MAIN	FIG	COLLEGE	Light Collector	Collector	0.28
Fallbrook	MAIN	MISSION	ZONE CONNECTOR	Light Collector	Town Collector	0.09
Fallbrook	MAIN	ZONE CONNECTOR	ALVARADO	Light Collector	Collector	0.18
Fallbrook	MAIN	ZONE CONNECTOR	FALLBROOK	Light Collector	Collector	0.16
Fallbrook	MISSION	BAJA MISSION	LA CANADA	Light Collector	Collector	0.63
Fallbrook	MISSION	BIG OAK RANCH	GREEN CANYON	Light Collector	Collector	0.89
Fallbrook	MISSION	BRANDON	IOWA	Light Collector	Collector	0.56
Fallbrook	MISSION	DAVIS	STAGE COACH	Light Collector	Town Collector	0.18
Fallbrook	MISSION	GREEN CANYON	VIA ENCINAS	Light Collector	Collector	0.62
Fallbrook	MISSION	GUM TREE	INDUSTRIAL	Light Collector	Collector	0.91
Fallbrook	MISSION	HELLERS BEND	ZONE CONNECTOR	Light Collector	Collector	0.78
Fallbrook	MISSION	INDUSTRIAL	SANTA MARGARITA	Light Collector	Collector	0.36
Fallbrook	MISSION	IOWA	ZONE CONNECTOR	Town Collector	Collector	0.10
Fallbrook	MISSION	LA CANADA	BLDG 4949	Light Collector	Collector	1.60
Fallbrook	MISSION	LIVE OAK PARK	OLD 395	Light Collector	Collector	1.42
Fallbrook	MISSION	OLD 395	RAMP I-15 SB	Light Collector	Collector	0.11
Fallbrook	MISSION	OLIVE HILL	WINTER HAVEN	Light Collector	Collector	0.29
Fallbrook	MISSION	OVERLAND	BIG OAK RANCH	Light Collector	Collector	0.52
Fallbrook	MISSION	RAMP I-15 SB	RAMP I-15 NB	Light Collector	Town Collector	0.15
Fallbrook	MISSION	SANTA MARGARITA	BRANDON	Light Collector	Collector	0.51
Fallbrook	MISSION	STAGE COACH	GUM TREE	Light Collector	Town Collector	0.13
Fallbrook	MISSION	STAGE COACH	OLIVE HILL	Light Collector	Collector	0.17
Fallbrook	MISSION	UNKNOWN	WILLOW GLEN	Light Collector	Collector	0.69
Fallbrook	MISSION	UNKNOWN	XX	Light Collector	Collector	1.13
Fallbrook	MISSION	VIA ENCINAS	HELLERS BEND	Light Collector	Collector	0.71
Fallbrook	MISSION	VIA MONSERATE	BAJA MISSION	Light Collector	Collector	0.22
Fallbrook	MISSION	WILLOW GLEN	LIVE OAK PARK	Light Collector	Collector	1.77
Fallbrook	MISSION	WINTER HAVEN	OVERLAND	Light Collector	Collector	0.59
Fallbrook	MISSION	XX	ZONE CONNECTOR	Light Collector	Town Collector	0.40
Fallbrook	MISSION	ZONE CONNECTOR	DAVIS	Light Collector	Town Collector	0.30
Fallbrook	MISSION	ZONE CONNECTOR	VIA MONSERATE	Light Collector	Collector	0.70

Appendix A
Base Year Deficiencies
County Facilities

CPA	Name	From Cross Street	To Cross Street	Existing Classification	Required Classification	Additional Lane Miles Required
Fallbrook	MISSION	ZONE CONNECTOR	MAIN	Town Collector	Collector	0.09
Fallbrook	OLD STAGE	PALOMINO	MISSION	Light Collector	Town Collector	0.13
Fallbrook	RECHE	FALLBROOK	LOS AMIGOS	Light Collector	Town Collector	0.08
Fallbrook	RECHE	STAGE COACH	UNKNOWN	Light Collector	Town Collector	0.20
Fallbrook	RECHE	UNKNOWN	ZONE CONNECTOR	Light Collector	Town Collector	0.19
Fallbrook	RECHE	ZONE CONNECTOR	FALLBROOK	Light Collector	Town Collector	0.12
Fallbrook	STAGE COACH	FALLBROOK	ZONE CONNECTOR	Light Collector	Collector	0.51
Fallbrook	STAGE COACH	ZONE CONNECTOR	RECHE	Light Collector	Collector	0.50
Lakeside	CHANNEL	LAKESIDE	UNKNOWN	Light Collector	Town Collector	0.13
Lakeside	I-8 BUSINESS	13490	LOS COCHES/CM CA	Light Collector	Town Collector	0.41
Lakeside	I-8 BUSINESS	JACKSON HILL	LAVALA	Light Collector	Town Collector	0.50
Lakeside	LAKE JENNINGS PA	EL MONTE	UNKNOWN	Light Collector	Town Collector	0.50
Lakeside	LAKE JENNINGS PA	HARRITT	HWY 8/BLOSSOM VA	Light Collector	Collector	0.23
Lakeside	LAKE JENNINGS PA	HWY 8/BLOSSOM VA	RAMP I-8 WB	Light Collector	Collector	0.10
Lakeside	LAKE JENNINGS PA	PINKARD	HARRITT	Light Collector	Town Collector	0.10
Lakeside	LAKE JENNINGS PA	RAMP I-8 WB	RAMP I-8 WB	Light Collector	Town Collector	0.03
Lakeside	LAKE JENNINGS PA	RAMP I-8 WB	SIERRA ALTA	Light Collector	Collector	0.14
Lakeside	LAKE JENNINGS PA	UNKNOWN	PINKARD	Light Collector	Town Collector	0.87
Lakeside	LOS COCHES	BOWER	LAKEVIEW	Town Collector	Collector	0.40
Lakeside	LOS COCHES	LAKEVIEW	I-8 BUSINESS	Town Collector	Collector	0.58
Lakeside	MAPLEVIEW	UNKNOWN	MAINE	Light Collector	Collector	0.07
Lakeside	MAPLEVIEW	UNKNOWN	UNKNOWN	Light Collector	Town Collector	0.02
Lakeside	OLDE 80	SIERRA ALTA	PECAN PARK	Light Collector	Town Collector	0.03
Lakeside	RIVERFORD	WOODSIDE(N)	RAMP SR-67 SB	Light Collector	Town Collector	0.04
Lakeside	WILDCAT CANYON	ZONE CONNECTOR	WILLOW	Light Collector	Collector	5.56
Lakeside	WOODSIDE	MARILLA	UNKNOWN	Light Collector	Town Collector	0.10
Lakeside	WOODSIDE	RAMP SR-67 NB	MARILLA	Light Collector	Collector	0.59
Lakeside	WOODSIDE	RAMP SR-67 NB	RIVERFORD	Light Collector	Town Collector	0.06
Lakeside	WOODSIDE	RIVERFORD	RAMP SR-67 NB	Light Collector	Collector	0.12
Lakeside	WOODSIDE	RIVERVIEW	11980/12001-APTS	Light Collector	Town Collector	0.18
Lakeside	WOODSIDE	UNKNOWN	RIVERVIEW	Light Collector	Town Collector	0.11
North County Metro	BEAR VALLEY	BIRCH	IDAHO	Light Collector	Collector	0.31
North County Metro	BEAR VALLEY	ELDORADO	ENCINO	Light Collector	Collector	1.15
North County Metro	BEAR VALLEY	IDAHO	LANDAVO	Light Collector	Collector	0.22
North County Metro	BEAR VALLEY	LANDAVO	SUBURBAN HILLS	Light Collector	Collector	0.28

Appendix A
Base Year Deficiencies
County Facilities

CPA	Name	From Cross Street	To Cross Street	Existing Classification	Required Classification	Additional Lane Miles Required
North County Metro	BEAR VALLEY	SAN PASQUAL VALL	ELDORADO	Town Collector	Collector	0.42
North County Metro	BUENA CREEK	HARTWRIGHT	ZONE CONNECTOR	Light Collector	Town Collector	0.70
North County Metro	BUENA CREEK	MONTE VISTA	SUGARBUSH	Light Collector	Town Collector	0.61
North County Metro	BUENA CREEK	SOUTH SANTA FE	SYCAMORE	Light Collector	Town Collector	0.02
North County Metro	BUENA CREEK	SYCAMORE	HARTWRIGHT	Light Collector	Town Collector	0.03
North County Metro	DEER SPRINGS	MARILYN	UNKNOWN	Light Collector	Collector	0.40
North County Metro	DEER SPRINGS	MESA ROCK	MOUNTAIN MEADOW	Light Collector	Collector	0.11
North County Metro	DEER SPRINGS	SF 1414	UNKNOWN	Light Collector	Collector	1.39
North County Metro	DEER SPRINGS	UNKNOWN	MESA ROCK	Light Collector	Collector	1.50
North County Metro	DEER SPRINGS	UNKNOWN	SF 1414	Light Collector	Collector	0.34
North County Metro	DEL DIOS	COUNTRY CLUB	ELM	Light Collector	Collector	0.74
North County Metro	DEL DIOS	UNKNOWN	COUNTRY CLUB	Light Collector	Collector	0.20
North County Metro	OLIVE	GRAPEVINE	GRANADA	Light Collector	Collector	0.39
North County Metro	ROBELINI	EL VALLE OPULENT	SYCAMORE	Light Collector	Collector	0.32
North County Metro	ROBELINI	SOUTH SANTA FE	EL VALLE OPULENT	Light Collector	Collector	0.15
North County Metro	SAN PASQUAL	ZERMATT	VIA RANCHO	Light Collector	Collector	0.99
North County Metro	SOUTH SANTA FE	2430/2503	SMILAX	Light Collector	Collector	0.22
North County Metro	SOUTH SANTA FE	AZALEA	POINSETTIA	Light Collector	Collector	0.28
North County Metro	SOUTH SANTA FE	MONTGOMERY	ZONE CONNECTOR	Light Collector	Collector	0.90
North County Metro	SOUTH SANTA FE	PALMYRA	AZALEA	Light Collector	Collector	0.40
North County Metro	SOUTH SANTA FE	POINSETTIA	2430/2503	Light Collector	Collector	0.39
North County Metro	SOUTH SANTA FE	ROBELINI	SYCAMORE	Light Collector	Collector	0.16
North County Metro	SOUTH SANTA FE	SMILAX	BOSSTICK	Light Collector	Collector	0.38
North County Metro	SOUTH SANTA FE	SYCAMORE	ZONE CONNECTOR	Light Collector	Collector	0.14
North County Metro	SOUTH SANTA FE	TIBER	ROBELINI	Light Collector	Major	0.37
North County Metro	SOUTH SANTA FE	WOODLAND	TIBER	Light Collector	Prime Arterial	0.37
North County Metro	SOUTH SANTA FE	YORK	WOODLAND	Light Collector	Collector	0.12
North County Metro	SOUTH SANTA FE	ZONE CONNECTOR	YORK	Light Collector	Collector	0.10
North County Metro	SOUTH SANTA FE	ZONE CONNECTOR	PALMYRA	Light Collector	Collector	0.22
North County Metro	SYCAMORE	SHADOW RIDGE	ZONE CONNECTOR	Major	Prime Arterial	0.29
North County Metro	VALLEY CENTER	UNKNOWN	UNKNOWN	Light Collector	Collector	0.38
North County Metro	VIA RANCHO	FELICITA	MONTESANO	Light Collector	Collector	0.26
North County Metro	VIA RANCHO	HIGHLANDS WEST	EUCALYPTUS	Light Collector	Town Collector	0.50
North County Metro	VIA RANCHO	LAKE	HIGHLANDS WEST	Light Collector	Town Collector	0.20
North County Metro	VIA RANCHO	VALLEY	LAKE	Light Collector	Town Collector	0.06

Appendix A
Base Year Deficiencies
County Facilities

CPA	Name	From Cross Street	To Cross Street	Existing Classification	Required Classification	Additional Lane Miles Required
North County Metro	VIA RANCHO	VIA LOMA VISTA	FELICITA	Light Collector	Town Collector	0.74
North County Metro	VIA RANCHO	VIENTO VALLE	SAN PASQUAL	Light Collector	Town Collector	1.08
Pendleton-De Luz	HARBOR	SAN DIEGO	SAN LUIS REY	Light Collector	Town Collector	0.05
Pendleton-De Luz	HARBOR	SAN LUIS REY	SANTA FE	Light Collector	Town Collector	0.12
Pendleton-De Luz	SAN DIEGO	RAMP	RAMP I-5 NB	Light Collector	Collector	0.07
Pendleton-De Luz	SAN DIEGO	RAMP I-5 NB	COAST	Light Collector	Collector	0.33
Pendleton-De Luz	SAN DIEGO	VANDEGRIFT	RAMP	Major	Prime Arterial	0.18
Pepper Drive-Bosto	BRADLEY	201	325/360	Light Collector	Town Collector	0.09
Pepper Drive-Bosto	BRADLEY	GRAVES	201	Light Collector	Town Collector	0.11
Pepper Drive-Bosto	BRADLEY	MAGNOLIA	RAMP SR-67 SB	Light Collector	Collector	0.12
Pepper Drive-Bosto	BRADLEY	RAMP SR-67 NB	GRAVES	Light Collector	Collector	0.11
Pepper Drive-Bosto	BRADLEY	RAMP SR-67 SB	RAMP SR-67 NB	Light Collector	Collector	0.16
Pepper Drive-Bosto	GRAVES	UNKNOWN	BRADLEY	Light Collector	Town Collector	0.29
Pepper Drive-Bosto	GREENFIELD	BRADLEY ACCESS	BALLANTYNE	Light Collector	Town Collector	0.07
Pepper Drive-Bosto	GREENFIELD	DIAMOND	01ST	Light Collector	Town Collector	0.13
Pepper Drive-Bosto	MAGNOLIA	1681	DENNY	Light Collector	Collector	0.24
Pepper Drive-Bosto	MAGNOLIA	AIRPORT	1681	Light Collector	Town Collector	0.15
Pepper Drive-Bosto	MAGNOLIA	BRADLEY	CYPRESS	Light Collector	Town Collector	0.15
Pepper Drive-Bosto	MAGNOLIA	CYPRESS	UNKNOWN	Light Collector	Town Collector	0.17
Pepper Drive-Bosto	MAGNOLIA	DENNY	BRADLEY	Light Collector	Collector	0.20
Pepper Drive-Bosto	MAGNOLIA	UNKNOWN	VERNON	Light Collector	Town Collector	0.14
Pepper Drive-Bosto	PEPPER	ROXANNE	GARYWOOD/MARLIND	Light Collector	Town Collector	0.20
Pepper Drive-Bosto	PEPPER	VULCAN	ROXANNE	Light Collector	Town Collector	0.07
Ramona	SAN VICENTE	CHUCKWAGON	WILDCAT CANYON	Light Collector	Town Collector	0.21
Ramona	SAN VICENTE	DYE	UNKNOWN	Light Collector	Town Collector	0.29
Ramona	SAN VICENTE	KEYES	DYE	Light Collector	Town Collector	0.07
Ramona	SAN VICENTE	UNKNOWN	CHUCKWAGON	Light Collector	Town Collector	1.29
Ramona	SAN VICENTE	WARNOCK	KEYES	Light Collector	Collector	0.67
Ramona	SAN VICENTE	WILDCAT CANYON	UNKNOWN	Light Collector	Collector	0.64
San Dieguito	DEL DIOS	ELM	ZONE CONNECTOR	Light Collector	Collector	1.14
San Dieguito	DEL DIOS	FRUIT STAND	UNKNOWN	Light Collector	Collector	0.38
San Dieguito	DEL DIOS	LUNA DE MIEL	VIA CUATRO CAMIN	Light Collector	Collector	0.40
San Dieguito	DEL DIOS	MT ISRAEL	RANCHO	Light Collector	Collector	0.11
San Dieguito	DEL DIOS	RANCHO	ZONE CONNECTOR	Light Collector	Collector	1.15
San Dieguito	DEL DIOS	UNKNOWN	FRUIT STAND	Light Collector	Collector	1.46

Appendix A
Base Year Deficiencies
County Facilities

CPA	Name	From Cross Street	To Cross Street	Existing Classification	Required Classification	Additional Lane Miles Required
San Dieguito	DEL DIOS	UNKNOWN	UNKNOWN	Light Collector	Collector	1.14
San Dieguito	DEL DIOS	UNKNOWN	UNKNOWN	Light Collector	Collector	0.98
San Dieguito	DEL DIOS	UNKNOWN	LUNA DE MIEL	Light Collector	Collector	0.92
San Dieguito	DEL DIOS	VIA CUATRO CAMIN	EL CAMINO DEL NO	Light Collector	Collector	0.95
San Dieguito	DEL DIOS	ZONE CONNECTOR	MT ISRAEL	Light Collector	Collector	1.46
San Dieguito	DEL DIOS	ZONE CONNECTOR	UNKNOWN	Light Collector	Collector	2.36
San Dieguito	EL CAMINO REAL	VIA DE LA VALLE	SAN DIEGUITO	Light Collector	Collector	0.98
San Dieguito	LA BAJADA	EL MIRLO	LA NORIA	Light Collector	Town Collector	0.29
San Dieguito	PASEO DELICIAS	EL CAMINO DEL NO	EL MONTEVIDEO	Light Collector	Collector	1.13
San Dieguito	PASEO DELICIAS	EL MONTEVIDEO	LAVALLE PLATEADA	Light Collector	Collector	1.09
San Dieguito	PASEO DELICIAS	LA FREMONTIA	VIA DE LA VALLE	Light Collector	Collector	0.10
San Dieguito	PASEO DELICIAS	LAVALLE PLATEADA	LA FREMONTIA	Light Collector	Collector	0.18
San Dieguito	PASEO DELICIAS	VIA DE LA VALLE	LA GRANADA	Light Collector	Town Collector	0.29
San Dieguito	VIA DE LA VALLE	14906	EL CAMINO REAL	Light Collector	Collector	0.61
San Dieguito	VIA DE LA VALLE	CALZADA DEL BOSQ	LAS PALOMAS	Light Collector	Town Collector	0.87
San Dieguito	VIA DE LA VALLE	CANCHA DE GOLF	UNKNOWN	Light Collector	Collector	1.22
San Dieguito	VIA DE LA VALLE	EL CAMINO REAL	UNKNOWN	Light Collector	Collector	1.04
San Dieguito	VIA DE LA VALLE	LAS COLINAS	VIA DE SANTA FE	Light Collector	Town Collector	0.56
San Dieguito	VIA DE LA VALLE	LAS PALOMAS	CANCHA DE GOLF	Light Collector	Town Collector	0.16
San Dieguito	VIA DE LA VALLE	PASEO DELICIAS	LAS COLINAS	Light Collector	Town Collector	0.02
San Dieguito	VIA DE LA VALLE	UNKNOWN	CAMTO PORTA DELG	Light Collector	Collector	0.32
San Dieguito	VIA DE LA VALLE	VIA DE SANTA FE	VIA DE SANTA FE	Light Collector	Collector	0.06
Spring Valley	BANCROFT	HELIX	KOONCE	Light Collector	Collector	0.33
Spring Valley	BANCROFT	KENWOOD	SWITZER/3401	Light Collector	Collector	0.19
Spring Valley	BANCROFT	KOONCE	KENWOOD	Light Collector	Collector	0.37
Spring Valley	BANCROFT	LAMAR	TROY	Light Collector	Collector	0.35
Spring Valley	BANCROFT	RAMP SR-94 EB	HELIX	Light Collector	Collector	0.08
Spring Valley	BANCROFT	SWITZER/3401	ZONE CONNECTOR	Light Collector	Collector	0.12
Spring Valley	BANCROFT	UNKNOWN	RAMP SR-94 EB	Light Collector	Collector	0.05
Spring Valley	BANCROFT	ZONE CONNECTOR	LAMAR	Light Collector	Collector	0.50
Spring Valley	CAMPO	KENWOOD	TERRACE	Light Collector	Collector	0.27
Spring Valley	CAMPO	RAMP SR-125 NB	KENWOOD	Light Collector	Collector	0.16
Spring Valley	JAMACHA BOULEVAR	JAMACHA	SPRING GLEN	Light Collector	Collector	0.18
Spring Valley	JAMACHA BOULEVAR	RAMP	JAMACHA	Light Collector	Collector	0.27
Spring Valley	JAMACHA BOULEVAR	SPRING GLEN	WHITESTONE	Light Collector	Collector	0.64

Appendix A
Base Year Deficiencies
County Facilities

CPA	Name	From Cross Street	To Cross Street	Existing Classification	Required Classification	Additional Lane Miles Required
Spring Valley	JAMACHA BOULEVAR	SWEETWATER SPRIN	RAMP	Light Collector	Collector	0.52
Spring Valley	JAMACHA BOULEVAR	WHITESTONE	JAMACHA ROAD	Light Collector	Collector	0.59
Spring Valley	KENWOOD	RAMP SR-94 EB	RAMP SR-94 WB	Light Collector	Collector	0.19
Spring Valley	SWEETWATER	BLOSSOM	UNKNOWN	Major	Prime Arterial	0.28
Spring Valley	SWEETWATER	HARNESS	SPRING VISTA	Major	Prime Arterial	0.51
Spring Valley	SWEETWATER	SPRING VISTA	JAMACHA ROAD	Major	Prime Arterial	0.38
Spring Valley	SWEETWATER	UNKNOWN	HARNESS	Major	Prime Arterial	0.26
Spring Valley	SWEETWATER SPRIN	DEL RIO	DON PICO	Major	Prime Arterial	0.12
Spring Valley	SWEETWATER SPRIN	DON PICO	CRISTOBAL	Major	Prime Arterial	0.16
Spring Valley	WORTHINGTON	PARADISE VALLEY	VERDE RIDGE	Light Collector	Town Collector	0.11
Spring Valley	WORTHINGTON	UNKNOWN	UNKNOWN	Light Collector	Town Collector	0.28
Spring Valley	WORTHINGTON	VERDE RIDGE	UNKNOWN	Light Collector	Town Collector	0.05
Sweetwater	BONITA	ANDORRA	PLZA BONITA/LYNN	Major	Prime Arterial	0.41
Sweetwater	BONITA	SAN MIGUEL	UNKNOWN	Light Collector	Collector	0.86
Sweetwater	BONITA	SWEETWATER	UNKNOWN	Light Collector	Collector	0.24
Sweetwater	BONITA	UNKNOWN	CENTRAL	Light Collector	Collector	0.28
Sweetwater	BONITA	VILLA BONITA SR	ANDORRA	Major	Prime Arterial	0.40
Sweetwater	BRIARWOOD	RAMP SR-54 EB	ROBINWOOD	Light Collector	Town Collector	0.05
Sweetwater	BRIARWOOD	SOUTH BAY PARKWA	RAMP SR-54 EB	Light Collector	Collector	0.03
Sweetwater	CENTRAL	AUDUBON	CORRAL CANYON	Light Collector	Town Collector	0.24
Sweetwater	CENTRAL	FRISBIE	HAZELHURST	Light Collector	Town Collector	0.13
Sweetwater	CENTRAL	HAZELHURST	AUDUBON	Light Collector	Town Collector	0.08
Sweetwater	SWEETWATER	BRIARWOOD	BONITA WOODS	Light Collector	Town Collector	0.40
Sweetwater	SWEETWATER	DEGEN	BONITA	Light Collector	Collector	0.32
Sweetwater	SWEETWATER	PRAY	DEGEN	Light Collector	Collector	0.11
Sweetwater	SWEETWATER	QUARRY	PRAY	Light Collector	Collector	0.92
Sweetwater	SWEETWATER	UNKNOWN	QUARRY	Light Collector	Collector	0.66
Sweetwater	WILLOW	SWEETWATER	BONITA	Light Collector	Collector	0.45
Valle De Oro	BANCROFT	CAMPO	RAMP SR-94 WB	Light Collector	Collector	0.09
Valle De Oro	BANCROFT	RAMP SR-94 WB	UNKNOWN	Light Collector	Collector	0.07
Valle De Oro	CALLE VERDE	RANCHO S D VILLA	VIA MERCADO	Light Collector	Town Collector	0.13
Valle De Oro	CAMPO	BANCROFT	HELIX	Light Collector	Collector	0.38
Valle De Oro	CAMPO	HELIX	UNKNOWN	Light Collector	Town Collector	0.23
Valle De Oro	CAMPO	KENWOOD	TERRACE	Light Collector	Collector	0.10
Valle De Oro	CAMPO	TERRACE	BANCROFT	Light Collector	Collector	0.41

CPA	Name	From Cross Street	To Cross Street	Existing Classification	Required Classification	Additional Lane Miles Required
Valle De Oro	CAMPO	UNKNOWN	ROGERS	Light Collector	Town Collector	0.14
Valle De Oro	CHASE	BERNITA	UNKNOWN	Light Collector	Collector	0.50
Valle De Oro	CHASE	FUERTE	ZONE CONNECTOR	Light Collector	Collector	0.16
Valle De Oro	CHASE	GROVE	BERNITA	Light Collector	Collector	0.22
Valle De Oro	CHASE	MONUMENT HILL	FUERTE	Light Collector	Collector	0.14
Valle De Oro	CHASE	SR 54	JAMACHA ROAD	Light Collector	Collector	0.23
Valle De Oro	CHASE	UNKNOWN	MONUMENT HILL	Light Collector	Collector	0.70
Valle De Oro	CHASE	ZONE CONNECTOR	SR 54	Light Collector	Collector	0.14
Valle De Oro	FUERTE	ALZEDA	CALAVO	Light Collector	Town Collector	0.13
Valle De Oro	FUERTE	CALAVO	AVOCADO	Light Collector	Town Collector	0.23
Valle De Oro	FUERTE	GRANDVIEW	ZONE CONNECTOR	Light Collector	Town Collector	0.20
Valle De Oro	FUERTE	GROSSMONT	SIERRA VISTA	Light Collector	Collector	0.40
Valle De Oro	FUERTE	HELIX	GRANDVIEW	Light Collector	Collector	0.82
Valle De Oro	FUERTE	LEMON	HELIX	Light Collector	Collector	0.72
Valle De Oro	FUERTE	SIERRA VISTA	UNKNOWN	Light Collector	Collector	0.62
Valle De Oro	FUERTE	UNKNOWN	ZONE CONNECTOR	Light Collector	Collector	0.63
Valle De Oro	FUERTE	ZONE CONNECTOR	LEMON	Light Collector	Collector	0.21
Valle De Oro	FUERTE	ZONE CONNECTOR	ALZEDA	Light Collector	Town Collector	0.13
Valle De Oro	HILLSDALE	JAMACHA ROAD	LA VALHALLA	Light Collector	Town Collector	0.29
Valle De Oro	KENWOOD	RAMP SR-94 WB	CAMPO	Light Collector	Collector	0.20
Valle De Oro	NORTH BARCELONA	CAMPO	DOLORES	Light Collector	Town Collector	0.06
Valle De Oro	VIA MERCADO	CALLE VERDE	CAMPO	Light Collector	Collector	0.31
Valley Center	CHAMPAGNE	GOPHER CANYON	OLD CASTLE	Light Collector	Collector	0.32
Valley Center	OLD 395	CIRCLE R	GOPHER CANYON	Light Collector	Town Collector	0.15
Valley Center	VALLEY CENTER	CALLE DE VISTA	ZONE CONNECTOR	Light Collector	Collector	0.32
Valley Center	VALLEY CENTER	CHARLAN	WOODS VALLEY	Light Collector	Collector	0.56
Valley Center	VALLEY CENTER	COLE GRADE	MILLER	Light Collector	Collector	1.04
Valley Center	VALLEY CENTER	LILAC	CALLE DE VISTA	Light Collector	Collector	0.55
Valley Center	VALLEY CENTER	MILLER	ZONE CONNECTOR	Light Collector	Collector	0.94
Valley Center	VALLEY CENTER	UNKNOWN	UNKNOWN	Light Collector	Collector	2.93
Valley Center	VALLEY CENTER	WOODS VALLEY	ZONE CONNECTOR	Light Collector	Collector	0.29
Valley Center	VALLEY CENTER	ZONE CONNECTOR	LILAC	Light Collector	Collector	0.59
Valley Center	VALLEY CENTER	ZONE CONNECTOR	CHARLAN	Light Collector	Collector	0.94
Valley Center	VALLEY CENTER	ZONE CONNECTOR	UNKNOWN	Light Collector	Collector	2.09

Appendix A
Base Year Deficiencies
State Facilities

CPA	Name	Lanes	Additional Lane Miles Required
Bonsall	MISSION	2	6.77
Bonsall	PALA	2	0.56
Fallbrook	PALA	2	0.30
Jamul-Dulzura	CAMPO	2	4.39
Jamul-Dulzura	SR-94	2	0.83
Lakeside	SR-67	2	7.81
Ramona	JULIAN	2	0.89
Ramona	MAIN	4	0.22
Ramona	SR-67	2	5.40
Spring Valley	SR-54 EB	4	0.31
Sweetwater	SOUTH BAY PARKWAY	2	1.70
Valle De Oro	CAMPO	2	2.87

Appendix B
Future Buildout Roadway Deficiencies

Appendix B
Buildout Deficiencies
County Facilities

CPA	Name	From Cross Street	To Cross Street	Existing Classification	Required Classification	Additional Lane Miles Required
Alpine	ALPINE	ALPINE MHP	BAY MDOWS/MARINO	Light Collector	Collector	0.22
Alpine	ALPINE	BAY MDOWS/MARINO	ROCK	Light Collector	Collector	0.61
Alpine	ALPINE	DUNBAR	RAMP I8 EB	Light Collector	Town Collector	0.07
Alpine	ALPINE	Eltinge	ALPINE MHP	Light Collector	Collector	0.56
Alpine	ALPINE	ROCK	SO GRADE/E VICTO	Light Collector	Collector	0.30
Alpine	ALPINE	TAVERN	ZONE CONNECTOR	Light Collector	Collector	0.11
Alpine	ALPINE	WEST VICTORIA	Eltinge	Light Collector	Collector	0.11
Alpine	ALPINE	ZONE CONNECTOR	ZONE CONNECTOR	Light Collector	Collector	0.35
Alpine	ALPINE	ZONE CONNECTOR	ZONE CONNECTOR	Light Collector	Collector	0.53
Alpine	ALPINE	ZONE CONNECTOR	WEST VICTORIA	Light Collector	Collector	0.41
Alpine	SOUTH GRADE	OLIVE VIEW	Eltinge	Light Collector	Town Collector	0.08
Alpine	TAVERN	ARNOLD	ZONE CONNECTOR	Light Collector	Collector	0.29
Alpine	TAVERN	RAMP I-8 HOV EB	ALPINE	Major	Prime Arterial	0.20
Alpine	TAVERN	RAMP I-8 WB	RAMP I-8 HOV EB	Light Collector	Major	0.33
Alpine	TAVERN	UNKNOWN	VICTORIA PARK	Light Collector	Collector	1.20
Alpine	TAVERN	VICTORIA PARK	RAMP I-8 WB	Light Collector	Major	0.07
Alpine	VIA LA MANCHA	RAMP I-8 EB	ALPINE	Light Collector	Town Collector	0.02
Alpine	VIA LA MANCHA	RAMP I-8 WB	RAMP I-8 EB	Light Collector	Collector	0.22
Alpine	VICTORIA PARK	TAVERN	GENTIAN	Light Collector	Town Collector	0.40
Alpine	WILLOWS	RAMP I-8 WB	WILLOWSIDE	Light Collector	Collector	1.15
Alpine	WILLOWS	WILLOWSIDE	VIEJAS GRADE	Light Collector	Collector	0.44
Barona	WILDCAT CANYON	SC 964	UNKNOWN	Light Collector	Town Collector	2.09
Barona	WILDCAT CANYON	UNKNOWN	ZONE CONNECTOR	Light Collector	Town Collector	1.87
Barona	WILDCAT CANYON	ZONE CONNECTOR	ZONE CONNECTOR	Light Collector	Collector	5.75
Bonsall	CHAMPAGNE	LAWRENCE WELK	ZONE CONNECTOR	Light Collector	Collector	1.80
Bonsall	EAST VISTA	EVERGREEN	HUTCHISON	Town Collector	Collector	0.67
Bonsall	EAST VISTA	HUTCHISON	ORMSBY/GOPHER CA	Town Collector	Collector	0.59
Bonsall	EAST VISTA	MISSION	OLD RIVER	Town Collector	Collector	0.13
Bonsall	EAST VISTA	OLD RIVER	EVERGREEN	Town Collector	Collector	0.50
Bonsall	EAST VISTA	ORMSBY/GOPHER CA	STRAWBERRY HILL	Town Collector	Collector	0.43
Bonsall	EAST VISTA	STRAWBERRY HILL	OSBORNE	Light Collector	Collector	0.89
Bonsall	GOPHER CANYON	ORMSBY	VISTA VALLEY	Light Collector	Collector	1.98
Bonsall	GOPHER CANYON	RAMP I-15 NB	OLD 395	Light Collector	Collector	0.14
Bonsall	GOPHER CANYON	RAMP I-15 SB	RAMP I-15 NB	Light Collector	Collector	0.19
Bonsall	GOPHER CANYON	TWIN OAKS VALLEY	UNKNOWN	Light Collector	Collector	1.65

CPA	Name	From Cross Street	To Cross Street	Existing Classification	Required Classification	Additional Lane Miles Required
Bonsall	GOPHER CANYON	UNKNOWN	RAMP I-15 SB	Light Collector	Collector	1.63
Bonsall	GOPHER CANYON	VISTA VALLEY	TWIN OAKS VALLEY	Light Collector	Collector	1.57
Bonsall	MISSION	BLDG 4949	ZONE CONNECTOR	Light Collector	Collector	0.35
Bonsall	NORTH RIVER	UNKNOWN	VIA PUERTA DEL S	Light Collector	Collector	0.10
Bonsall	NORTH RIVER	VIA PUERTA DEL S	MISSION	Light Collector	Collector	0.85
Bonsall	OLD 395	WEST LILAC	ZONE CONNECTOR	Light Collector	Town Collector	0.41
Bonsall	OLD 395	ZONE CONNECTOR	RAMP I-15 SB	Light Collector	Town Collector	0.44
Bonsall	OLD RIVER	GOLF CLUB	ZONE CONNECTOR	Light Collector	Town Collector	0.44
Bonsall	OLD RIVER	GOPHER CANYON	UNKNOWN	Light Collector	Town Collector	0.53
Bonsall	OLD RIVER	OLIVEHILL	GOLF CLUB	Light Collector	Town Collector	0.33
Bonsall	OLD RIVER	ZONE CONNECTOR	GOPHER CANYON	Light Collector	Town Collector	1.04
Bonsall	OLIVEHILL	MISSION	WEST LILAC	Light Collector	Town Collector	0.25
Bonsall	ORMSBY	FAIRVIEW	EAST VISTA	Light Collector	Collector	0.81
Bonsall	ORMSBY	GOPHER CANYON	ZONE CONNECTOR	Light Collector	Collector	0.55
Bonsall	ORMSBY	ZONE CONNECTOR	FAIRVIEW	Light Collector	Collector	1.01
Bonsall	VIA PUERTA DEL S	BIG VIEW	UNKNOWN	Light Collector	Town Collector	0.15
Bonsall	VIA PUERTA DEL S	OLIVE HILL	VALLE DEL SOL	Light Collector	Town Collector	0.60
Bonsall	VIA PUERTA DEL S	PASO DEL LAGOS	UNKNOWN	Light Collector	Town Collector	0.25
Bonsall	VIA PUERTA DEL S	UNKNOWN	UNKNOWN	Light Collector	Town Collector	0.01
Bonsall	VIA PUERTA DEL S	UNKNOWN	BIG VIEW	Light Collector	Town Collector	0.24
Bonsall	VIA PUERTA DEL S	UNKNOWN	NORTH RIVER	Light Collector	Town Collector	0.13
Bonsall	VIA PUERTA DEL S	VALLE DEL SOL	PASO DEL LAGOS	Light Collector	Town Collector	0.75
Bonsall	WEST LILAC	OLD RIVER	CAM DEL REY	Light Collector	Collector	0.59
County Islands	POMERADO	UNKNOWN	RAMP I-15 NB	Light Collector	Major	0.13
Crest-Dehesa	DEHESA	CALLE ENCANTO	VISTA GRANDE	Light Collector	Collector	0.64
Crest-Dehesa	DEHESA	DEHESA-NEW	DEHESA-NEW	Light Collector	Town Collector	0.65
Crest-Dehesa	DEHESA	DEHESA-NEW	WILLOW GLEN	Light Collector	Town Collector	0.04
Crest-Dehesa	DEHESA	HARBISON CANYON	UNKNOWN	Light Collector	Collector	0.50
Crest-Dehesa	DEHESA	SINGING TRAILS	DEHESA-NEW	Light Collector	Town Collector	0.12
Crest-Dehesa	DEHESA	UNKNOWN	UNKNOWN	Light Collector	Collector	1.83
Crest-Dehesa	DEHESA	UNKNOWN	HARBISON CANYON	Light Collector	Collector	1.01
Crest-Dehesa	DEHESA	UNKNOWN	SYCUAN	Light Collector	Collector	0.97
Crest-Dehesa	DEHESA	VISTA GRANDE	SINGING TRAILS	Light Collector	Collector	0.89
Crest-Dehesa	DEHESA	WILLOW GLEN	ZONE CONNECTOR	Light Collector	Collector	0.84
Crest-Dehesa	DEHESA	ZONE CONNECTOR	UNKNOWN	Light Collector	Collector	2.75

CPA	Name	From Cross Street	To Cross Street	Existing Classification	Required Classification	Additional Lane Miles Required
Crest-Dehesa	GREENFIELD	SYCAMORE	LA CRESTA	Light Collector	Collector	0.30
Crest-Dehesa	SYCUAN	DEHESA	ZONE CONNECTOR	Light Collector	Collector	0.70
Desert	BORREGO SPRINGS	CHRISTMAS S	STIRRUP	Light Collector	Collector	0.42
Desert	CHRISTMAS N	BORREGO SPRINGS	PALM CANYON	Light Collector	Collector	0.13
Desert	CHRISTMAS S	CHRISTMAS N	BORREGO SPRINGS	Light Collector	Collector	0.14
Desert	PALM CANYON	CHRISTMAS N	UNKNOWN	Light Collector	Collector	0.49
Desert	PALM CANYON	DI GIORGIO	UNKNOWN	Light Collector	Town Collector	0.48
Desert	PALM CANYON	OCOTILLO	UNKNOWN	Light Collector	Collector	0.55
Desert	PALM CANYON	UNKNOWN	OCOTILLO	Light Collector	Town Collector	0.22
Desert	PALM CANYON	UNKNOWN	CHRISTMAS N	Light Collector	Collector	0.40
Desert	PALM CANYON	UNKNOWN	DI GIORGIO	Light Collector	Town Collector	0.23
Fallbrook	AVIATION	UNKNOWN	MISSION	Light Collector	Town Collector	0.09
Fallbrook	FALLBROOK	GOLDEN	MC DONALD	Light Collector	Town Collector	0.35
Fallbrook	FALLBROOK	MAGARIAN	ZONE CONNECTOR	Light Collector	Town Collector	0.22
Fallbrook	FALLBROOK	MAIN	OLD STAGE	Light Collector	Collector	0.25
Fallbrook	FALLBROOK	MANDARIN	GOLDEN	Light Collector	Collector	0.54
Fallbrook	FALLBROOK	MC DONALD	MAGARIAN	Light Collector	Town Collector	0.06
Fallbrook	FALLBROOK	OLD STAGE	MANDARIN	Light Collector	Collector	0.25
Fallbrook	FALLBROOK	ZONE CONNECTOR	STAGE COACH	Light Collector	Town Collector	0.22
Fallbrook	MAIN	ALVARADO	FIG	Light Collector	Town Collector	0.06
Fallbrook	MAIN	AMMUNITION	CLEMMENS	Light Collector	Collector	0.25
Fallbrook	MAIN	AVIATION	AMMUNITION	Light Collector	Collector	0.38
Fallbrook	MAIN	COLLEGE	ZONE CONNECTOR	Light Collector	Collector	0.18
Fallbrook	MAIN	FALLBROOK	AVIATION	Light Collector	Collector	0.38
Fallbrook	MAIN	FIG	COLLEGE	Light Collector	Collector	0.28
Fallbrook	MAIN	MISSION	ZONE CONNECTOR	Light Collector	Town Collector	0.09
Fallbrook	MAIN	ZONE CONNECTOR	ALVARADO	Light Collector	Collector	0.18
Fallbrook	MAIN	ZONE CONNECTOR	FALLBROOK	Light Collector	Collector	0.16
Fallbrook	MISSION	BAJA MISSION	LA CANADA	Light Collector	Collector	0.63
Fallbrook	MISSION	BIG OAK RANCH	GREEN CANYON	Light Collector	Collector	0.89
Fallbrook	MISSION	BRANDON	IOWA	Light Collector	Collector	0.56
Fallbrook	MISSION	DAVIS	STAGE COACH	Light Collector	Collector	0.35
Fallbrook	MISSION	GREEN CANYON	VIA ENCINAS	Light Collector	Collector	0.62
Fallbrook	MISSION	GUM TREE	INDUSTRIAL	Light Collector	Collector	0.91
Fallbrook	MISSION	HELLERS BEND	ZONE CONNECTOR	Light Collector	Collector	0.78

CPA	Name	From Cross Street	To Cross Street	Existing Classification	Required Classification	Additional Lane Miles Required
Fallbrook	MISSION	INDUSTRIAL	SANTA MARGARITA	Light Collector	Collector	0.36
Fallbrook	MISSION	IOWA	UNKNOWN	Town Collector	Collector	0.10
Fallbrook	MISSION	LA CANADA	BLDG 4949	Light Collector	Collector	1.60
Fallbrook	MISSION	LIVE OAK PARK	OLD 395	Light Collector	Collector	1.42
Fallbrook	MISSION	OLD 395	RAMP I-15 SB	Light Collector	Prime Arterial	0.22
Fallbrook	MISSION	OLD STAGE	PEPPER TREE	Major	Prime Arterial	0.16
Fallbrook	MISSION	OVERLAND	BIG OAK RANCH	Light Collector	Collector	0.52
Fallbrook	MISSION	RAMP I-15 NB	OLD 395	Light Collector	Collector	0.10
Fallbrook	MISSION	RAMP I-15 SB	RAMP I-15 NB	Light Collector	Collector	0.31
Fallbrook	MISSION	SANTA MARGARITA	BRANDON	Light Collector	Collector	0.51
Fallbrook	MISSION	STAGE COACH	GUM TREE	Light Collector	Collector	0.26
Fallbrook	MISSION	STAGE COACH	OLIVE HILL	Light Collector	Collector	0.17
Fallbrook	MISSION	UNKNOWN	WILLOW GLEN	Light Collector	Collector	0.69
Fallbrook	MISSION	UNKNOWN	XX	Light Collector	Collector	1.13
Fallbrook	MISSION	UNKNOWN	MAIN	Town Collector	Collector	0.09
Fallbrook	MISSION	VIA ENCINAS	HELLERS BEND	Light Collector	Collector	0.71
Fallbrook	MISSION	VIA MONSERATE	BAJA MISSION	Light Collector	Collector	0.22
Fallbrook	MISSION	WILLOW GLEN	LIVE OAK PARK	Light Collector	Collector	1.77
Fallbrook	MISSION	WINTER HAVEN	OVERLAND	Light Collector	Collector	0.59
Fallbrook	MISSION	XX	ZONE CONNECTOR	Light Collector	Collector	0.79
Fallbrook	MISSION	ZONE CONNECTOR	DAVIS	Light Collector	Collector	0.60
Fallbrook	MISSION	ZONE CONNECTOR	VIA MONSERATE	Light Collector	Collector	0.70
Fallbrook	OLD 395	CANONITA	TECALOTE	Light Collector	Town Collector	0.57
Fallbrook	OLD 395	DULIN	DULIN	Light Collector	Collector	0.43
Fallbrook	OLD 395	DULIN	WEST LILAC	Light Collector	Collector	2.72
Fallbrook	OLD 395	MISSION	MISSION	Light Collector	Collector	0.64
Fallbrook	OLD 395	PALA	UNKNOWN	Light Collector	Town Collector	0.23
Fallbrook	OLD 395	PALA MESA	ZONE CONNECTOR	Light Collector	Collector	1.03
Fallbrook	OLD 395	PUBLIC	PALA	Light Collector	Collector	0.23
Fallbrook	OLD 395	RECHE	CANONITA	Light Collector	Town Collector	0.72
Fallbrook	OLD 395	TECALOTE	PALA MESA	Light Collector	Collector	2.17
Fallbrook	OLD 395	UNKNOWN	DULIN	Light Collector	Town Collector	0.31
Fallbrook	OLD 395	ZONE CONNECTOR	PUBLIC	Light Collector	Collector	0.60
Fallbrook	OLIVE HILL	BURMA	RANCHO BONITO	Light Collector	Town Collector	0.31
Fallbrook	OLIVE HILL	LADERA VISTA	BURMA	Light Collector	Collector	0.47

CPA	Name	From Cross Street	To Cross Street	Existing Classification	Required Classification	Additional Lane Miles Required
Fallbrook	OLIVE HILL	MISSION	ZONE CONNECTOR	Light Collector	Collector	0.29
Fallbrook	OLIVE HILL	RANCHO BONITO	RANCHO CAM	Light Collector	Town Collector	0.36
Fallbrook	OLIVE HILL	RANCHO CAM	ZONE CONNECTOR	Light Collector	Collector	1.68
Fallbrook	OLIVE HILL	UNKNOWN	VIA PUERTA DEL S	Light Collector	Collector	1.21
Fallbrook	OLIVE HILL	WHITE HORSE	LADERA VISTA	Light Collector	Collector	1.00
Fallbrook	OLIVE HILL	ZONE CONNECTOR	ZONE CONNECTOR	Light Collector	Collector	0.63
Fallbrook	OLIVE HILL	ZONE CONNECTOR	ZONE CONNECTOR	Light Collector	Collector	0.73
Fallbrook	OLIVE HILL	ZONE CONNECTOR	WHITE HORSE	Light Collector	Collector	1.10
Fallbrook	OLIVE HILL	ZONE CONNECTOR	UNKNOWN	Light Collector	Collector	0.20
Fallbrook	PANKEY	PALA	SHEARER	Light Collector	Collector	0.17
Fallbrook	PANKEY	ZONE CONNECTOR	PALA	Light Collector	8L Prime	0.92
Fallbrook	PEPPER TREE	MISSION	ZONE CONNECTOR	Light Collector	Collector	0.23
Fallbrook	RECHE	FALLBROOK	LOS AMIGOS	Light Collector	Collector	0.16
Fallbrook	RECHE	GIRD	UNKNOWN	Light Collector	Town Collector	0.67
Fallbrook	RECHE	GREEN CANYON	UNKNOWN	Light Collector	Town Collector	0.08
Fallbrook	RECHE	LIVE OAK PARK	GIRD	Light Collector	Town Collector	0.51
Fallbrook	RECHE	LOS AMIGOS	GREEN CANYON	Light Collector	Collector	0.34
Fallbrook	RECHE	RANGER	OLD 395	Light Collector	Town Collector	0.39
Fallbrook	RECHE	STAGE COACH	UNKNOWN	Light Collector	Collector	0.40
Fallbrook	RECHE	UNKNOWN	ZONE CONNECTOR	Light Collector	Collector	0.38
Fallbrook	RECHE	UNKNOWN	LIVE OAK PARK	Light Collector	Town Collector	0.32
Fallbrook	RECHE	UNKNOWN	UNKNOWN	Light Collector	Town Collector	0.58
Fallbrook	RECHE	UNKNOWN	RANGER	Light Collector	Town Collector	0.53
Fallbrook	RECHE	ZONE CONNECTOR	FALLBROOK	Light Collector	Collector	0.24
Fallbrook	STAGE COACH	BROOKE	POMEGRANATE	Light Collector	Town Collector	0.61
Fallbrook	STAGE COACH	FALLBROOK	ZONE CONNECTOR	Light Collector	Collector	0.51
Fallbrook	STAGE COACH	MORRO	MISSION	Town Collector	Collector	0.48
Fallbrook	STAGE COACH	PEPPER TREE	BROOKE	Light Collector	Collector	0.72
Fallbrook	STAGE COACH	POMEGRANATE	MORRO	Town Collector	Collector	0.48
Fallbrook	STAGE COACH	RANCHWOOD	PEPPER TREE	Light Collector	Collector	0.25
Fallbrook	STAGE COACH	RECHE	RANCHWOOD	Light Collector	Town Collector	0.38
Fallbrook	STAGE COACH	ZONE CONNECTOR	RECHE	Light Collector	Collector	0.50
Jamul-Dulzura	JAMUL	TUK A WILE	YUCCA	Light Collector	Town Collector	1.04
Jamul-Dulzura	JAMUL	YUCCA	LYONS VALLEY	Light Collector	Town Collector	0.08
Jamul-Dulzura	JEFFERSON	OLIVE VISTA	ZONE CONNECTOR	Light Collector	Town Collector	0.18

CPA	Name	From Cross Street	To Cross Street	Existing Classification	Required Classification	Additional Lane Miles Required
Jamul-Dulzura	LYONS VALLEY	JAMUL	RIO GRANDE	Light Collector	Collector	0.85
Jamul-Dulzura	LYONS VALLEY	JEFFERSON	RESERVOIR	Light Collector	Collector	0.39
Jamul-Dulzura	LYONS VALLEY	RESERVOIR	JAMUL	Light Collector	Collector	0.36
Jamul-Dulzura	LYONS VALLEY	RIO GRANDE	SC 760	Light Collector	Collector	0.70
Jamul-Dulzura	PROCTOR VALLEY	CALLE BUENO GANA	SCHLEE CANYON	Light Collector	Town Collector	0.41
Jamul-Dulzura	PROCTOR VALLEY	MAXFIELD	ZONE CONNECTOR	Light Collector	Collector	0.22
Jamul-Dulzura	PROCTOR VALLEY	MELODY	CALLE BUENO GANA	Light Collector	Town Collector	0.11
Jamul-Dulzura	PROCTOR VALLEY	SCHLEE CANYON	MAXFIELD	Light Collector	Collector	0.52
Jamul-Dulzura	PROCTOR VALLEY	ZONE CONNECTOR	JEFFERSON	Light Collector	Collector	0.16
Lakeside	ASHWOOD	WILDCAT CANYON	ZONE CONNECTOR	Light Collector	Collector	0.85
Lakeside	ASHWOOD	ZONE CONNECTOR	ZONE CONNECTOR	Light Collector	Collector	0.76
Lakeside	ASHWOOD	ZONE CONNECTOR	MAPLEVIEW	Light Collector	Collector	0.36
Lakeside	CHANNEL	LAKESIDE	UNKNOWN	Light Collector	Collector	0.26
Lakeside	EL NOPAL	11354	RIVERFORD	Light Collector	Collector	0.22
Lakeside	EL NOPAL	UNKNOWN	11354	Light Collector	Town Collector	0.21
Lakeside	EL NOPAL	UNNAMED LKS	UNKNOWN	Light Collector	Town Collector	0.12
Lakeside	I-8 BUSINESS	13490	LOS COCHES/CM CA	Light Collector	Collector	0.81
Lakeside	I-8 BUSINESS	JACKSON HILL	LAVALA	Light Collector	Collector	1.01
Lakeside	I-8 BUSINESS	LOS COCHES/CM CA	UNKNOWN	Light Collector	Collector	0.32
Lakeside	I-8 BUSINESS	PINKARD	LAKEVIEW/13754	Light Collector	Town Collector	0.23
Lakeside	I-8 BUSINESS	UNKNOWN	JACKSON HILL	Light Collector	Collector	0.59
Lakeside	JULIAN	CACTUS	LOS COCHES/MAINE	Light Collector	Town Collector	0.18
Lakeside	JULIAN	PINO	LAKEVIEW	Light Collector	Town Collector	0.16
Lakeside	LAKE JENNINGS PA	EL MONTE	ZONE CONNECTOR	Light Collector	Collector	1.00
Lakeside	LAKE JENNINGS PA	HARRITT	HWY 8/BLOSSOM VA	Light Collector	Collector	0.23
Lakeside	LAKE JENNINGS PA	HWY 8/BLOSSOM VA	RAMP I-8 WB	Light Collector	Collector	0.10
Lakeside	LAKE JENNINGS PA	PINKARD	HARRITT	Light Collector	Collector	0.20
Lakeside	LAKE JENNINGS PA	RAMP I-8 WB	RAMP I-8 WB	Light Collector	Collector	0.06
Lakeside	LAKE JENNINGS PA	RAMP I-8 WB	SIERRA ALTA	Light Collector	Collector	0.14
Lakeside	LAKE JENNINGS PA	ZONE CONNECTOR	PINKARD	Light Collector	Collector	1.74
Lakeside	LAKESIDE	RIVERSIDE	ZONE CONNECTOR	Town Collector	Collector	0.28
Lakeside	LAKESIDE	ZONE CONNECTOR	CHANNEL	Town Collector	Collector	0.15
Lakeside	LOS COCHES	BOWER	LAKEVIEW	Town Collector	Collector	0.40
Lakeside	LOS COCHES	DEL SOL	ZONE CONNECTOR	Town Collector	Collector	1.01
Lakeside	LOS COCHES	LAKEVIEW	I-8 BUSINESS	Town Collector	Collector	0.58

CPA	Name	From Cross Street	To Cross Street	Existing Classification	Required Classification	Additional Lane Miles Required
Lakeside	LOS COCHES	LOS COCHES/MAINE	DEL SOL	Town Collector	Collector	0.94
Lakeside	LOS COCHES	ZONE CONNECTOR	BOWER	Town Collector	Collector	0.76
Lakeside	MAPLEVIEW	MAINE	VINE	Town Collector	Prime Arterial	0.11
Lakeside	MAPLEVIEW	SC 1805	SR-67	Light Collector	Collector	0.42
Lakeside	MAPLEVIEW	SR-67	MAINE	Light Collector	Prime Arterial	0.17
Lakeside	OLDE 80	PECAN PARK	PECAN PARK	Light Collector	Collector	0.61
Lakeside	OLDE 80	PECAN PARK	BOND	Light Collector	Collector	0.30
Lakeside	OLDE 80	SIERRA ALTA	PECAN PARK	Light Collector	Collector	0.07
Lakeside	PEPPER	02ND/WINTER GARD	PEERLESS	Light Collector	Town Collector	0.25
Lakeside	RIVERFORD	EL NOPAL	RIVERSIDE/MAST	Light Collector	Collector	0.16
Lakeside	RIVERFORD	RAMP SR-67 SB	WOODSIDE	Light Collector	Collector	0.18
Lakeside	RIVERFORD	RIVERSIDE/MAST	WOODSIDE(N)	Town Collector	Major	0.63
Lakeside	RIVERFORD	WOODSIDE(N)	RAMP SR-67 SB	Light Collector	Collector	0.08
Lakeside	RIVERSIDE	PALM ROW	VISTA CAMINO	Town Collector	Collector	0.42
Lakeside	RIVERSIDE	RIVERFORD	PALM ROW	Town Collector	Collector	0.56
Lakeside	RIVERSIDE	VISTA CAMINO	UNKNOWN	Town Collector	Collector	0.21
Lakeside	SIERRA ALTA	LAKE JENNINGS PA	RAMP I-8 EB	Light Collector	Collector	0.06
Lakeside	SIERRA ALTA	RAMP I-8 EB	OLDE 80	Light Collector	Collector	0.07
Lakeside	VALLE VISTA	SC 1791	ZONE CONNECTOR	Light Collector	Town Collector	0.23
Lakeside	VALLE VISTA	VISTA CAMINO	SC 1791	Light Collector	Town Collector	0.14
Lakeside	VALLE VISTA	ZONE CONNECTOR	RIVERSIDE	Light Collector	Town Collector	0.41
Lakeside	WILDCAT CANYON	ZONE CONNECTOR	WILLOW	Light Collector	Collector	5.56
Lakeside	WILLOW	FILLBROOK	WILDCAT CANYON	Light Collector	Town Collector	0.36
Lakeside	WILLOW	MORENO	FILLBROOK	Light Collector	Town Collector	0.29
Lakeside	WILLOW	SR-67	MORENO	Light Collector	Town Collector	0.25
Lakeside	WOODSIDE	11980/12001-APTS	WINTER GARDENS	Light Collector	Town Collector	0.17
Lakeside	WOODSIDE	MARILLA	UNKNOWN	Light Collector	Collector	0.21
Lakeside	WOODSIDE	RAMP	RIVERFORD	Light Collector	Collector	0.13
Lakeside	WOODSIDE	RAMP SR-67 NB	MARILLA	Light Collector	Collector	0.59
Lakeside	WOODSIDE	RIVERFORD	RAMP SR-67 NB	Light Collector	Collector	0.12
Lakeside	WOODSIDE	RIVERVIEW	11980/12001-APTS	Light Collector	Town Collector	0.18
Lakeside	WOODSIDE	UNKNOWN	RIVERVIEW	Light Collector	Collector	0.21
North County Metro	17TH	LENDEE	UNKNOWN	Light Collector	Collector	0.11
North County Metro	17TH	UNKNOWN	SAN PASQUAL VALL	Light Collector	Collector	0.33
North County Metro	BEAR VALLEY	BIRCH	IDAHO	Light Collector	Collector	0.31

CPA	Name	From Cross Street	To Cross Street	Existing Classification	Required Classification	Additional Lane Miles Required
North County Metro	BEAR VALLEY	IDAHO	LANDAVO	Light Collector	Collector	0.22
North County Metro	BEAR VALLEY	LANDAVO	SUBURBAN HILLS	Light Collector	Collector	0.28
North County Metro	BUENA CREEK	FREDAS HILL	LAS POSAS	Light Collector	Town Collector	0.50
North County Metro	BUENA CREEK	HARTWRIGHT	UNKNOWN	Light Collector	Collector	1.40
North County Metro	BUENA CREEK	HOLLYBERRY	FREDAS HILL	Light Collector	Town Collector	0.28
North County Metro	BUENA CREEK	LAS POSAS	TAMARA	Light Collector	Town Collector	0.43
North County Metro	BUENA CREEK	LONE OAK	MONTE VISTA	Light Collector	Collector	0.50
North County Metro	BUENA CREEK	MONTE VISTA	SUGARBUSH	Light Collector	Collector	1.21
North County Metro	BUENA CREEK	SOUTH SANTA FE	SYCAMORE	Light Collector	Collector	0.04
North County Metro	BUENA CREEK	SUGARBUSH	HOLLYBERRY	Light Collector	Collector	0.17
North County Metro	BUENA CREEK	SYCAMORE	HARTWRIGHT	Light Collector	Collector	0.06
North County Metro	BUENA CREEK	UNKNOWN	LONE OAK	Light Collector	Collector	0.33
North County Metro	CAMINO DEL	ZONE CONNECTOR	RANCHO SANTA FE	Light Collector	Town Collector	0.06
North County Metro	CHAMPAGNE	UNKNOWN	LAWRENCE WELK	Light Collector	Collector	0.74
North County Metro	CHAMPAGNE	ZONE CONNECTOR	MOUNTAIN MEADOW	Light Collector	Collector	3.62
North County Metro	DEER SPRINGS	MARILYN	UNKNOWN	Light Collector	Collector	0.40
North County Metro	DEER SPRINGS	MESA ROCK	MOUNTAIN MEADOW	Light Collector	Prime Arterial	0.21
North County Metro	DEER SPRINGS	SF 1414	UNKNOWN	Light Collector	Prime Arterial	2.78
North County Metro	DEER SPRINGS	UNKNOWN	MARILYN	Light Collector	Collector	0.33
North County Metro	DEER SPRINGS	UNKNOWN	SF 1414	Light Collector	Collector	0.34
North County Metro	DEER SPRINGS	UNKNOWN	MESA ROCK	Light Collector	Prime Arterial	3.01
North County Metro	DEL DIOS	COUNTRY CLUB	ELM	Light Collector	Collector	0.74
North County Metro	HARMONY GROVE	COUNTRY CLUB	WILGEN	Light Collector	Town Collector	0.39
North County Metro	HARMONY GROVE	WILGEN	ZONE CONNECTOR	Light Collector	Town Collector	1.66
North County Metro	HOLLYBERRY	BUENA CREEK	SALEM	Light Collector	Collector	0.48
North County Metro	N CENTRE CITY	CHAMPAGNE	JESMOND DENE	Light Collector	Town Collector	0.58
North County Metro	N CENTRE CITY	IVY DELL	UNKNOWN	Light Collector	Collector	0.51
North County Metro	N CENTRE CITY	JESMOND DENE	MESA ROCK	Light Collector	Collector	2.51
North County Metro	N CENTRE CITY	MESA ROCK	IVY DELL	Light Collector	Collector	0.71
North County Metro	N CENTRE CITY	UNKNOWN	CENTRE CITY	Light Collector	Collector	0.07
North County Metro	ROCK SPRINGS	MONTIEL	SEVEN OAKES	Light Collector	Town Collector	0.05
North County Metro	ROCK SPRINGS	UNKNOWN	BENNETT	Light Collector	Collector	0.01
North County Metro	SALEM	HOLLYBERRY	EMMA	Light Collector	Collector	1.00
North County Metro	SAN PASQUAL	ZERMATT	VIA RANCHO	Light Collector	Collector	0.99
North County Metro	SOUTH SANTA FE	TIBER	ROBELINI	Major	Prime Arterial	0.37

CPA	Name	From Cross Street	To Cross Street	Existing Classification	Required Classification	Additional Lane Miles Required
North County Metro	SOUTH SANTA FE	WOODLAND	TIBER	Major	Prime Arterial	0.19
North County Metro	SYCAMORE	BUENA CREEK	UNKNOWN	Major	Prime Arterial	0.21
North County Metro	SYCAMORE	RAMP SR-78 WB	RAMP SR-78 EB	Prime Arterial	8L Prime	0.09
North County Metro	SYCAMORE	ROBELINI	ROBELINI	Major	Prime Arterial	0.00
North County Metro	SYCAMORE	SHADOW RIDGE	ZONE CONNECTOR	Major	Prime Arterial	0.29
North County Metro	SYCAMORE	UNKNOWN	ROBELINI	Major	Prime Arterial	0.29
North County Metro	VALLEY CENTER	UNKNOWN	UNKNOWN	Major	Prime Arterial	0.09
North County Metro	VIA RANCHO	FELICITA	MONTESANO	Light Collector	Collector	0.26
North County Metro	VIA RANCHO	GRENADINE GLEN	VIA LOMA VISTA	Light Collector	Town Collector	0.57
North County Metro	VIA RANCHO	HIGHLANDS WEST	EUCALYPTUS	Light Collector	Town Collector	0.50
North County Metro	VIA RANCHO	LAKE	HIGHLANDS WEST	Light Collector	Town Collector	0.20
North County Metro	VIA RANCHO	UNKNOWN	UNKNOWN	Light Collector	Collector	2.01
North County Metro	VIA RANCHO	VALLEY	LAKE	Light Collector	Town Collector	0.06
North County Metro	VIA RANCHO	VIA LOMA VISTA	FELICITA	Light Collector	Collector	1.49
North County Metro	VIA RANCHO	VIENTO VALLE	UNKNOWN	Light Collector	Collector	0.14
Otay	AIRWAY	XX	ENRICO FERMI	Light Collector	Collector	0.48
Otay	ALTA	LONE STAR	XX	Light Collector	Prime Arterial	0.68
Otay	ALTA	XX	OTAY MESA	Light Collector	Prime Arterial	0.83
Otay	ALTA	ZONE CONNECTOR	ZONE CONNECTOR	Light Collector	Collector	0.95
Otay	ALTA	ZONE CONNECTOR	LONE STAR	Light Collector	Prime Arterial	0.25
Otay	ENRICO FERMI	AIRWAY	SIEMPRE VIVA	Light Collector	Prime Arterial	0.90
Otay	ENRICO FERMI	OTAY MESA	ZONE CONNECTOR	Major	Prime Arterial	0.20
Otay	ENRICO FERMI	RAMP SR-11 EB	ZONE CONNECTOR	Major	Prime Arterial	0.19
Otay	ENRICO FERMI	RAMP SR-11 WB	RAMP SR-11 EB	Major	Prime Arterial	0.18
Otay	ENRICO FERMI	ZONE CONNECTOR	RAMP SR-11 WB	Major	Prime Arterial	0.20
Otay	ENRICO FERMI	ZONE CONNECTOR	AIRWAY	Major	Prime Arterial	0.46
Otay	HARVEST	LONESTAR	UNNAMED	Light Collector	Prime Arterial	1.98
Otay	HARVEST	UNNAMED	UNNAMED	Light Collector	Prime Arterial	0.95
Otay	LONESTAR	NATIONAL UNIVERS	HARVEST	Light Collector	Prime Arterial	0.71
Otay	LONESTAR	UNKNOWN	UNKNOWN	Light Collector	Prime Arterial	0.81
Otay	LONESTAR	UNKNOWN	NATIONAL UNIVERS	Light Collector	Prime Arterial	0.79
Otay	OTAY LAKES	UNKNOWN	UNKNOWN	Light Collector	Prime Arterial	0.41
Otay	OTAY LAKES	UNKNOWN	UNKNOWN	Light Collector	Town Collector	0.82
Otay	OTAY LAKES	UNKNOWN	UNKNOWN	Light Collector	Town Collector	0.89
Otay	OTAY LAKES	UNKNOWN	UNKNOWN	Light Collector	Town Collector	0.92

CPA	Name	From Cross Street	To Cross Street	Existing Classification	Required Classification	Additional Lane Miles Required
Otay	OTAY LAKES	UNKNOWN	UNKNOWN	Light Collector	Town Collector	0.66
Otay	OTAY LAKES	WUESTE	UNKNOWN	Light Collector	Prime Arterial	0.80
Otay	OTAY MESA	BONITA VISTA HIG	ALTA	Major	Prime Arterial	2.31
Otay	OTAY MESA	ENRICO FERMI	BONITA VISTA HIG	Major	Prime Arterial	2.83
Otay	OTAY MESA	UNKNOWN	XX	Major	Prime Arterial	1.58
Otay	OTAY MESA	XX	ENRICO FERMI	Major	Prime Arterial	0.92
Pala-Pauma	VALLEY CENTER	PALA/SR-76	ZONE CONNECTOR	Town Collector	Collector	1.76
Pendleton-De Luz	BASILONE	RAMP I-5 SB	RAMP I-5 NB	Light Collector	Collector	0.19
Pendleton-De Luz	COAST	SAN DIEGO	UNKNOWN	Light Collector	Collector	0.13
Pendleton-De Luz	SAN DIEGO	RAMP	RAMP	Light Collector	Prime Arterial	0.13
Pendleton-De Luz	SAN DIEGO	RAMP	RAMP	Light Collector	Prime Arterial	0.65
Pendleton-De Luz	SAN DIEGO	VANDEGRIFT	RAMP	Major	Prime Arterial	0.36
Pendleton-De Luz	VANDEGRIFT	WIRE MTN/MAIN GA	RAMP I-5 NB	Major	8L Prime	0.93
Pepper Drive-Bosto	BRADLEY	201	325/360	Light Collector	Collector	0.19
Pepper Drive-Bosto	BRADLEY	325/360	450/465-MHP/469	Light Collector	Collector	0.23
Pepper Drive-Bosto	BRADLEY	450/465-MHP/469	UNKNOWN	Light Collector	Collector	0.21
Pepper Drive-Bosto	BRADLEY	GRAVES	201	Light Collector	Collector	0.21
Pepper Drive-Bosto	BRADLEY	UNKNOWN	01ST	Light Collector	Town Collector	0.12
Pepper Drive-Bosto	GRAVES	UNKNOWN	UNKNOWN	Light Collector	Town Collector	0.14
Pepper Drive-Bosto	GRAVES	UNKNOWN	BRADLEY	Light Collector	Town Collector	0.29
Pepper Drive-Bosto	GREENFIELD	01ST	ORO	Light Collector	Town Collector	0.26
Pepper Drive-Bosto	GREENFIELD	BRADLEY ACCESS	GRAVES	Light Collector	Collector	0.13
Pepper Drive-Bosto	GREENFIELD	DENVER	DIAMOND	Light Collector	Collector	0.27
Pepper Drive-Bosto	GREENFIELD	DIAMOND	01ST	Light Collector	Collector	0.27
Pepper Drive-Bosto	GREENFIELD	ORO	UNKNOWN	Light Collector	Town Collector	0.21
Pepper Drive-Bosto	GREENFIELD	UNKNOWN	BRADLEY ACCESS	Light Collector	Collector	0.73
Pepper Drive-Bosto	MAGNOLIA	1681	DENNY	Light Collector	Collector	0.24
Pepper Drive-Bosto	MAGNOLIA	BRADLEY	CYPRESS	Light Collector	Collector	0.31
Pepper Drive-Bosto	MAGNOLIA	CYPRESS	UNKNOWN	Light Collector	Collector	0.35
Pepper Drive-Bosto	MAGNOLIA	DENNY	BRADLEY	Light Collector	Collector	0.20
Pepper Drive-Bosto	MAGNOLIA	UNKNOWN	1681	Light Collector	Collector	0.29
Pepper Drive-Bosto	MAGNOLIA	UNKNOWN	VERNON	Light Collector	Collector	0.28
Pepper Drive-Bosto	PEERLESS	LILY	GREENFIELD	Light Collector	Town Collector	0.13
Pepper Drive-Bosto	PEPPER	BATES	MOLLISON	Light Collector	Collector	0.30
Pepper Drive-Bosto	PEPPER	BRADLEY	02ND/WINTER GARD	Light Collector	Town Collector	0.24

CPA	Name	From Cross Street	To Cross Street	Existing Classification	Required Classification	Additional Lane Miles Required
Pepper Drive-Bosto	PEPPER	GARYWOOD/MARLIND	BATES	Light Collector	Town Collector	0.14
Pepper Drive-Bosto	PEPPER	MOLLISON	PEPPER VILLA	Light Collector	Town Collector	0.07
Pepper Drive-Bosto	PEPPER	PEPPER VILLA	01ST	Light Collector	Town Collector	0.25
Pepper Drive-Bosto	PEPPER	ROXANNE	GARYWOOD/MARLIND	Light Collector	Town Collector	0.20
Pepper Drive-Bosto	PEPPER	TETON	VULCAN	Light Collector	Town Collector	0.05
Pepper Drive-Bosto	PEPPER	VULCAN	ROXANNE	Light Collector	Town Collector	0.07
Rainbow	OLD 395	05TH	RAINBOW GLEN	Light Collector	Collector	1.14
Rainbow	OLD 395	RAINBOW GLEN	RAINBOW VALLEY	Light Collector	Collector	0.64
Rainbow	OLD 395	RAINBOW VALLEY	MISSION	Light Collector	Collector	1.71
Rainbow	OLD 395	ZONE CONNECTOR	05TH	Light Collector	Town Collector	0.29
Rainbow	RAINBOW VALLEY W	RAMP	OLD 395	Light Collector	Town Collector	0.04
Ramona	MONTECITO	DAVIS	RAMONA	Light Collector	Town Collector	0.39
Ramona	OLIVE	MAPLE	PINE	Light Collector	Collector	0.50
Ramona	OLIVE	PINE	ZONE CONNECTOR	Light Collector	Town Collector	0.13
Ramona	OLIVE	ZONE CONNECTOR	ELM	Light Collector	Town Collector	0.16
Ramona	RAMONA	RAYMOND	MAIN	Light Collector	Town Collector	0.14
Ramona	RAMONA	ROWLEY	SA 330	Light Collector	Town Collector	0.07
Ramona	SAN VICENTE	10TH	UNKNOWN	Town Collector	Collector	0.18
Ramona	SAN VICENTE	CHUCKWAGON	WILDCAT CANYON	Light Collector	Collector	0.41
Ramona	SAN VICENTE	DYE	UNKNOWN	Light Collector	Collector	0.58
Ramona	SAN VICENTE	HANSON	ZONE CONNECTOR	Town Collector	Collector	0.51
Ramona	SAN VICENTE	KEYES	DYE	Light Collector	Collector	0.14
Ramona	SAN VICENTE	UNKNOWN	BARGER	Town Collector	Collector	0.76
Ramona	SAN VICENTE	UNKNOWN	CHUCKWAGON	Light Collector	Collector	2.57
Ramona	SAN VICENTE	WARNOCK	KEYES	Light Collector	Collector	0.67
Ramona	SAN VICENTE	WILDCAT CANYON	UNKNOWN	Light Collector	Collector	0.64
Ramona	SAN VICENTE	ZONE CONNECTOR	CREELMAN	Town Collector	Collector	0.49
Ramona	WILDCAT CANYON	LITTLE KLONDIKE	SC 964	Light Collector	Town Collector	2.19
Ramona	WILDCAT CANYON	SAN VICENTE	LITTLE KLONDIKE	Light Collector	Collector	0.75
San Dieguito	CAM DEL NORTE	SA 680	RAMP	Light Collector	Prime Arterial	1.24
San Dieguito	DEL DIOS *	ELM	ZONE CONNECTOR	Light Collector	Collector	1.14
San Dieguito	DEL DIOS *	FRUIT STAND	UNKNOWN	Light Collector	Collector	1.37
San Dieguito	DEL DIOS *	LUNA DE MIEL	EL CAMINO DEL NO	Light Collector	Collector	1.34
San Dieguito	DEL DIOS *	MT ISRAEL	RANCHO	Light Collector	Collector	0.11

* Improvement may involve use of roundabouts.

CPA	Name	From Cross Street	To Cross Street	Existing Classification	Required Classification	Additional Lane Miles Required
San Dieguito	DEL DIOS *	RANCHO	ZONE CONNECTOR	Light Collector	Collector	1.15
San Dieguito	DEL DIOS *	UNKNOWN	LUNA DE MIEL	Light Collector	Collector	0.92
San Dieguito	DEL DIOS *	ZONE CONNECTOR	MT ISRAEL	Light Collector	Collector	1.46
San Dieguito	DEL DIOS *	ZONE CONNECTOR	FRUIT STAND	Light Collector	Collector	4.96
San Dieguito	EL APAJO	VIA DE SANTA FE	SAN DIEGUITO	Light Collector	Town Collector	0.57
San Dieguito	ELFIN FOREST	ZONE CONNECTOR	HARMONY GROVE	Light Collector	Collector	2.74
San Dieguito	HARMONY GROVE	UNKNOWN	QUESTHAVEN	Light Collector	Town Collector	0.24
San Dieguito	HARMONY GROVE	ZONE CONNECTOR	UNKNOWN	Light Collector	Town Collector	0.92
San Dieguito	LA BAJADA	EL MIRLO	LA NORIA	Light Collector	Collector	0.57
San Dieguito	PASEO DELICIAS	EL CAMINO DEL NO	EL MONTEVIDEO	Light Collector	Collector	1.13
San Dieguito	PASEO DELICIAS	EL MONTEVIDEO	LAVALLE PLATEADA	Light Collector	Collector	1.09
San Dieguito	PASEO DELICIAS	LA FREMONTIA	VIA DE LA VALLE	Light Collector	Major	0.10
San Dieguito	PASEO DELICIAS	LAVALLE PLATEADA	LA FREMONTIA	Light Collector	Collector	0.18
San Dieguito	PASEO DELICIAS	VIA DE LA VALLE	LA GRANADA	Light Collector	Town Collector	0.29
San Dieguito	RANCHO BERNARDO	CAM SAN BERNARDO	UNKNOWN	Major	Prime Arterial	0.57
San Dieguito	RANCHO SANTA FE	UNKNOWN	EL MIRLO	Light Collector	Collector	0.33
San Dieguito	SA 680	4SR	BLACK MOUNTAIN	Light Collector	Collector	0.51
San Dieguito	SAN DIEGUITO	EL APAJO	UNKNOWN	Light Collector	Town Collector	0.08
San Dieguito	SAN DIEGUITO	PVT	CAM SANTA FE	Light Collector	Town Collector	0.72
San Dieguito	SAN DIEGUITO	RANCHO DIEGUENO	UNKNOWN	Light Collector	Collector	0.66
San Dieguito	SAN DIEGUITO	UNKNOWN	PVT	Light Collector	Town Collector	0.02
San Dieguito	SAN DIEGUITO	UNKNOWN	RANCHO DIEGUENO	Light Collector	Town Collector	0.53
San Dieguito	SAN DIEGUITO	UNKNOWN	VIA DOS VALLES	Light Collector	Collector	1.70
San Dieguito	SAN DIEGUITO	VIA DOS VALLES	EL APAJO	Light Collector	Collector	1.48
San Dieguito	SAN ELIJO RD	UNKNOWN	UNKNOWN	Major	Prime Arterial	0.30
San Dieguito	SAN ELIJO RD	UNKNOWN	ZONE CONNECTOR	Major	Prime Arterial	0.20
San Dieguito	VIA DE LA VALLE	14906	EL CAMINO REAL	Light Collector	Collector	0.61
San Dieguito	VIA DE LA VALLE	CALZADA DEL BOSQ	LAS PALOMAS	Light Collector	Town Collector	0.87
San Dieguito	VIA DE LA VALLE	CANCHA DE GOLF	UNKNOWN	Light Collector	Collector	1.22
San Dieguito	VIA DE LA VALLE	LA GRACIA	CALZADA DEL BOSQ	Light Collector	Town Collector	0.49
San Dieguito	VIA DE LA VALLE	LAS COLINAS	VIA DE SANTA FE	Light Collector	Collector	1.12
San Dieguito	VIA DE LA VALLE	LAS PALOMAS	CANCHA DE GOLF	Light Collector	Town Collector	0.16
San Dieguito	VIA DE LA VALLE	PASEO DELICIAS	LAS COLINAS	Light Collector	Collector	0.05
San Dieguito	VIA DE LA VALLE	UNKNOWN	UNKNOWN	Light Collector	Collector	0.01

* Improvement may involve use of roundabouts.

CPA	Name	From Cross Street	To Cross Street	Existing Classification	Required Classification	Additional Lane Miles Required
San Dieguito	VIA DE LA VALLE	VIA DE SANTA FE	VIA DE SANTA FE	Light Collector	Collector	0.06
San Dieguito	VIA DE LA VALLE	VIA DE SANTA FE	LA GRACIA	Light Collector	Collector	0.79
San Dieguito	VIA DE SANTA FE	CALZADA DEL BOSQ	EL APAJO	Light Collector	Collector	0.83
San Dieguito	VIA DE SANTA FE	VIA DE LA VALLE	ZONE CONNECTOR	Light Collector	Town Collector	0.40
San Dieguito	VIA DE SANTA FE	ZONE CONNECTOR	CALZADA DEL BOSQ	Light Collector	Town Collector	0.25
Spring Valley	APPLE	JAMACHA ROAD	RAMONA	Light Collector	Town Collector	0.15
Spring Valley	APPLE	RAMONA	MAYA	Light Collector	Town Collector	0.26
Spring Valley	BANCROFT	HELIX	KOONCE	Light Collector	Collector	0.33
Spring Valley	BANCROFT	KENWOOD	SWITZER/3401	Light Collector	Collector	0.19
Spring Valley	BANCROFT	KOONCE	KENWOOD	Light Collector	Collector	0.37
Spring Valley	BANCROFT	LAMAR	TROY	Light Collector	Collector	0.35
Spring Valley	BANCROFT	RAMP SR-94 EB	HELIX	Light Collector	Collector	0.08
Spring Valley	BANCROFT	SWITZER/3401	ZONE CONNECTOR	Light Collector	Collector	0.12
Spring Valley	BANCROFT	UNKNOWN	RAMP SR-94 EB	Light Collector	Collector	0.05
Spring Valley	BANCROFT	ZONE CONNECTOR	LAMAR	Light Collector	Collector	0.50
Spring Valley	CAMPO	KENWOOD	TERRACE	Light Collector	Collector	0.27
Spring Valley	CAMPO	RAMP	KENWOOD	Light Collector	Collector	0.16
Spring Valley	JAMACHA BOULEVAR	JAMACHA	SPRING GLEN	Light Collector	Collector	0.18
Spring Valley	JAMACHA BOULEVAR	POINTE PARKWAY	JAMACHA	Light Collector	Collector	0.27
Spring Valley	JAMACHA BOULEVAR	SPRING GLEN	WHITESTONE	Light Collector	Collector	0.64
Spring Valley	JAMACHA BOULEVAR	SWEETWATER SPRIN	POINTE PARKWAY	Light Collector	Collector	0.52
Spring Valley	JAMACHA BOULEVAR	WHITESTONE	JAMACHA ROAD	Light Collector	Collector	0.59
Spring Valley	JAMACHA ROAD	RAMP SR-125 HOV	RAMP SR-125 NB	Major	Prime Arterial	0.18
Spring Valley	JAMACHA ROAD	RAMP SR-125 NB	SWEETWATER	Major	Prime Arterial	0.15
Spring Valley	KENWOOD	DALE	RAMP SR-94 EB	Light Collector	Town Collector	0.03
Spring Valley	KENWOOD	RAMP SR-94 EB	RAMP SR-94 WB	Light Collector	Collector	0.19
Spring Valley	PARADISE VALLEY	ELKELTON	RAMP SR-125 SB	Major	Prime Arterial	0.15
Spring Valley	PARADISE VALLEY	RAMP SR-125 NB	SWEETWATER-NEW	Major	Prime Arterial	0.07
Spring Valley	PARADISE VALLEY	RAMP SR-125 SB	UNKNOWN	Major	Prime Arterial	0.13
Spring Valley	PARADISE VALLEY	SWEETWATER-NEW	JAMACHA BOULEVAR	Major	Prime Arterial	0.13
Spring Valley	PARADISE VALLEY	UNKNOWN	RAMP SR-125 NB	Major	Prime Arterial	0.16
Spring Valley	SWEETWATER SPRIN	DEL RIO	DON PICO	Major	Prime Arterial	0.12
Spring Valley	SWEETWATER SPRIN	DON PICO	CRISTOBAL	Major	Prime Arterial	0.16
Spring Valley	TROY	CENTRAL	BANCROFT	Light Collector	Collector	0.43
Spring Valley	TROY	PALM	CENTRAL	Light Collector	Collector	0.49

CPA	Name	From Cross Street	To Cross Street	Existing Classification	Required Classification	Additional Lane Miles Required
Spring Valley	WORTHINGTON	PARADISE VALLEY	VERDE RIDGE	Light Collector	Town Collector	0.11
Sweetwater	BONITA	SAN MIGUEL	ZONE CONNECTOR	Light Collector	Collector	0.86
Sweetwater	BONITA	SWEETWATER	SAN MIGUEL	Light Collector	Collector	0.52
Sweetwater	BONITA	UNKNOWN	PLZA BONITA/LYNN	Major	Prime Arterial	0.04
Sweetwater	BONITA	VILLA BONITA SR	UNKNOWN	Major	Prime Arterial	0.78
Sweetwater	BONITA	ZONE CONNECTOR	CENTRAL	Light Collector	Collector	0.28
Sweetwater	BRIARWOOD	RAMP SR-54 EB	ROBINWOOD	Light Collector	Collector	0.10
Sweetwater	BRIARWOOD	SOUTH BAY PARKWA	RAMP SR-54 EB	Light Collector	Collector	0.03
Sweetwater	SWEETWATER	BRIARWOOD	BONITA WOODS	Light Collector	Collector	0.81
Sweetwater	SWEETWATER	DEGEN	BONITA	Light Collector	Collector	0.32
Sweetwater	SWEETWATER	QUARRY	DEGEN	Light Collector	Collector	1.04
Sweetwater	SWEETWATER	UNKNOWN	QUARRY	Light Collector	Collector	0.66
Sweetwater	SWEETWATER	VALLEY	WILLOW	Light Collector	Town Collector	0.32
Sweetwater	WILLOW	SWEETWATER	BONITA	Light Collector	Collector	0.45
Valle De Oro	BANCROFT	CAMPO	RAMP SR-94 WB	Light Collector	Town Collector	0.04
Valle De Oro	BANCROFT	RAMP SR-94 WB	UNKNOWN	Light Collector	Collector	0.07
Valle De Oro	CAMPO	BANCROFT	HELIX	Light Collector	Collector	0.38
Valle De Oro	CAMPO	HELIX	ROGERS	Light Collector	Town Collector	0.38
Valle De Oro	CAMPO	KENWOOD	TERRACE	Light Collector	Collector	0.10
Valle De Oro	CAMPO	ROGERS	KENWOOD	Light Collector	Town Collector	0.27
Valle De Oro	CAMPO	TERRACE	BANCROFT	Light Collector	Collector	0.41
Valle De Oro	CHASE	BERNITA	UNKNOWN	Light Collector	Collector	0.50
Valle De Oro	CHASE	FUERTE	ZONE CONNECTOR	Light Collector	Collector	0.16
Valle De Oro	CHASE	GROVE	BERNITA	Light Collector	Collector	0.22
Valle De Oro	CHASE	MONUMENT HILL	FUERTE	Light Collector	Collector	0.14
Valle De Oro	CHASE	SR 54	JAMACHA ROAD	Light Collector	Collector	0.23
Valle De Oro	CHASE	UNKNOWN	MONUMENT HILL	Light Collector	Collector	0.70
Valle De Oro	CHASE	ZONE CONNECTOR	SR 54	Light Collector	Collector	0.14
Valle De Oro	FUERTE	GROSSMONT	SIERRA VISTA	Light Collector	Town Collector	0.20
Valle De Oro	FUERTE	HELIX	GRANDVIEW	Light Collector	Collector	0.82
Valle De Oro	FUERTE	LEMON	HELIX	Light Collector	Collector	0.72
Valle De Oro	FUERTE	SIERRA VISTA	ZONE CONNECTOR	Light Collector	Town Collector	0.31
Valle De Oro	FUERTE	UNKNOWN	GROSSMONT	Light Collector	Town Collector	0.02
Valle De Oro	FUERTE	ZONE CONNECTOR	ZONE CONNECTOR	Light Collector	Town Collector	0.31
Valle De Oro	FUERTE	ZONE CONNECTOR	LEMON	Light Collector	Town Collector	0.10

CPA	Name	From Cross Street	To Cross Street	Existing Classification	Required Classification	Additional Lane Miles Required
Valle De Oro	HILLSDALE	CHASE	WIND RIVER	Light Collector	Town Collector	0.16
Valle De Oro	JAMUL	COTTONWOOD SPRIN	TUK A WILE	Light Collector	Town Collector	1.34
Valle De Oro	JAMUL	IVANHOE RANCH	COTTONWOOD SPRIN	Light Collector	Collector	0.95
Valle De Oro	JAMUL	STEELE CANYON	IVANHOE RANCH	Light Collector	Collector	0.35
Valle De Oro	KENWOOD	RAMP SR-94 WB	CAMPO	Light Collector	Collector	0.20
Valle De Oro	NORTH BARCELONA	CAMPO	DOLORES	Light Collector	Town Collector	0.06
Valle De Oro	STEELE CANYON	JAMUL	OLD CALIFORNIA	Light Collector	Town Collector	0.19
Valle De Oro	STEELE CANYON	UNKNOWN	JAMUL	Light Collector	Collector	0.22
Valle De Oro	STEELE CANYON	WILLOW GLEN	UNKNOWN	Light Collector	Collector	0.78
Valle De Oro	VIA MERCADO	CALLE VERDE	CAMPO	Light Collector	Collector	0.31
Valle De Oro	WILLOW GLEN	HILLSDALE	UNKNOWN	Light Collector	Town Collector	0.81
Valley Center	CHAMPAGNE	OLD 395	OLD CASTLE	Light Collector	Collector	0.32
Valley Center	CHAMPAGNE	OLD CASTLE	UNKNOWN	Light Collector	Collector	1.93
Valley Center	COLE GRADE	FRUITVALE	ZONE CONNECTOR	Town Collector	Collector	0.96
Valley Center	COLE GRADE	VIA VALENCIA	FRUITVALE	Town Collector	Collector	1.36
Valley Center	COLE GRADE	ZONE CONNECTOR	VALLEY CENTER	Town Collector	Major	0.38
Valley Center	LILAC	ANTHONY	BETSWORTH	Light Collector	Collector	2.80
Valley Center	LILAC	BETSWORTH	UNKNOWN	Light Collector	Collector	0.29
Valley Center	LILAC	LILAC HILL	OLD CASTLE	Light Collector	Town Collector	1.27
Valley Center	LILAC	OLD CASTLE	ZONE CONNECTOR	Light Collector	Collector	1.27
Valley Center	LILAC	UNKNOWN	VALLEY CENTER	Light Collector	Collector	0.29
Valley Center	LILAC	WEST LILAC	LILAC HILL	Light Collector	Town Collector	0.26
Valley Center	LILAC	ZONE CONNECTOR	ANTHONY	Light Collector	Collector	2.02
Valley Center	MOUNTAIN MEADOW	UNKNOWN	UNKNOWN	Light Collector	Town Collector	0.26
Valley Center	OLD 395	CAM DEL REY	CIRCLE R	Light Collector	Collector	1.65
Valley Center	OLD 395	CIRCLE R	GOPHER CANYON	Light Collector	Collector	0.30
Valley Center	OLD CASTLE	CHAMPAGNE	UNKNOWN	Light Collector	Collector	3.44
Valley Center	OLD CASTLE	UNKNOWN	AIRFLIGHT	Light Collector	Town Collector	2.21
Valley Center	VALLEY CENTER	CHARLAN	WOODS VALLEY	Major	Prime Arterial	0.56
Valley Center	VALLEY CENTER	COLE GRADE	MILLER	Major	Prime Arterial	1.04
Valley Center	VALLEY CENTER	MILLER	ZONE CONNECTOR	Major	Prime Arterial	0.94
Valley Center	VALLEY CENTER	UNKNOWN	UNKNOWN	Major	Prime Arterial	2.93
Valley Center	VALLEY CENTER	VESPER	COLE GRADE	Light Collector	Collector	0.43
Valley Center	VALLEY CENTER	WOODS VALLEY	ZONE CONNECTOR	Major	Prime Arterial	0.29
Valley Center	VALLEY CENTER	ZONE CONNECTOR	LILAC	Major	Prime Arterial	0.59

Appendix B
Buildout Deficiencies
County Facilities

CPA	Name	From Cross Street	To Cross Street	Existing Classification	Required Classification	Additional Lane Miles Required
Valley Center	VALLEY CENTER	ZONE CONNECTOR	CHARLAN	Major	Prime Arterial	0.94
Valley Center	VALLEY CENTER	ZONE CONNECTOR	UNKNOWN	Major	Prime Arterial	2.09

Appendix B
Buildout Deficiencies
State Facilities

CPA	Name	Lanes	Additional Lane Miles Required
Bonsall	MISSION	2	14.02
Bonsall	PALA	2	2.55
Central Mountain	JULIAN	2	5.21
Fallbrook	PALA	2	11.43
Fallbrook	PALA-NEW	2	1.01
Jamul-Dulzura	CAMPO	2	15.13
Jamul-Dulzura	SR-94	2	0.83
Lakeside	SR-67	3	7.13
Mountain Empire	TECATE	2	2.93
North County Metro	SAN PASQUAL VALLEY	2	2.24
North County Metro	SR-78	2	2.01
North County Metro	SR-78 NEW	4	0.00
North Mountain	JULIAN	2	2.71
Pala-Pauma	SR-76	2	2.50
Ramona	JULIAN	2	4.81
Ramona	MAIN	4	2.56
Ramona	SR-67	2	8.90
Ramona	SR-78	2	3.85
Valle De Oro	CAMPO	2	2.75

APPENDIX K

Responses to County Comment

Darnell & ASSOCIATES, INC.

TRANSPORTATION PLANNING & TRAFFIC ENGINEERING

MEMORANDUM

DATE: November 25, 2008

TO: Jerry Gaughan, Valley Center View Properties E-Mail: jerrygaughan@msn.com

FROM: Bill E. Darnell

D&A Ref. No: 030705

RE: Beauvais Major Subdivision; TM 5315; ER 03-02-035; Fifth Iteration Review of Initial Studies/Information

Darnell & Associates, Inc. (D&A) has reviewed the County of San Diego's October 8, 2008 comments on our April 10, 2007 Traffic Study for Beauvais Tentative Map (TM 5315; ER 03-02-035). The following summarizes our responses to each of the traffic related comments. These responses have been incorporated into our November 2008 iteration of the Traffic Study for the Beauvais Tentative Map.

Comment 1: *Figure 5 should update the projects trip distribution percentages for road segments and intersections up to 2008 or state that these percentages are currently valid.*

Response 1: **In Figure 5, the project's trip distribution percentages for roadway segments and intersections are currently valid.**

Comment 2: *The addendum should provide an assessment of cumulative traffic impacts of the proposed project assuming the inclusion of the Merriam Mountains/Stonegate Project.*

Response 2: **The project's cumulative traffic impacts include the Merriam Mountains/Stonegate Project.**

Comment 3: *The addendum should note that the 1-15/Gopher Canyon Road interchange was added to the TIF program as part of the January 2008 update.*

Response 3: **The study was updated to reflect the addition of the 1-15/Gopher Canyon Road interchange to the County's Traffic Impact Fee (TIF) Program.**

Comment 4: *In the Projects TIF calculation estimate, the traffic study has applied (Pg. 32) a pass-by trip reduction to the project's proposed residential uses. The trip generation estimate and TIF calculation estimate shall be revised to be based on TIF program update of January 2008.*

Response 4: **The project's TIF calculation estimate had been recalculated to reflect the County TIF Program update in January 2008. The new Traffic Impact Fee estimate for the**