LINSCOTT LAW & GREENSPAN engineers

FOCUSED TRAFFIC IMPACT ANALYSIS

ALPINE BOULEVARD MINOR SUBDIVISION

TPM 21044

County of San Diego, California
July 7, 2009
Revised September 28, 2009

Prepared for

The County of San Diego
On behalf of
R McKany Realty

LLG Ref 3-09-1875

E.R 06-14-054

Prepared by

Chris Mendiara
Senior Transportation Planner

Under the Supervision of

John Boarman P E
Principal Engineer

Linscott, Law & Greenspan, Engineers
4542 Ruffner Street
Suite 100
San Diego CA 92111
858.300 8800 T
858 300 8810 F

EXECUTIVE SUMMARY

Linscott, Law & Greenspan, Engineers (LLG) have prepared the following focused traffic impact analysis to evaluate the potential impacts to the local circulation system due to the development of the Alpine Boulevard Minor Subdivision project The site, currently vacant, is located south of Alpine Boulevard and west of Louise Drive in the community of Alpine in the County of San Diego The project proposes to develop four (4) residential parcels and one (1) commercial parcel The residential parcels are less than one acre, the commercial parcel is proposed to be developed with a liquor/convenience store (approximately 3,000 square feet) that will be relocated from the applicant's current location at 2262 Alpine Boulevard The land uses are consistent with the site's zoning

The County has requested a focused traffic impact analysis to determine what potential impacts the development may have on daily traffic (ADT) on Alpine Boulevard in the study area This study presents an analysis of existing daily traffic volume on Alpine Boulevard in the study area, a trip generation summary of the proposed project, an estimation of cumulative growth in the near-term, and an analysis of the project driveways (two are proposed, one for the residential uses and one for the commercial use), and the daily segment impacts of the project and cumulative growth on Alpine Boulevard

The residential component of the project is estimated to generate approximately 40 ADT, based on published SANDAG "single family residential' rates Peak hour residential volumes were analyzed at the residential project driveway

The commercial component of the project is relocation from an existing site on Alpine Boulevard, to the west of the proposed project site As such, peak hour counts were taken from the existing business to determine the project's peak hour generation The daily traffic (ADT) was estimated using published relationships of peak hour to daily traffic from the SANDAG rates An additional 15% increase was included to account for any potential increase in traffic over the relocated amount that could occur due to the new location The commercial trips were identified as "primary" and "diverted/pass-by" trips per SANDAG standards The primary trips are new trips to the driveway and the regional street system, while the diverted/pass-by trips are new trips to the driveway only, since they are already on the regional street system Thus, the commercial project driveway was analyzed using the gross commercial trips (primary, diverted and pass-by), while the daily street segments in study area were studied using net new trips Gross driveway trips (including residential) are 940 ADT Net new regional trips after accounting for diverted and pass-by reductions are 445 ADT

The project impacts were assessed at three street segments along Alpine Boulevard The existing 2008 traffic volumes resulted in I OS D or better operations in the study area

The project traffic was distributed to Alpine Boulevard based on existing turning movement counts collected in 2008 at the nearby major intersection of Alpine Boulevard/South Grade Road These counts show an 80% 20% west/east split, respectively To be conservative, all project traffic was distributed to Alpine Boulevard, although some small percentage of traffic could be expected to use South Grade Road The results of the existing + project daily traffic analysis showed continued LOS D or better operations in the study area No direct project impacts were identified

LLG applied a modest 3% per year growth factor for three years to the existing volumes to provide a conservative, near-term cumulative analysis The results of the existing + project + cumulative growth analysis showed a cumulative project impact to the street segment of Alpine Boulevard from West Victoria Drive to South Grade Road The project's payment of the Traffic Impact Fee (TIF) mitigates this cumulative impact Both driveways are calculated to operate at acceptable I evels of Service with the addition of project and cumulative project traffic Parking should be provided to code once a specific site plan is developed

TABLE OF CONTENTS

APPENDICES

LIST OF FIGURES

LIST OF TABLES

FOCUSED TRAFFIC IMPACT ANALYSIS

ALPINE BOULEVARD MINOR SUBDIVISION

TPM 21044

County of San Diego, California
July 7, 2009
Revised September 28, 2009

1.0 INTRODUCTION

1 1 Purpose of the Report

Linscott, Law & Greenspan Engineers (LLG) has been retained to assess the traffic impacts associated with the proposed Alpine Boulevard Minor Subdivision project Per County guidelines, a focused traffic impact analysis is appropriate for this project based on the net new trips it is anticipated to generate (less than 500 ADT and less than 50 peak hour trips) Included in this focused traffic impact analysis are the following

- Project Description
- Existing Conditions Discussion
- Analysis Approach and Methodology
- Significance Criteria
- Trip Generation/Distribution/Assignment
- Cumulative Projects Discussion
- Significance of Impacts and Mitigation Measures

1 2 Project Location and Description

The project site is located south of Alpine Boulevard, west of Louise Drive within the community of Alpine in the County of San Diego Access to the local street system will be via a private road intersecting with Alpine Boulevard Regional access will be via Alpine Boulevard, which has interchanges with Interstate 8 at West Willows Road approximately 1 5 miles east of the project site, and 1 25 miles to the west at Tavern Road The project's land uses are consistent with the site's zoning, and the County of San Diego has requested a focused traffic impact analysis to determine potential impacts to the immediate segments of Alpine Boulevard, as well as the proposed project driveways

The site is generally oriented north-south, with the northern boundary abutting Alpine Boulevard Five parcels are identified on the grading plan 1 commercial parcel to the north, and 4 residential parcels in the middle The four residential lots are less than one-acre, so they are considered "single family residential" lots for trip generating purposes The commercial lot is identified to have a net acreage of 13,864 square feet (SF), which is approximately 0 32 acres While the grading plan does not include a specific building footprint for the commercial parcel, the owner has stated that he

intends to relocate his existing 3,000 SF convenience/liquor store located at 2262 Alpine Boulevard to this parcel

Figure 1—1 shows the vicinity map, ***Figure 1–2*** shows a more detailed project area map, and ***Figure 1–3*** showing the project s site plan

1 3 Summary of Significance Criteria

The following criterion was utilized to evaluate potential significant impacts, based on the County's documents "Guidelines for Determining Significance' (March 30, 2009)

1 3 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 1*** The thresholds in *Table 1 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

TABLE 1-1

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

General 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

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

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 by 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 projects that result in one or more of the following criteria will have a significant traffic impact on a road segment unless specific facts show that there are other circumstances that mitigate or avoid such impact

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

1 3 2 *Intersections*

This section provides guidance for evaluating adverse environmental effects a project may have on unsignalized intersections (e g , Project Driveways)

Unsignalized Intersections—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 an unsignalized intersection

- 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

TABLE 1-2

MEASURES OF SIGNIFICANT PROJECT IMPACTS TO CONGESTION ON INTERSECTIONS

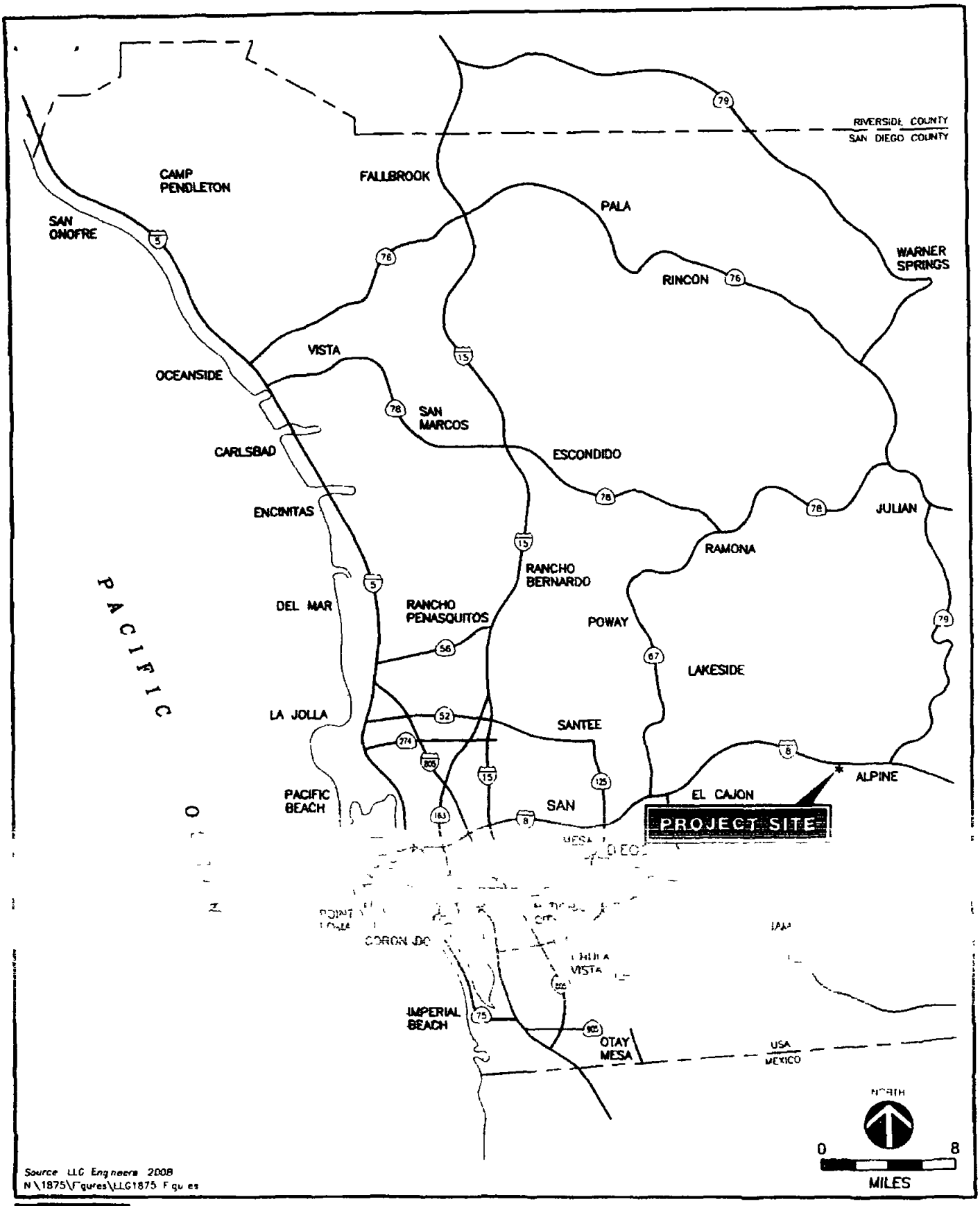
ALLOWABLE INCREASES ON CONGESTED INTERSECTIONS

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

General Notes

1. A critical movement is one that is experiencing excessive queue
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 impact

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

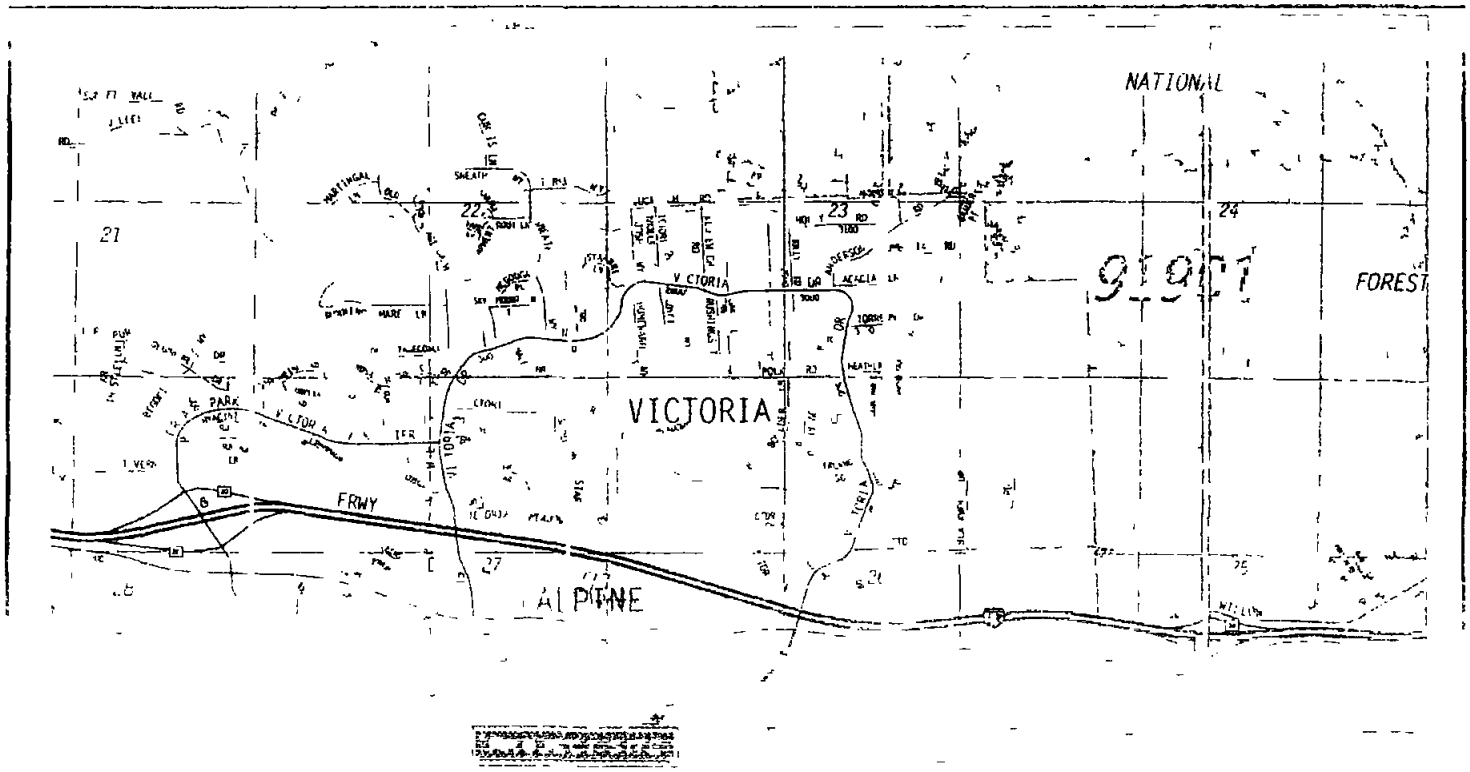


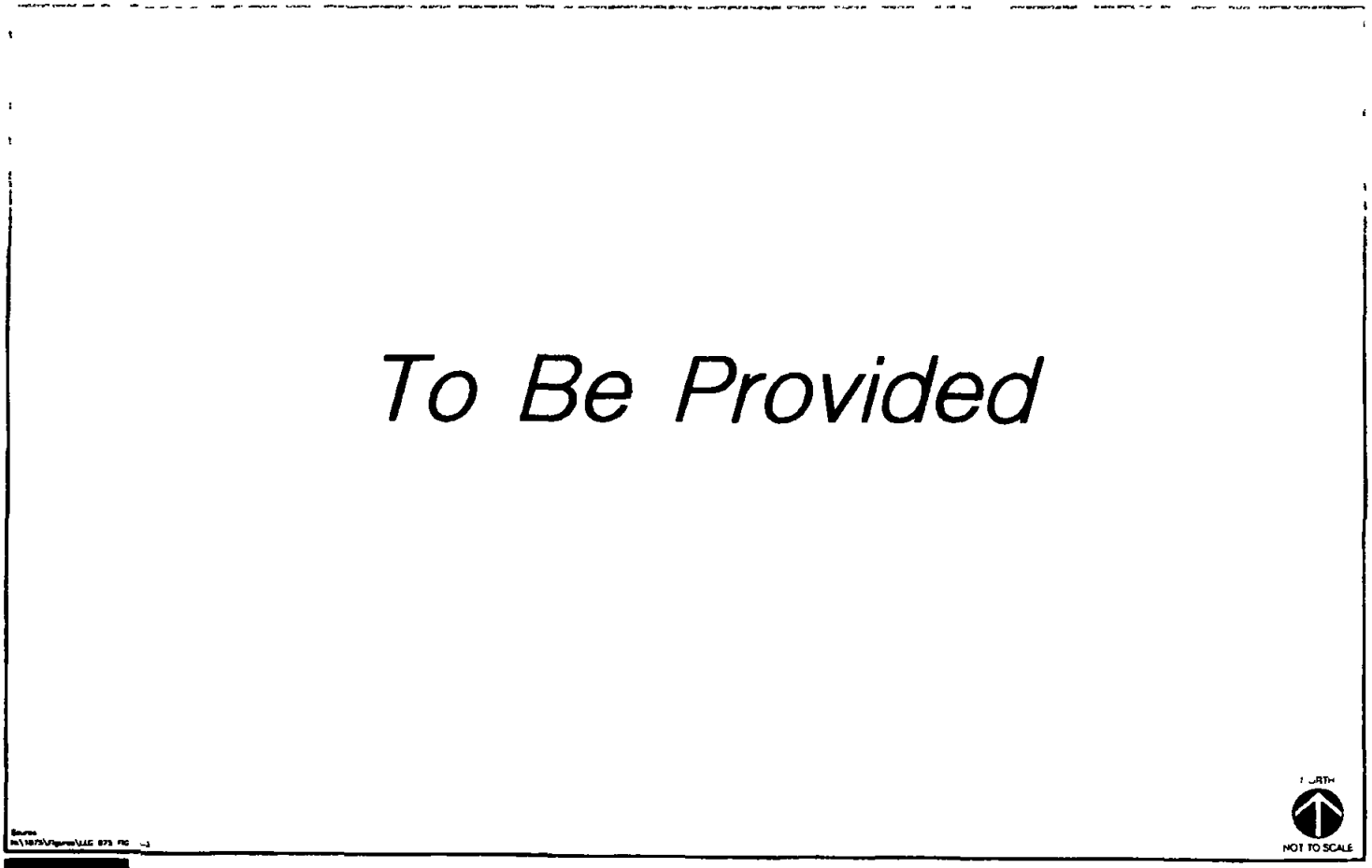
Source LLG Engineers 2008
N:\1875\Figures\LLG1875 Figures

LINSCOTT LAW & GREENSPAN

Figure 1-1

Vicinity Map


NATIONAL
FOREST
VICTORIA
ALPINE
FRWY
PARK
21
22
23
24
27



LINSCOTT LAW & GREENSPAN engineers

Figure 1-3

Site Plan

ALPINE BOULEVARD MINOR SUBDIVISION

2.0 EXISTING CONDITIONS

The segments of Alpine Boulevard included in the study area are listed below

Unsignalized Intersections

- Alpine Boulevard/ Residential Driveway (serves four residential lots)
- Alpine Boulevard/ Commercial Driveway (serves relocated convenience/liquor store)

Street Segments

Alpine Boulevard

- Tavern Road to West Victoria Drive
- West Victoria Drive to South Grade Road
- South Grade Road to West Willows Road

2.1 Existing Transportation Conditions

The following is a description of the nearby roadway network

Alpine Boulevard is currently classified as a Collector Road in the County of San Diego Circulation Element. It is classified as a Light Collector on the GP Update Circulation Element which is proposed but not yet approved

Alpine Boulevard currently provides one travel lane in each direction with a two-way left turn lane east of Tavern Road. A bike-lane and curbside parking is provided in the westbound direction. Curb, gutter and sidewalk improvements are constructed on the north side (westbound direction) of Alpine Boulevard. None are present on the south side of Alpine Boulevard. The posted speed limit [illegible] Road to West [illegible]

[illegible]

2.2 Existing Traffic Volumes

The project study area was determined using the County's published [illegible] *Requirements* (March [illegible] 2009 [illegible] entering new trips to the street system, described in Section [illegible] The [illegible]

[illegible]

2.3 Peak Hour Intersection Volumes

[illegible] Alpine Boulevard [illegible] Drive during November 2008 when schools were in session. *Appendix A* contains the machine count sheets. Peak hour directional volumes were taken from these counts to represent the existing through trips on Alpine Boulevard

2 2 2 *Daily Segment Volumes*

Weekday bi-directional daily traffic counts were conducted on Alpine Boulevard at three segments in the study area during November 2008 when schools were in session *Appendix A* contains the machine count sheets

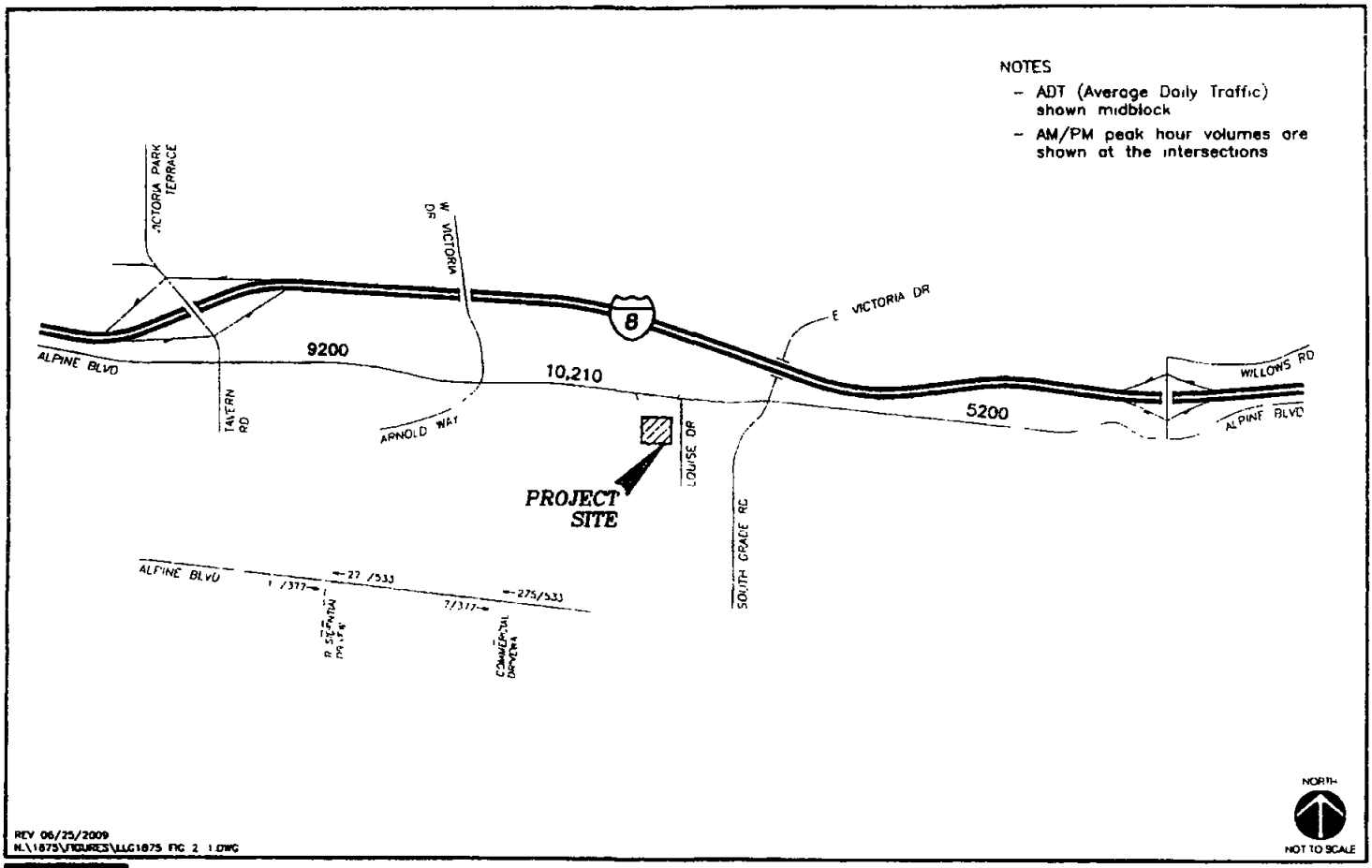
Figure 2–1 shows the existing traffic volumes in the study area

2 2 3 *Unsignalized Intersection Operations*

The proposed residential and commercial project driveways currently do not exist on Alpine Boulevard No intersection analyses possible

2 2 4 *Daily Segment Operations*

Table 4–2 summarizes the existing roadway segment operations As seen in *Table 4–2* the study area segments are calculated to currently operate at



LINSCOTT LAW & GREENSPAN engineers

Figure 2-1

Existing Traffic Volumes
AM/PM Peak Hours & ADT

3.0 PROJECT IMPACT ANALYSIS

3.1 Analysis Methodology

Level of service (LOS) is the term used to denote the different operating conditions which occur on a given roadway segment under various traffic volume loads. It is a qualitative measure used to describe a quantitative analysis taking into account factors such as roadway geometrics, signal phasing, speed, travel delay, freedom to maneuver, and safety. Level of service provides an index to the operational qualities of a roadway segment or an intersection. Level of service designations range from A to F with LOS A representing the best operating conditions and LOS F representing the worst operating conditions. Level of service designation [illegible] reported differently for signalized intersections, unsignalized intersections and roadway segments.

3.1.1 *Intersections*

Unsignalized intersections were analyzed under AM and PM peak hour conditions. Average vehicle delay and Levels of Service (LOS) was determined based upon the procedures found in Chapter [illegible] of the *2000 Highway Capacity Manual (HCM)* with the assistance of the *Traffix* (version 7.5) computer software. Unsignalized intersection calculation worksheets and a more detailed explanation of the methodology are attached in ***Appendix B***.

3.1.2 *Street Segments*

Street segment analysis is based upon the comparison of daily traffic volumes (ADTs) to the County of San Diego *Roadway Classification, Level of Service and ADT Table*. This table provides segment capacities for different street classifications, based on traffic volumes and roadway [illegible] *Roadway Classification, Level of Service and ADT Table* [illegible] attached in *Appendix C*.

3.2 Project Trip Generation

3.2.1 *Proposed Commercial Relocation Component*

Table 3-1 summarizes the trip generation for the [illegible] As described in *Section 1.2*, the project consists of four (4) single family residential units and [illegible] acres of commercial. The [illegible]

[illegible]

Since the commercial use of the proposed project currently exists, LLG coordinated a [illegible] County of San Diego staff to collect actual peak hour data at the site. LLG discussed the operational characteristics of the existing store at 2262 Alpine Boulevard with the applicant to determine if typical commuter peak hours (7-9 AM, 4-6 PM) coincide with morning and afternoon peaks at the site. The applicant agreed that existing peak trips to the store typically occur between 7-8 AM and [illegible]

The published, regional SANDAG guidelines approved by the County for determining trip generation provide primary/pass-by/diverted percentages to account for these trips The rates are applicable to a wide range of commercial uses under the "Commercial Shops" category, including any potential commercial types that could be considered similar to the proposed project It is appropriate to use the published diverted/pass by rates even while using a site-specific daily and

TABLE 3-1

PROJECT TRIP GENERATION

Land Use	Size	Daily Trip Ends (ADTs)		AM Peak Hour				PM Peak Hour			
		Rate	Volume	% of ADT	In Out Split	Volume In	Volume Out	% of ADT	In Out Split	Volume In	Volume Out
Single Family Residential (Driveway)	4 DU	10 /DU ᵃ	40	8	30 70	1	2	10	70 30	3	1
Commercial (Driveway)	3 ksf	b	900	b	b	18	18	b	b	12	52
Total Residential and Gross Commercial Trips (Driveway)		—	*940*			*10*	*20*			*35*	*35*
Commercial Reductions (Diverted Pass-by)		—	*(49[illegible])*	—		*(10)*	*(10)*	—		*(16)*	*(16)*
Total Residential and Net New Commercial Trips [illegible]			[illegible]				[illegible]			[illegible]	[illegible]

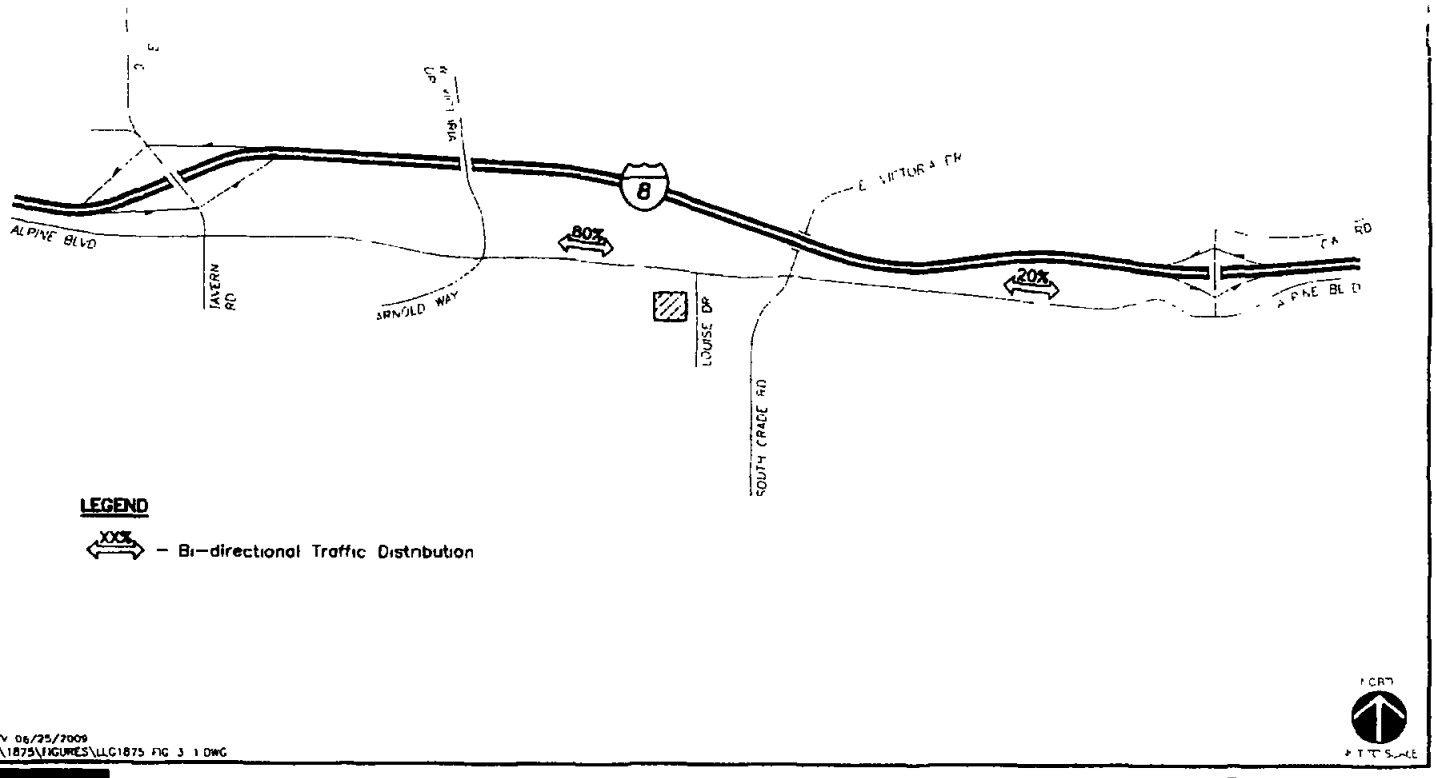
Footnotes
a. [illegible]
b. [illegible]
c. [illegible]

(XXX) = Diverted Pass-by traffic volumes subtracted from the Total Gross Trips (driveway trips) to determined net new regional trips

[illegible]

[illegible] Project Trip Distribution [illegible]

[illegible] distributed and assigned to the street system based on the project's proximity [illegible]

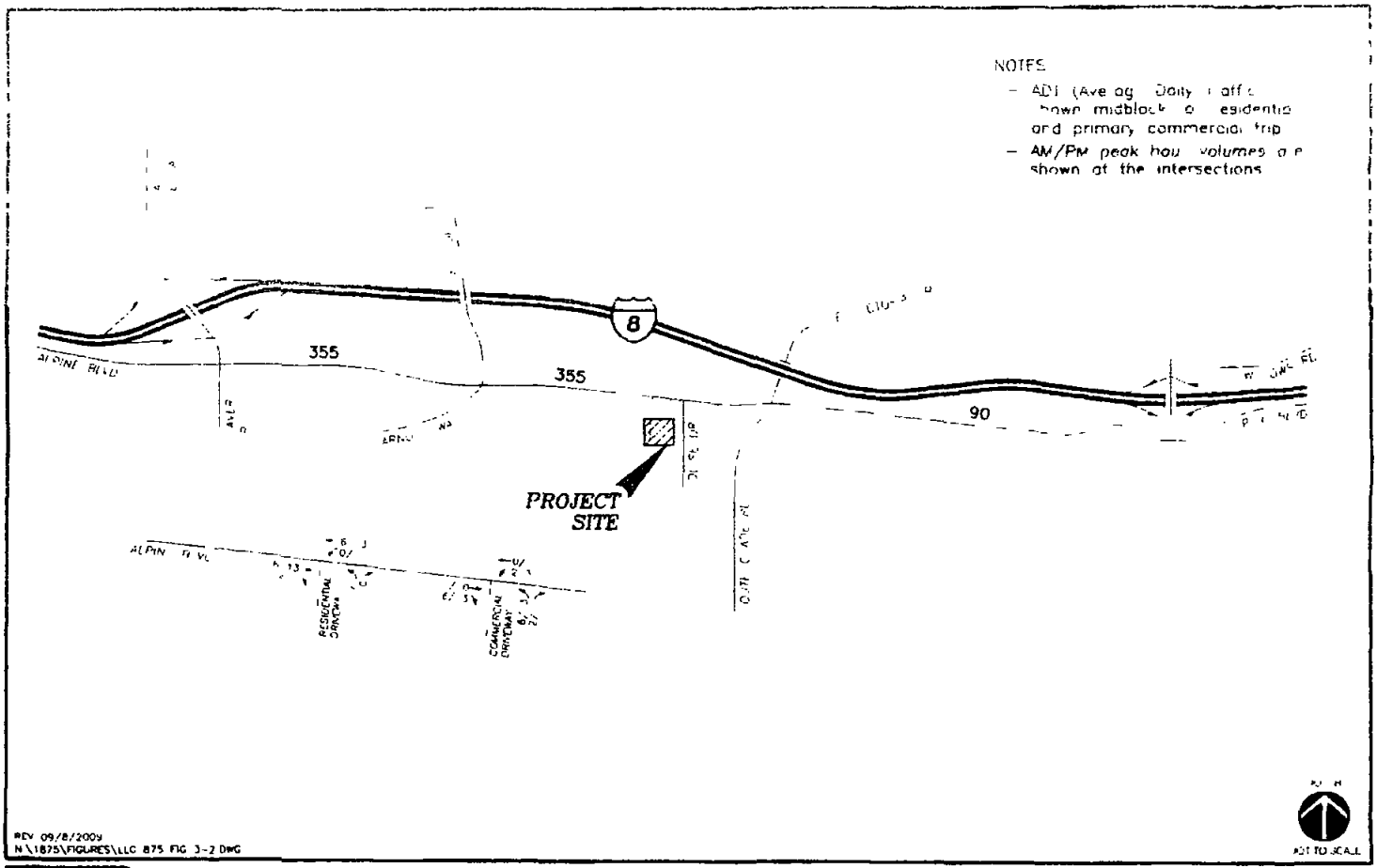


LSA

Figure 3-1

Project Traffic Distribution

ALPINE BOULEVARD MINOR SUBDIVISION

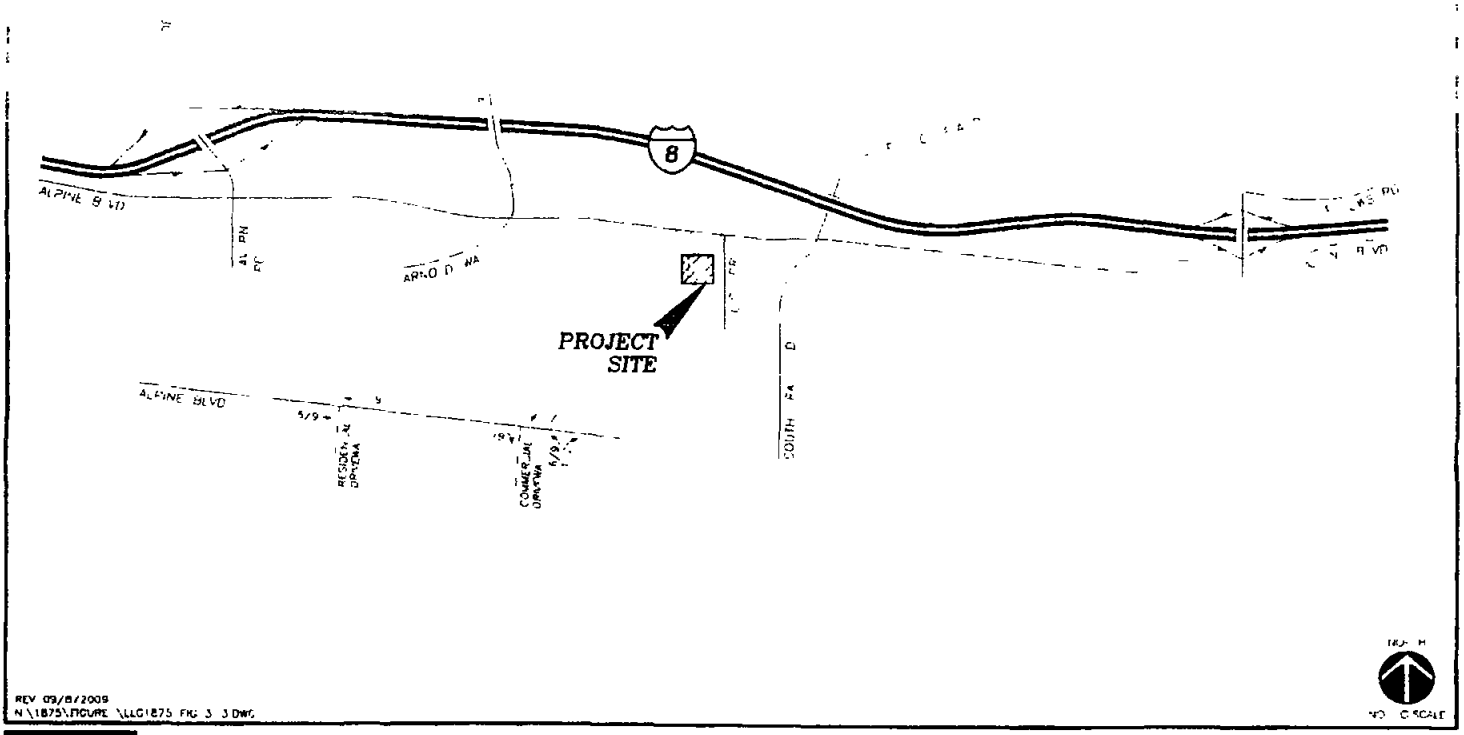


REV 09/8/2009
N:\1875\FIGURES\LLG 875 FIG 3-2.DWG

LINSCOTT LAW & GREENSPAN

Figure 3-2

"Net New" Regional Project Traffic Volumes
AM/PM Peak Hours & ADT

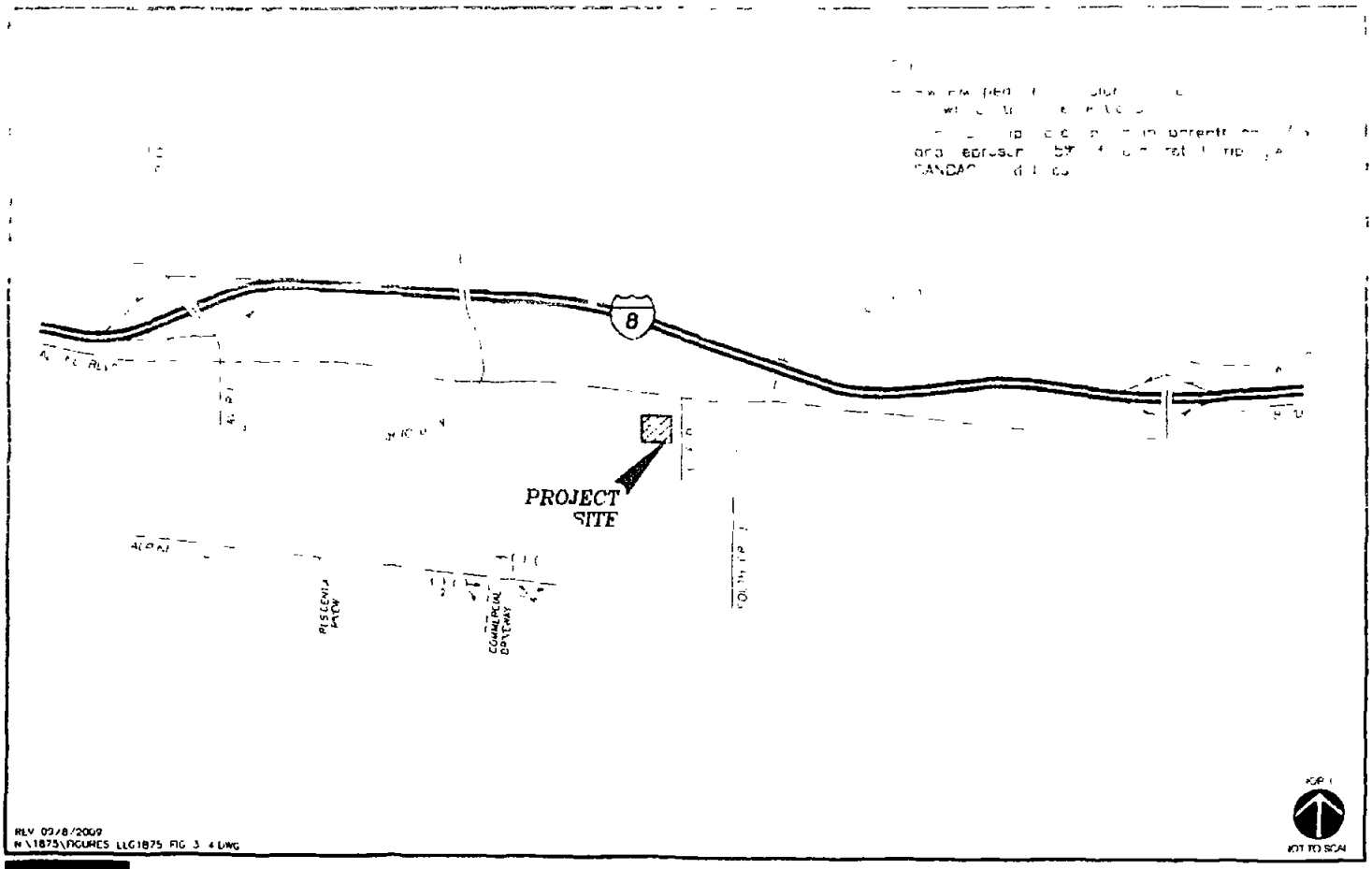


LINSCOTT LAW & GREENSPAN engineers

Figure 3-3

Diverted Project Traffic Volumes AM/PM Peak Hours

ALPINE BOULEVARD MINOR SUBDIVISION

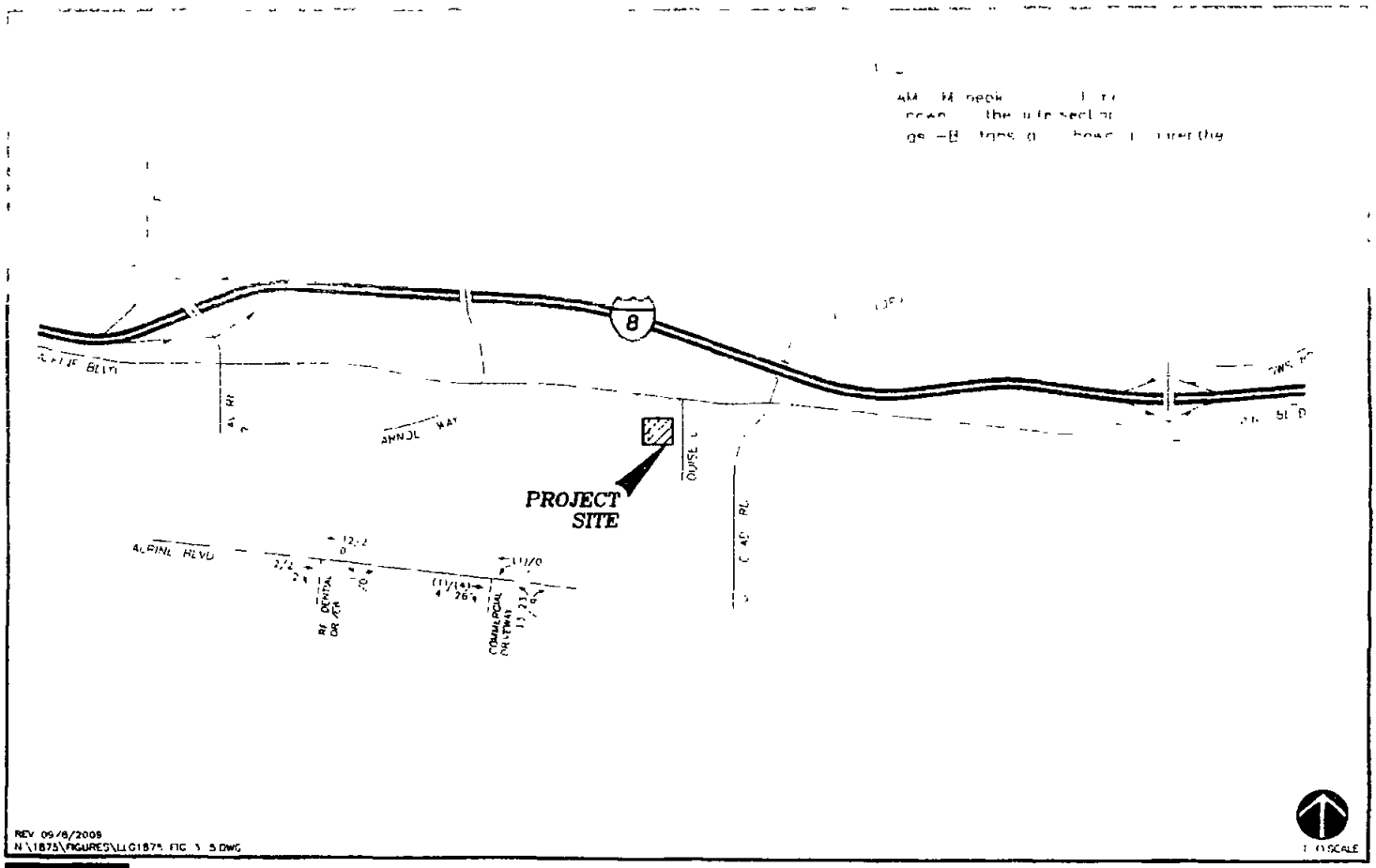


LINSCOTT LAW & GREENSPAN ENGINEERS

Figure 3-4

Pass-By Project Traffic Volumes AM/PM Peak Hours

LPB BOULEVARD MINOR SUBDIVISION



LINSCOTT LAW & GREENSPAN

Figure 3-5

Total Project Driveway Traffic Volumes
AM/PM Peak Hours

ALPINE BOULEVARD MINOR SUBDIVISION

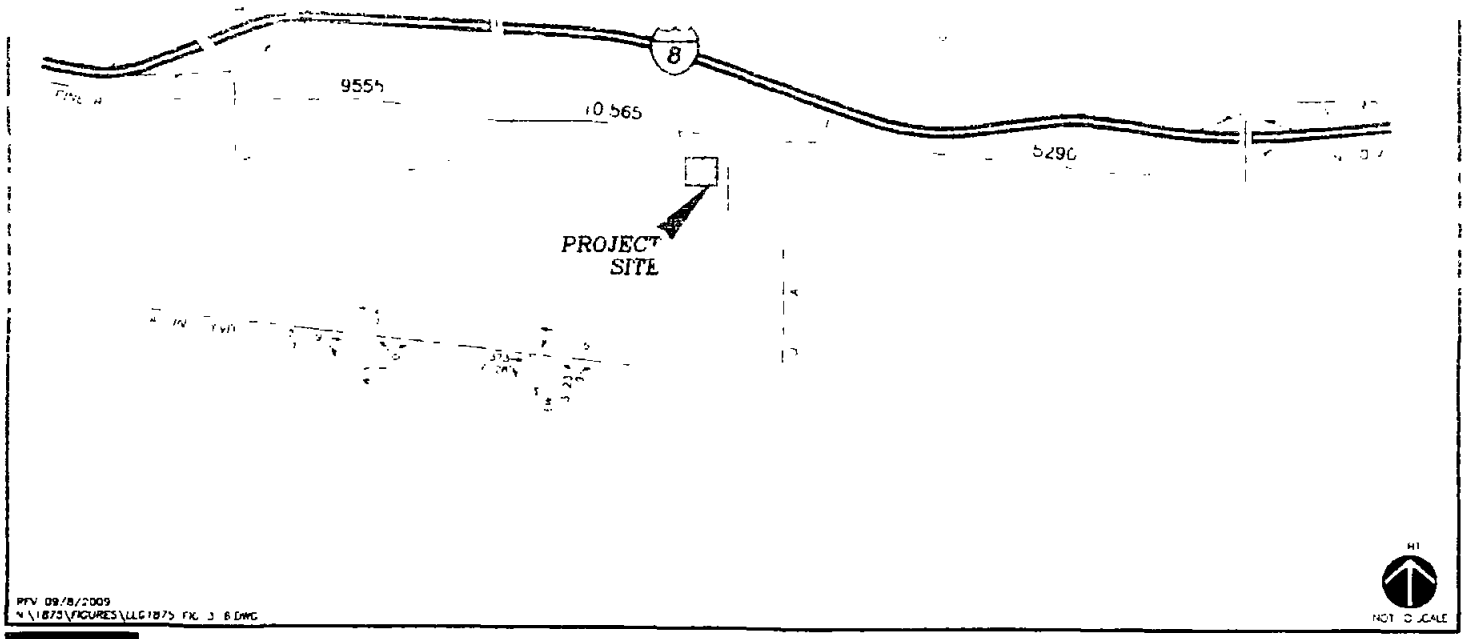


Figure 3-6

Existing + Project Traffic Volumes
AM/PM Peak Hours & ADT

ALPINE BOULEVARD MINOR SUBDIVISION

4.1 Existing + Project Conditions

The following analyses with the addition of project traffic were conducted using methodology described in *Section 3.1*. It should be noted the project driveways were analyzed assuming no diverted or pass-by reductions.

4.1.1 *Unsignalized Intersection Operations*

Table 4-1 also summarizes the existing + project unsignalized intersection level of service at the two project driveways. As seen in *Table 4-1*, with the addition of project traffic, both proposed driveways would operate at LOS C or better. The analysis assumes no turn pockets are present on Alpine Boulevard. No project impacts are calculated, and no improvements are required.

4.1.2 *Daily Segment Operations*

Table 4-2 also summarizes the existing + project roadway segment level of service. As seen in *Table 4-2*, with the addition of project traffic, all the segments are calculated to continue to operate at LOS D or better.

4.2 Existing + Project + Cumulative Growth Conditions

TABLE 4-1

NEAR TERM INTERSECTION OPERATIONS

Intersection	Control Type	Peak Hour	Existing		Existing + Project			Existing + Project + Cumulative Projects	
			Delay	LOS	Delay	LOS	Δ[d]	Delay	LOS
Alpine Boulevard Residential Driveway	OWSC[c]	AM PM	DNE DNE		12.9 19.1	B [illegible]	N/A N/A	13.4 20.5	B C
Alpine Boulevard Commercial Driveway	OWSC	AM PM	DNE DNE	— —	14.1 17.7	B C	N/A N/A	14.7 19.0	B C

Footnotes

a. Average delay expressed in seconds per vehicle
b. Level of Service
c. OWSC One Way Stop Controlled. Minor street delay is reported
d. Δ denotes the project induced increase in delay [illegible]

General Note

DNE Does not [illegible] existing volumes [illegible] constructed

[illegible]

Volumes analyzed in residential volumes [illegible] commercial volumes

UNSIGNALIZED

DELAY/LOS THRESHOLDS

Delay	LOS
[illegible]	[illegible]

TABLE 4-2

NEAR TERM STREET SEGMENT OPERATIONS

Street Segment	Capacity (LOS E)[a]	Existing		Existing + Project		Existing + Project + Cumulative Growth		Significant Impact
		ADT[b]	LOS[c]	ADT	LOS	ADT	LOS	
Alpine Boulevard								
[illegible]	[illegible]	[illegible]		[illegible]	[illegible]		[illegible]	
West Victoria Drive to South Grade Road	16,200	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	Yes [illegible]
[illegible]	[illegible]	[illegible]		[illegible]		[illegible]	[illegible]	

Footnotes

a. Capacities based on County of San Diego Roadway Classification Table
b. Average Daily Traffic Volumes
c. Level of Service

General Note

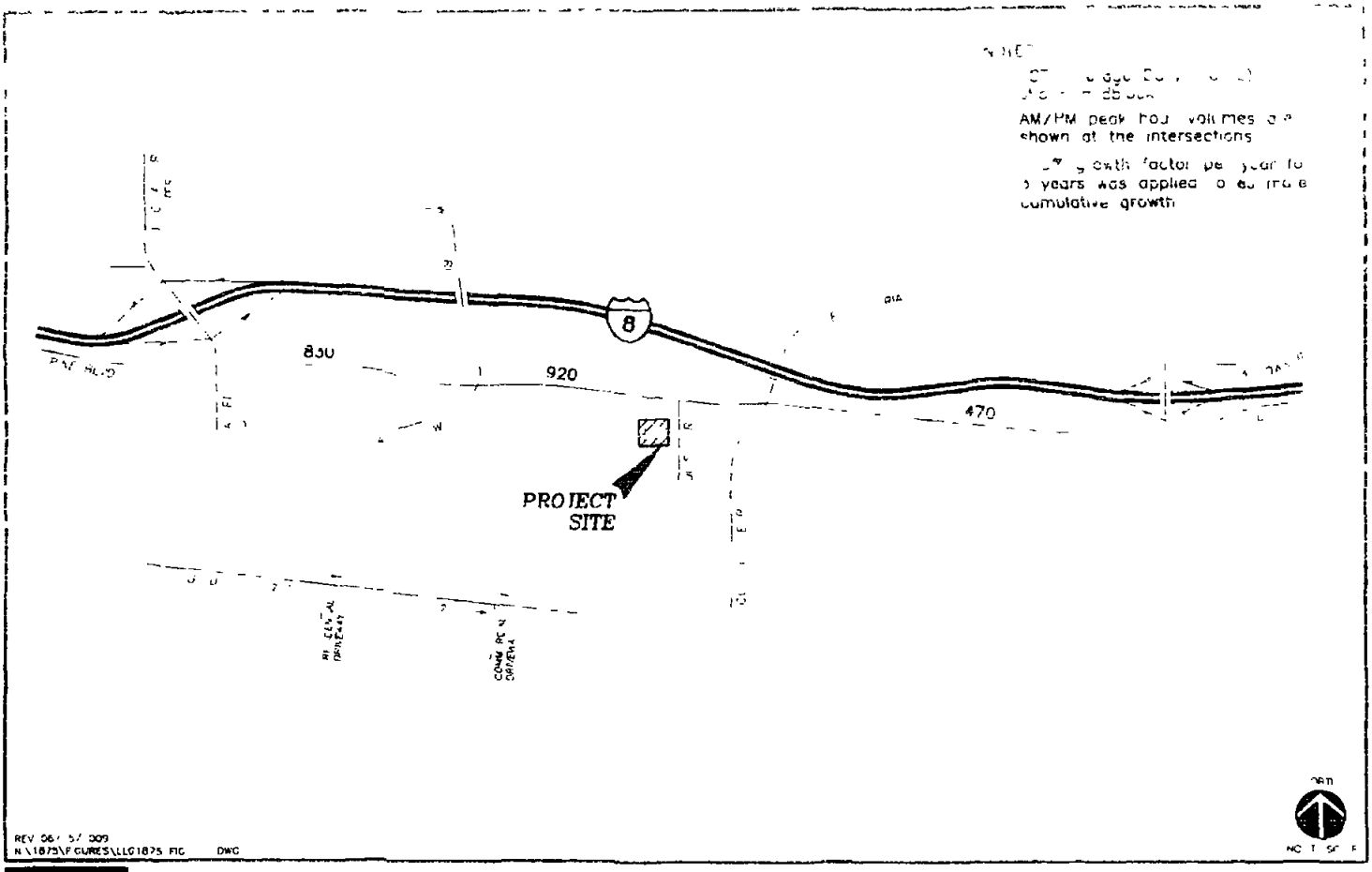


Figure 4-1

Cumulative Growth Traffic Volumes AM/PM Peak Hours & ADT

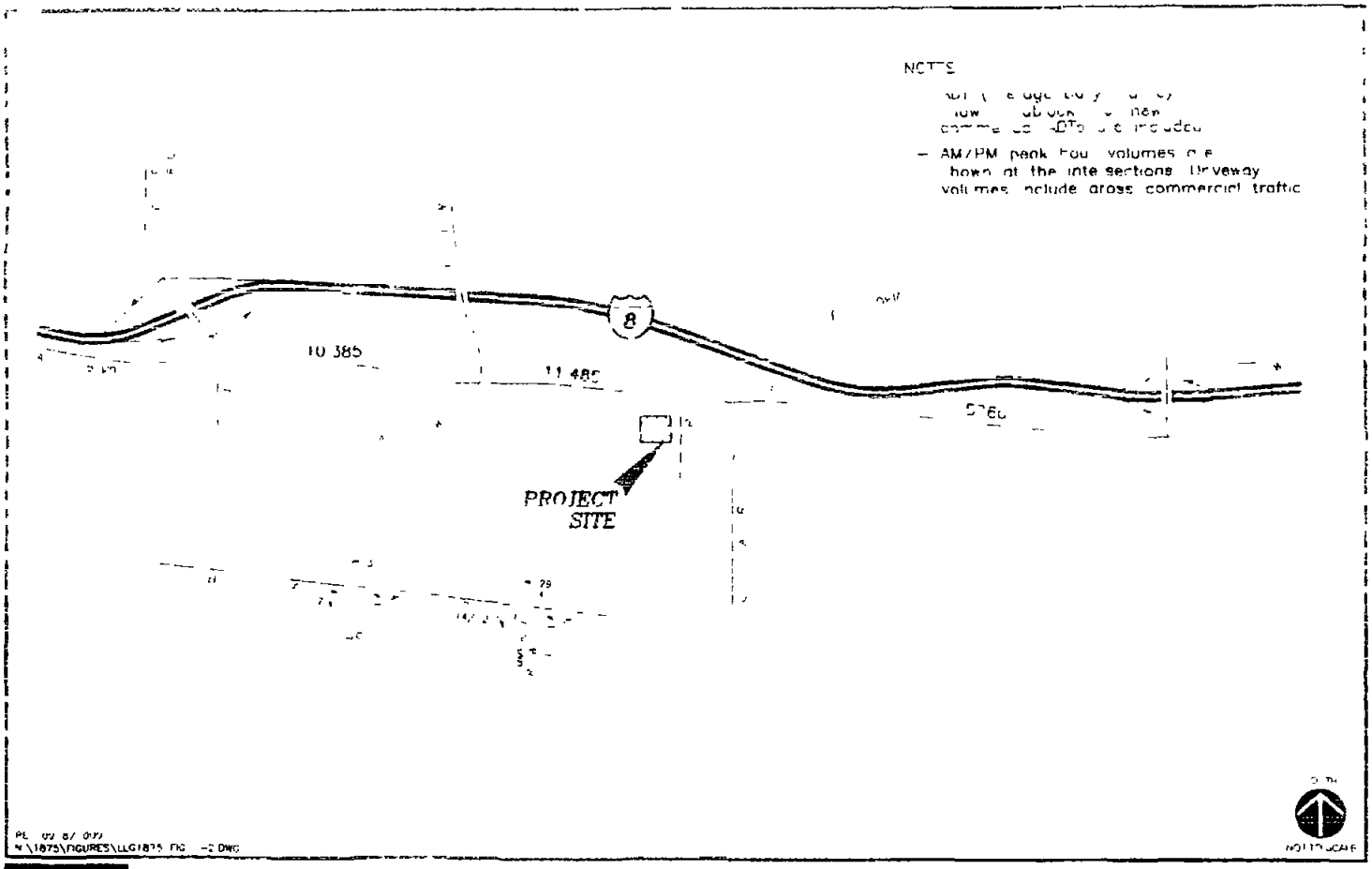


Figure 4-2

Existing + Project + Cumulative Growth Traffic Volumes

AM/PM Peak Hours & ADT

5 0 PROJECT ACCESS/FRONTAGE IMPROVEMENTS

5 1 1 *Project Access*

A grading plan has been prepared for the project, which shows the proposed project driveway access. The County has already reviewed the driveway configuration and required project to file a Modification to Road Standards request. This request was applied for in May 2008 and subsequently granted. ***Appendix D*** contains the Modification to Road Standard Request and approval letters.

The HCM unsignalized intersection analysis shows that LOS C or better operations are calculated for the project under various near-term conditions. This analysis was conducted assuming no additional improvements such as turn lanes on Alpine Boulevard.

The section of Alpine Boulevard where the project site is located is a tangent section without substantial horizontal or vertical curves. The project design shall provide for appropriate corner-sight distance from the driveways to Alpine Boulevard.

5 1 2 *Frontage Improvements*

A review of the grading plan shows that half-width improvements including curb and gutter improvements are proposed along the project frontage with Alpine Boulevard. These improvements shall be designed and constructed to the satisfaction of the County of San Diego.

6 0 IMPACTS SUMMARY

6 1 Unsignalized Intersections

No impacts were calculated at either of the unsignalized project driveway intersections

6 2 Road Segments

The analysis shows that the segment of Alpine Boulevard from West Victoria Drive to South Grade Road is calculated to degrade to LOS E with the addition of cumulative project traffic volumes This is considered a significant cumulative project impact

The project will make an appropriate Traffic Impact Fee (TIF) payment This will sufficiently mitigate the project's cumulative contribution to the near term cumulative impact

Finally parking for the retail component should be provided to code once the building square footage is determined

Table 6–1 summarizes the project impact and significance after mitigation

TABLE 6–1
IMPACT/MITIGATION MEASURE SUMMARY

Segments	Impact Type	Mitigation Measure	Post Mitigation LOS
Alpine Boulevard West Victoria Drive to South Grade Road	Cumulative	Payment of the required TIF would mitigate the cumulative impact of the County portion of this roadway to below a level of significance	D

Footnotes

6 3 Conclusions

The proposed project does not cause significant near term direct impact However, the project does contribute traffic to one segment of Alpine Boulevard that does experience a cumulative project impact Payment of the TIF mitigates the project's contribution to this location

7.0 REFERENCES

SANDAG's *(Not So) Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region* (2002)

County of San Diego's *Guidelines for Determining Significance* (June 30, 2009)

Counties of San Diego's *Report Format and Content requirements* (June 26, 2009)

8.0 LIST OF PREPARERS AND ORGANIZATIONS CONTACTED

Preparers

John Boarman, P.E., Principal – *Linscott, Law & Greenspan, Engineers*

Chris Mendiara, Senior Transportation Engineer – *Linscott, Law & Greenspan, Engineers*

Organizations Contacted

Ms. India Peeva, County of San Diego

Mr. Francisco Ortiz, County of San Diego

[illegible]

Mr. Robert Chia, Allied Earth Technology

APPENDIX A

INTERSECTION SIGHT DISTANCE CALCULATIONS

True Count

3401 First Ave #123
San Diego CA 92103

File Name 9051 01 WEST DRIVEWAY
Site Code 00000000
Start Date 6/4/2009
Page No 1

Groups Printed- Vehicles

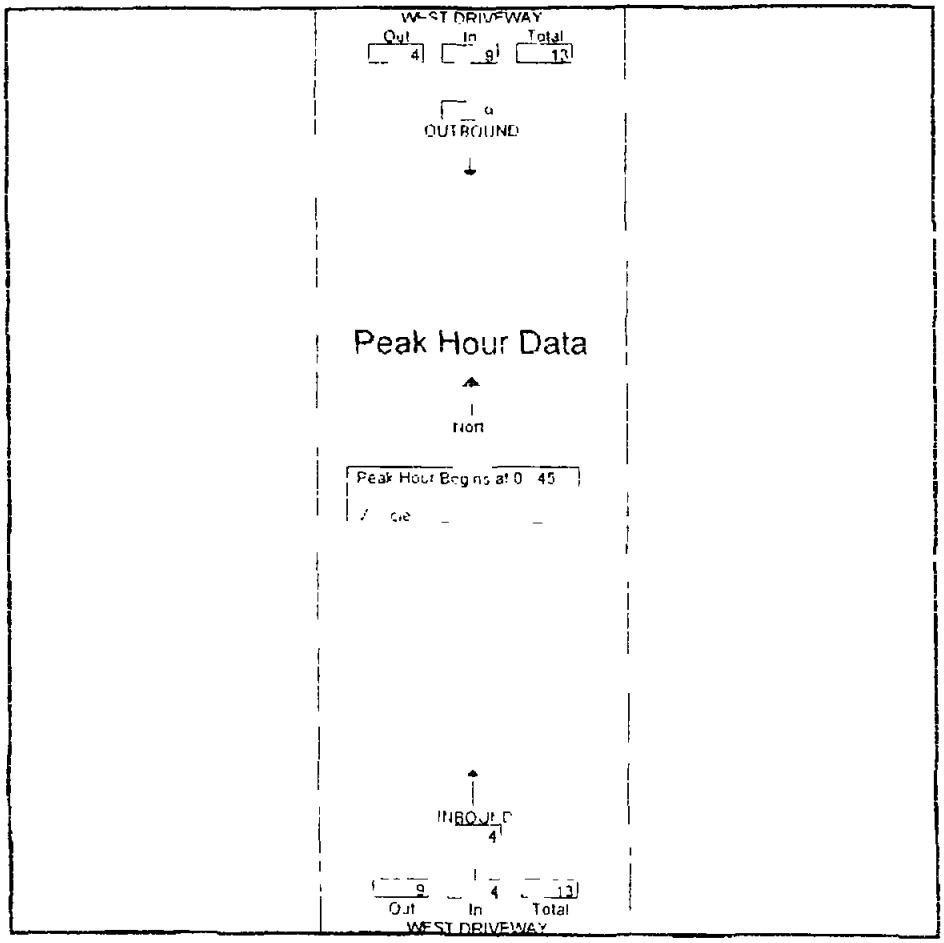
Start Time	WEST DRIVEWAY Southbound OUTBOUND	Peds	WEST DRIVEWAY Northbound INBOUND	Peds	Exclu Total	Inclu Total	Int. Total
07:00	1	1	0	0	1	1	2
07:15	0	1	1	0	1	1	2
07:30	0	1	1	0	1	1	2
07:45	3	1	1	0	1	4	5
Total	4	4	3	0	4	7	11
08:00	3	1	1	0		4	5
08:15	1	1	1	0	1	2	3
08:30	2	1	1	0	1	3	4
08:45	2	1	2	0	1	4	5
Total	8	4	5	0	4	13	17
BREAK							
16:00	0	1	0	0	1	0	1
16:15	0	1	0	0	1	0	1
16:30	0	1	0	0	1	0	1
16:45	0	1	0	0	1	0	1
Total	0	4	0	0	4	0	4
17:00	6	1	2	0	1	8	9
17:15	4	1	0	0	1	4	5
17:30		1	2	0	1	3	4
17:45	4	1	2	0	1	6	7
Total	15	4	6	0	4	21	25
18:00	2	1	2	0		4	5
18:15	0	1		0		2	3
18:30	3	1	1	0	1	4	5
18:45	1	1	2	0	1	3	4
Total	6	4	5	0	4	13	17
19:00	0	1	1	0	1	1	2
19:15	3	1	2	0	1	5	6
19:30	0	1	1	0		1	2
19:45	2	1	2	0	1	4	5
Total	5	4	6	0	4	11	15
Grand Total	28	24	27	0	24	65	89
Approch %	100		100				
Total %	58.5		41.5		27	73	

True Count

3401 First Ave #123
San Diego CA 92103

File Name 9051 01 WEST DRIVEWAY
Site Code 00000000
Start Date 6/4/2009
Page No 2

Start Time	WEST DRIVEWAY Southbound OUTBOUND	App Total	WEST DRIVEWAY Northbound INBOUND	App Total	Int. Total
Peak Hour Analysis From 07 00 to 11 45 - Peak 1 of 1					
Peak Hour for Entire Intersection Begins at 07 45					
07 45	3	3	1	1	4
08 00	3	3	1	1	4
08 15	1		1		2
08 30	2	2	1	1	3
Total Volume	9	9	4	4	13
% App Total	100		100		
PHF	750	750	1 000	1 000	813

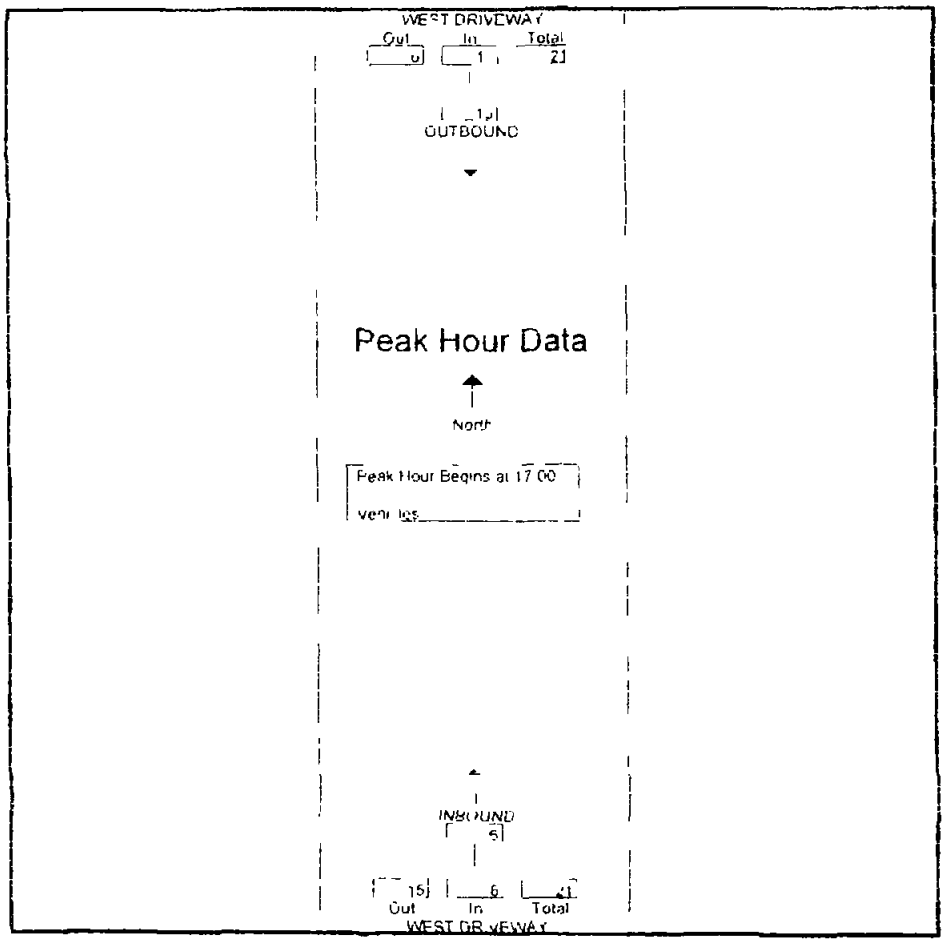


True Count

3401 First Ave #123
San Diego CA 92103

File Name: 9051 01 WEST DRIVEWAY
Site Code: 00000000
Start Date: 6/4/2009
Page No: 1

Start Time	WEST DRIVEWAY Southbound OUTBOUND	App Total	WEST DRIVEWAY Northbound INBOUND	App Total	Int. Total
Peak Hour Analysis From 12:00 to 19:45 - Peak 1 of 1					
Peak Hour for Entire Intersection Begins at 17:00					
17:00	6	6	2	2	8
17:15	4	4	0	0	4
17:30	1	1	2	2	3
17:45	4	4	2	2	6
Total Volume	15	15	6	6	21
% App Total	100		100		
PHF	.625	.625	.750	.750	.656



True Count

3401 First Ave #123
San Diego CA 92103

File Name 9051 03 EAST DRIVEWAY
Site Code 00000000
Start Date 6/4/2009
Page No 1

Groups Printed Vehicles

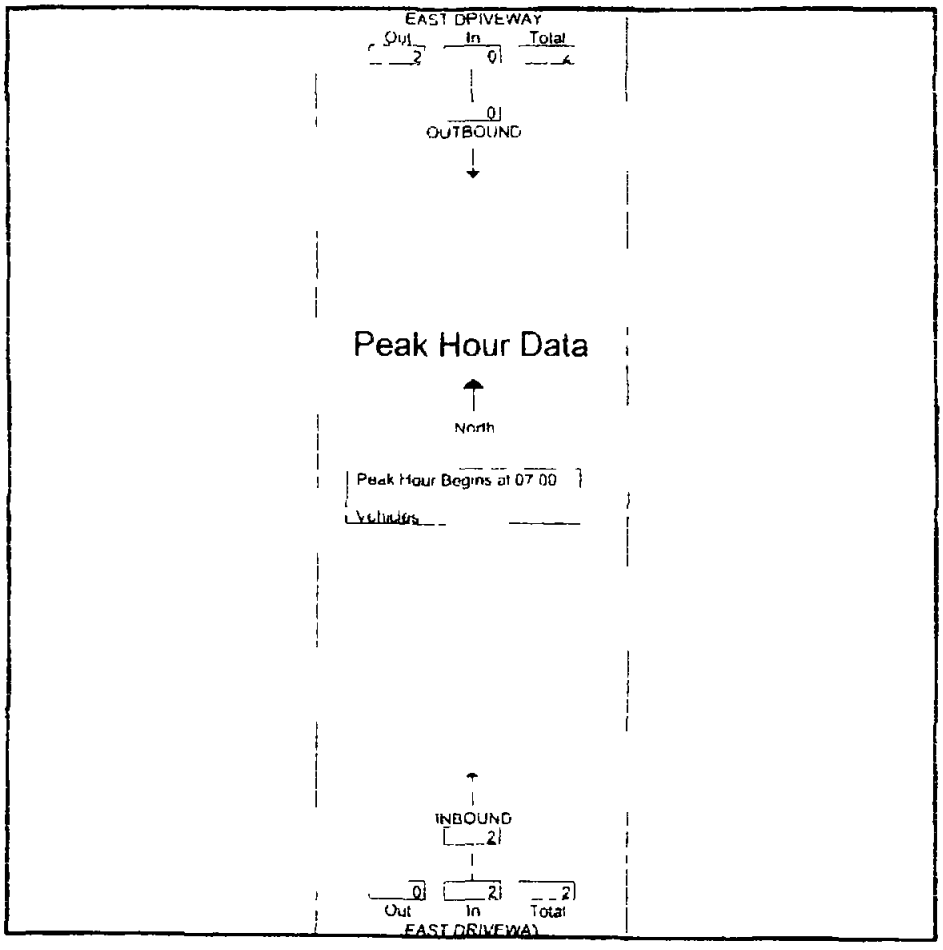
Start Time	EAST DRIVEWAY Southbound OUTBOUND	Peds	EAST DRIVEWAY Northbound INBOUND	Peds	Exclu Total	Inclu Tota	Int Total
07 00	0	1	0	0	1	0	1
07 15	0	1	0	0	1	0	1
07 30	0	1	2	0	1	2	3
07 45	0	1	0	0	1	0	1
Total	0	4	2	0	4	2	6
08 00	0	1	0	0	1	0	
08 15	0	1	0	0	1	0	1
08 30	0	1	0	0	1	0	1
08 45	0	1	1	0	1	1	2
Total	0	4	1	0	4	1	5
BREAK							
16 00	0	1	0	0	1	0	
16 15	0	1	0	0	1	0	1
16 30	0	1	0	0	1	0	1
16 45	0	1	0	0	1	0	1
Total	0	4	0	0	4	0	4
17 00	1	1	1	0	1	2	3
17 15	0	1	0	0	1	0	1
17 30	2	1	0	0		2	2
17 45	2	1	0	0	1	2	3
Total	5	4	1	0	4	6	10
18 00	1	1	1	0	1	2	3
18 15	0	1	0	0	1	0	1
18 30	0	1	0	0	1	0	1
18 45	0	1	0	0	1	0	1
Total	1	4	1	0	4	2	6
19 00	0	1	0	0	1	0	1
19 15	0	1	0	0	1	0	1
19 30	0	1	0	0	1	0	1
19 45	0	1	0	0	1	0	1
Total	0	4	0	0	4	0	4
Grand Total	6	24	5	0	24	11	35
Apprch %	100		100				
Total %	54 5		45 5		68 6	3 4	

True Count

3401 First Ave #123
San Diego CA 92103

File Name 9051 05 EAST DRIVEWAY
Site Code 00000000
Start Date 6/4/2009
Page No 2

Start Time	EAST DRIVEWAY Southbound OUTBOUND	App Total	EAST DRIVEWAY Northbound INBOUND	App Total	nt Total
Peak Hour Analysis From 07 00 to 11 45 Peak 1 of 1					
Peak Hour for Entire Intersection Begins at 07 00					
07 00	0	0	0	0	0
07 15	0	0	0	0	0
07 30	0	0	2	2	2
07 45	0	0	0	0	0
Total Volume	0	0	2	2	2
% App Total	0		100		
PHF	000	000	250	250	250

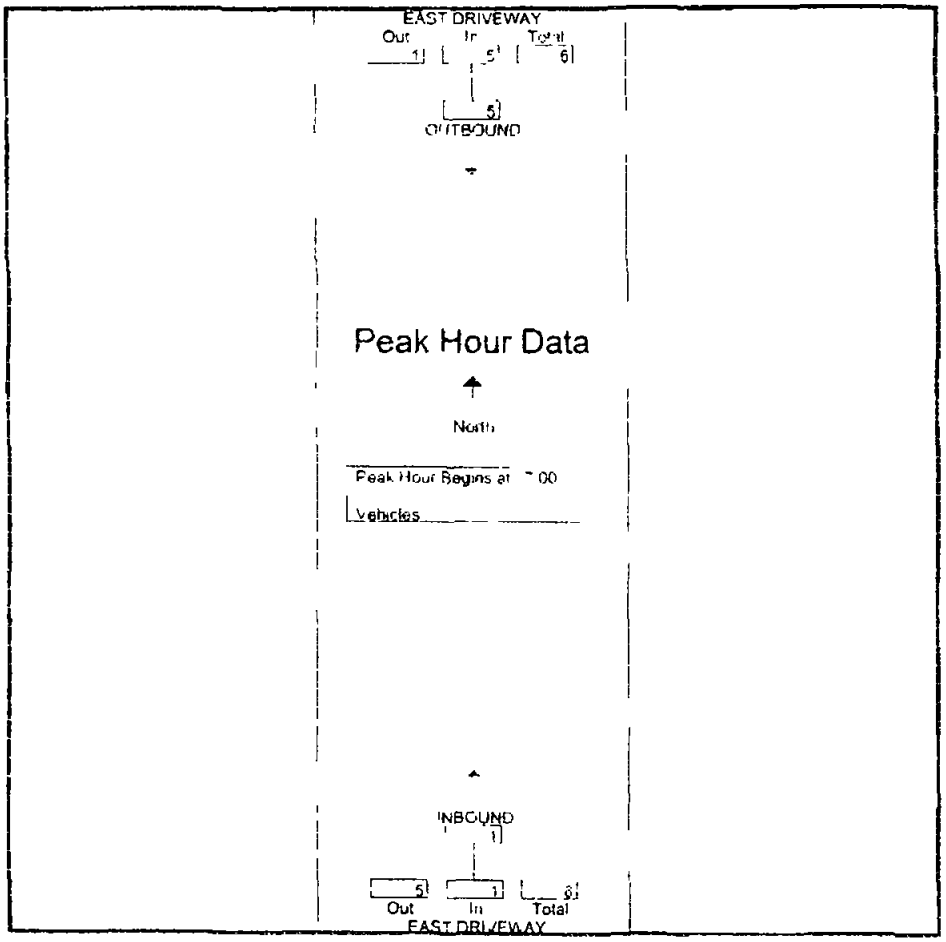


True Count

3401 First Ave #123
San Diego CA 92103

File Name 9051 03 EAST DRIVEWAY
Site Code 00000000
Start Date 6/4/2009
Page No 3

	EAST DRIVEWAY Southbound		EAST DRIVEWAY Northbound		
Start Time	OUTBOUND	App Total	INBOUND	App Total	Int Total
Peak Hour Analysis From 12:00 to 19:45 - Peak 1 of 1					
Peak Hour for Entire Intersection Begins at 17:00					
17:00	1	1	1	1	2
17:15	0	0	0	0	0
17:30	2	2	0	0	2
17:45	2	2	0	0	2
Total Volume	5	5	1	1	6
% App Total	100		100		
PHF	.625	.625	.250	.250	.750



True Count

3401 First Ave #123
San Diego CA 92103

File Name 9051 02 SOUTH DRIVEWAY
Site Code 00000000
Start Date 6/4/2009
Page No 1

Groups Printed Vehicles

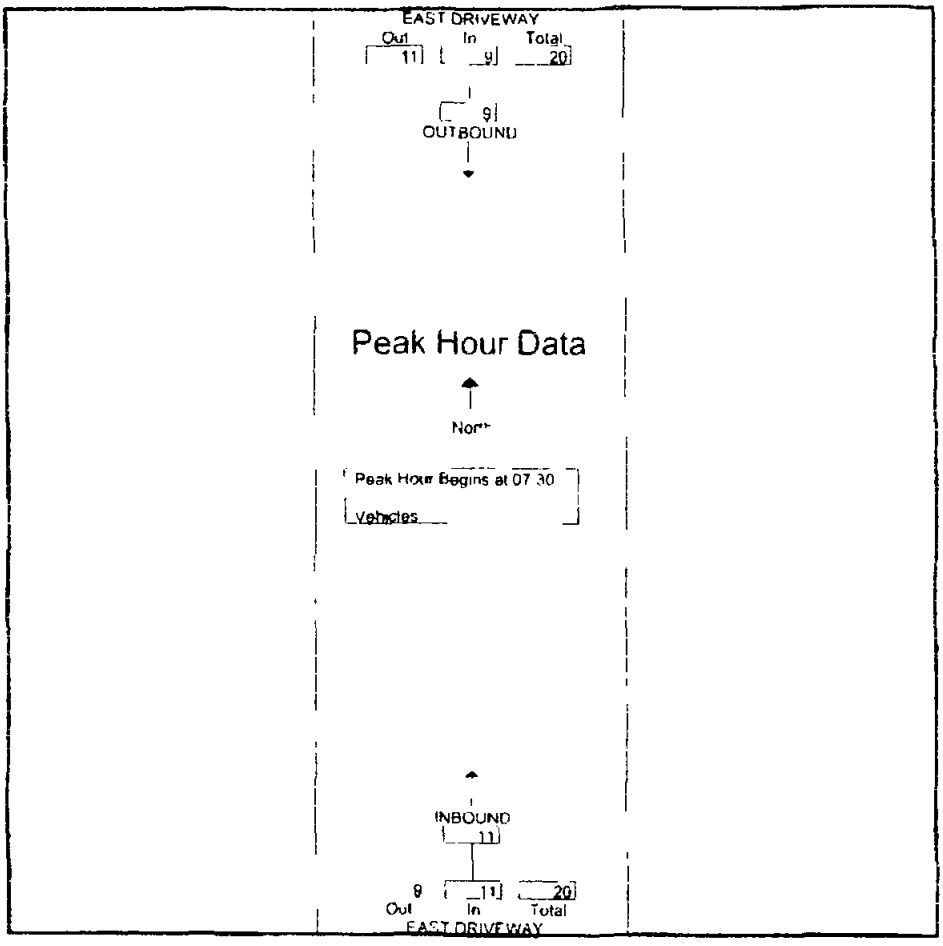
Start Time	EAST DRIVEWAY Southbound OUTBOUND	Peds	EAST DRIVEWAY Northbound INBOUND	Peds	Exclu Total	Inclu Total	Int Total
07 00	0		2	0	1	2	3
07 15	1	1	0	0	1	1	2
07 30	2	1	3	0	1	5	6
07 45	4	1	4	0	1	8	9
Total	7	4	9	0	4	16	20
08 00	2	1	2	0		4	5
08 15	1	1	2	0	1	3	4
08 30	1	1	2	0	1	3	4
08 45	2	1	2	0	1	4	5
Total	6	4	8	0	4	14	18
BREAK							
16 00	0	1	0	0	1	0	1
16 15	0	1	0	0	1	0	1
16 30	0	1	0	0	1	0	1
16 45	0	1	0	0	1	0	1
Total	0	4	0	0	4	0	4
17 00	4	1	8	0	1	12	13
17 15	2	1	4	0	1	6	7
17 30	3	1	6	0	1	8	9
17 45	4	1	5	0	1	9	10
Total	12	4	23	0	4	35	39
8 00	2	1	2	0		4	5
18 15	0	1	1	0	1	1	2
18 30	0	1	4	0	1	4	5
18 45	3	1	2	0	1	5	6
Total	5	4	9	0	4	14	18
19 00	2	1	1	0	1	3	4
19 15	1	1	3	0	1	4	5
19 30	2	1	0	0	1	2	3
19 45	1	1	2	0	1	3	4
Total	6	4	6	0	4	12	16
Grand Total	36	24	55	0	24	91	115
Apprch %	100		100				
Total %	39 6		60 4		20 9	79 1	

True Count

3401 First Ave #123
San Diego CA 92103

File Name 9051 02 SOUTH DRIVEWAY
Site Code 00000000
Start Date 6/4/2009
Page No 2

	EAST DRIVEWAY Southbound		EAST DRIVEWAY Northbound		
Start Time	OUTBOUND	App Total	INBOUND	App Total	Int Total
Peak Hour Analysis From 07 00 to 11 45 Peak 1 of 1					
Peak Hour for Entire Intersection Begins at 07 30					
07 30	2	2	3	3	5
07 45	4	4	4	4	8
08 00	2	2	2	2	4
08 15	1	1	2	2	3
Total Volume	9	9	11	11	20
% App Total	100		100		
PHF	563	563	688	688	625

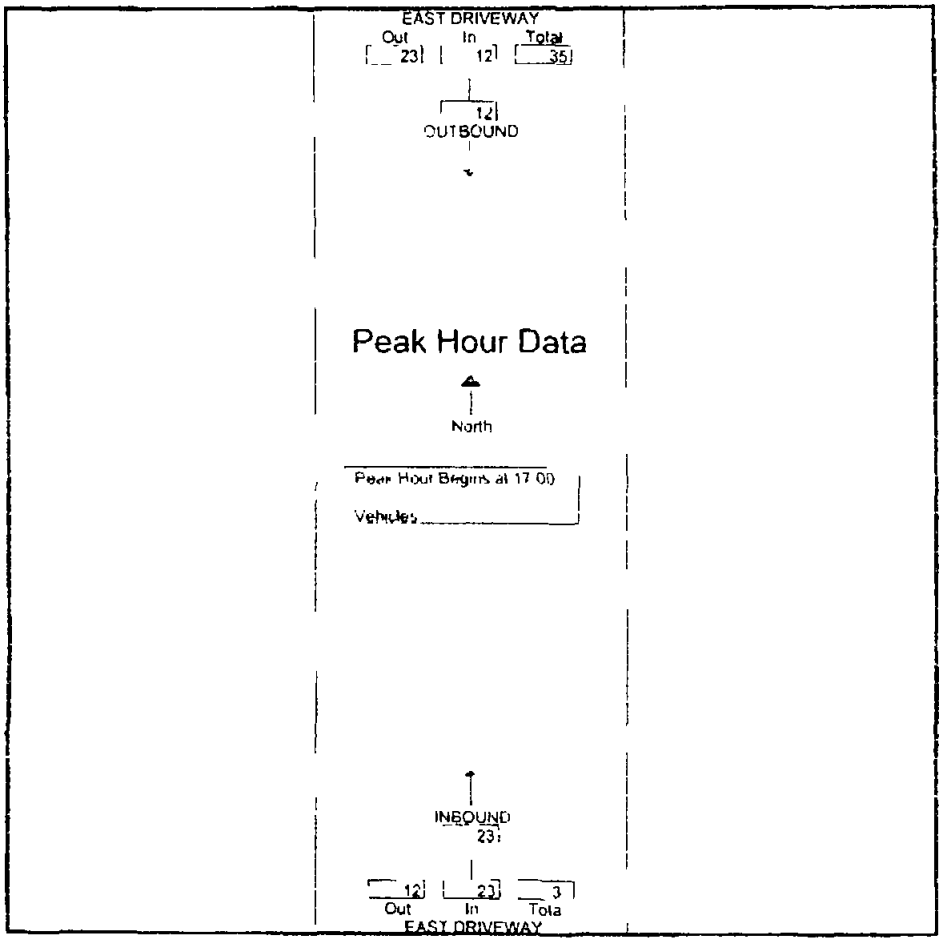


True Count

3401 First Ave #123
San Diego CA 92103

File Name 9051 02 SOUTH DRIVEWAY
Site Code 00000000
Start Date 6/4/2009
Page No 3

Start Time	EAST DRIVEWAY Southbound OUTBOUND	App Total	EAST DRIVEWAY Northbound INBOUND	App Total	Int Total
Peak Hour Analysis From 12 00 to 19 45 Peak 1 of 1					
Peak Hour for Entire Intersection Begins at 17 00					
17 00	4	4	8	8	12
17 15	2	2	4	4	6
17 30	2	2	6	6	8
17 45	4	4	5	5	9
Total Volume	12	12	23	23	35
% App Total	100		100		
PHF	750	750	719	719	729



Weekly Vehicle Counts

WeeklyVehicle-4
Site 19401 0EW
Description **2138 Alpine Blvd Btwn W Victoria Dr & Boulders Rd**
Filter time **0 00 Tuesday, November 04, 2008 => 0 00 Tuesday, November 11, 2008**
Scheme Vehicle classification (Scheme F99)
Filter Cls(1 2 3 4 5 6 7 8 9 10 11 12 13) [redacted]Sp(0 100) Headway(>0)

	Mon 03 Nov	Tue 04 Nov	Wed 05 Nov	Thu 06 Nov	Fri 07 Nov	Sat 08 Nov	Sun 09 Nov	Averages 1 - 5	1 - 7
Hour									
0000-0100	*	25	20	23	21	35	31	22 3	25 8
0100-0200	*	12	3	6	6	20	28	6 8	12 5
0200-0300	*	15	3	9	11	10	7	9 5	9 2
0300-0400	*	11	14	19	15	22	13	14 8	15 7
0400-0500	*	45	42	47	52	19	18	46 5	37 2
0500-0600	*	153	156	162	149	42	28	155 0	115 0
0600-0700	*	308	291	293	301	133	59	298 3	230 8
0700-0800	*	372	358	351	336	173	100	354 3	281 7
0800-0900	*	**472<**	**451<**	**454<**	**441<**	246	179	**454 5<**	**373 8<**
0900-1000	*	*332*	*314*	*324*	336	317	*246*	326 5	311 5
1000-1100	*	310	292	297	322	339	286	305 3	307 7
1100-1200	*	326	291	*297*	312	**347<**	**287<**	305 3	309 2
1200-1300	*	282	**314<**	286	341	**362<**	**277<**	305 8	**310 3<**
1300-1400	*	250	292	233	272	333	254	261 8	272 3
1400-1500	*	**320<**	262	294	**353<**	283	202	**307 3<**	285 7
1500-1600	*	311	264	282	341	306	206	299 5	285 0
1600-1700	*	*290*	*261*	*265*	*311*	*299*	*241*	281 8	277 8
1700-1800	*	275	258	**298<**	335	252	220	291 5	273 0
1800-1900	*	193	211	236	259	207	182	224 8	214 7
1900-2000	*	139	127	145	173	152	109	146 0	140 8
2000-2100	*	96	114	105	119	142	63	108 5	106 5
2100-2200	*	75	65	60	110	108	51	77 5	78 2
2200-2300	*	37	39	45	59	84	39	45 0	50 5
2300-2400	*	33	34	32	44	47	31	35 8	36 8
Totals									
0700-1900	*	3733	3568	3612	3959	3464	2680	3718 0	3502 7
0600-2200	*	4351	4165	4215	4662	3999	2962	4348 3	4059 0
0600-0000	*	4421	4238	4292	4765	4130	3032	4429 0	4146 3
0000-0000	*	4682	4476	*4558*	*5019*	*4278*	*3157*	*4683 8*	*4361 7*
AM Peak	*	0800	0800	0800	0800	1100	1100		
	*	472	451	454	441	347	287		
PM Peak	*	1400	1200	1700	1400	1200	1200		
	*	320	314	298	353	362	277		

*** - No data**

4558 WB
+ 4642 EB
9200 Total

Weekly Vehicle Counts

WeeklyVehicle-4
Site 19401 0EW
Description **2138 Alpine Blvd Btwn W Victoria Dr & Boulders Rd**
Filter time **0 00 Tuesday, November 04, 2008 => 0 00 Tuesday, November 11, 2008**
Scheme Vehicle classification (Scheme F99)
Filter Cls(1 2 3 4 5 6 7 8 9 10 11 12 13) Dir(E) Sp(0 100) Headway(>0)

	Mon 03 Nov	Tue 04 Nov	Wed 05 Nov	Thu 06 Nov	Fri 07 Nov	Sat 08 Nov	Sun 09 Nov	Averages 1 - 5	1 - 7
Hour									
0000-0100	*	25	40	30	18	40	49	28 3	33 7
0100-0200	*	16	16	12	8	29	17	13 0	16 3
0200-0300	*	18	10	12	16	17	19	14 0	15 3
0300-0400	*	13	10	11	11	17	18	11 3	13 3
0400-0500	*	19	12	13	15	15	7	14 8	13 5
0500-0600	*	41	19	34	39	27	21	33 3	30 2
0600-0700	*	103	95	85	9[illegible]	56	42	93 5	78 7
0700-0800	*	174	157	167	156	119	90	163 5	143 8
0800-0900	*	249	238	262	210	231	144	239 8	222 3
0900-1000	*	253	227	237	**289<**	244	187	251 5	239 5
1000-1100	*	243	223	243	248	292	230	239 3	246 5
1100-1200	*	**301<**	**295<**	**283<**	288	**322<**	**249<**	**291 8<**	**289 7<**
1200-1300		325	293	266	354	**379<**	**308<**	309 5	320 8
1300-1400	*	293	380	297	338	325	264	327 0	316 7
1400-1500	*	331	315	372	358	345	214	344 0	322 5
1500-1600	*	**464<**	402	427	**478<**	347	213	442 8	388 5
1600-1700	*	406	446	460	439	329	212	437 8	382 0
1700-1800	*	460	**459<**	**464<**	445	298	252	**457 0<**	**396 3<**
1800-1900	*	315	345	375	382	263	200	354 3	313 3
1900-2000	*	184	244	223	288	163	146	234 8	208 0
2000-2100	*	141	143	163	166	142	83	153 3	139 7
2100-2200	*	101	90	98	131	107	71	105 0	99 7
2200-2300	*	63	62	66	98	86	52	72 3	71 2
2300-2400	*	35	38	42	67	62	41	45 5	47 5
Totals									
0700-1900	*	3814	3780	3853	3985	3494	2563	3858 0	3581 5
0600-2200	*	4343	4352	4422	4661	3962	2905	4444 5	4107 5
0600-0000	*	4441	4452	4530	4826	4110	2998	4562 3	4226 2
0000-0000	*	4573	4559	4642	4933	4255	3129	4676 8	4348 5
AM Peak	*	1100	1100	1100	0900	1100	1100		
	*	301	295	283	289	322	249		
PM Peak	*	1500	1700	1700	1500	1200	1200		
	*	464	459	464	478	379	308		

*** - No data**

Weekly Vehicle Counts

WeeklyVehicle-4
Site 19402 0EW
Description *2635 Alpine Blvd Btwn Bay Medows Dr & Louise Dr*
Filter time **0:00 Tuesday, November 04, 2008 => 0:00 Tuesday, November 11, 2008**
Scheme Vehicle classification (Scheme F99)
Filter Cls(1 2 3 4 5 6 7 8 9 10 11 12 13) Dir(E W) Sp(0 100) Headway(>0)

Hour	Mon 03 Nov	Tue 04 Nov	Wed 05 Nov	Thu 06 Nov	Fri 07 Nov	Sat 08 Nov	Sun 09 Nov	Averages 1 - 5	Averages 1 - 7
0000-0100	*	21	37	24	12	43	38	23 5	29 2
0100-0200	*	20	12	13	13	33	19	14 5	18 3
0200-0300	*	20	10	14	14	13	14	14 5	14 2
0300-0400	*	14	10	11	13	19	19	12 0	14 3
0400-0500	*	22	15	15	25	21	7	19 3	17 5
0500-0600	*	70	34	56	51	40	28	52 8	46 5
0600-0700	*	131	118	108	126	70	61	120 8	102 3
0700-0800	*	252	219	206	222	145	107	224 8	191 8
0800-0900	*	286	279	259	255	242	161	269 8	247 0
0900-1000	*	327	304	**295<**	**313<**	296	241	309 8	296 0
1000-1100	*	294	293	255	299	358	295	285 3	299 0
1100-1200	*	**366<**	**311<**	289	305	**419<**	**356<**	**317 8<**	**341 0<**
1200-1300	*	377	337	303	381	**437<**	**385<**	349 5	370 0
1300-1400	*	394	444	375	372	412	325	396 3	387 0
1400-1500	*	479	413	449	485	372	252	456 5	408 3
1500-1600	*	**545<**	467	524	**552<**	422	259	522 0	**461 5<**
1600-1700	*	505	511	**531<**	531	412	278	519 5	461 3
1700-1800	*	527	**542<**	526	515	354	296	**527 5<**	460 0
1800-1900	*	362	395	401	404	303	244	390 5	351 5
1900-2000	*	239	278	280	337	188	171	283 5	248 8
2000-2100	*	177	145	183	191	173	106	174 0	162 5
2100-2200	*	110	99	113	144	131	78	116 5	112 5
2200-2300	*	61	59	66	103	92	48	72 3	71 5
2300-2400	*	37	45	50	61	54	44	48 3	48 5
Totals									
0700-1900	*	4714	4515	4413	4634	4172	3199	4569 0	4274 5
0600-2200	*	5371	5155	5097	5432	4734	3615	5263 8	4900 7
0600-0000	*	5469	5259	5213	5596	4880	3707	5384 3	5020 7
0000-0000	*	5636	5377	5346	5724	5049	3832	5520 8	5160 7
AM Peak	*	1100	1100	0900	0900	1100	1100		
	*	366	311	295	313	419	356		
PM Peak	*	1500	1700	1600	1500	1200	1200		
	*	545	542	531	552	437	385		

*** - No data**

5346 EB
+ 4863 WB
10,209 TOTAL

WESTBOUND

AM Peak	PM Peak
286	527
279	542
259	531
Σ 824	Σ 1600
x̄ 275	x̄ 533

Weekly Vehicle Counts

WeeklyVehicle-4
Site 19402 0EW
Description **2635 Alpine Blvd Btwn Bay Medows Dr & Louise Dr**
Filter time **0:00 Tuesday, November 04, 2008 => 0 00 Tuesday, November 11, 2008**
Scheme Vehicle classification (Scheme F99)
Filter Cls(1 2 3 4 5 6 7 8 9 10 11 12 13) Dir(W) Sp(0 100) Headway(>0)

	Mon 03 Nov	Tue 04 Nov	Wed 05 Nov	Thu 06 Nov	Fri 07 Nov	Sat 08 Nov	Sun 09 Nov	Averages 1 - 5	Averages 1 - 7
Hour									
0000-0100	*	28	22	23	17	28	29	22 5	24 5
0100-0200	*	16	13	10	13	26	25	13 0	17 2
0200-0300	*	16	9	9	16	17	15	12 5	13 7
0300-0400	*	7	7	17	7	18	11	9 5	11 2
0400-0500	*	30	34	26	32	23	20	30 5	27 5
0500-0600	*	130	110	121	104	39	29	116 3	88 8
0600-0700	*	265	218	233	244	108	59	240 0	187 8
0700-0800	*	367	335	309	313	170	101	331 0	265 8
0800-0900		**433<**	**416<**	**403<**	**405<**	224	240	**414 3<**	**353 5<**
0900-1000	*	336	312	308	285	327	287	310 3	309 2
1000-1100	*	312	315	263	323	339	277	308 3	308 2
1100-1200	*	360	302	297	332	**394<**	**305<**	322 8	331 7
1200-1300	*	354	315	282	350	**395<**	**336<**	325 3	338 7
1300-1400		349	303	290	301	351	269	310 8	310 5
1400-1500	*	372	340	332	**401<**	316	244	361 3	334 2
1500-1600	*	378	346	359	400	325	234	370 0	339 8
1600-1700	*	**383<**	350	360	371	366	284	366 0	**352 3<**
1700-1800	*	381	**351<**	**398<**	384	349	250	**378 5<**	352 2
1800-1900	*	283	283	288	319	267	243	293 3	280 5
1900-2000	*	173	165	212	213	164	152	190 8	179 8
2000-2100	*	135	153	133	181	166	97	150 5	144 2
2100-2200	*	89	85	90	122	117	67	96 5	95 0
2200-2300	*	52	47	49	74	83	49	55 5	59 0
2300-2400	*	28	25	31	46	42	33	32 5	34 2
Totals									
0700-1900	*	4305	3968	3909	4184	3823	3070	4091 5	3876 5
0600-2200		4967	4589	4577	4944	4378	3445	4769 3	4483 3
0600-0000	*	5047	4661	4657	5064	4503	3527	4857 3	4576 5
0000-0000	*	5274	4856	4863	5253	4654	3656	5061 5	4759 3
AM Peak	*	0800	0800	0800	0800	1100	1100		
	*	433	416	403	405	394	305		
PM Peak	*	1600	1700	1700	1400	1200	1200		
	*	383	351	398	401	395	336		

*** - No data**

EASTBOUND

AM Peak	PM Peak
433	383
416	351
403	398
Σ 1252	Σ 1132
x̄ = 417	x̄ = 377

Weekly Vehicle Counts

WeeklyVehicle-4
Site 19403 0WE
Description **3576 Alpine Blvd W/O W Willows Road OC**
Filter time **0 00 Tuesday, November 04, 2008 => 0 00 Tuesday, November 11, 2008**
Scheme Vehicle classification (Scheme F99)
Filter Cls(1 2 3 4 5 6 7 8 9 10 11 12 13) Dir(EB) Sp(0 100) Headway(>0)

	Mon 03 Nov	Tue 04 Nov	Wed 05 Nov	Thu 06 Nov	Fri 07 Nov	Sat 08 Nov	Sun 09 Nov	Averages 1 - 5	Averages 1 - 7
Hour									
0000-0100	*	16	16	14	12	14	17	14 5	14 8
0100-0200	*	11	9	6	7	12	11	7 0	8 5
0200-0300	*	11	10	8	3	5	10	8 0	7 8
0300-0400	*	8	7	4	9	14	8	7 0	8 3
0400-0500	*	15	6	13	13	16	7	11 8	11 7
0500-0600	*	45	40	44	35	23	14	41 0	33 5
0600-0700	*	92	83	73	78	44	34	81 5	67 3
0700-0800	*	142	140	141	128	82	64	137 8	116 2
0800-0900	*	124	132	117	131	130	74	126 0	118 0
0900-1000	*	149	**162<**	**154<**	140	165	118	151 3	148 0
1000-1100	*	156	160	145	170	225	163	157 8	169 8
1100-1200	*	**171<**	159	140	**171<**	**239<**	**189<**	**160 3<**	**178 2<**
1200-1300		183	189	176	191	**239<**	**190<**	184 8	194 7
1300-1400	*	166	211	194	211	207	165	195 5	192 3
1400-1500	*	206	214	200	240	230	163	215 0	208 8
1500-1600	*	**273<**	228	257	287	225	146	261 3	236 0
1600-1700	*	248	**258<**	**315<**	310	217	162	**282 8<**	**251 7<**
1700-1800	*	228	246	244	**323<**	208	134	260 3	230 5
1800-1900	*	148	156	199	229	152	105	183 0	164 8
1900-2000	*	109	122	103	162	90	79	124 0	110 8
2000-2100	*	67	73	74	102	82	58	79 0	76 0
2100-2200	*	66	49	53	78	67	50	61 5	60 5
2200-2300	*	25	34	29	44	41	30	33 0	33 8
2300-2400	*	38	35	33	37	42	28	35 8	35 5
Totals									
0700-1900	*	2194	2255	2282	2531	2319	1673	2315 5	2209 0
0600-2200	*	2528	2582	2585	2951	2602	1894	2661 5	2523 7
0600-0000	*	2591	2651	2647	3032	2685	1952	2730 3	2593 0
0000-0000	*	2697	2739	2736	3106	2769	2019	2819 5	2677 7
AM Peak	*	1100	0900	0900	1100	1100	1100		
	*	171	162	154	171	239	189		
PM Peak	*	1500	1600	1600	1700	1200	1200		
	*	273	258	315	323	239	190		

***** - No data

2736 EB
+2458 WB
5194 TOTAL

Weekly Vehicle Counts

WeeklyVehicle-4
Site 19403 0WE
Description **3576 Alpine Blvd W/O W Willows Road OC**
Filter time **0 00 Tuesday, November 04, 2008 => 0 00 Tuesday, November 11, 2008**
Scheme Vehicle classification (Scheme F99)
Filter Cls(1 2 3 4 5 6 7 8 9 10 11 12 13) Dir(W) Sp(0 100) Headway(>0)

	Mon 03 Nov	Tue 04 Nov	Wed 05 Nov	Thu 06 Nov	Fri 07 Nov	Sat 08 Nov	Sun 09 Nov	Averages 1 - 5	1 - 7
Hour									
0000-0100	*	22	17	14	15	20	20	17 0	18 0
0100-0200	*	20	16	10	15	22	27	15 3	18 3
0200-0300	*	15	12	12	11	27	15	12 5	15 3
0300-0400	*	6	4	13	5	12	12	7 0	8 7
0400-0500	*	17	12	14	12	14	13	13 8	13 7
0500-0600	*	44	36	42	32	25	17	38 5	32 7
0600-0700	*	95	83	94	81	43	28	88 3	70 7
0700-0800	*	166	138	138	133	90	45	143 8	118 3
0800-0900	*	**188<**	**170<**	**167<**	**181<**	104	111	**176 5<**	**153 5<**
0900-1000	*	155	142	127	160	129	124	146 0	139 5
1000-1100	*	134	147	128	170	150	132	144 8	143 5
1100-1200	*	152	140	122	156	**192<**	**142<**	142 5	150 7
1200-1300	*	161	160	140	171	183	**176<**	158 0	165 2
1300-1400	*	183	158	154	157	164	147	163 0	160 5
1400-1500	*	174	172	179	185	193	159	177 5	177 0
1500-1600	*	222	**205<**	205	**224<**	177	167	214 0	200 0
1600-1700	*	**230<**	204	**232<**	218	**206<**	169	**221 0<**	**209 8<**
1700-1800	*	206	190	220	209	175	117	206 3	186 2
1800-1900	*	117	142	147	172	143	94	144 5	135 8
1900-2000	*	103	95	101	109	91	90	102 0	98 2
2000-2100	*	80	87	81	119	97	59	91 8	87 2
2100-2200	*	41	47	50	61	82	49	49 8	55 0
2200-2300	*	34	34	39	42	59	31	37 3	39 8
2300-2400	*	17	20	29	40	31	18	26 5	25 8
Totals									
0700-1900	*	2088	1968	1959	2136	1906	1583	2037 8	1940 0
0600-2200	*	2407	2280	2285	2506	2219	1809	2369 5	2251 0
0600-0000		2458	2334	2353	2588	2309	1858	2433 3	2316 7
0000-0000	*	2582	2431	2458	2678	2429	1962	2537 3	2423 3
AM Peak	*	0800	0800	0800	0800	1100	1100		
	*	188	170	167	181	192	142		
PM Peak	*	1600	1500	1600	1500	1600	1200		
	*	230	205	232	224	206	176		

*** - No data**

APPENDIX B

UNSIGNALIZED INTERSECTION CALCULATION SHEETS

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #1 Alpine Boulevard/Residential Driveway

Average Delay (sec/veh) 0 0 Worst Case Level Of Service B[12 9]

Approach	North Bound			South Bound			East Bound			West Bound		
Movement	L	T	R	L	T	R	L	T	R	L	T	R
Control	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights	Include			Include			Include			Include		
Lanes	0 0 1'		0 0	0 0 0		0 0	0 0 0		1 0	0 0 1		0 0
Volume Module AM Peak												
Base Vol	1	0	1	0	0	0	0	429	1	0	287	0
Growth Adj	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00
Initial Bse	1	0	1	0	0	0	0	429	1	0	287	0
User Adj	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00
PHF Adj	0 92	0 92	0 92	0 92	0 92	0 92	0 92	0 92	0 92	0 92	0 92	0 92
PHF Volume	1	0	1	0	0	0	0	466	1	0	312	0
Reduct Vol	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume	1	0	1	0	0	0	0	466	1	0	312	0
Critical Gap Module												
Critical Gp	6 4	6 5	6 2	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim	3 5	4 0	3 3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module												
Cnflict Vol	779	779	467	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap	367	330	600	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap	367	330	600	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap	0 00	0 00	0 00	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module												
2Way95thQ	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move	*	*	*	*	*	*	*	*	*	*	*	*
Movement	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap	xxxx	456	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue	xxxxx	0	0 xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel	xxxxx	12	9 xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS	*	B	*	*	*	*	*	*	*	*	*	*
ApproachDel		12 9		xxxxxx			xxxxxx			xxxxxx		
ApproachLOS		B		*			*			*		

Note Queue reported is the number of cars per lane

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #1 Alpine Boulevard/Residential Driveway

Average Delay (sec/veh) 0 0 Worst Case Level Of Service C[19 1]

Approach	North Bound			South Bound			East Bound			West Bound		
Movement	L	T	R	L	T	R	L	T	R	L	T	R
Control	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights	Include			Include			Include			Include		
Lanes	1 0	0 0	0	0 0	0 0	0	0 0	0 1	0	0 1	0 0	0
Volume Module PM Peak												
Base Vol	1	0	0	0	0	0	0	399	2	1	555	0
Growth Adj	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00
Initial Bse	1	0	0	0	0	0	0	399	2	1	555	0
User Adj	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00
PHF Adj	0 92	0 92	0 92	0 92	0 92	0 92	0 92	0 92	0 92	0 92	0 92	0 92
PHF Volume	1	0	0	0	0	0	0	434	2	1	603	0
Reduct Vol	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume	1	0	0	0	0	0	0	434	2	1	603	0
Critical Gap Module												
Critical Gp	6 4	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	4 1	xxxx	xxxxx
FollowUpTim	3 5	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	2 2	xxxx	xxxxx
Capacity Module												
Cnflict Vol	1040	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	436	xxxx	xxxxx
Potent Cap	257	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1135	xxxx	xxxxx
Move Cap	257	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1135	xxxx	xxxxx
Volume/Cap	0 00	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0 00	xxxx	xxxx
Level Of Service Module												
2Way95thQ	0 0	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0 0	xxxx	xxxxx
Control Del	19 1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8 2	xxxx	xxxxx
LOS by Move	C	*	*	*	*	*	*	*	*	A	*	*
Movement	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	0 0	xxxx	xxxxx
Shrd ConDel	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8 2	xxxx	xxxxx
Shared LOS	*	*	*	*	*	*	*	*	*	A	*	*
ApproachDel		19 1			xxxxxx			xxxxxx			xxxxxx	
ApproachLOS		C			*			*			*	

Note Queue reported is the number of cars per lane

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #2 Alpine Boulevard/ Commercial Driveway

Average Delay (sec/veh) 0 4 Worst Case Level Of Service B[14 1]

Approach	North Bound			South Bound			East Bound			West Bound		
Movement	L	T	R	L	T	R	L	T	R	L	T	R
Control	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights	Include			Include			Include			Include		
Lanes	0 0 1	0 0		0 0 0	0 0		0 0 0	1 0		0 1	0 0 0	
Volume Module AM Peak												
Base Vol	13	0	5	0	0	0	0	416	14	4	274	0
Growth Adj	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00
Initial Bse	13	0	5	0	0	0	0	416	14	4	274	0
User Adj	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00
PHF Adj	0 92	0 92	0 92	0 92	0 92	0 92	0 92	0 92	0 92	0 92	0 92	0 92
PHF Volume	14	0	5	0	0	0	0	452	15	4	298	0
Reduct Vol	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume	14	0	5	0	0	0	0	452	15	4	298	0
Critical Gap Module												
Critical Gp	6 4	6 5	6 2	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	4 1	xxxx	xxxxx
FollowUpTim	3 5	4 0	3 3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	2 2	xxxx	xxxxx
Capacity Module												
Cnflict Vol	766	766	460	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	467	xxxx	xxxxx
Potent Cap	374	335	606	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1105	xxxx	xxxxx
Move Cap	372	334	606	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1105	xxxx	xxxxx
Volume/Cap	0 04	0 00	0 01	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0 00	xxxx	xxxx
Level Of Service Module												
2Way95thQ	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0 0	xxxx	xxxxx
Control Del	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8 3	xxxx	xxxxx
LOS by Move	*	*	*	*	*	*	*	*	*	A	*	*
Movement	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap	xxxx	417	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue	xxxxx	0 1	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	0 0	xxxx	xxxxx
Shrd ConDel	xxxxx	14 1	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8 3	xxxx	xxxxx
Shared LOS	*	B	*	*	*	*	*	*	*	A	*	*
ApproachDel		14 1			xxxxxx			xxxxxx			xxxxxx	
ApproachLOS		B			*			*			*	

Note Queue reported is the number of cars per lane

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #2 Alpine Boulevard/ Commercial Driveway

Average Delay (sec/veh) 0 6 Worst Case Level Of Service C[17 7]

Approach	North Bound			South Bound			East Bound			West Bound		
Movement	L	T	R	L	T	R	L	T	R	L	T	R
Control	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights	Include			Include			Include			Include		
Lanes	0 0 1' 0 0			0 0 0 0 0			0 0 0 1 0			0 1 0 0 0		
Volume Module PM Peak												
Base Vol	23	0	9	0	0	0	0	373	26	6	533	0
Growth Adj	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00
Initial Bse	23	0	9	0	0	0	0	373	26	6	533	0
User Adj	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00
PHF Adj	0 92	0 92	0 92	0 92	0 92	0 92	0 92	0 92	0 92	0 92	0 92	0 92
PHF Volume	25	0	10	0	0	0	0	405	28	7	579	0
Reduct Vol	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume	25	0	10	0	0	0	0	405	28	7	579	0
Critical Gap Module												
Critical Gp	6 4	6 5	6 2	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	4 1	xxxx	xxxxx
FollowUpTim	3 5	4 0	3 3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	2 2	xxxx	xxxxx
Capacity Module												
Cnflict Vol	1012	1012	420	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	434	xxxx	xxxxx
Potent Cap	267	241	638	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1137	xxxx	xxxxx
Move Cap	266	240	638	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1137	xxxx	xxxxx
Volume/Cap	0 09	0 00	0 02	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0 01	xxxx	xxxx
Level Of Service Module												
2Way95thQ	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0 0	xxxx	xxxxx
Control Del	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8 2	xxxx	xxxxx
LOS by Move	*	*	*	*	*	*	*	*	*	A	*	*
Movement	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap	xxxx	318	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue	xxxxx	0 4	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	0 0	xxxx	xxxxx
Shrd ConDel	xxxxx	17 7	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8 2	xxxx	xxxxx
Shared LOS	*	C	*	*	*	*	*	*	*	A	*	*
ApproachDel		17 7			xxxxxx			xxxxxx			xxxxxx	
ApproachLOS		C			*			*			*	

Note Queue reported is the number of cars per lane

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #1 Alpine Boulevard/Residential Driveway

Average Delay (sec/veh) 0 0 Worst Case Level Of Service B[13 4]

Approach	North Bound			South Bound			East Bound			West Bound		
Movement	L	T	R	L	T	R	L	T	R	L	T	R
Control	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights	Include			Include			Include			Include		
Lanes	0 0 1! 0 0			0 0 0 0 0			0 0 0 1 0			0 0 1 0 0		
Volume Module AM Peak												
Base Vol	1	0	1	0	0	0	0	450	1	0	312	0
Growth Adj	1 00 1 00		1 00	1 00 1 00		1 00	1 00 1 00		1 00	1 00 1 00		1 00
Initial Bse	1	0	1	0	0	0	0	450	1	0	312	0
User Adj	1 00 1 00		1 00	1 00 1 00		1 00	1 00 1 00		1 00	1 00 1 00		1 00
PHF Adj	0 92 0 92		0 92	0 92 0 92		0 92	0 92 0 92		0 92	0 92 0 92		0 92
PHF Volume	1	0	1	0	0	0	0	489	1	0	339	0
Reduct Vol	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume	1	0	1	0	0	0	0	489	1	0	339	0
Critical Gap Module												
Critical Gp	6 4	6 5	6 2	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
FollowUpTim	3 5	4 0	3 3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Capacity Module												
Cnflict Vol	829	829	490	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Potent Cap	343	308	583	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Move Cap	343	308	583	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Volume/Cap	0 00	0 00	0 00	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx
Level Of Service Module												
2Way95thQ	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move	*	*	*	*	*	*	*	*	*	*	*	*
Movement	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap	xxxx	432	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue	xxxxx	0	0 xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shrd ConDel	xxxxx	13	4 xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
Shared LOS	*	B	*	*	*	*	*	*	*	*	*	*
ApproachDel		13 4			xxxxxx			xxxxxx			xxxxxx	
ApproachLOS		B			*			*			*	

Note Queue reported is the number of cars per lane

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #1 Alpine Boulevard/Residential Driveway

Average Delay (sec/veh) 0 0 Worst Case Level Of Service C[20 5]

Approach	North Bound			South Bound			East Bound			West Bound		
Movement	L	T	R	L	T	R	L	T	R	L	T	R
Control	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights	Include			Include			Include			Include		
Lanes	1 0	0 0	0	0 0	0 0	0	0 0	0 1	0	0 1	0 0	0
Volume Module PM Peak												
Base Vol	1	0	0	0	0	0	0	441	2	1	576	0
Growth Adj	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00
Initial Bse	1	0	0	0	0	0	0	441	2	1	576	0
User Adj	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00
PHF Adj	0 92	0 92	0 92	0 92	0 92	0 92	0 92	0 92	0 92	0 92	0 92	0 92
PHF Volume	1	0	0	0	0	0	0	479	2	1	626	0
Reduct Vol	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume	1	0	0	0	0	0	0	479	2	1	626	0
Critical Gap Module												
Critical Gp	6 4	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	4 1	xxxx	xxxxx
FollowUpTim	3 5	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	2 2	xxxx	xxxxx
Capacity Module												
Cnflict Vol	1109	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	482	xxxx	xxxxx
Potent Cap	234	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1092	xxxx	xxxxx
Move Cap	234	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1092	xxxx	xxxxx
Volume/Cap	0 00	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0 00	xxxx	xxxx
Level Of Service Module												
2Way95thQ	0 0	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0 0	xxxx	xxxxx
Control Del	20 5	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8 3	xxxx	xxxxx
LOS by Move	C	*	*	*	*	*	*	*	*	A	*	*
Movement	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	0 0	xxxx	xxxxx
Shrd ConDel	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8 3	xxxx	xxxxx
Shared LOS	*	*	*	*	*	*	*	*	*	A	*	*
ApproachDel		20 5			xxxxxx			xxxxxx			xxxxxx	
ApproachLOS		C			*			*			*	

Note Queue reported is the number of cars per lane

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #2 Alpine Boulevard/ Commercial Driveway

Average Delay (sec/veh) 0 4 Worst Case Level Of Service B[14 7]

Approach	North Bound			South Bound			East Bound			West Bound		
Movement	L	T	R	L	T	R	L	T	R	L	T	R
Control	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights	Include			Include			Include			Include		
Lanes	0 0 1' 0 0			0 0 0 0 0			0 0 0 1 0			0 1 0 0 0		
Volume Module AM Peak												
Base Vol	13	0	5	0	0	0	0	437	14	4	299	0
Growth Adj	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00
Initial Bse	13	0	5	0	0	0	0	437	14	4	299	0
User Adj	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00
PHF Adj	0 92	0 92	0 92	0 92	0 92	0 92	0 92	0 92	0 92	0 92	0 92	0 92
PHF Volume	14	0	5	0	0	0	0	475	15	4	325	0
Reduct Vol	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume	14	0	5	0	0	0	0	475	15	4	325	0
Critical Gap Module												
Critical Gp	6 4	6 5	6 2	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	4 1	xxxx	xxxxx
FollowUpTim	3 5	4 0	3 3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	2 2	xxxx	xxxxx
Capacity Module												
Cnflict Vol	816	816	483	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	490	xxxx	xxxxx
Potent Cap	349	314	588	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1084	xxxx	xxxxx
Move Cap	348	312	588	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1084	xxxx	xxxxx
Volume/Cap	0 04	0 00	0 01	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0 00	xxxx	xxxx
Level Of Service Module												
2Way95thQ	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0 0	xxxx	xxxxx
Control Del	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8 3	xxxx	xxxxx
LOS by Move	*	*	*	*	*	*	*	*	*	A	*	*
Movement	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap	xxxx	393	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue	xxxxx	0 2	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	0 0	xxxx	xxxxx
Shrd ConDel	xxxxx	14 7	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8 3	xxxx	xxxxx
Shared LOS	*	B	*	*	*	*	*	*	*	A	*	*
ApproachDel		14 7			xxxxxx			xxxxxx			xxxxxx	
ApproachLOS		B			*			*			*	

Note Queue reported is the number of cars per lane

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #2 Alpine Boulevard/ Commercial Driveway

Average Delay (sec/veh) 0 6 Worst Case Level Of Service C[19 0]

Approach	North Bound			South Bound			East Bound			West Bound		
Movement	L	T	R	L	T	R	L	T	R	L	T	R
Control	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Rights	Include			Include			Include			Include		
Lanes	0 0 1' 0 0			0 0 0 0 0			0 0 0 1 0			0 1 0 0 0		
Volume Module PM Peak												
Base Vol	23	0	9	0	0	0	0	415	26	6	554	0
Growth Adj	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00
Initial Bse	23	0	9	0	0	0	0	415	26	6	554	0
User Adj	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00
PHF Adj	0 92	0 92	0 92	0 92	0 92	0 92	0 92	0 92	0 92	0 92	0 92	0 92
PHF Volume	25	0	10	0	0	0	0	451	28	7	602	0
Reduct Vol	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume	25	0	10	0	0	0	0	451	28	7	602	0
Critical Gap Module												
Critical Gp	6 4	6 5	6 2	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	4 1	xxxx	xxxxx
FollowUpTim	3 5	4 0	3 3	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	2 2	xxxx	xxxxx
Capacity Module												
Cnflict Vol	1080	1080	465	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	479	xxxx	xxxxx
Potent Cap	243	220	601	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1094	xxxx	xxxxx
Move Cap	242	218	601	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	1094	xxxx	xxxxx
Volume/Cap	0 10	0 00	0 02	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	0 01	xxxx	xxxx
Level Of Service Module												
2Way95thQ	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0 0	xxxx	xxxxx
Control Del	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8 3	xxxx	xxxxx
LOS by Move	*	*	*	*	*	*	*	*	*	A	*	*
Movement	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT	LT	LTR	RT
Shared Cap	xxxx	291	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
SharedQueue	xxxxx	0	4 xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	0 0	xxxx	xxxxx
Shrd ConDel	xxxxx	19	0 xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	8 3	xxxx	xxxxx
Shared LOS	*	C	*	*	*	*	*	*	*	A	*	*
ApproachDel		19	0		xxxxxx			xxxxxx			xxxxxx	
ApproachLOS		C			*			*			*	

Note Queue reported is the number of cars per lane

APPENDIX C

COUNTY OF SAN DIEGO
ROADWAY CLASSIFICATION TABLE

County of San Diego
DRAFT

August 11, 1998

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 applicable 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

APPENDIX D

MODIFICATION TO ROAD STANDARD REQUEST AND APPROVAL LETTER

County of San Diego

DEPARTMENT OF PUBLIC WORKS

JOHN L SNYDER
DIRECTOR

5201 RUFFIN ROAD SUITE D
SAN DIEGO CALIFORNIA 92123-4310
(858) 694 2055 FAX (858) 694-2826
Web Site sdcdpw.org

RICHARD E CROMPTON
ASSISTANT DIRECTOR

May 20 2008

Allied Earth Technology
4926 La Cuenta Drive Suite 102A
San Diego CA 92124
Attn Robert Chan P E

Dear Mr Chan

REQUEST FOR A MODIFICATION TO A ROAD STANDARD AND/OR TO PROJECT CONDITIONS – ALPINE BOULEVARD TPM 21044

Department of Public Works (DPW) has reviewed your request for a modification of Public Road Standards Section 6 1 C 2 for proposed project accesses onto Alpine Boulevard a Circulation Element Road to allow centerline separations between Driveway on Parcel 1 and Louse Lane of approximately 130 feet, and existing private access road for the parcels 2, 3 4 and remainder and Louse Lane of approximately 265 feet, along Alpine Boulevard, respectively

DPW is able to support your request for a modification The proposed driveway and existing private road are currently located as far from the adjacent intersection (Louse Lane) as is reasonable The project shall provide a safe sight distance for access from proposed driveway and private easement road onto Alpine Boulevard in both directions It has been determined your request for exception will not adversely affect the safety and flow of traffic in this area

If you have any questions or need additional information related to this request please contact Ed Sinsay, DPW Project Manager at (858) 694-2486

Sincerely,

RICHARD E CROMPTON
Assistant Director

REQUEST FOR A MODIFICATION TO A ROAD STANDARD AND/OR TO PROJECT CONDITIONS – ALPINE BOULEVARD, TPM 21044

NATURE OF REQUEST

The Department of Public Works received a Request for Modification to a Road Standard from Allied Earth Technology The request was for a reduction in the DPW required centerline separation for non-Circulation Element roads entering into a Circulation Element road from 300 feet to approximately 130 feet and 265 feet on Alpine Boulevard These centerline separations are between the proposed project's driveway for Parcel 1, existing private easement road and the intersection of Alpine Boulevard and Louise Lane The proposed driveway for Parcel 1 is designed at northeast corner of the parcel in order to provide maximum possible separation from existing easement road (westerly) and Louise Lane (easterly)

BACKGROUND

TPM 21044 consists of three residential parcels, remainder parcel and one commercial parcel on Alpine Boulevard in the Lakeside area The project accesses are along Alpine Boulevard

Applicant s request is based on the following

1 All access to the four residential lots would be provided by existing offsite private easement road The proposed driveway on Parcel 1 would be for access to the commercial property

2 The access requirements of 300 feet centerline separation between the driveway on Parcel 1 and Louise Lane is limited by the lot width constraints of 150 feet

3 The proposed driveway has been situated to provide a maximum possible separation from existing private road and intersection of Alpine Boulevard and Louise Lane

4 Based on sight distance letter for Alpine Boulevard, prepared by Allied Earth Technology dated February 25 2008 the sight distances in both directions along Alpine Boulevard from the existing private easement road and proposed driveway on Parcel 1 are in excess of 1,000 feet

5 The owner wants to be consis ent with surrounding neighborhood of the existing driveways along Alpine Boulevard

PROJECT MANAGEMENT TEAM REVIEW

It s recommended t at the Director of Public Works approve this request Decision is based upo the following

1 The project's engineer has verified that there is an adequate sight distance from the proposed driveway and existing private road along Alpine Boulevard at both directions

REQUEST FOR A MODIFICATION TO A ROAD STANDARD AND/OR TO PROJECT CONDITIONS – ALPINE BOULEVARD, TPM 21044

2 If this modification request is not accepted by DPW, it will be a hardship for the owner to provide an access to the commercial parcel his property

3 The request was reviewed and supported by DPWs Traffic Engineer

RECOMMENDATION

It is recommended that the Director of Public Works approve this request for modification to the road standard and/or to project conditions

1 The applicant shall provide an adequate sight distance at the proposed driveways locations at both directions along Alpine Boulevard

2 The proposed driveway alignment shall be designed to line up with existing driveway across the street (Alpine Boulevard)

APPLICANT ACTION

The applicant shall comply with approval modification

~~Request Recommended/~~
Not Recommended

Edwin M Sinsay Date 5/19/08

Request Approved/
~~Denied~~

Troy Bankston Date 05/19/08

Request Approved/
~~Denied~~

Richard E Crompton Date 5/20/08