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Valero Station

(Los Volcanes Rd. / Unser Blvd.)

Traffic Impact Study

January 28, 2012

Presented to:

City of Albuquerque
Transportation Development Section

Prepared for:

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Valero Commercial Development
(Southwest Corner – Los Volcanes Rd. / Unser Blvd.)
TRAFFIC IMPACT STUDY

STUDY PURPOSE

This study is being conducted in conjunction with a request for approval of a gasoline station with a convenience market (20 fueling positions) facility such as the one shown in the Appendix (Page A-3) of this report. The purpose of this study is to identify the impact of the proposed Development on the adjacent transportation system, and to make recommendations to mitigate any significant adverse impact on the adjacent transportation system resulting from the implementation of the new development. This study is based on the assumption that the land uses and intensities implemented in the development of the proposed site development plan will be similar to those defined in the table on Page A-7 in the Appendix of this report. Should the developer propose a combination of land uses and / or densities that would significantly increase the overall traffic generation for the Valero Facility, an update to this study would be required reflecting the proposed new conditions.

STUDY PROCEDURES

The basic procedure followed for this traffic impact study is outlined as follows:

- Calculate the generated trips for this proposed retail commercial development consisting of a gas station with 20 fueling positions as specifically defined in the Trip Generation Table on Page A-7 in the Appendix of this report. The trips generated for the implementation year analysis (2012) will assume that 100% of the development has occurred.
- Calculate trip distribution for the newly generated trips by this development. The new commercial trips will be distributed based on year 2012 population data within a two (2) mile radius of the project as shown on Page A-8 in the Appendix of this report. Trips were truncated north of Interstate 40 due to another Valero station in the area.
- Determine Trip Assignments for the newly generated trips based on the results of the Trip Distribution Analysis and logical routing to and from the new site.
- Include the generated trips for the proposed Unser Crossing & Unser Town Center projects in the 2012 NO BUILD Volumes for this project.
- Conduct new traffic turning movement counts for the AM and PM Peak Hour periods for the intersections of Bluewater Rd. / Unser Blvd. and Los Volcanes Rd. / Unser Blvd.
- Calculate Historic Growth Rates for background traffic volumes based on historic AWDT Data obtained from the Mid-Region Council of Governments' Traffic Flow Maps or based on forecast AM and PM Peak Hour period link volumes extracted from the Mid-Region Council of Governments' regional transportation model (2030 data set).
- Calculate background traffic growth from the year of the most recent traffic counts to the implementation year for this analysis (2012).
- Add trips generated from the proposed Unser Crossing and Unser Town Center to the background traffic volumes. The trips from these previously approved developments will be included in the 2012 NO BUILD Volumes for this study.
- Add data from Trip Assignments Maps and Tables to the 2012 NO BUILD Volumes to obtain 2012 BUILD Volumes for this project.

- Provide signalized and / or unsignalized intersection analyses for the following intersections:

	INTERSECTION	TYPE CONTROL	EXISTING ANALYSIS	NO BUILD ANALYSIS	BUILD ANALYSIS
1	Los Volcanes Rd. / Unser Blvd.	Traffic Signal	N/A	2012	2012
2	Bluewater Rd. / Unser Blvd.	Traffic Signal	N/A	2012	2012
3	Central Ave. / Unser Blvd.	Traffic Signal	N/A	2012	2012
4	I-40 North Ramp / Unser Blvd.	Traffic Signal	N/A	2012	2012
5	I-40 South Ramp / Unser Blvd.	Stop Sign	N/A	2012	2012
6	Saul Bell Rd / Unser Blvd	Stop Sign	N/A	2012	2012
7	Los Volcanes Rd. / Driveway "A"	Stop Sign	N/A	N/A	2012
8	Los Volcanes Rd. / Driveway "B"	Stop Sign	N/A	N/A	2012

GENERAL AREA CHARACTERISTICS

This project is located along the south side of Los Volcanes Rd. west of Unser Blvd. The surrounding area to the south, east, and west is primarily zoned for commercial and industrial park type of development. The Vicinity Map on Page A-1 of the Appendix shows the zoning of the surrounding properties in the area surrounding this site. The project is located in a mild to moderately active development area.

AREA STREET NETWORK

Access to this new site will be primarily via Los Volcanes Rd. There are two proposed points into this development from Los Volcanes Rd. Additionally, request is made to permit a northbound left-turn-in movement off of Unser Blvd. at Saul Bell Rd. to relieve potential northbound left turn traffic on Unser Blvd. at Los Volcanes Rd.

Los Volcanes Rd. is classified as a Collector Street on the Long Range Roadway System Map for the Albuquerque Metropolitan Planning Area. It is a paved urban roadway with curbs and gutters on both sides and no medians from Unser Blvd. to Coors Blvd. West of Unser Blvd., it is not classified.

Bluewater Rd. is classified as a Collector Street on the Long Range Roadway System Map for the Albuquerque Metropolitan Planning Area. It is a paved urban roadway with curbs and gutters on both sides and no medians from Unser Blvd. to Coors Blvd.

Unser Blvd. is classified as a Limited Access Principal Arterial roadway from Arenal Rd. to Montano Rd. on the Long Range Roadway System Map for the Albuquerque Metropolitan Planning Area. It is a four lane divided paved urban roadway with raised medians from Central Ave. to Montano Rd.

EXISTING TRAFFIC VOLUMES

2009 Average Weekday Traffic Volumes (AWDT) for major streets in the site plan area are shown on Page A-6 in the Appendix.

Recent AM and PM Peak Hour turning movement counts were provided by the City of Albuquerque for the following intersections:

Additionally, AM and PM Peak Hour turning movement counts were obtained by field traffic counts taken recently for the following intersections:

Los Volcanes Rd. / Unser Blvd. (October 6, 2010)
Bluewater Ave. / Unser Blvd. (October 12, 2010)
I-40 North Ramp / Unser Blvd. (October 13, 2010)
I-40 South Ramp / Unser Blvd. (October 14, 2010)

The counts are included near the end of the Appendix (Pages A-79 thru A-82).

EXISTING (2010) LEVELS OF SERVICE

The Highway Capacity Manual defines Level of Service (LOS) for signalized intersections in terms of average controlled delay per vehicle as follows:

LOS A	10.0" or less	Most Vehicles do not stop
LOS B	10.1 to 20.0"	Some Vehicles stop
LOS C	20.1 to 35.0"	Significant number of vehicles stop
LOS D	35.1 to 55.0"	Many vehicles stop.
LOS E	55.1 to 80.0"	Limit of acceptable delay.
LOS F	> 80.0"	Unacceptable delay.

Level of Service D is generally considered acceptable in urban areas and is the desirable base condition for analysis in a traffic study.

Existing operational levels-of-service calculations were not provided in this report since the 2012 NO BUILD analysis will approximate current conditions.

EXISTING TRANSIT SERVICE

This area is currently served by Bus Route # 54 (Bridge / Westgate) which operates on weekdays from approximately 6:00 am until approximately 9:00 pm at 45 minute intervals and on Saturdays from approximately 6:00 am until approximately 9:00 pm at one hour intervals.

PROPOSED DEVELOPMENT

The subject area of land discussed in this report is comprised of approximately 2 acres. See the conceptual site development plan on Page A-3 in the Appendix of this report to acquire more detailed information about the proposed development. This site plan is conceptual (preliminary) at this point in time and is subject to some changes as progress takes place in the design process. The changes are necessary to address concerns of the

City of Albuquerque and the neighborhood associations during the review process. The plan should, however, provide a reliable basis upon which to analyze the impact of the development on the adjacent transportation system and provide guidelines for mitigating the impact and establishing access criteria. The final approved plan should be substantially the same as the one contained in this report.

There are two (2) proposed primary access points (driveways) along Los Volcanes Rd. for the new site (See Site Map on Page A-2 of Appendix). One of the proposed driveways is intended to be a full access intersection accessing Los Volcanes Rd., while the other is a right-in, right-out only driveway. There is a proposed northbound left-turn-in off of Unser Blvd. at Saul Bell Rd. to access this project. Implementation of the left-turn-in access will be required to be approved by the Roadway Access Committee (RAC) at the Mid-Region Council of Governments (MRCOG).

TRIP GENERATION

Projected trips were calculated from data in the Institute of Transportation Engineers Trip Generation report (8th Edition, 2008). Trips for the development were determined based on land uses defined on the Preliminary Site Plan on Page A-3 in the Appendix of this report.

The resulting number of trips generated for the proposed development (100%) are summarized in the following table:

Valero Station (Los Volcanes Rd. / Unser Blvd.)

Trip Generation Data (ITE Trip Generation Manual - 8th Edition)

USE (ITE CODE)		24 HOUR TWO-WAY VOLUME	A.M. PEAK HOUR		P.M. PEAK HOUR	
		GROSS	ENTER	EXIT	ENTER	EXIT
	Units					
Gasoline / Service Station w/ Convenience Market (945)	*20.00* Fueling Positions	3,256	102	102	134	134

ITE Trip Generation Equations:

Average Vehicle Trip Ends on a Weekday (24 HOUR TWO-WAY VOLUME)

T = *162.78* (X) + *0*

50% Enter, *50%* Exit

Average Vehicle Trip Ends on a Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 7am and 9am (A.M. PEAK HOUR)

T = *10.16* (X) + *0*

50% Enter, *50%* Exit

Average Vehicle Trip Ends on a Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 4pm and 6pm (P.M. PEAK HOUR)

T = *13.38* (X) + *0*

50% Enter, *50%* Exit

The Implementation Year Analysis (2012) for this study assumed a development of 100% of the project to be implemented. See Appendix Page A-7 for more detailed information regarding trip generation rates.

An adjustment was made to the trip generation rates for PM Peak Hour Pass-by Trips for trips generated by this project.

TRIP DISTRIBUTION

Primary and Diverted Linked Trips:

Trips were distributed as follows:

Commercial Land Uses

Primary and diverted linked trips for the commercial land use development were distributed proportionally to the 2012 projected population of Data Analysis Subzones within a three mile radius of the proposed development. Population data for the years 2004 and 2030 were taken from the 2030 Socioeconomic Forecasts by Data Analysis Subzones for the Mid-Region of New Mexico, S-03-01, Appendix B and Appendix C, supplied by the Mid-Region Council of Governments (MRCOG). Population data from the years 2004 and 2030 was interpolated linearly to obtain 2012 population data to utilize for this analysis. Population Subzones were grouped based on the most likely major street(s) or route(s) to the subject development. The trip distribution worksheets and associated map of data analysis subzones is shown in the Appendix. The commercial Trip Distribution map can be found in the Appendix on Page A-12.

TRIP ASSIGNMENTS

Trip assignments for primary and diverted linked trips are first made on a percentage basis derived from data established in the trip distribution determination process and logical routing. Those percentages are then applied to the projected trips to determine individual traffic movements. Percentage trip assignments are shown on Pages A-13 thru A-14 in the Appendix of this report.

BACKGROUND TRAFFIC GROWTH

Background traffic growth rates were considered for each individual approach to an intersection that was targeted for analysis based on data from the Mid-Region Council of Governments' Regional Transportation Model (2030 data set). Forecast AM and PM Peak Hour link volumes on major streets were extracted from the 2004 and 2030 volumes and utilized to establish a background traffic growth rate for projecting turning movements at the intersections to be analyzed in this project. Since there are existing traffic count volumes at the intersections analyzed in this project, the link volumes based on the recent traffic counts were utilized instead of the MRCOG regional model link volumes. Utilizing the growth rates established in such a manner should result in forecast turning movement volumes that are consistent with the Mid-Region Council of Governments forecast link volumes.

PROJECTED PEAK HOUR TURNING MOVEMENTS FOR 2012 BUILDOUT

The calculated growth rates were applied to the most recent peak hour traffic counts (conducted for this study) and the trips from the approved *Unser Crossing* and *Unser Town Center* were added in to establish the 2012 background traffic volumes. To these volumes, the generated trips based on implementation of the proposed Valero Commercial Development Site Development Plan (100% development) were added to obtain BUILD volumes for the intersection analyses. See Appendix Pages A-20 thru A-40 for further information regarding 2012 turning movement counts.

INTERSECTION CAPACITY ANALYSIS

Intersection capacity analyses were performed in accordance with the procedures for signalized and unsignalized intersections utilized in the Synchro (Version 7, Build 773) Transportation System analysis software program. Synchro software deviates from the 2000 Highway Capacity Manual methods in several areas, but the results obtained using Synchro software seem to be generally close to those based on the 2000 Highway Capacity Manual in most cases. For signalized intersections, the operational method of analysis was used for both the 2012 NO BUILD and BUILD conditions.

Capacity analyses were performed for the following traffic conditions.

2012 without development of the subject property (NO BUILD)
2012 with development as per the Conceptual Site Development Plan (BUILD)

Queuing analysis at signalized intersections is calculated based on Poisson's arrival method considering cycle length and peak hour volumes to achieve a 95% confidence level of maximum queue for the peak hour periods.

The results of the 2012 NO BUILD and 2012 BUILD capacity analyses are summarized in the following sections - *Results and Discussion of Intersection Capacity Analyses*.

RESULTS OF SIGNALIZED INTERSECTION CAPACITY ANALYSES

IMPLEMENTATION YEAR (2012)

1. Los Volcanes Rd. /Unser Blvd. – A-41 thru A-48

The results of the implementation year analysis of the signalized intersection of Los Volcanes Rd. / Unser Blvd. are summarized in the following tables:

Existing Geometry (Los Volcanes Rd. / Unser Blvd.)

Approach	Left Turn Lanes	Thru/Lefts	Thru Lanes	Thru/Rights	Right Turn Lanes
EB Los Volcanes Rd.	2	0	0	1	0
WB Los Volcanes Rd.	1	0	1	0	1
NB Unser Blvd.	1	0	3	0	1
SB Unser Blvd.	1	0	2	0	1

* - Right Turn Lane by-passes the signal.

Los Volcanes Rd. / Unser Blvd.	AM Peak Hour		PM Peak Hour	
2012	NO BUILD	BUILD	NO BUILD	BUILD
Existing Geometry	C – 31.5	C – 32.2	B – 17.2	C – 20.5

D - 39.7 - Bold Italicized Level-of-Service indicates that one or more individual turning movements is Level-of-Service E or worse.

The operation of the signalized intersection has been demonstrated to be acceptable for the projected 2012 BUILD conditions analyzed in this report. Therefore, there are no major recommendations to significantly modify the geometry or signal phasing / timing at the intersection. Minor extensions of auxiliary lanes may be recommended based on the following queuing analysis.

The following table summarizes the existing and calculated queuing at the signalized intersection:

Queueing Analysis Summary Sheet

Project: Valero Commercial Development (Los Volcanes Rd / Unser Blvd)

Intersection: **Los Volcanes Rd / Unser Blvd**

2012

Approach	Left Turns			Thru Movements				Right Turns		
Eastbound	# Lanes	Vol.	Length	# Lanes	Vol.	Length		# Lanes	Vol.	Length
Existing Lane Length	*2*	*172*	*100*	*1*	*119*	*Cont*		*0*	*11*	*0*
AM NO BUILD Queue	2	182	175	1	127	200		0	12	50
AM BUILD Queue	**2**	**182**	**175**	**1**	**143**	**225**		**0**	**33**	**75**
Existing Lane Length	*2*	*96*	*100*	*1*	*16*	*Cont*		*0*	*16*	*0*
PM NO BUILD Queue	2	113	125	1	21	**50**		0	19	**50**
PM BUILD Queue	**2**	**126**	**125**	**1**	**38**	**100**		**0**	**46**	**100**
Westbound	# Lanes	Vol.	Length	# Lanes	Vol.	Length		# Lanes	Vol.	Length
Existing Lane Length	*1*	*58*	*140*	*1*	*29*	*Cont*		*1*	*136*	*140*
AM NO BUILD Queue	1	94	150	1	32	75		1	152	225
AM BUILD Queue	**1**	**94**	**150**	**1**	**48**	**100**		**1**	**152**	**225**
Existing Lane Length	*1*	*68*	*140*	*1*	*20*	*Cont*		*1*	*209*	*140*
PM NO BUILD Queue	1	180	275	1	23	**75**		1	269	375
PM BUILD Queue	**1**	**180**	**275**	**1**	**40**	**100**		**1**	**269**	**375**
Northbound	# Lanes	Vol.	Length	# Lanes	Vol.	Length		# Lanes	Vol.	Length
Existing Lane Length	*1*	*23*	*575*	*3*	*1,156*	*Cont*		*1*	*115*	*140*
AM NO BUILD Queue	1	24	50	3	1,253	575		1	147	225
AM BUILD Queue	**1**	**45**	**100**	**3**	**1,253**	**575**		**1**	**147**	**225**
Existing Lane Length	*1*	*10*	*575*	*3*	*1,045*	*Cont*		*1*	*83*	*140*
PM NO BUILD Queue	1	11	**50**	3	1,184	575		1	137	225
PM BUILD Queue	**1**	**36**	**75**	**3**	**1,171**	**575**		**1**	**137**	**225**
Southbound	# Lanes	Vol.	Length	# Lanes	Vol.	Length		# Lanes	Vol.	Length
Existing Lane Length	*1*	*405*	*999*	*2*	*1,511*	*Cont*		*1*	*208*	*140*
AM NO BUILD Queue	1	462	550	2	1,614	>1,000	*	1	220	300
AM BUILD Queue	**1**	**462**	**550**	**2**	**1,614**	**>1,000**	*	**1**	**220**	**300**
Existing Lane Length	*1*	*141*	*999*	*2*	*1,147*	*Cont*		*1*	*108*	*140*
PM NO BUILD Queue	1	223	325	2	1,167	775		1	111	200
PM BUILD Queue	**1**	**223**	**325**	**2**	**1,163**	**775**		**1**	**115**	**200**

	AM	PM
Cycle Length:	120	130

NOTE: Queue lengths are in feet.

The intersection of Los Volcanes Rd. / Unser Blvd. will be significantly reconstructed with the Unser Towne Center project in the future. It is recommended for this project that the southbound right turn lane be extended to a total length of 300 feet plus transition.

2. Bluewater Rd. /Unser Blvd. – A-49 thru A-56

The results of the implementation year analysis of the signalized intersection of Bluewater Rd. / Unser Blvd. are summarized in the following tables:

Existing Geometry (Bluewater Rd. / Unser Blvd.)

Approach	Left Turn Lanes	Thru/Lefts	Thru Lanes	Thru/Rights	Right Turn Lanes
EB Bluewater Rd.	1	0	0	1	0
WB Bluewater Rd.	1	0	1	0	1
NB Unser Blvd.	1	0	2	0	1
SB Unser Blvd.	1	0	2	0	1

* - Right Turn Lane by-passes the signal.

Bluewater Rd. / Unser Blvd.	AM Peak Hour		PM Peak Hour	
2012	NO BUILD	BUILD	NO BUILD	BUILD
Existing Geometry	C – 22.7	C – 23.9	B – 18.5	B – 19.8

D - 39.7 - Bold Italicized Level-of-Service indicates that one or more individual turning movements is Level-of-Service E or worse.

The operation of the signalized intersection has been demonstrated to be acceptable for all projected conditions analyzed in this report. Therefore, there are no major recommendations to significantly modify the geometry or signal phasing / timing at the intersection. Minor extensions of auxiliary lanes may be recommended based on the following queuing analysis.

The following table summarizes the existing and calculated queuing at the signalized intersection:

Queueing Analysis Summary Sheet

Project: Valero Commercial Development (Los Volcanes Rd / Unser Blvd)

Intersection: **Bluewater Rd. / Unser Blvd**

2012

Approach	Left Turns			Thru Movements			Right Turns		
Eastbound	# Lanes	Vol.	Length	# Lanes	Vol.	Length	# Lanes	Vol.	Length
Existing Lane Length	*1*	*177*	*85*	*1*	*79*	*Cont*	*0*	*81*	*0*
AM NO BUILD Queue	1	184	250	1	81	150	0	84	150
AM BUILD Queue	**1**	**184**	**250**	**1**	**81**	**150**	**0**	**84**	**150**
Existing Lane Length	*1*	*97*	*85*	*1*	*53*	*Cont*	*0*	*57*	*0*
PM NO BUILD Queue	1	109	175	1	58	125	0	63	125
PM BUILD Queue	**1**	**109**	**175**	**1**	**58**	**125**	**0**	**63**	**125**
Westbound	# Lanes	Vol.	Length	# Lanes	Vol.	Length	# Lanes	Vol.	Length
Existing Lane Length	*1*	*45*	*130*	*1*	*46*	*Cont*	*1*	*52*	*130*
AM NO BUILD Queue	1	48	100	1	49	100	1	55	100
AM BUILD Queue	**1**	**48**	**100**	**1**	**49**	**100**	**1**	**70**	**125**
Existing Lane Length	*1*	*91*	*130*	*1*	*89*	*Cont*	*1*	*183*	*130*
PM NO BUILD Queue	1	96	175	1	94	175	1	194	300
PM BUILD Queue	**1**	**96**	**175**	**1**	**94**	**175**	**1**	**210**	**300**
Northbound	# Lanes	Vol.	Length	# Lanes	Vol.	Length	# Lanes	Vol.	Length
Existing Lane Length	*1*	*70*	*130*	*2*	*1,233*	*Cont*	*1*	*89*	*250*
AM NO BUILD Queue	1	75	125	2	1,359	825	1	94	150
AM BUILD Queue	**1**	**75**	**125**	**2**	**1,408**	**850**	**1**	**94**	**150**
Existing Lane Length	*1*	*63*	*130*	*2*	*865*	*Cont*	*1*	*28*	*250*
PM NO BUILD Queue	1	70	125	2	1,050	**725**	1	31	75
PM BUILD Queue	**1**	**70**	**125**	**2**	**1,101**	**750**	**1**	**31**	**75**
Southbound	# Lanes	Vol.	Length	# Lanes	Vol.	Length	# Lanes	Vol.	Length
Existing Lane Length	*1*	*148*	*160*	*2*	*704*	*Cont*	*1*	*97*	*170*
AM NO BUILD Queue	1	161	225	2	809	525	1	106	175
AM BUILD Queue	**1**	**176**	**250**	**2**	**858**	**575**	**1**	**106**	**175**
Existing Lane Length	*1*	*85*	*160*	*2*	*1,100*	*Cont*	*1*	*124*	*170*
PM NO BUILD Queue	1	87	**150**	2	1,217	**825**	1	130	200
PM BUILD Queue	**1**	**103**	**175**	**2**	**1,268**	**850**	**1**	**130**	**200**

	AM	PM
Cycle Length:	120	130

NOTE: Queue lengths are in feet.

The eastbound left turn lane should be lengthened to a total length of 250 feet plus transition. However, there appears to be insufficient street width and right-of-way to accomplish the widening necessary to lengthen the left turn lane. Therefore, no recommendation is made. The southbound left turn lane should be lengthened to a total length of 250 feet plus transition.

3. Central Ave. / Unser Blvd.

No analysis of Central Ave. / Unser Blvd. was required for this Traffic Impact Study. Only the trip assignments through the intersection were required to be report (See pages A-13 and A-14).

4. I-40 N. Ramp / Unser Blvd. – A-57 thru A-64

The results of the implementation year analysis of the signalized intersection of I-40 N. Ramp / Unser Blvd. are summarized in the following tables:

Existing Geometry (I-40 N. Ramp / Unser Blvd.)

Approach	Left Turn Lanes	Thru/Lefts	Thru Lanes	Thru/Rights	Right Turn Lanes
EB I-40 N. Ramp	0	0	0	0	0
WB I-40 N. Ramp	2	0	1	0	1*
NB Unser Blvd.	1	0	2	0	0
SB Unser Blvd.	0	0	3	0	1*

* - WB and WB right turns are on free right turn ramps that by-pass the signal.

I-40 N. Ramp / Unser Blvd.	AM Peak Hour		PM Peak Hour	
2012	NO BUILD	BUILD	NO BUILD	BUILD
Existing Geometry	B – 12.4	B – 12.4	C – 25.4	C-25.4

D - 39.7 - Bold Italicized Level-of-Service indicates that one or more individual turning movements is Level-of-Service E or worse.

The operation of the signalized intersection has been demonstrated to be acceptable for the projected 2012 BUILD conditions analyzed in this report. It should be noted that there are no trips generated by the Valero Station from or to this intersection. Since there is an existing Valero Station approximately one-half mile north of this intersection, it is assumed that traffic will gravitate to the other Valero Station north of I-40. Therefore, there are no major recommendations to significantly modify the geometry or signal phasing / timing at the intersection.

The following table summarizes the existing and calculated queuing at the signalized intersection:

Queueing Analysis Summary Sheet

Project: Valero Commercial Development (Los Volcanes Rd / Unser Blvd)

Intersection: **I-40 N. Ramp / Unser Blvd**

2012

Approach	Left Turns			Thru Movements				Right Turns		
Eastbound	# Lanes	Vol.	Length	# Lanes	Vol.	Length		# Lanes	Vol.	Length
Existing Lane Length	*0*	*0*	*0*	*0*	*0*	*Cont*		*0*	*0*	*0*
AM NO BUILD Queue	0	0	0	0	0	0		0	0	0
AM BUILD Queue	**0**	**0**	**0**	**0**	**0**	**0**		**0**	**0**	**0**
Existing Lane Length	*0*	*0*	*0*	*0*	*0*	*Cont*		*0*	*0*	*0*
PM NO BUILD Queue	0	0	0	0	0	0		0	0	0
PM BUILD Queue	**0**	**0**	**0**	**0**	**0**	**0**		**0**	**0**	**0**
Westbound	# Lanes	Vol.	Length	# Lanes	Vol.	Length		# Lanes	Vol.	Length
Existing Lane Length	*2*	*376*	*999*	*1*	*0*	*Cont*		*1*	*0*	*999*
AM NO BUILD Queue	2	391	300	1	0	0		1	0	0
AM BUILD Queue	**2**	**391**	**300**	**1**	**0**	**0**		**1**	**0**	**0**
Existing Lane Length	*2*	*921*	*999*	*1*	*3*	*Cont*		*1*	*0*	*999*
PM NO BUILD Queue	2	958	650	1	3	25		1	0	0
PM BUILD Queue	**2**	**958**	**650**	**1**	**3**	**25**		**1**	**0**	**0**
Northbound	# Lanes	Vol.	Length	# Lanes	Vol.	Length		# Lanes	Vol.	Length
Existing Lane Length	*1*	*33*	*300*	*2*	*602*	*Cont*		*0*	*0*	*0*
AM NO BUILD Queue	1	36	75	2	659	450		0	0	0
AM BUILD Queue	**1**	**36**	**75**	**2**	**659**	**450**		**0**	**0**	**0**
Existing Lane Length	*1*	*23*	*300*	*2*	*915*	*Cont*		*0*	*0*	*0*
PM NO BUILD Queue	1	26	75	2	1,034	700		0	0	0
PM BUILD Queue	**1**	**26**	**75**	**2**	**1,034**	**700**		**0**	**0**	**0**
Southbound	# Lanes	Vol.	Length	# Lanes	Vol.	Length		# Lanes	Vol.	Length
Existing Lane Length	*0*	*0*	*0*	*3*	*2,222*	*Cont*		*1*	*0*	*999*
AM NO BUILD Queue	0	0	0	3	2,341	>1,000	*	1	0	0
AM BUILD Queue	**0**	**0**	**0**	**3**	**2,341**	**>1,000**	*	**1**	**0**	**0**
Existing Lane Length	*0*	*0*	*0*	*3*	*879*	*Cont*		*1*	*0*	*999*
PM NO BUILD Queue	0	0	0	3	1,049	525		1	0	0
PM BUILD Queue	**0**	**0**	**0**	**3**	**1,049**	**525**		**1**	**0**	**0**

	AM	PM
Cycle Length:	120	130

NOTE: Queue lengths are in feet.

No recommendation is made for this intersection since no traffic is generated that contributes.

RESULTS OF UNSIGNALIZED INTERSECTION CAPACITY ANALYSES

IMPLEMENTATION YEAR (2012)

5. I-40 S. Ramp / Unser Blvd - Pages A-65 thru A-68

The results of the analysis of the unsignalized intersection of I-40 S. Ramp / Unser Blvd are summarized in the following table:

	NO BUILD		BUILD	
2012	AM	PM	AM	PM
I-40 S. Ramp / Unser Blvd				
Minor Street (I-40 S. Ramp)				
EB Left	F – Err	F – 461	F - Err	F 461
EB Right	A - 0	A - 0	A - 0	A - 0
Major Street (Unser Blvd.)				
NB Left	N/A	N/A	N/A	N/A

It was observed during the field traffic counts that no eastbound left turn movement was delayed more than about one minute. The calculated delay is so high during the AM Peak Hour that Synchro 7 reports it as "err." In actuality, it is much less delay. Since the proposed Valero Station is not anticipated to contribute new traffic to this intersection, no recommendation is made.

6. Saul Bell Rd. / Unser Blvd - Pages A-69 thru A-72

The results of the analysis of the unsignalized intersection of Saul Bell Rd. / Unser Blvd. are summarized in the following table:

	NO BUILD		BUILD	
2012	AM	PM	AM	PM
Saul Bell Rd. / Unser Blvd				
Minor Street (Saul Bell Rd.)				
EB Left	N/A	N/A	N/A	N/A
EB Right	B – 12	B - 11	B - 13	B – 11
Major Street (Unser Blvd.)				
NB Left	N/A	N/A	C - 18	B - 15

The existing intersection of Saul Bell Rd. / Unser Blvd. is a right-in, right-out only unsignalized intersection located approximately midway between Los Volcanes Rd. and Bluewater Rd. This project is requesting approval of a northbound to westbound left turn movement from Unser Blvd. into Saul Bell Rd. in order to intercept some of the traffic entering the Valero project area, thus reducing the volume of northbound left turn traffic anticipated on Unser Blvd. at Los Volcanes Rd. There is an accompanying Valero Development Access Justification Study that addresses this request in more detail. The intersection of Saul Bell Rd. / Unser Blvd. is projected to operate at an acceptable level-of-service in the year 2012 as a right-in, right-out, left-in unsignalized intersection.

7. Los Volcanes Rd. / Driveway "A" - Pages A-73 thru A-74

Driveway "A" is an existing full access driveway which will be shared with the property to the west. The results of the analysis of the unsignalized intersection of Los Volcanes Rd. / Driveway "A" are summarized in the following table:

	BUILD	
2012	AM	PM
Los Volcanes Rd. / Driveway "A"		
Minor Street (Driveway "A")		
NB Left	C – 16	B – 12
NB Right	C – 16	B – 12
Major Street (Los Volcanes Rd.)		
WB Left	A - 2	A - 2

The operation of the unsignalized Driveway "A" has been demonstrated to be acceptable for the projected BUILD conditions analyzed in this report.

8. Los Volcanes Rd. / Driveway "B" - Pages A-75 thru A-76

The results of the analysis of the unsignalized intersection of Los Volcanes Rd. / Driveway "B" are summarized in the following table:

	BUILD	
2012	AM	PM
Los Volcanes Rd. / Driveway "B"		
Minor Street (Driveway "B")		
NB Right	B - 11	A - 10
Major Street (Los Volcanes Rd.)		
WB Left	N/A	N/A

The operation of the unsignalized Driveway "B" has been demonstrated to be acceptable for the projected PM BUILD conditions analyzed in this report.

It should be noted that Levels of Service (LOS) for unsignalized intersections cannot be compared directly with Levels of Service for signalized intersections. LOS for unsignalized intersections is based on reserve capacity, which is converted to generalized levels of delay; LOS for signalized intersections is based on actual delay in seconds..

LEVEL-OF-SERVICE CRITERIA FOR UNSIGNALIZED INTERSECTIONS

Average Delay (secs)	Level-of-Service
≤ 10	A
> 10 and ≤ 15	B
> 15 and ≤ 25	C
> 25 and ≤ 35	D
> 35 and ≤ 50	E
> 50	F

Generally speaking, a Level-of-Service D or better is an acceptable parameter for design purposes.

CONCLUSIONS

The proposed site plan for the Valero Station at the southwest corner of Los Volcanes Rd. / Unser Blvd. will present minor impact to the adjacent transportation system. However, the impact to the adjacent transportation system can be mitigated by implementation of the following recommendations:

RECOMMENDATIONS

FROM IMPLEMENTATION YEAR (2012) ANALYSIS

Offsite Recommendations:

Bluewater Rd. / Unser Blvd. – Lengthen the southbound left turn lane to a total length of 250 feet plus transition.

Los Volcanes Rd. / Unser Blvd. – Lengthen the southbound right turn lane to a total length of 300 feet plus transition.

Access Recommendations:

Recommended access is via two proposed new driveways plus modification of one existing driveway (intersection). One full access driveway is an existing driveway on Los Volcanes (Driveway "A") at the west end of this project. It will remain a full access unsignalized shared driveway with the neighboring property to the west. One right-turn-in, right-turn-out driveway is proposed on Los Volcanes Rd. (Driveway "B") east of Driveway "A". The existing intersection of Saul Bell Rd. / Unser Blvd. is currently a right-in, right-out only intersection. Request is made to approve a northbound left-in at this intersection to accept northbound traffic on Unser Blvd. turning into the area. This will relieve some of the northbound left turn traffic on Unser Blvd. at Los Volcanes Rd. See Preliminary Site Plan on Page A-3 in the Appendix of this report for further detail.

Driveway "A" is an existing a full access unsignalized driveway on Los Volcanes Rd. constructed on the property to the west. It is located approximately 360 feet west of Unser Blvd. (centerline to centerline).

Driveway "B" is recommended to be a right-in, right-out only unsignalized driveway on Los Volcanes Rd. located approximately 200 feet west of Unser Blvd. (centerline to centerline). Driveway "B" should be designed with one exiting lane (for right turns only) and one entering lane.

All design and construction of the project shall provide for adequate sight distances and driveways at existing and proposed intersections and driveways.

Appendix

APPENDIX

v.cabq.gov/gis

For more current information and more details visit: http://www.c

Zone Atlas Page:

K-09-Z / K-10-Z

Selected Symbols

SECTOR PLANS
Design Overlay Zones
City Historic Zones
H-1 Buffer Zone
Petroglyph Mon.
Escarpment
2 Mile Airport Z
Airport Noise C
Wall Overlay Z

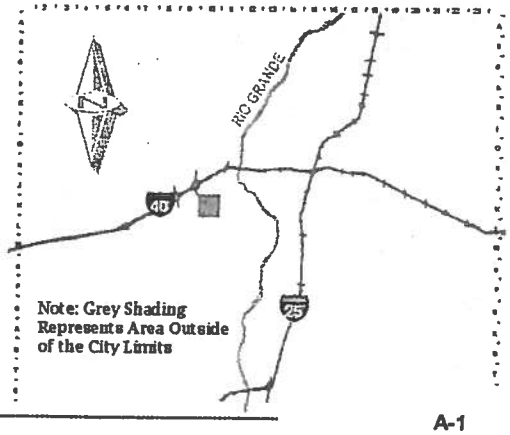
0 750 1

OF ALBUQUERQUE

AGIS

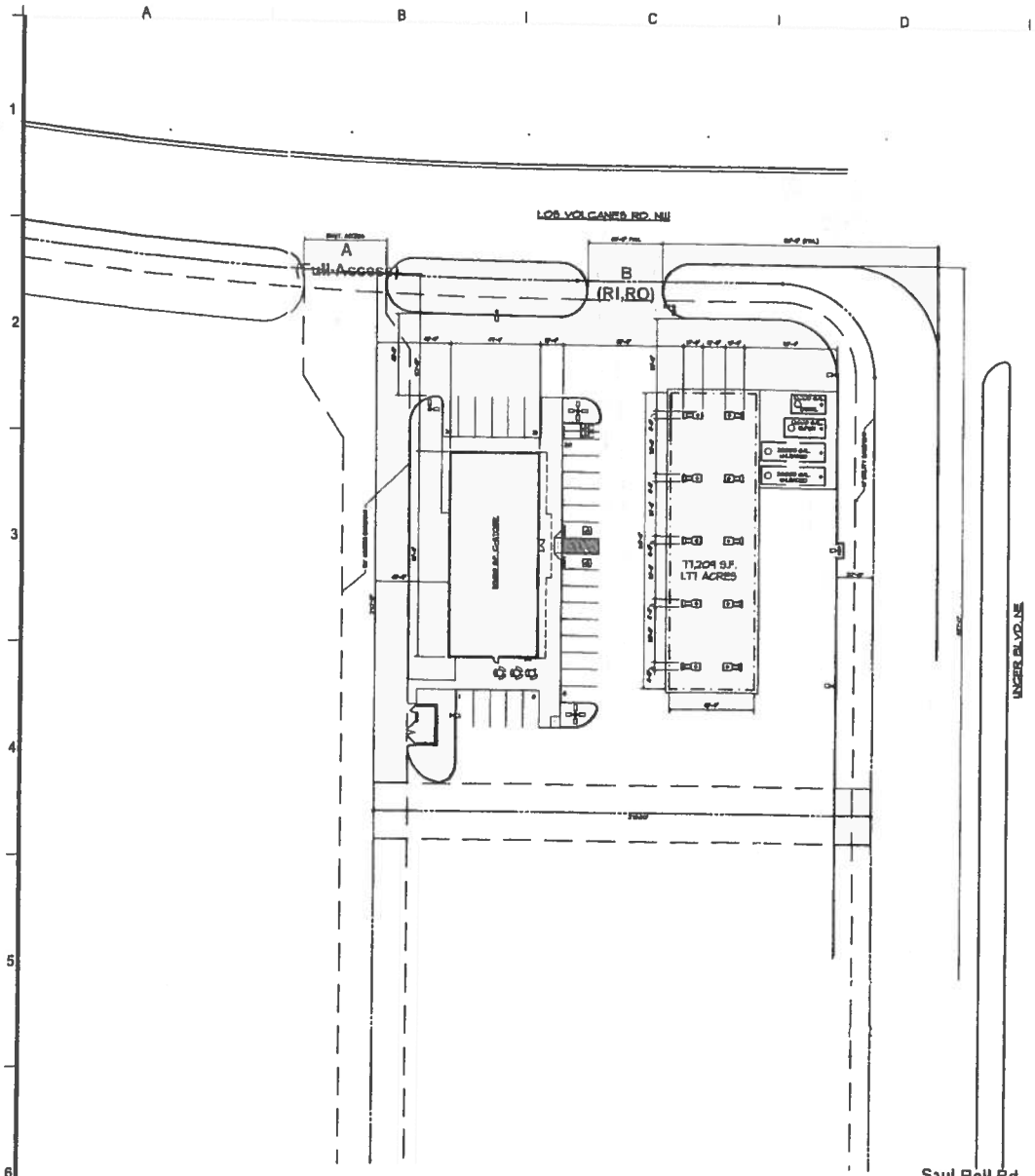
Albuquerque Geographic Information System

Map amended through: 6/13/2008

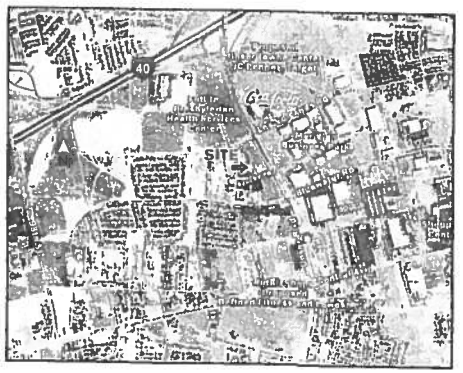


Note: Grey Shading Represents Area Outside of the City Limits

UNSER BLVD.
LOS VOLCANES RD.
SAUL BELL RD.
BLUEWATER RD.
OLIVER ROSS DR.
"A"
"B"
SCALE: 1"=300' (APPROX)



B6 CONCEPTUAL SITE PLAN
SCALE: 1" = 30'-0"



F2 VICINITY MAP
SCALE: NTS

NORTH

5500 S.F. BLDG.
SCHEME 'D'

cornerstore

Valero Retail Holdings, Inc.
One Valero Way
San Antonio, TX 78249-1616

CAD
CIVIL ARCHITECTURE & CONSULTING
3430 New Castle Dr.
Loveland, CO 80539
phone: 970.980.6002

VALERO RETAIL HOLDINGS
PROPOSED NTI
LOS VOLCANES RD. NW & UNSER BLVD. NW
ALBUQUERQUE, NEW MEXICO

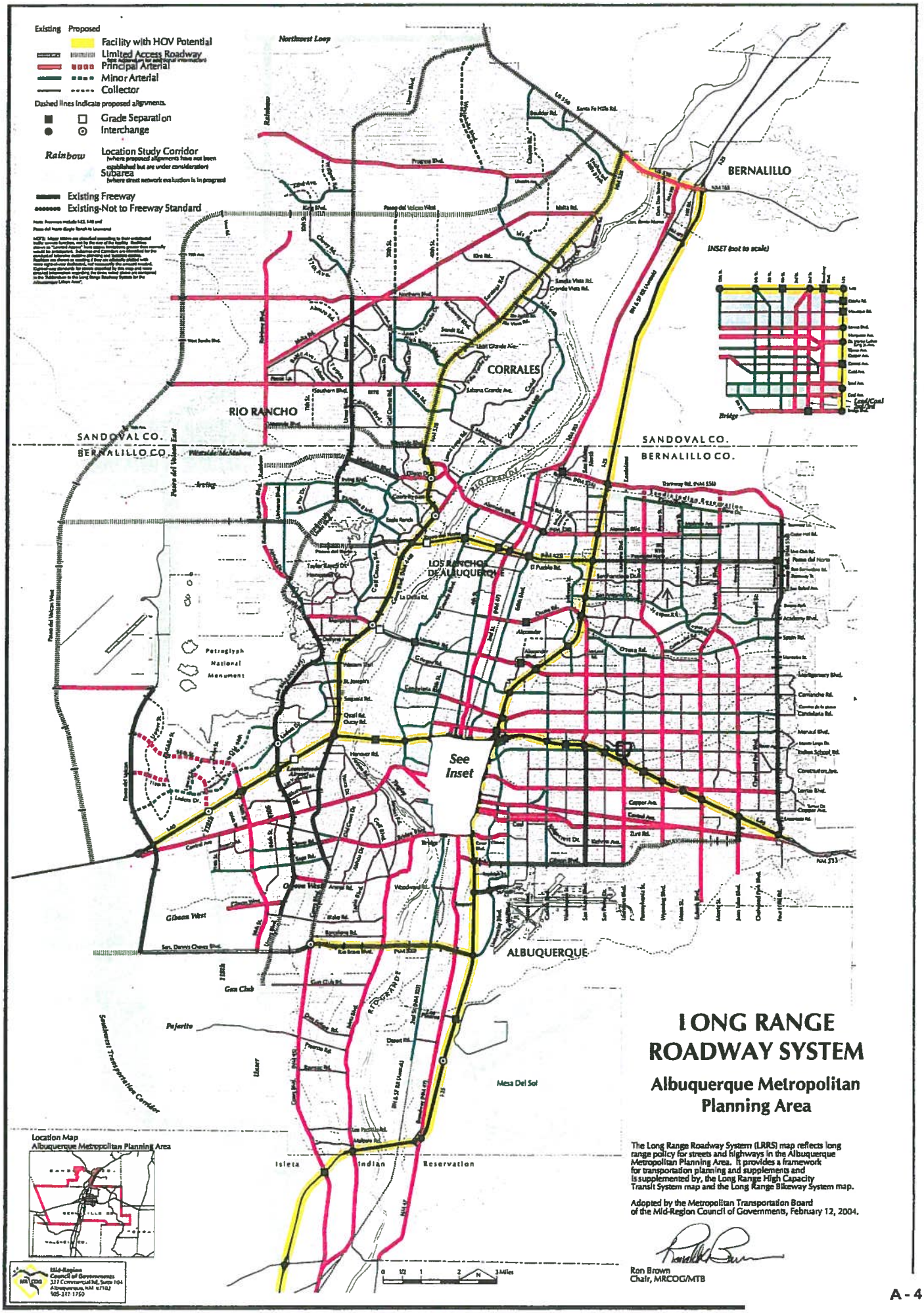
PROJECT NO. 0284-07

ISSUE	DATE
REVISION	4-23-10

SHEET TITLE
CONCEPTUAL SITE PLAN

SHEET NO.
CSP1.1

A - 3



LONG RANGE ROADWAY SYSTEM

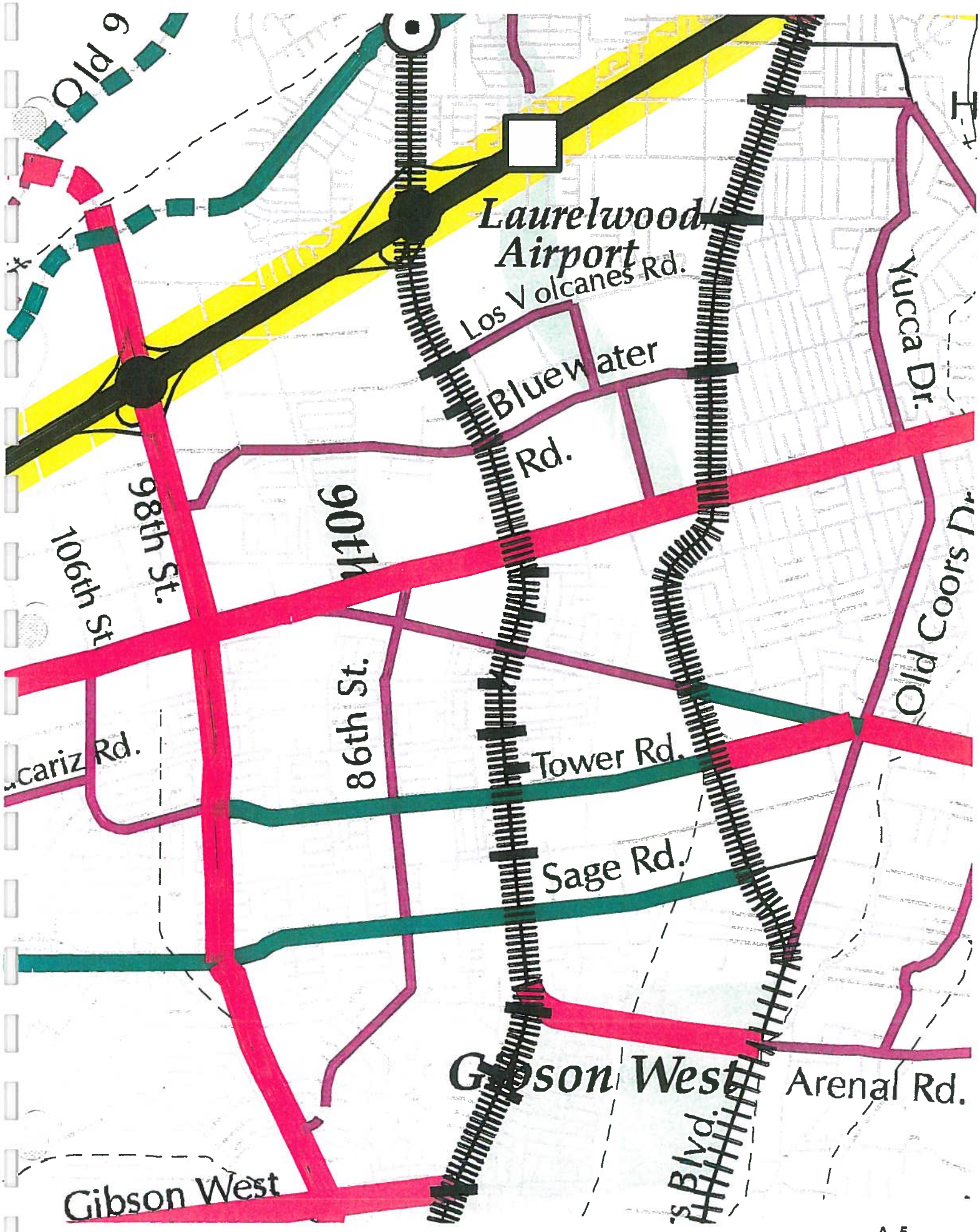
Albuquerque Metropolitan Planning Area

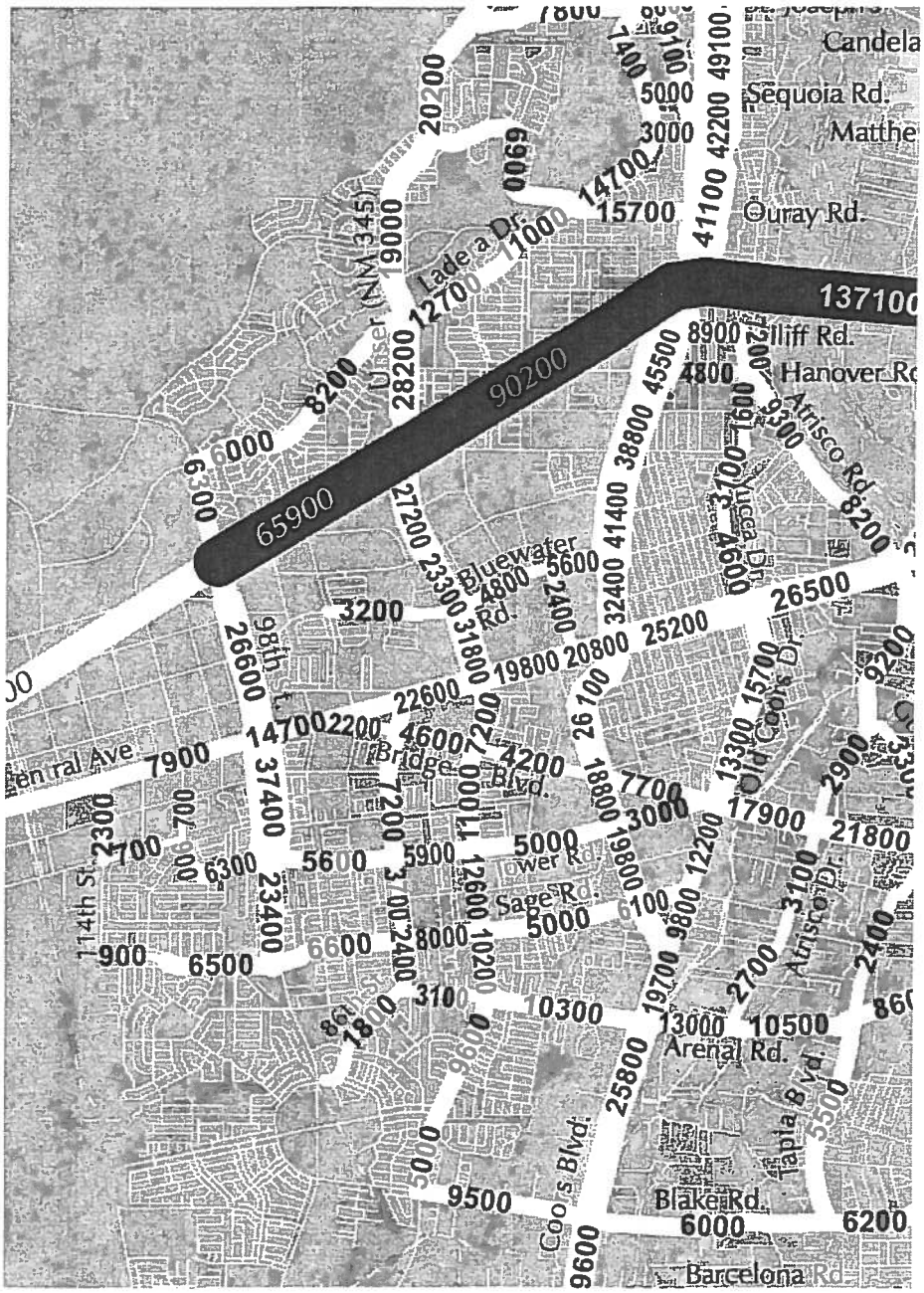
The Long Range Roadway System (LRRS) map reflects long range policy for streets and highways in the Albuquerque Metropolitan Planning Area. It provides a framework for transportation planning and supplements and is supplemented by, the Long Range High Capacity Transit System map and the Long Range Bikeway System map.

Adopted by the Metropolitan Transportation Board of the Mid-Region Council of Governments, February 12, 2004.

Ron Brown
Chair, MRCOG/MTB

Mid-Region Council of Governments
809 Copper Ave. NW
Albuquerque, NM 87102
505-247-1750


Old 9
Laurelwood Airport
Los Volcanes Rd.
Bluewater
Rd.
Yucca Dr.
106th St
98th St.
86th St.
Old Coors Dr.
Tower Rd.
Sage Rd.
Gibson West
Arenal Rd.
Gibson West



Portion of **2009 Traffic Flow Map**
for the Greater Albuquerque Area
(Mid-Region Council of Governments)

Valero Station (Los Volcanes Rd. / Unser Blvd.)

Trip Generation Data (ITE Trip Generation Manual - 8th Edition)

USE (ITE CODE)		24 HR VOL	A. M. PEAK HR.		P. M. PEAK HR.	
DESCRIPTION		*GROSS*	*ENTER*	*EXIT*	*ENTER*	*EXIT*
Summary Sheet	Units					
Gasoline / Service Station w/ Convenience Market (945)	20	3,256	102	102	134	134
Subtotal		**3,256**	**102**	**102**	**134**	**134**
Pass-by Trip Adjustment	20%				**(27)**	**(27)**
Total Net New Trips to System		**3,256**	**102**	**102**	**107**	**107**

Valero Station (Los Volcanes Rd. / Unser Blvd.)

Trip Generation Data (ITE Trip Generation Manual - 8th Edition)

USE (ITE CODE)		24 HOUR TWO-WAY VOLUME	A.M. PEAK HOUR		P.M. PEAK HOUR	
		GROSS	ENTER	EXIT	ENTER	EXIT
	Units					
Gasoline / Service Station w/ Convenience Market (945)	*20.00*	3,256	102	102	134	134
	Fueling Positions					

ITE Trip Generation Equations:

Average Vehicle Trip Ends on a Weekday (24 HOUR TWO-WAY VOLUME)

T = *162.78* (X) + *0*
50% Enter, *50%* Exit

Average Vehicle Trip Ends on a Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 7am and 9am (A.M. PEAK HOUR)

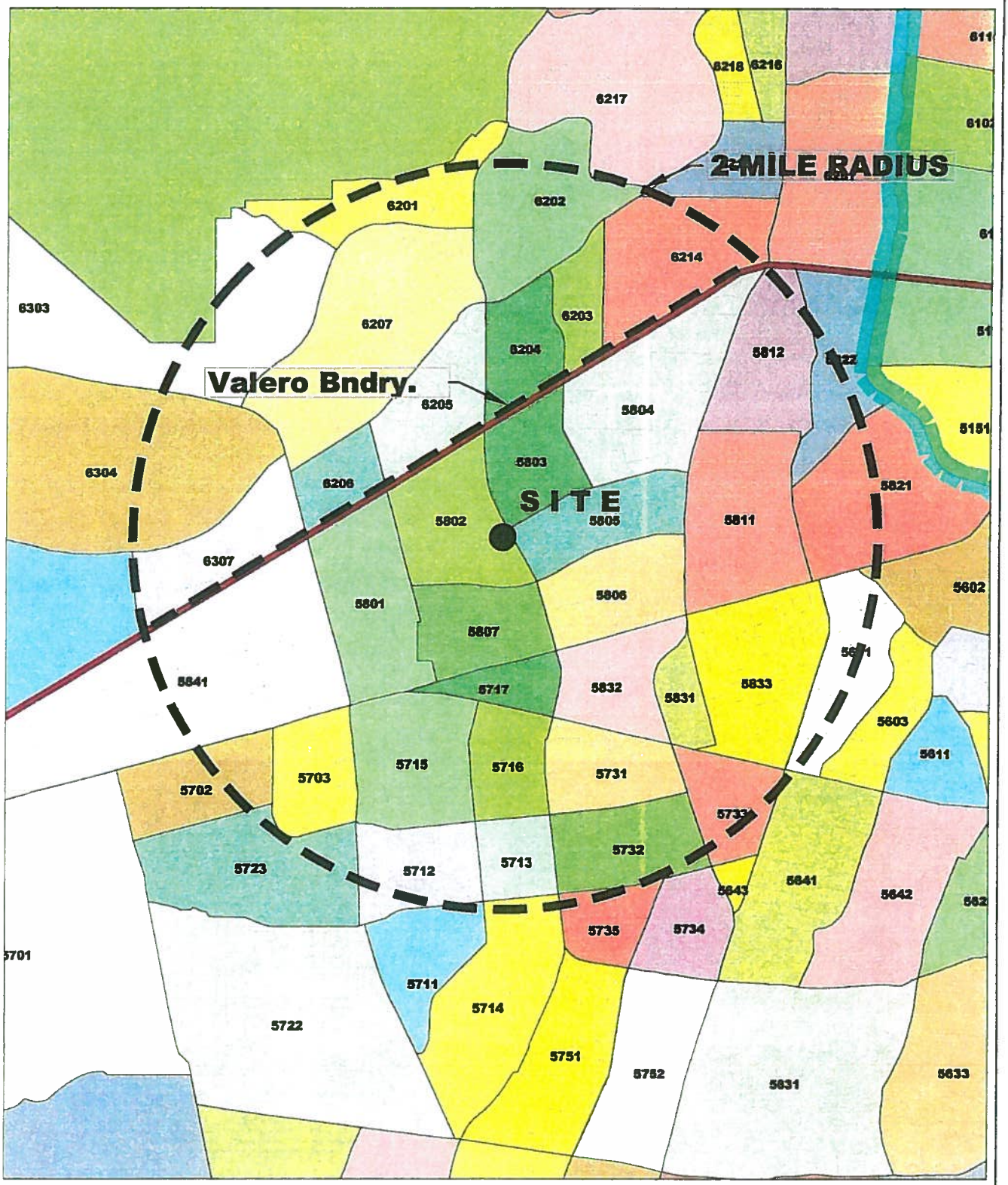
T = *10.16* (X) + *0*
50% Enter, *50%* Exit

Average Vehicle Trip Ends on a Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 4pm and 6pm (P.M. PEAK HOUR)

T = *13.38* (X) + *0*
50% Enter, *50%* Exit

Comments:
Tract No.

Based on ITE Trip Generation Manual - 8th Edition



DATA ANALYSIS SUBZONE (DASZ) MAP

Valero Commercial Development (Los Volcanes Rd. / Unser Blvd.)

Trip Distribution Table

Valero Commercial Development (Los Volcanes Rd / Unser Blvd)

Data Analysis Subzone Population Data for determination of Local Trip Distribution for Proposed **Valero Trips**

2004 and 2030 Data Taken from Mid-Region Council of Governments' 2030 Socioeconomic
2030 Socioeconomic Forecasts by Data Analysis Subzones for the Mid-Region of New Mexico

							(LE) Los Volcanes Rd East			(BE) Bluewater Rd East			(CE) Central Ave East		
DASZ #	% Sub Area in Study	2004 Population	2030 Population	Interpolated Population for the Year	Population in Study	Percent Population	% Utilizing	% Population Utilizing	Population	% Utilizing	% Population Utilizing	Population	% Utilizing	% Population Utilizing	Population
		2004	2030	2012											
Boundary Specified on DASZ Map															
5601	50%	1335	1608	1,419	710	2.41%	0%	0.00%	0	0%	0.00%	0	100%	2.41%	710
5702	40%	49	58	52	21	0.07%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5703	100%	1890	1762	1,851	1,851	6.29%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5712	90%	1881	1992	1,915	1,724	5.85%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5713	100%	409	733	509	509	1.73%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5715	100%	2515	2774	2,595	2,595	8.81%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5716	100%	1795	2263	1,939	1,939	6.58%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5717	100%	3	350	110	110	0.37%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5723	15%	3993	4118	4,031	605	2.05%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5731	100%	1010	1063	1,026	1,026	3.48%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5732	95%	127	758	321	305	1.04%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5733	80%	110	220	144	115	0.39%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5801	100%	542	926	660	660	2.24%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5802	100%	467	432	456	456	1.55%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5803	100%	0	0	0	0	0.00%	100%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5804	100%	1983	2412	2,115	2,115	7.18%	100%	7.18%	2,115	0%	0.00%	0	0%	0.00%	0
5805	100%	79	97	85	85	0.29%	50%	0.14%	43	50%	0.14%	43	0%	0.00%	0
5806	100%	609	635	617	617	2.10%	0%	0.00%	0	50%	1.05%	309	50%	1.05%	309
5807	100%	737	1424	948	948	3.22%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5811	100%	3959	3816	3,915	3,915	13.30%	0%	0.00%	0	100%	13.30%	3,915	0%	0.00%	0
5812	95%	2322	2177	2,277	2,163	7.35%	100%	7.35%	2,163	0%	0.00%	0	0%	0.00%	0
5821	50%	1901	1916	1,906	953	3.24%	0%	0.00%	0	0%	0.00%	0	100%	3.24%	953
5822	40%	998	1006	1,000	400	1.36%	100%	1.36%	400	0%	0.00%	0	0%	0.00%	0
5831	100%	609	635	617	617	2.10%	0%	0.00%	0	0%	0.00%	0	75%	1.57%	463
5832	100%	1214	1283	1,235	1,235	4.19%	0%	0.00%	0	0%	0.00%	0	25%	1.05%	309
5833	100%	3608	3385	3,539	3,539	12.02%	0%	0.00%	0	0%	0.00%	0	50%	6.01%	1,770
5841	50%	479	438	466	233	0.79%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
				35,748	29,446	100.00%			4,721			4,266			4,513
									16.03%			14.49%			15.32%

Trip Distribution Table

Valero Commercial Development (Los Volcanes Rd / Unser Blvd)

Data Analysis Subzone Population Data for determination of Local Trip Distribution for Proposed **Valero Trips**

2004 and 2030 Data Taken from Mid-Region Council of Governments' 2030 Socioeconomic
2030 Socioeconomic Forecasts by Data Analysis Subzones for the Mid-Region of New Mexico

							(US) Unser Blvd South			(CW) Central Ave West			(BW) Bluewater Rd West		
DASZ #	% Sub Area in Study	2004 Population	2030 Population	Interpolated Population for the Year	Population in Study	Percent Population	% Utilizing	% Population Utilizing	Population	% Utilizing	% Population Utilizing	Population	% Utilizing	% Population Utilizing	Population
		2004	2030	2012											
Boundary Specified on DASZ Map															
5601	50%	1335	1608	1,419	710	2.41%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5702	40%	49	58	52	21	0.07%	0%	0.00%	0	100%	0.07%	21	0%	0.00%	0
5703	100%	1890	1762	1,851	1,851	6.29%	0%	0.00%	0	100%	6.29%	1,851	0%	0.00%	0
5712	90%	1881	1992	1,915	1,724	5.85%	0%	0.00%	0	50%	2.93%	862	0%	0.00%	0
5713	100%	409	733	509	509	1.73%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5715	100%	2515	2774	2,595	2,595	8.81%	0%	0.00%	0	100%	8.81%	2,595	0%	0.00%	0
5716	100%	1795	2263	1,939	1,939	6.58%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5717	100%	3	350	110	110	0.37%	0%	0.00%	0	50%	0.19%	55	0%	0.00%	0
5723	15%	3993	4116	4,031	605	2.05%	0%	0.00%	0	100%	2.05%	605	0%	0.00%	0
5731	100%	1010	1063	1,026	1,028	3.48%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5732	95%	127	758	321	305	1.04%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5733	80%	110	220	144	115	0.39%	100%	0.39%	115	0%	0.00%	0	0%	0.00%	0
5801	100%	542	926	660	660	2.24%	0%	0.00%	0	20%	0.45%	132	0%	0.00%	0
5802	100%	467	432	456	456	1.55%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5803	100%	0	0	0	0	0.00%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5804	100%	1983	2412	2,115	2,115	7.18%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5805	100%	79	97	85	85	0.29%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5806	100%	609	635	617	617	2.10%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5807	100%	737	1424	948	948	3.22%	0%	0.00%	0	20%	0.64%	190	80%	2.58%	758
5811	100%	3959	3816	3,915	3,915	13.30%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5812	95%	2322	2177	2,277	2,163	7.35%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5821	50%	1901	1916	1,906	953	3.24%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5822	40%	998	1006	1,000	400	1.36%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5831	100%	609	635	617	617	2.10%	25%	0.52%	154	0%	0.00%	0	0%	0.00%	0
5832	100%	1214	1283	1,235	1,235	4.19%	75%	3.15%	926	0%	0.00%	0	0%	0.00%	0
5833	100%	3608	3385	3,539	3,539	12.02%	50%	6.01%	1,770	0%	0.00%	0	0%	0.00%	0
5841	50%	479	438	466	233	0.79%	0%	0.00%	0	100%	0.79%	233	0%	0.00%	0
				35,748	29,446	100.00%			2,965			6,544			758
									10.07%			22.22%			2.58%

Trip Distribution Table

Valero Commercial Development (Los Volcanes Rd / Unser Blvd)

Data Analysis Subzone Population Data for determination of Local Trip Distribution for Proposed **Valero Trips**

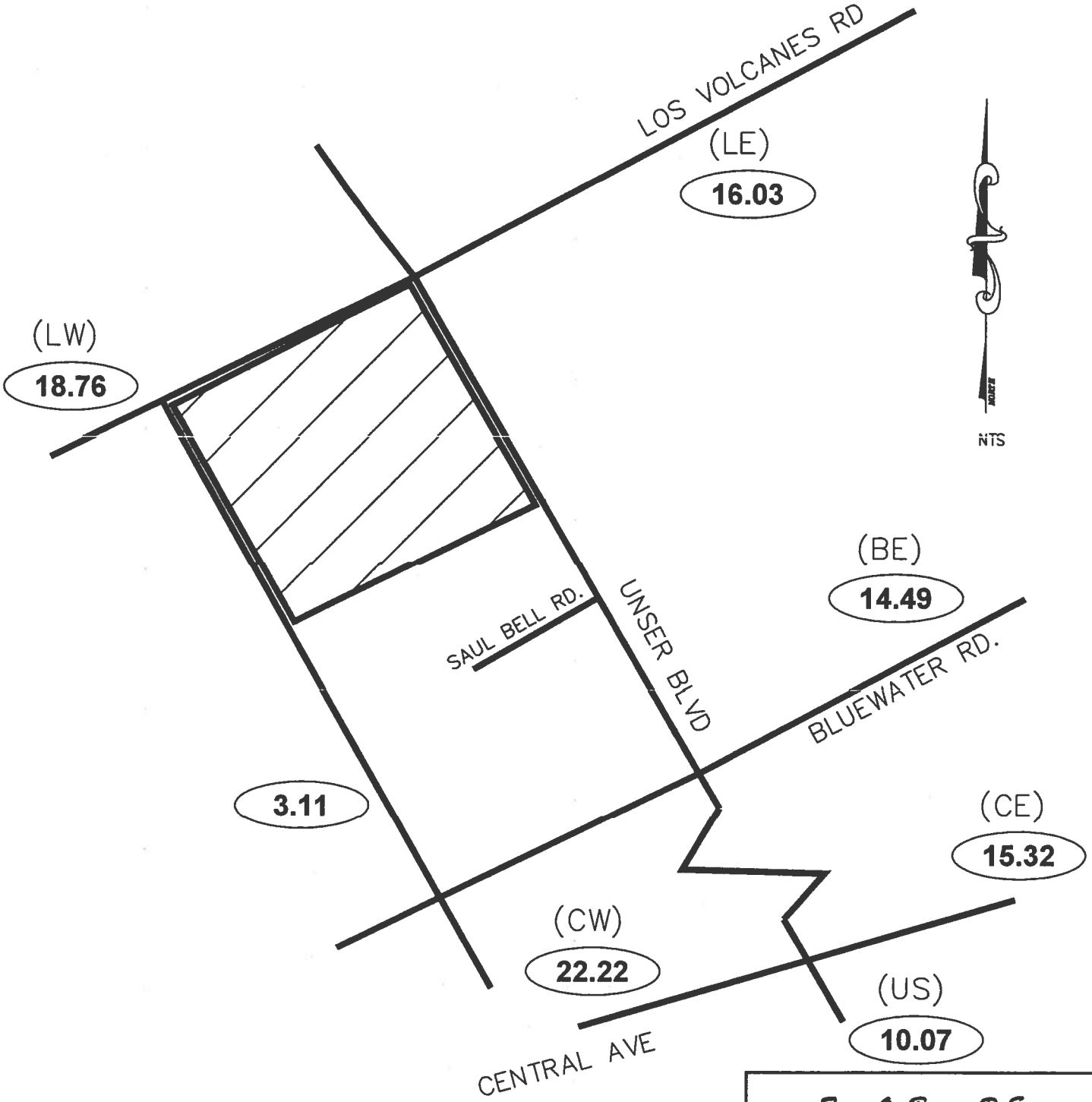
2004 and 2030 Data Taken from Mid-Region Council of Governments' 2030 Socioeconomic
2030 Socioeconomic Forecasts by Data Analysis Subzones for the Mid-Region of New Mexico

							(LW) Los Volcanes West			(SW) Saul Bell Rd West		
DASZ #	% Sub Area in Study	2004 Population	2030 Population	Interpolated Population for the Year	Population in Study	Percent Population	% Utilizing	% Population Utilizing	Population	% Utilizing	% Population Utilizing	Population
		2004	2030	2012								
Boundary Specified on DASZ Map												
5601	50%	1335	1608	1,419	710	2.41%	0%	0.00%	0	0%	0.00%	0
5702	40%	49	58	52	21	0.07%	0%	0.00%	0	0%	0.00%	0
5703	100%	1890	1762	1,851	1,851	6.29%	0%	0.00%	0	0%	0.00%	0
5712	90%	1881	1992	1,915	1,724	5.85%	50%	2.93%	862	0%	0.00%	0
5713	100%	409	733	509	509	1.73%	100%	1.73%	509	0%	0.00%	0
5715	100%	2515	2774	2,595	2,595	8.81%	0%	0.00%	0	0%	0.00%	0
5716	100%	1795	2263	1,939	1,939	6.58%	100%	6.58%	1,939	0%	0.00%	0
5717	100%	3	350	110	110	0.37%	50%	0.19%	55	0%	0.00%	0
5723	15%	3993	4116	4,031	605	2.05%	0%	0.00%	0	0%	0.00%	0
5731	100%	1010	1063	1,026	1,026	3.48%	100%	3.48%	1,026	0%	0.00%	0
5732	95%	127	758	321	305	1.04%	100%	1.04%	305	0%	0.00%	0
5733	80%	110	220	144	115	0.39%	0%	0.00%	0	0%	0.00%	0
5801	100%	542	926	660	660	2.24%	70%	1.57%	462	10%	0.22%	66
5802	100%	467	432	456	456	1.55%	80%	1.24%	365	20%	0.31%	91
5803	100%	0	0	0	0	0.00%	0%	0.00%	0	0%	0.00%	0
5804	100%	1983	2412	2,115	2,115	7.18%	0%	0.00%	0	0%	0.00%	0
5805	100%	79	97	85	85	0.29%	0%	0.00%	0	0%	0.00%	0
5806	100%	609	635	617	617	2.10%	0%	0.00%	0	0%	0.00%	0
5807	100%	737	1424	948	948	3.22%	0%	0.00%	0	0%	0.00%	0
5811	100%	3959	3816	3,915	3,915	13.30%	0%	0.00%	0	0%	0.00%	0
5812	95%	2322	2177	2,277	2,163	7.35%	0%	0.00%	0	0%	0.00%	0
5821	50%	1901	1916	1,908	953	3.24%	0%	0.00%	0	0%	0.00%	0
5822	40%	998	1006	1,000	400	1.36%	0%	0.00%	0	0%	0.00%	0
5831	100%	609	635	617	617	2.10%	0%	0.00%	0	0%	0.00%	0
5832	100%	1214	1283	1,235	1,235	4.19%	0%	0.00%	0	0%	0.00%	0
5833	100%	3608	3385	3,539	3,539	12.02%	0%	0.00%	0	0%	0.00%	0
5841	50%	479	438	466	233	0.79%	0%	0.00%	0	0%	0.00%	0
				35,748	29,446	100.00%			5,523			157
									18.76%			0.53%

Valero Commercial Development

(Los Volcanes Rd / Unser Blvd)

Trip Distribution Map (%)



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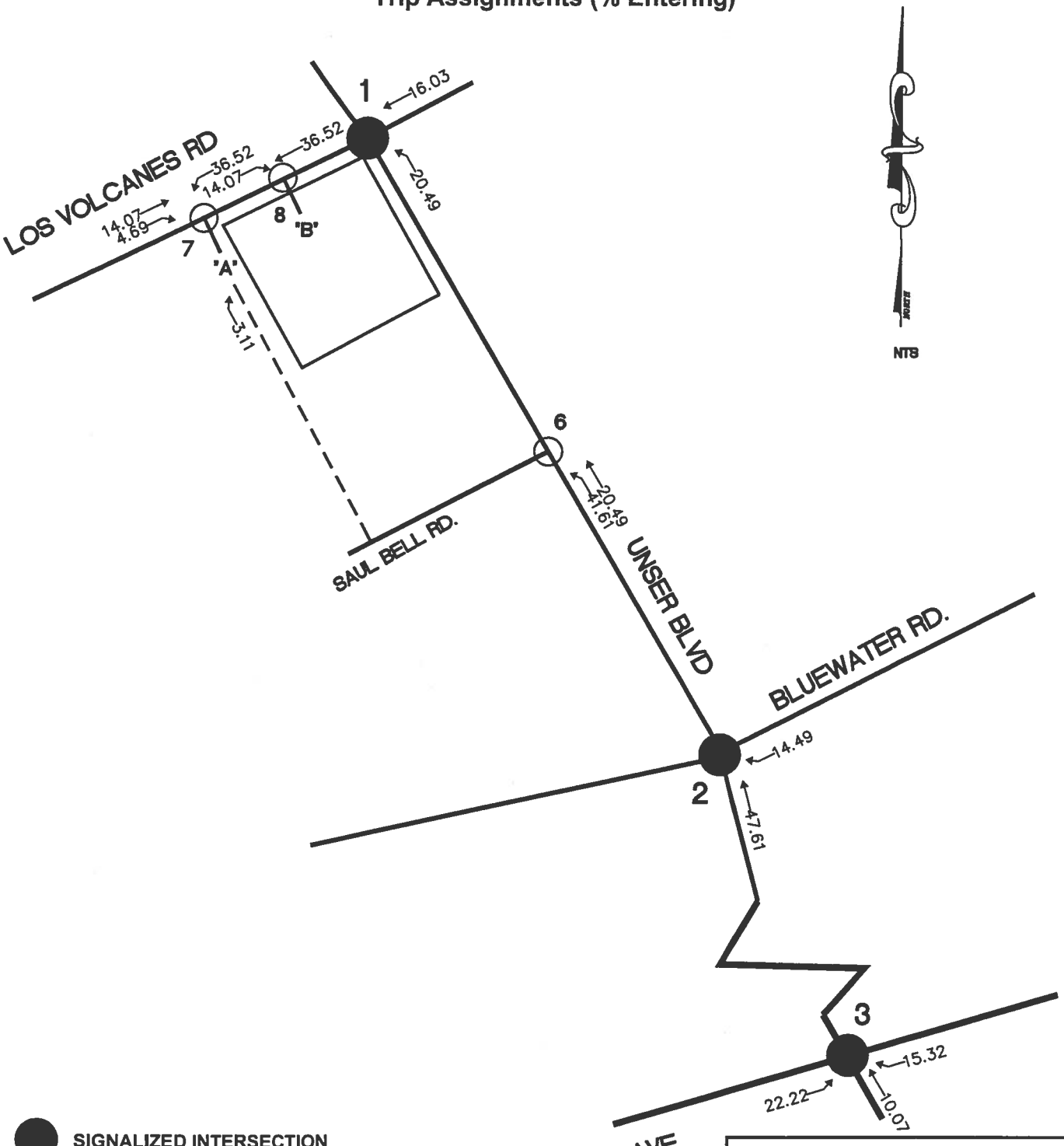
Valero Commercial Development

(Los Volcanes Rd / Unser Blvd)

Trip Assignments (% Entering)



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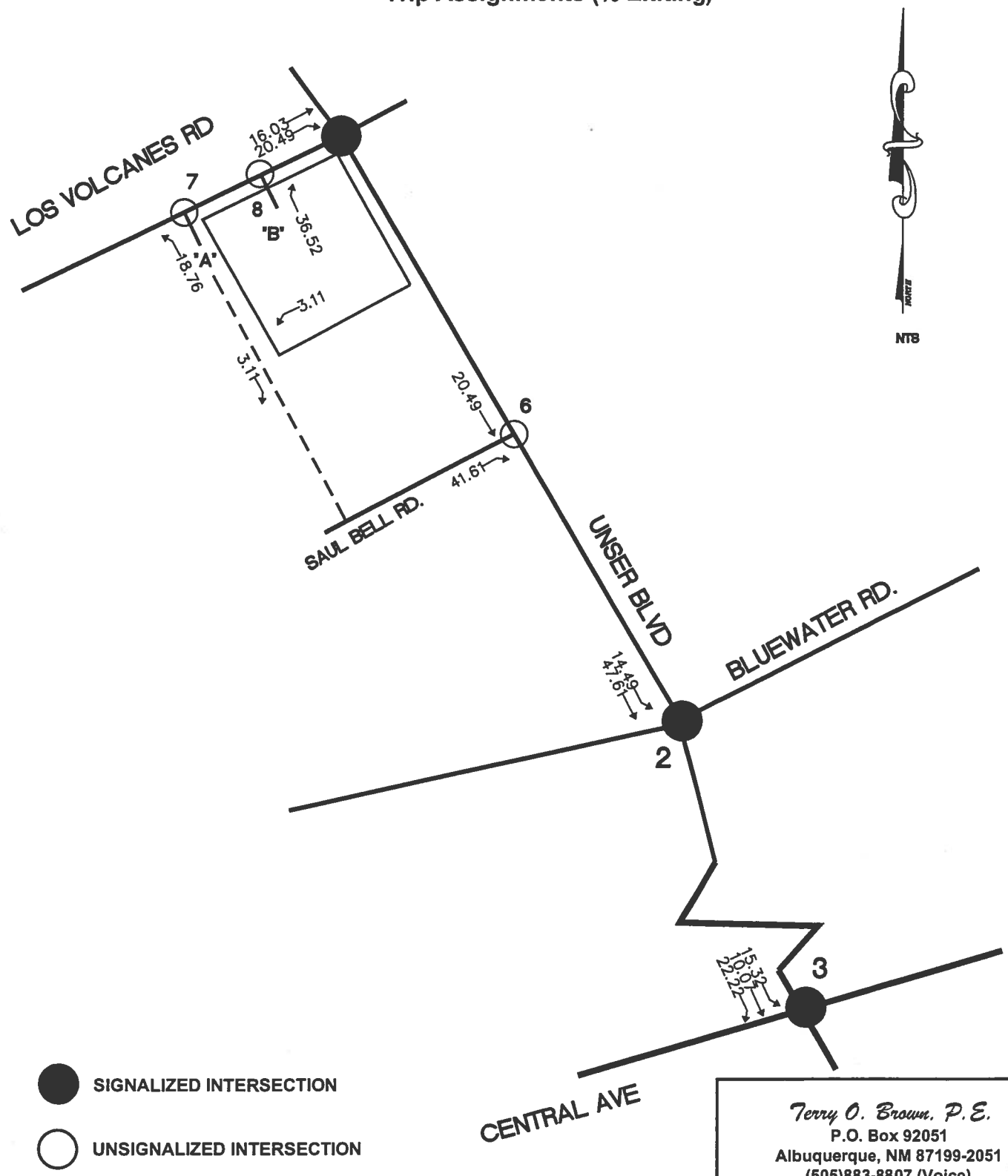
Valero Commercial Development

(Los Volcanes Rd / Unser Blvd)

Trip Assignments (% Exiting)



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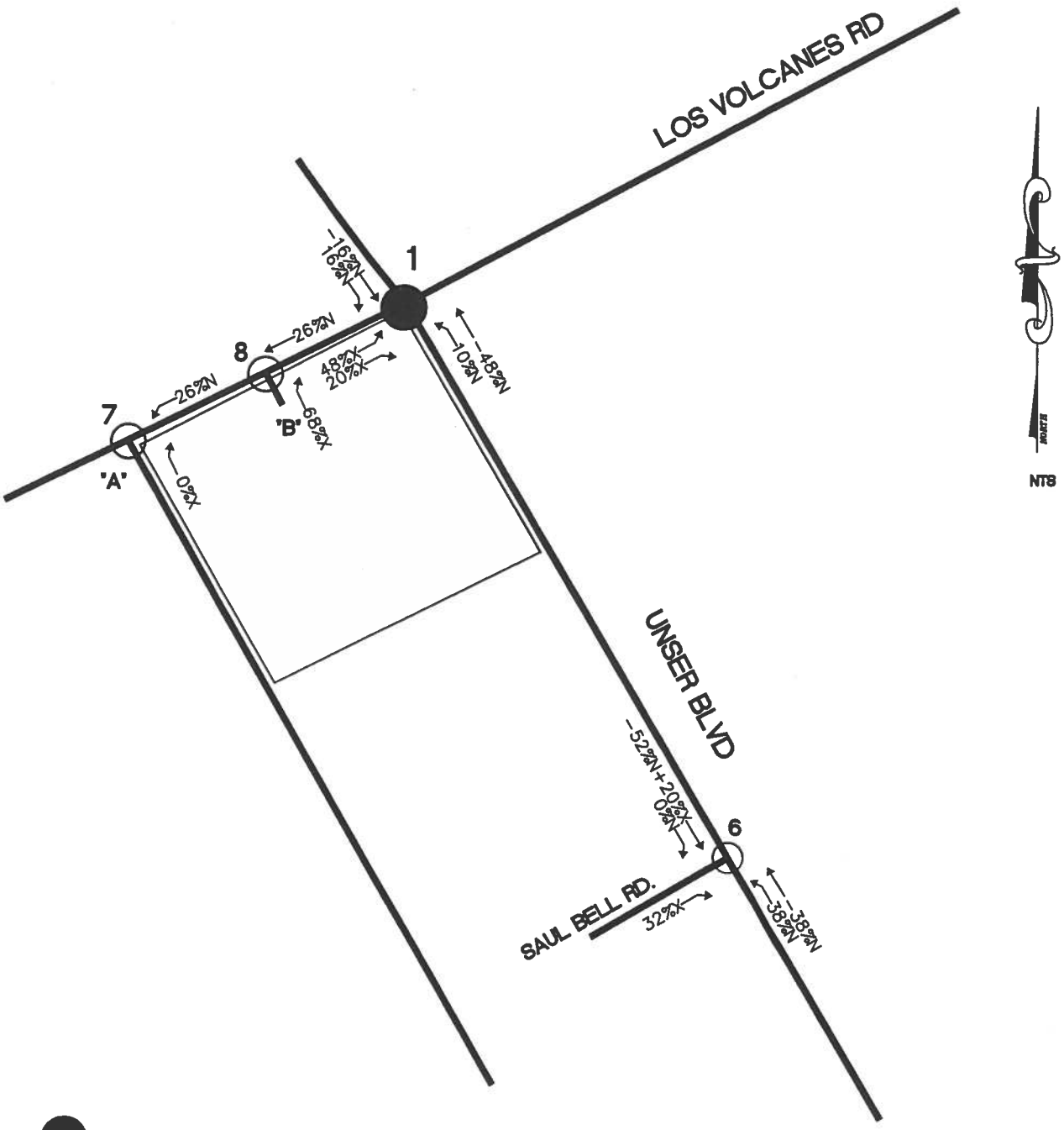
Valero Commercial Development

(Los Volcanes Rd / Unser Blvd)

Passby Trips (%)



SIGNALIZED INTERSECTION

UNSIGNALIZED INTERSECTION

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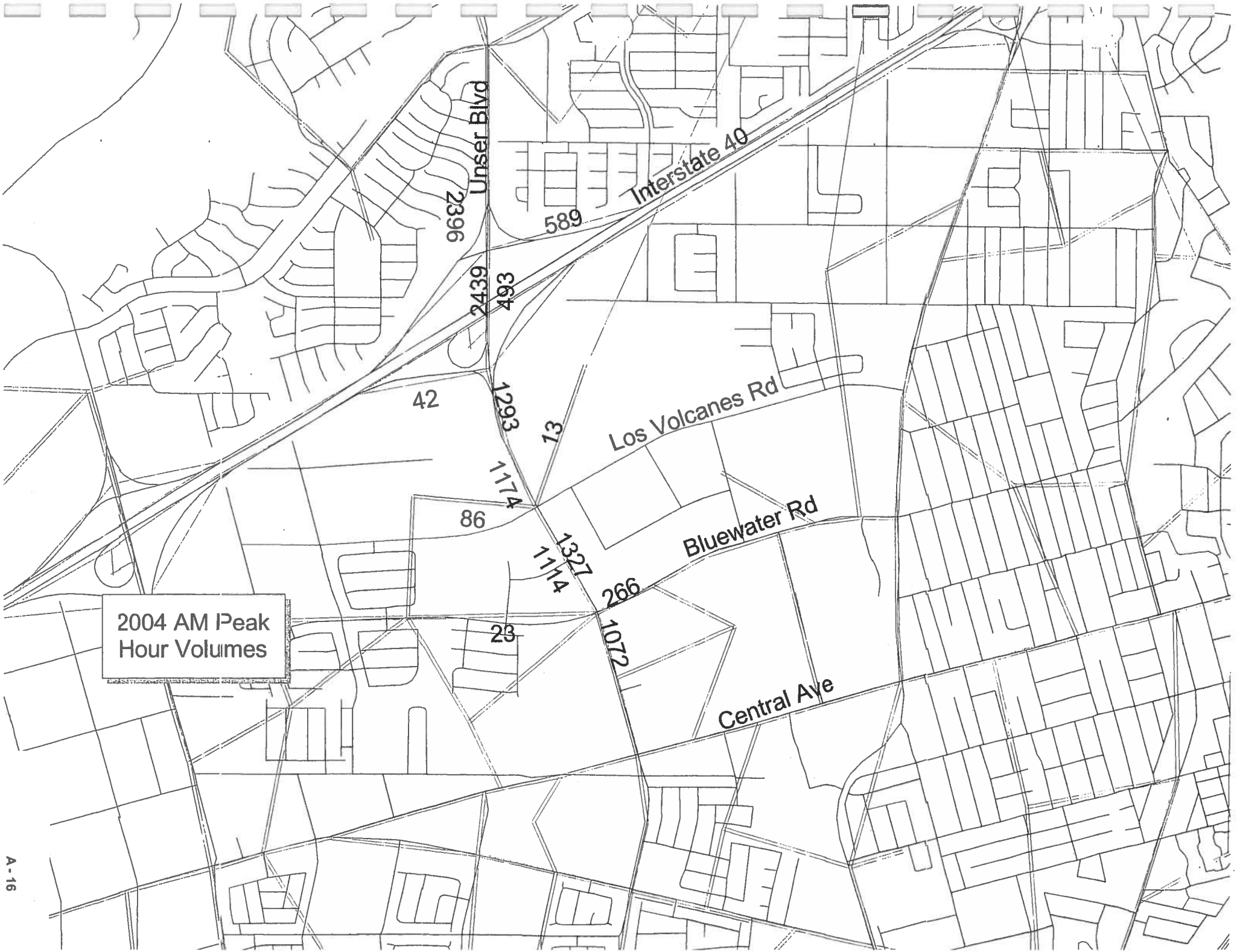
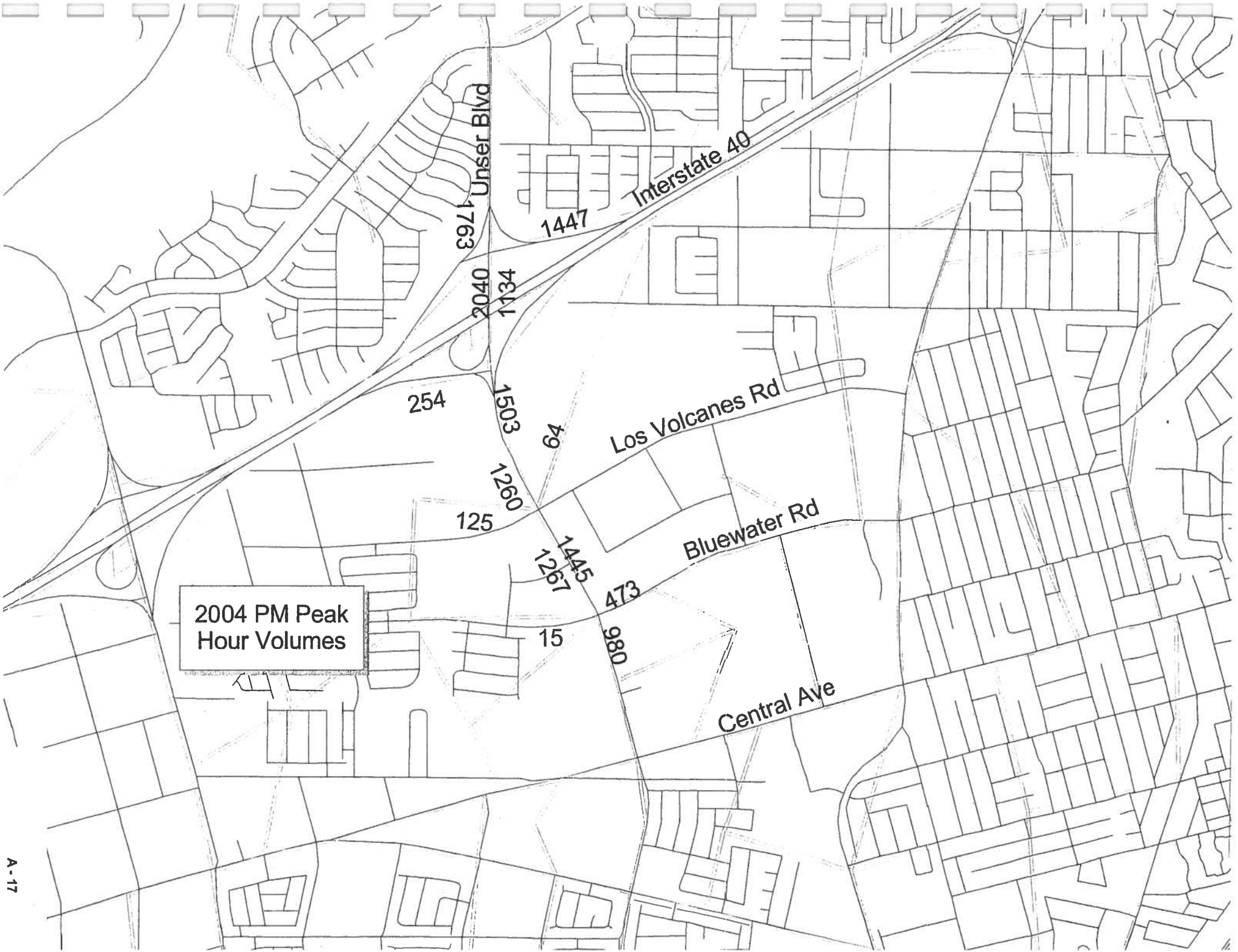
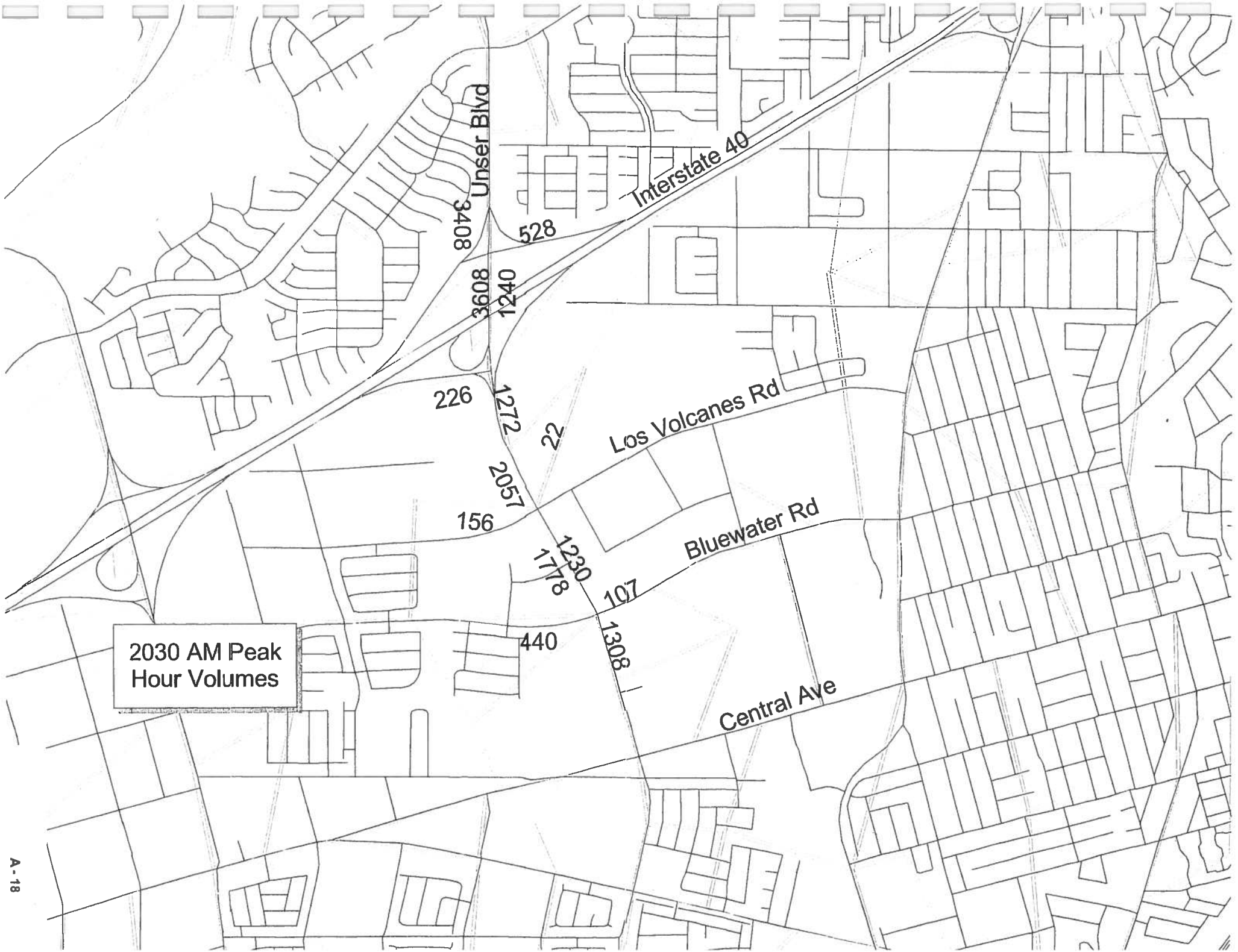
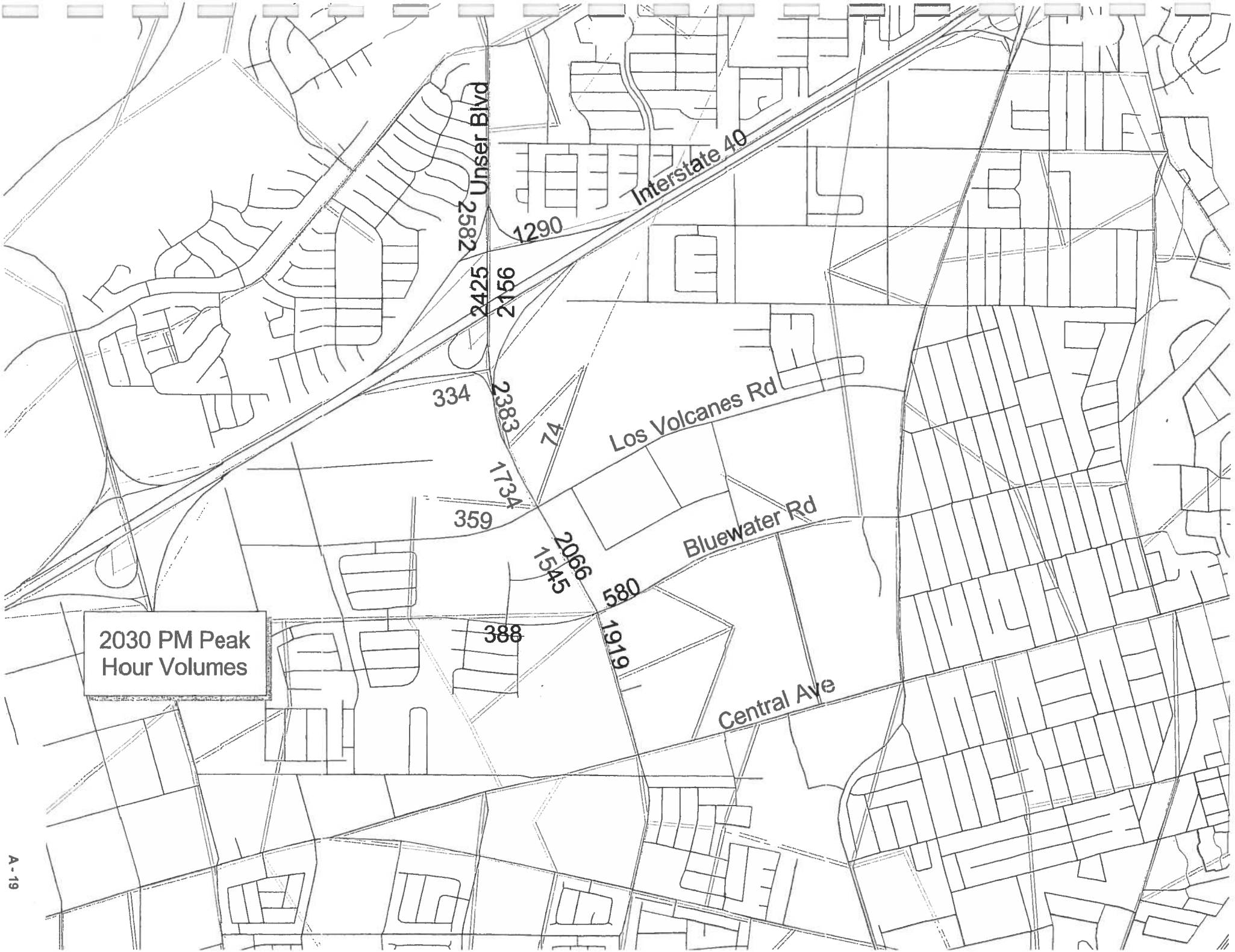

Unser Blvd
Interstate 40
2396
589
2439
493
42
1293
13
Los Volcanes Rd
1174
86
1327
1114
Bluewater Rd
266
1072
23
Central Ave
2004 AM Peak
Hour Volumes


Unser Blvd
Interstate 40
Los Volcanes Rd
Bluewater Rd
Central Ave
2004 PM Peak Hour Volumes
1763
1447
2040
1134
254
1503
64
1260
125
1445
1267
473
15
980


Unser Blvd
Interstate 40
Los Volcanes Rd
Bluewater Rd
Central Ave
3408
528
3608
1240
226
1272
22
2057
156
1230
1778
107
440
1308
2030 AM Peak
Hour Volumes


Unser Blvd
Interstate 40
Los Volcanes Rd
Bluewater Rd
Central Ave
2582
1290
2425
2156
334
2383
74
1734
359
2066
1545
580
388
1919
2030 PM Peak
Hour Volumes

Valero Commercial Development (Los Volcanes Rd / Unser Blvd)

Projected Turning Movements SUMMARY

PROPOSED DEVELOPMENT (2012) - 100% Development

INTERSECTION: **Summary**

Los Volcanes Rd / Unser Blvd (1) — 3.0% Truck

	0.93			0.75			0.90			0.85			PHF
	Eastbound (Los Volcanes Rd)			Westbound (Los Volcanes Rd)			Northbound (Unser Blvd)			Southbound (Unser Blvd)			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Existing (2010)	172	119	11	58	29	136	23	1,156	115	405	1,511	208	
2012 (NO BUILD - A.M.)	*182*	*127*	*12*	*94*	*32*	*152*	*24*	*1,253*	*147*	*462*	*1,614*	*220*	
2012 (BUILD - A.M.)	*182*	*143*	*33*	*94*	*48*	*152*	*45*	*1,253*	*147*	*462*	*1,614*	*220*	
	0.89			0.94			0.91			0.92			PHF
	Eastbound (Los Volcanes Rd)			Westbound (Los Volcanes Rd)			Northbound (Unser Blvd)			Southbound (Unser Blvd)			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Existing (2010)	96	16	16	68	20	209	10	1,045	83	141	1,147	108	
2012 (NO BUILD - P.M.)	*113*	*21*	*19*	*180*	*23*	*269*	*11*	*1,184*	*137*	*223*	*1,167*	*111*	
2012 (BUILD - P.M.)	*126*	*38*	*46*	*180*	*40*	*269*	*36*	*1,171*	*137*	*223*	*1,163*	*115*	

Bluewater Rd. / Unser Blvd (2) — 3.0% Truck

	0.83			0.75			0.92			0.85			PHF
	Eastbound (Bluewater Rd.)			Westbound (Bluewater Rd.)			Northbound (Unser Blvd)			Southbound (Unser Blvd)			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Existing (2010)	177	79	81	45	46	52	70	1,233	89	148	704	97	
2012 (NO BUILD - A.M.)	*184*	*81*	*84*	*48*	*49*	*55*	*75*	*1,359*	*94*	*161*	*809*	*106*	
2012 (BUILD - A.M.)	*184*	*81*	*84*	*48*	*49*	*70*	*75*	*1,408*	*94*	*176*	*858*	*106*	
	0.78			0.95			0.95			0.92			PHF
	Eastbound (Bluewater Rd.)			Westbound (Bluewater Rd.)			Northbound (Unser Blvd)			Southbound (Unser Blvd)			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Existing (2010)	97	53	57	91	89	183	63	865	28	85	1,100	124	
2012 (NO BUILD - P.M.)	*109*	*58*	*63*	*96*	*94*	*194*	*70*	*1,050*	*31*	*87*	*1,217*	*130*	
2012 (BUILD - P.M.)	*109*	*58*	*63*	*96*	*94*	*210*	*70*	*1,101*	*31*	*103*	*1,268*	*130*	

Central Ave / Unser Blvd (3) — 3.0% Truck

	0.85			0.85			0.85			0.85			PHF
	Eastbound (Central Ave)			Westbound (Central Ave)			Northbound (Unser Blvd)			Southbound (Unser Blvd)			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Existing (2010)	0	0	0	0	0	0	0	0	0	0	0	0	
2012 (NO BUILD - A.M.)	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	
2012 (BUILD - A.M.)	*23*	*0*	*0*	*0*	*0*	*16*	*0*	*10*	*0*	*16*	*10*	*23*	
	0.85			0.85			0.85			0.85			PHF
Trip assignments only	Eastbound (Central Ave)			Westbound (Central Ave)			Northbound (Unser Blvd)			Southbound (Unser Blvd)			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Existing (2010)	0	0	0	0	0	0	0	0	0	0	0	0	
2012 (NO BUILD - P.M.)	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	
2012 (BUILD - P.M.)	*24*	*0*	*0*	*0*	*0*	*16*	*0*	*11*	*0*	*16*	*11*	*24*	

I-40 N. Ramp / Unser Blvd (4) — 3.0% Truck

	0.90			0.86			0.85			0.99			PHF
	Eastbound (I-40 N. Ramp)			Westbound (I-40 N. Ramp)			Northbound (Unser Blvd)			Southbound (Unser Blvd)			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Existing (2010)	0	0	0	376	0	0	33	602	0	0	2,222	0	
2012 (NO BUILD - A.M.)	*0*	*0*	*0*	*391*	*0*	*0*	*36*	*659*	*0*	*0*	*2,341*	*0*	
2012 (BUILD - A.M.)	*0*	*0*	*0*	*391*	*0*	*0*	*36*	*659*	*0*	*0*	*2,341*	*0*	
	0.90			0.83			0.80			0.85			PHF
	Eastbound (I-40 N. Ramp)			Westbound (I-40 N. Ramp)			Northbound (Unser Blvd)			Southbound (Unser Blvd)			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Existing (2010)	0	0	0	921	3	0	23	915	0	0	879	0	
2012 (NO BUILD - P.M.)	*0*	*0*	*0*	*958*	*3*	*0*	*26*	*1,034*	*0*	*0*	*1,049*	*0*	
2012 (BUILD - P.M.)	*0*	*0*	*0*	*958*	*3*	*0*	*26*	*1,034*	*0*	*0*	*1,049*	*0*	

Valero Commercial Development (Los Volcanes Rd / Unser Blvd)

Projected Turning Movements SUMMARY

PROPOSED DEVELOPMENT (2012) - 100% Development

INTERSECTION: **Summary**

I-40 S. Ramp / Unser Blvd (5) — 3.0% Truck

	0.78			0.90			0.84			0.85		PHF
	Eastbound (I-40 S. Ramp)			Westbound (I-40 S. Ramp)			Northbound (Unser Blvd)			Southbound (Unser Blvd)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing (2012)	89	0	43	0	0	0	0	689	0	0	2,272	0
2012 (NO BUILD - A.M.)	*89*	*0*	*43*	*0*	*0*	*0*	*0*	*689*	*0*	*0*	*2,272*	*0*
2012 (BUILD - A.M.)	***89***	***0***	***43***	***0***	***0***	***0***	***0***	***689***	***0***	***0***	***2,272***	***0***

	0.86			0.90			0.80			0.94		PHF
	Eastbound (I-40 S. Ramp)			Westbound (I-40 S. Ramp)			Northbound (Unser Blvd)			Southbound (Unser Blvd)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing (2012)	134	0	52	0	0	0	0	1,060	0	0	1,547	0
2012 (NO BUILD - P.M.)	*134*	*0*	*52*	*0*	*0*	*0*	*0*	*1,060*	*0*	*0*	*1,547*	*0*
2012 (BUILD - P.M.)	***134***	***0***	***52***	***0***	***0***	***0***	***0***	***1,060***	***0***	***0***	***1,547***	***0***

Saul Bell Rd. / Unser Blvd (6) — 3.0% Truck

	0.85			0.85			0.90			0.85		PHF
	Eastbound (Saul Bell Rd.)			Westbound (Saul Bell Rd.)			Northbound (Unser Blvd)			Southbound (Unser Blvd)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing (2012)	0	0	6	0	0	0	0	0	0	0	0	12
2012 (NO BUILD - A.M.)	*0*	*0*	*6*	*0*	*0*	*0*	*0*	*1,424*	*0*	*0*	*1,708*	*12*
2012 (BUILD - A.M.)	***0***	***0***	***48***	***0***	***0***	***0***	***42***	***1,445***	***0***	***0***	***1,729***	***12***

	0.85			0.85			0.91			0.92		PHF
	Eastbound (Saul Bell Rd.)			Westbound (Saul Bell Rd.)			Northbound (Unser Blvd)			Southbound (Unser Blvd)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing (2012)	0	0	6	0	0	0	0	0	0	0	0	7
2012 (NO BUILD - P.M.)	*0*	*0*	*6*	*0*	*0*	*0*	*0*	*1,332*	*0*	*0*	*1,359*	*7*
2012 (BUILD - P.M.)	***0***	***0***	***60***	***0***	***0***	***0***	***55***	***1,344***	***0***	***0***	***1,372***	***7***

Los Volcanes Rd / Driveway 'A' (7) — 3.0% Truck

	0.93			0.93			0.85			0.85		PHF
	Eastbound (Los Volcanes Rd)			Westbound (Los Volcanes Rd)			Northbound (Driveway 'A')			Southbound (Driveway 'A')		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing (2012)	0	320	0	0	276	0	0	0	0	0	0	0
2012 (NO BUILD - A.M.)	*0*	*325*	*0*	*0*	*280*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
2012 (BUILD - A.M.)	***0***	***339***	***5***	***37***	***280***	***0***	***19***	***0***	***0***	***0***	***0***	***0***

	0.89			0.89			0.85			0.85		PHF
	Eastbound (Los Volcanes Rd)			Westbound (Los Volcanes Rd)			Northbound (Driveway 'A')			Southbound (Driveway 'A')		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing (2012)	0	151	0	0	160	0	0	0	0	0	0	0
2012 (NO BUILD - P.M.)	*0*	*161*	*0*	*0*	*170*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
2012 (BUILD - P.M.)	***0***	***176***	***5***	***46***	***170***	***0***	***20***	***0***	***0***	***0***	***0***	***0***

Los Volcanes Rd / Driveway 'B' (8) — 3.0% Truck

	0.93			0.93			0.85			0 85		PHF
	Eastbound (Los Volcanes Rd)			Westbound (Los Volcanes Rd)			Northbound (Driveway 'B')			Southbound (Driveway 'B')		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing (2012)	0	320	0	0	276	0	0	0	0	0	0	0
2012 (NO BUILD - A.M.)	*0*	*325*	*0*	*0*	*280*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
2012 (BUILD - A.M.)	***0***	***325***	***14***	***0***	***317***	***0***	***0***	***0***	***37***	***0***	***0***	***0***

	0.89			0.89			0.85			0 85		PHF
	Eastbound (Los Volcanes Rd)			Westbound (Los Volcanes Rd)			Northbound (Driveway 'B')			Southbound (Driveway 'B')		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing (2012)	0	151	0	0	160	0	0	0	0	0	0	0
2012 (NO BUILD - P.M.)	*0*	*161*	*0*	*0*	*170*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
2012 (BUILD - P.M.)	***0***	***161***	***15***	***0***	***216***	***0***	***0***	***0***	***57***	***0***	***0***	***0***

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Valero Commercial Development (Los Volcanes Rd / Unser Blvd)

Projected Turning Movements Worksheet

Los Volcanes Rd / Unser Blvd

INTERSECTION: E-W Street: **Los Volcanes Rd** (1)
N-S Street: **Unser Blvd**

Year of Existing Counts 2010
Implementation Year **2012**

	Growth Rates	3.00%			3.00%			3.00%			3.00%		
		Eastbound (Los Volcanes Rd)			Westbound (Los Volcanes Rd)			Northbound (Unser Blvd)			Southbound (Unser Blvd)		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes		172	119	11	58	29	136	23	1,156	115	405	1,511	208
Background Traffic Growth		10	7	1	3	2	8	1	69	7	24	91	12
Subtotal		182	126	12	61	31	144	24	1,225	122	429	1,602	220
Unser Town Center Trips Generated		0	1	0	32	1	8	0	18	24	33	0	0
Unser Crossing Trips Generated		0	0	0	1	0	0	0	10	1	0	12	0
Subtotal (NO BUILD - A.M.)		***182***	***127***	***12***	***94***	***32***	***152***	***24***	***1,253***	***147***	***462***	***1,614***	***220***
Percent Commercial Trips Generated(Entering)		*0.00%*	*0.00%*	*0.00%*	*0.00%*	*16.03%*	*0.00%*	*20.49%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*
Percent Commercial Trips Generated(Exiting)		*0.00%*	*16.03%*	*20.49%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*
Total Trips Generated		0	16	21	0	16	0	21	0	0	0	0	0
Total AM Peak Hour BUILD Volumes		**182**	**143**	**33**	**94**	**48**	**152**	**45**	**1,253**	**147**	**462**	**1,614**	**220**

		9.02%			3.00%			4.08%			1.21%		
		Eastbound (Los Volcanes Rd)			Westbound (Los Volcanes Rd)			Northbound (Unser Blvd)			Southbound (Unser Blvd)		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes		96	16	16	68	20	209	10	1,045	83	141	1,147	108
Background Traffic Growth		17	3	3	4	1	13	1	85	7	3	28	3
Subtotal		113	19	19	72	21	222	11	1,130	90	144	1,175	111
Unser Town Center Trips Generated		0	2	0	106	2	47	0	32	45	79	-29	0
Unser Crossing Trips Generated		0	0	0	2	0	0	0	22	2	0	21	0
Subtotal (NO BUILD - P.M.)		***113***	***21***	***19***	***180***	***23***	***269***	***11***	***1,184***	***137***	***223***	***1,167***	***111***
Percent Commercial Trips Generated(Entering)		*0.00%*	*0.00%*	*0.00%*	*0.00%*	*16.03%*	*0.00%*	*20.49%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*
Percent Commercial Trips Generated(Exiting)		*0.00%*	*16.03%*	*20.49%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*
Total Trips Generated		0	17	22	0	17	0	22	0	0	0	0	0
Subtotal PM Pk Hr. BUILD Volumes		**113**	**38**	**41**	**180**	**40**	**269**	**33**	**1,184**	**137**	**223**	**1,167**	**111**
Pass-by Trip Adjustments		*13*	*0*	*5*	*0*	*0*	*0*	*3*	*-13*	*0*	*0*	*-4*	*4*
Total PM Peak Hour BUILD Volumes		**126**	**38**	**46**	**180**	**40**	**269**	**36**	**1,171**	**137**	**223**	**1,163**	**115**

	Entering	Exiting		
Number of Commercial Trips Generated	**102**	**102**	A.M.	100% Commercial Development
	107	**107**	P.M.	

Pass-by Trip Calculations:

PM Pass-by Trips	***Eastbound (Los Volcanes Rd)***			***Westbound (Los Volcanes Rd)***			***Northbound (Unser Blvd)***			***Southbound (Unser Blvd)***		
Percent Entering	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*10.00%*	*-48.00%*	*0.00%*	*0.00%*	*-16.00%*	*16.00%*
Volume Entering	*0*	*0*	*0*	*0*	*0*	*0*	3	*-13*	*0*	*0*	*-4*	*4*
Percent Exiting	*48.00%*	*0.00%*	*20.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*
Volume Exiting	*13*	*0*	*5*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Net PM Passby Trips	***13***	***0***	***5***	***0***	***0***	***0***	***3***	***-13***	***0***	***0***	***-4***	***4***

	Entering	Exiting	
Pass-by Trips	*0*	*0*	*AM*
	27	*27*	*PM*

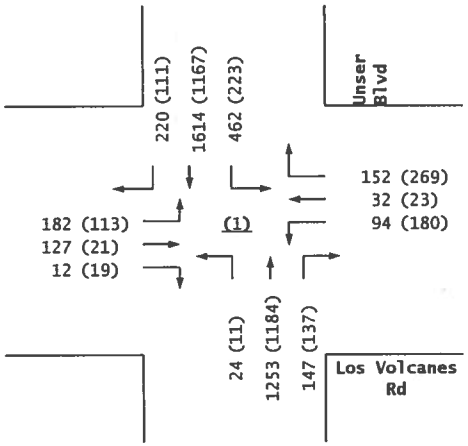
Trips Generated by Other Approved Projects

AM Peak Hr. Volumes	Eastbound (Los Volcanes Rd)			Westbound (Los Volcanes Rd)			Northbound (Unser Blvd)			Southbound (Unser Blvd)		
Unser Town Center	0	5	0	202	4	51	0	115	152	207	0	0
Unser Crossing	0	0	0	7	0	0	0	65	6	0	76	0

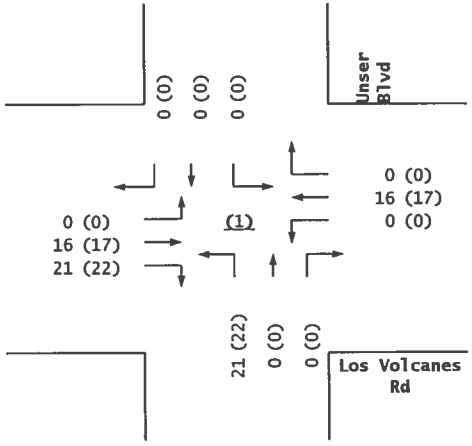
PM Peak Hr. Volumes	Eastbound (Los Volcanes Rd)			Westbound (Los Volcanes Rd)			Northbound (Unser Blvd)			Southbound (Unser Blvd)		
Unser Town Center	0	10	0	663	10	293	0	203	283	496	-179	0
Unser Crossing	0	0	0	12	0	0	0	135	12	0	133	0

* - Unser Town Center Volumes from I-40 / Unser Commercial Development TIS (May 5, 2008)
* - Unser Crossing Volumes from Unser Crossing TIS (March 31, 2008)
NOTE: Assume 16% development of Unser Town Center and Unser Crossing by 2012. 16%

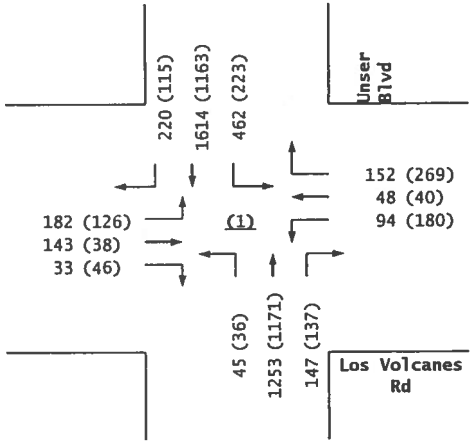
2012
NO BUILD



Trips



2012
BUILD



Los Volcanes Rd / Unser Blvd
Case "Y"

Valero Commercial Development (Los Volcanes Rd / Unser Blvd)

Projected Turning Movements Worksheet

Bluewater Rd. / Unser Blvd

INTERSECTION: E-W Street: **Bluewater Rd.** (2)

N-S Street: **Unser Blvd**

Year of Existing Counts 2010

Implementation Year **2012**

Growth Rates	1.53%			3.00%			3.00%			4.37%		
	Eastbound (Bluewater Rd.)			Westbound (Bluewater Rd.)			Northbound (Unser Blvd)			Southbound (Unser Blvd)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	177	79	81	45	46	52	70	1,233	89	148	704	97
Background Traffic Growth	5	2	2	3	3	3	4	74	5	13	61	8
Subtotal	182	81	83	48	49	55	74	1,307	94	161	765	105
Unser Town Center Trips Generated	2	0	0	0	0	0	0	41	0	0	31	1
Unser Crossing Trips Generated	0	0	1	0	0	0	1	11	0	0	13	0
Subtotal (NO BUILD - A.M.)	***184***	***81***	***84***	***48***	***49***	***55***	***75***	***1,359***	***94***	***161***	***809***	***106***
Percent Commercial Trips Generated(Entering)	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*14.49%*	*0.00%*	*47.61%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*
Percent Commercial Trips Generated(Exiting)	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*14.49%*	*47.61%*	*0.00%*
Total Trips Generated	0	0	0	0	0	15	0	49	0	15	49	0
Total AM Peak Hour BUILD Volumes	**184**	**81**	**84**	**48**	**49**	**70**	**75**	**1,408**	**94**	**176**	**858**	**106**

	4.37%			2.99%			5.04%			0.90%		
	Eastbound (Bluewater Rd.)			Westbound (Bluewater Rd.)			Northbound (Unser Blvd)			Southbound (Unser Blvd)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	97	53	57	91	89	183	63	865	28	85	1,100	124
Background Traffic Growth	8	5	5	5	5	11	6	87	3	2	20	2
Subtotal	105	58	62	96	94	194	69	952	31	87	1,120	126
Unser Town Center Trips Generated	4	0	0	0	0	0	0	74	0	0	74	4
Unser Crossing Trips Generated	0	0	1	0	0	0	1	24	0	0	23	0
Subtotal (NO BUILD - P.M.)	***109***	***58***	***63***	***96***	***94***	***194***	***70***	***1,050***	***31***	***87***	***1,217***	***130***
Percent Commercial Trips Generated(Entering)	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*14.49%*	*0.00%*	*47.61%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*
Percent Commercial Trips Generated(Exiting)	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*14.49%*	*47.61%*	*0.00%*
Total Trips Generated	0	0	0	0	0	16	0	51	0	16	51	0
Total PM Peak Hour BUILD Volumes	**109**	**58**	**63**	**96**	**94**	**210**	**70**	**1,101**	**31**	**103**	**1,268**	**130**

	Entering	Exiting		
Number of Commercial Trips Generated	**102**	**102**	A.M.	100% Commercial Development
	107	**107**	P.M.	

	Eastbound (Bluewater Rd.)			Westbound (Bluewater Rd.)			Northbound (Unser Blvd)			Southbound (Unser Blvd)		
2010 AM Peak Hr. Volumes	177	79	81	45	46	52	70	1,233	89	148	704	97
2010 PM Peak Hr. Volumes	97	53	57	91	89	183	63	865	28	85	1,100	124

Trips Generated by Other Approved Projects

AM Peak Hr. Volumes	Eastbound (Bluewater Rd.)			Westbound (Bluewater Rd.)			Northbound (Unser Blvd)			Southbound (Unser Blvd)		
Unser Town Center	12	0	0	0	0	0	0	255	0	0	193	9
Unser Crossing	0	0	4	1	0	0	4	70	1	0	83	0

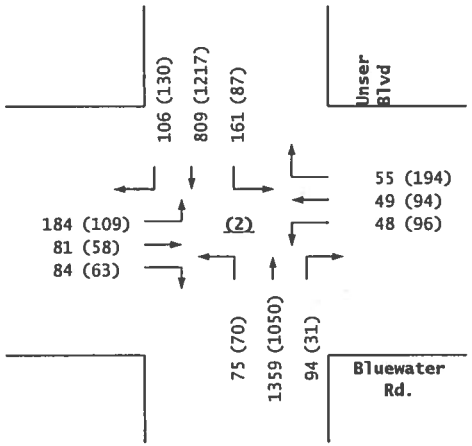
PM Peak Hr. Volumes	Eastbound (Bluewater Rd.)			Westbound (Bluewater Rd.)			Northbound (Unser Blvd)			Southbound (Unser Blvd)		
Unser Town Center	23	0	0	0	0	0	0	464	0	0	462	22
Unser Crossing	0	0	7	2	0	0	7	147	2	0	145	0

* - Unser Town Center Volumes from I-40 / Unser Commercial Development TIS (May 5, 2008)

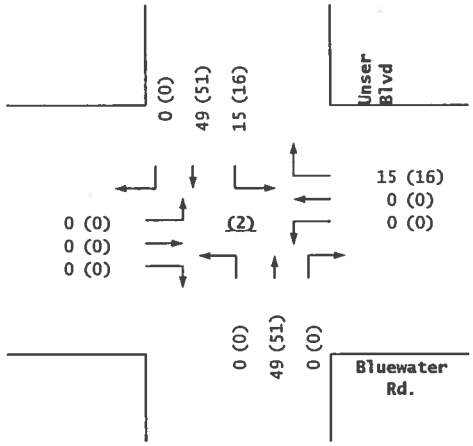
* - Unser Crossing Volumes from Unser Crossing TIS (March 31, 2008)

NOTE: Assume 16% development of Unser Town Center and Unser Crossing by 2012. 16%

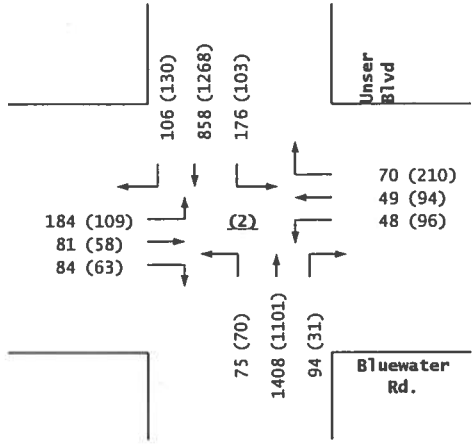
2012
NO BUILD



Trips



2012
BUILD



Bluewater Rd. / Unser Blvd

Valero Commercial Development (Los Volcanes Rd / Unser Blvd)

Projected Turning Movements Worksheet

Central Ave / Unser Blvd

INTERSECTION: E-W Street: **Central Ave** (3) Trip assignments only

N-S Street: **Unser Blvd**

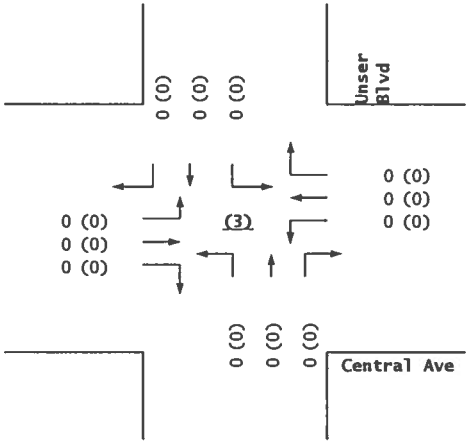
AM Peak Hour Volumes Generated	Eastbound (Central Ave)			Westbound (Central Ave)			Northbound (Unser Blvd)			Southbound (Unser Blvd)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Percent Commercial Trips Generated(Entering)	*22.22%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*15.32%*	*0.00%*	*10.07%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*
Percent Commercial Trips Generated(Exiting)	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*15.32%*	*10.07%*	*22.22%*
Total Trips Generated	23	0	0	0	0	16	0	10	0	16	10	23

	3.00%			3.00%			3.00%			3.00%		
PM Peak Hour Volumes Generated	Eastbound (Central Ave)			Westbound (Central Ave)			Northbound (Unser Blvd)			Southbound (Unser Blvd)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Percent Commercial Trips Generated(Entering)	*22.22%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*15.32%*	*0.00%*	*10.07%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*
Percent Commercial Trips Generated(Exiting)	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*15.32%*	*10.07%*	*22.22%*
Total Trips Generated	24	0	0	0	0	16	0	11	0	16	11	24

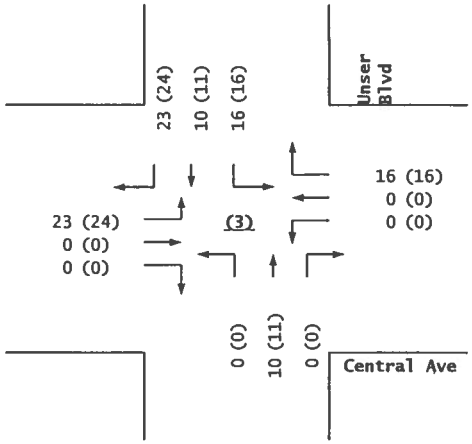
	Entering	Exiting		
Number of Commercial Trips Generated	**102**	**102**	A.M.	100% Commercial Development
	107	**107**	P.M.	

	Eastbound (Central Ave)			Westbound (Central Ave)			Northbound (Unser Blvd)			Southbound (Unser Blvd)		
2010 AM Peak Hr. Volumes	0	0	0	0	0	0	0	0	0	0	0	0
2010 PM Peak Hr. Volumes	0	0	0	0	0	0	0	0	0	0	0	0

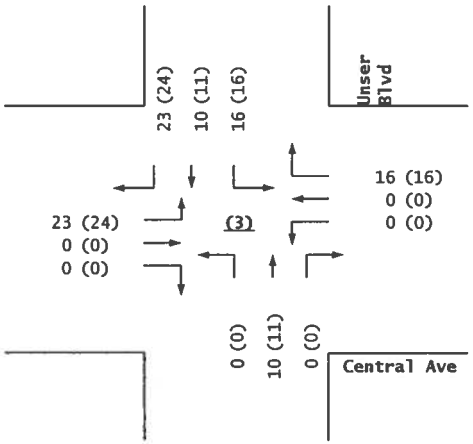
2012
NO BUILD



Trips



2012
BUILD



Central Ave / Unser Blvd

Valero Commercial Development (Los Volcanes Rd / Unser Blvd)

Projected Turning Movements Worksheet

I-40 N. Ramp / Unser Blvd

INTERSECTION: E-W Street: **I-40 N. Ramp** (4)

N-S Street: **Unser Blvd**

Year of Existing Counts 2010

Implementation Year **2012**

	Growth Rates	3.00%			2.00%			4.76%			2.67%		
		Eastbound (I-40 N. Ramp)			Westbound (I-40 N. Ramp)			Northbound (Unser Blvd)			Southbound (Unser Blvd)		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes		0	0	0	376	0	0	33	602	0	0	2,222	0
Background Traffic Growth		0	0	0	15	0	0	3	57	0	0	119	0
Subtotal (NO BUILD - A.M.)		*0*	*0*	*0*	*391*	*0*	*0*	*36*	*659*	*0*	*0*	*2,341*	*0*
Percent Commercial Trips Generated(Entering)		*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*
Percent Commercial Trips Generated(Exiting)		*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*
Total Trips Generated		0	0	0	0	0	0	0	0	0	0	0	0
Total AM Peak Hour BUILD Volumes		**0**	**0**	**0**	**391**	**0**	**0**	**36**	**659**	**0**	**0**	**2,341**	**0**

	3.00%			2.00%			6.49%			9.69%		
	Eastbound (I-40 N. Ramp)			Westbound (I-40 N. Ramp)			Northbound (Unser Blvd)			Southbound (Unser Blvd)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	0	0	0	921	3	0	23	915	0	0	879	0
Background Traffic Growth	0	0	0	37	0	0	3	119	0	0	170	0
Subtotal (NO BUILD - P.M.)	*0*	*0*	*0*	*958*	*3*	*0*	*26*	*1,034*	*0*	*0*	*1,049*	*0*
Percent Commercial Trips Generated(Entering)	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*
Percent Commercial Trips Generated(Exiting)	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*
Total Trips Generated	0	0	0	0	0	0	0	0	0	0	0	0
Subtotal PM Pk Hr. BUILD Volumes	**0**	**0**	**0**	**958**	**3**	**0**	**26**	**1,034**	**0**	**0**	**1,049**	**0**
Pass-by Trip Adjustments	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Total PM Peak Hour BUILD Volumes	**0**	**0**	**0**	**958**	**3**	**0**	**26**	**1,034**	**0**	**0**	**1,049**	**0**

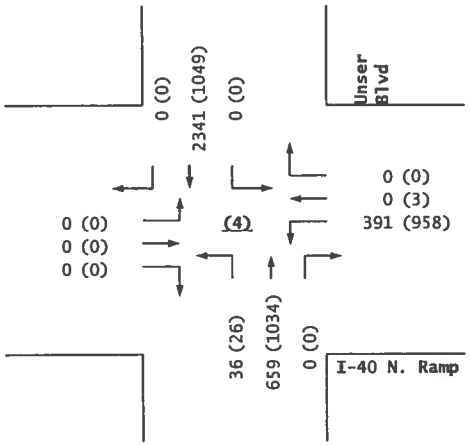
	Entering	Exiting		
Number of Commercial Trips Generated	102	102	A.M.	100% Commercial Development
	107	107	P.M.	

	Eastbound (I-40 N. Ramp)			Westbound (I-40 N. Ramp)			Northbound (Unser Blvd)			Southbound (Unser Blvd)		
2010 AM Peak Hr. Volumes	0	0	0	376	0	0	33	602	0	0	2,222	0
2010 PM Peak Hr. Volumes	0	0	0	921	3	0	23	915	0	0	879	0

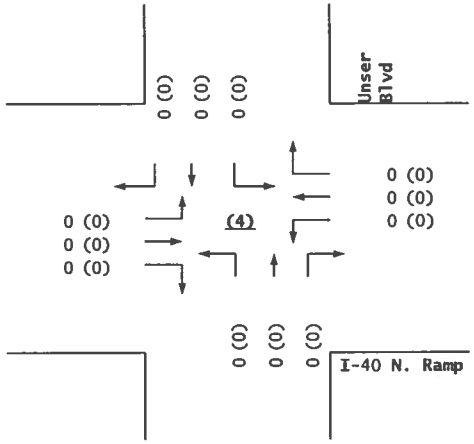
MRCOG Forecast Volumes Worksheet

Based on 2010 Traffic Count				
2010 AM Link Volume	**0**	**376**	**635**	**2,222**
2010 PM Link Volume	**0**	**924**	**938**	**879**
Based on MRCOG Model (2030 Data Set)				
2004 AM Link Volume	**0**	**589**	**493**	**2396**
2004 PM Link Volume	**0**	**1447**	**1134**	**1763**
2030 AM Link Volume	**0**	**528**	**1240**	**3408**
2030 PM Link Volume	**0**	**1290**	**2156**	**2582**
Growth Rate to Apply to Existing Counts to Match 2030 Forecasts				
2010-2030 AM Growth Rates	#DIV/0!	2.02%	4.76%	2.67%
2010-2030 PM Growth Rates	#DIV/0!	1.98%	6.49%	9.69%
Growth Rate to Apply to 2004 Model Volumes to Match 2030 Forecasts				
2004-2030 AM Growth Rates	#DIV/0!	-0.40%	5.83%	1.62%
2004-2030 PM Growth Rates	#DIV/0!	-0.42%	3.47%	1.79%

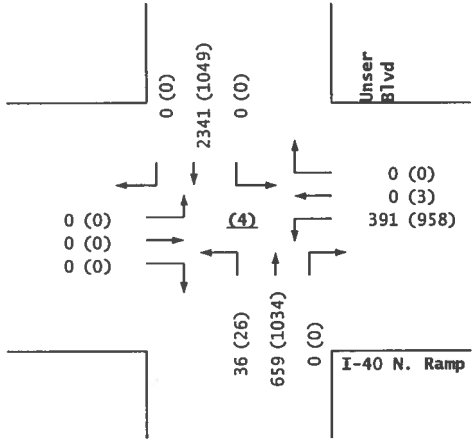
2012
NO BUILD



Trips



2012
BUILD



I-40 N. Ramp / Unser Blvd

Valero Commercial Development (Los Volcanes Rd / Unser Blvd)

Projected Turning Movements Worksheet

I-40 S. Ramp / Unser Blvd

INTERSECTION: E-W Street: **I-40 S. Ramp** (5)

N-S Street: **Unser Blvd**

Year of Existing Counts 2010

Implementation Year **2012**

Growth Rates	**4.26%**			**3.00%**			**4.87%**			**3.49%**		
	Eastbound (I-40 S. Ramp)			**Westbound (I-40 S. Ramp)**			**Northbound (Unser Blvd)**			**Southbound (Unser Blvd)**		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	82	0	40	0	0	0	0	628	0	0	2,124	0
Background Traffic Growth	7	0	3	0	0	0	0	61	0	0	148	0
Subtotal (NO BUILD - A.M.)	***89***	***0***	***43***	***0***	***0***	***0***	***0***	***689***	***0***	***0***	**2,272**	***0***
Percent Commercial Trips Generated(Entering)	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*
Percent Commercial Trips Generated(Exiting)	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*
Total Trips Generated	0	0	0	0	0	0	0	0	0	0	0	0
Total AM Peak Hour BUILD Volumes	**89**	**0**	**43**	**0**	**0**	**0**	**0**	**689**	**0**	**0**	**2,272**	**0**

	4.88%			**3.00%**			**6.49%**			**4.02%**		
	Eastbound (I-40 S. Ramp)			**Westbound (I-40 S. Ramp)**			**Northbound (Unser Blvd)**			**Southbound (Unser Blvd)**		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	122	0	47	0	0	0	0	938	0	0	1,432	0
Background Traffic Growth	12	0	5	0	0	0	0	122	0	0	115	0
Subtotal (NO BUILD - P.M.)	***134***	***0***	***52***	***0***	***0***	***0***	***0***	***1,060***	***0***	***0***	***1,547***	***0***
Percent Commercial Trips Generated(Entering)	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*
Percent Commercial Trips Generated(Exiting)	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*
Total Trips Generated	0	0	0	0	0	0	0	0	0	0	0	0
Subtotal PM Pk Hr. BUILD Volumes	134	0	52	0	0	0	0	1,060	0	0	1,547	0
Pass-by Trip Adjustments	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Total PM Peak Hour BUILD Volumes	**134**	**0**	**52**	**0**	**0**	**0**	**0**	**1,060**	**0**	**0**	**1,547**	**0**

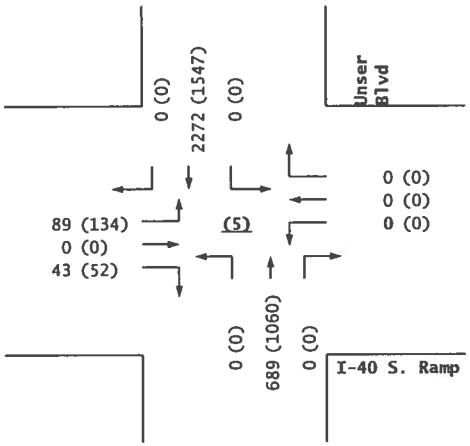
	Entering	Exiting		
Number of Commercial Trips Generated	**102**	**102**	A.M.	100% Commercial Development
	107	**107**	P.M.	

	Eastbound (I-40 S. Ramp)			**Westbound (I-40 S. Ramp)**			**Northbound (Unser Blvd)**			**Southbound (Unser Blvd)**		
2010 AM Peak Hr. Volumes	82	0	40	0	0	0	0	628	0	0	2,124	0
2010 PM Peak Hr. Volumes	122	0	47	0	0	0	0	938	0	0	1,432	0

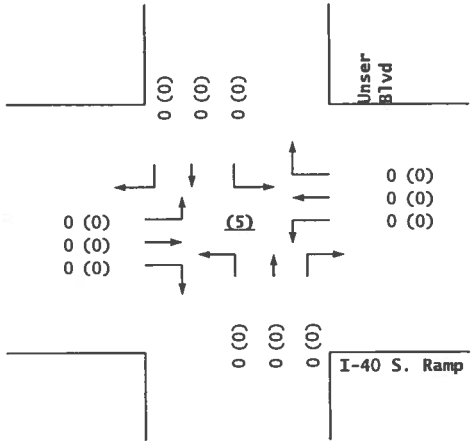
MRCOG Forecast Volumes Worksheet

Based on 2010 Traffic Count				
2010 AM Link Volume	**122**	**0**	**628**	**2,124**
2010 PM Link Volume	**169**	**0**	**938**	**1,432**
Based on MRCOG Model (2030 Data Set)				
2004 AM Link Volume	**42**	**0**	**493**	**2439**
2004 PM Link Volume	**254**	**0**	**1134**	**2040**
2030 AM Link Volume	**226**	**0**	**1240**	**3608**
2030 PM Link Volume	**334**	**0**	**2156**	**2582**
Growth Rate to Apply to Existing Counts to Match 2030 Forecasts				
2010-2030 AM Growth Rates	**4.26%**	**#DIV/0!**	**4.87%**	**3.49%**
2010-2030 PM Growth Rates	**4.88%**	**#DIV/0!**	**6.49%**	**4.02%**
Growth Rate to Apply to 2004 Model Volumes to Match 2030 Forecasts				
2004-2030 AM Growth Rates	**16.85%**	**#DIV/0!**	**5.83%**	**1.84%**
2004-2030 PM Growth Rates	**1.21%**	**#DIV/0!**	**3.47%**	**1.02%**

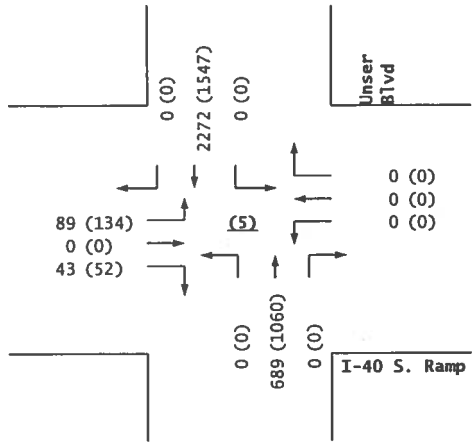
2012
NO BUILD



Trips



2012
BUILD



I-40 S. Ramp / Unser Blvd

Valero Commercial Development (Los Volcanes Rd / Unser Blvd)

Projected Turning Movements Worksheet

Saul Bell Rd. / Unser Blvd

INTERSECTION: E-W Street: **Saul Bell Rd.** (6)

N-S Street: **Unser Blvd**

Year of Existing Counts 2010

Implemenlation Year 2012

Growth Rates	3.00%			0.00%			3.00%			3.00%		
	Eastbound (Saul Bell Rd.)			Westbound (Saul Bell Rd.)			Northbound (Unser Blvd)			Southbound (Unser Blvd)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	0	0	6	0	0	0	0	0	0	0	0	11
Background Traffic Growth	0	0	0	0	0	0	0	0	0	0	0	1
Subtotal	0	0	6	0	0	0	0	1,371	0	0	1,663	12
Unser Town Center Trips Generated	0	0	0	0	0	0	0	42	0	0	32	0
Unser Crossing Trips Generated	0	0	0	0	0	0	0	11	0	0	13	0
Subtotal (NO BUILD - A.M.)	***0***	***0***	***6***	***0***	***0***	***0***	***0***	***1,424***	***0***	***0***	***1,708***	***12***
Percent Commercial Trips Generated(Entering)	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*41.61%*	*20.49%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*
Percent Commercial Trips Generated(Exiting)	*0.00%*	*0.00%*	*41.61%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*20.49%*	*0.00%*
Total Trips Generated	0	0	42	0	0	0	42	21	0	0	21	0
Total AM Peak Hour BUILD Volumes	**0**	**0**	**48**	**0**	**0**	**0**	**42**	**1,445**	**0**	**0**	**1,729**	**12**

	3.00%			0.00%			4.08%			1.21%		
	Eastbound (Saul Bell Rd.)			Westbound (Saul Bell Rd.)			Northbound (Unser Blvd)			Southbound (Unser Blvd)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	0	0	6	0	0	0	0	0	0	0	0	7
Background Traffic Growth	0	0	0	0	0	0	0	0	0	0	0	0
Subtotal	0	0	6	0	0	0	0	1,231	0	0	1,259	7
Unser Town Center Trips Generated	0	0	0	0	0	0	0	77	0	0	77	0
Unser Crossing Trips Generated	0	0	0	0	0	0	0	24	0	0	23	0
Subtotal (NO BUILD - P.M.)	***0***	***0***	***6***	***0***	***0***	***0***	***0***	***1,332***	***0***	***0***	***1,359***	***7***
Percent Commercial Trips Generated(Entering)	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*41.61%*	*20.49%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*
Percent Commercial Trips Generated(Exiting)	*0.00%*	*0.00%*	*41.61%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*20.49%*	*0.00%*
Total Trips Generated	0	0	45	0	0	0	45	22	0	0	22	0
Subtotal PM Pk Hr. BUILD Volumes	**0**	**0**	**51**	**0**	**0**	**0**	**45**	**1,354**	**0**	**0**	**1,381**	**7**
Pass-by Trip Adjustments	*0*	*0*	*9*	*0*	*0*	*0*	*10*	*-10*	*0*	*0*	*-9*	*0*
Total PM Peak Hour BUILD Volumes	**0**	**0**	**60**	**0**	**0**	**0**	**55**	**1,344**	**0**	**0**	**1,372**	**7**

	Entering	Exiting		
Number of Commercial Trips Generated	102	102	A.M.	100% Commercial Development
	107	107	P.M.	

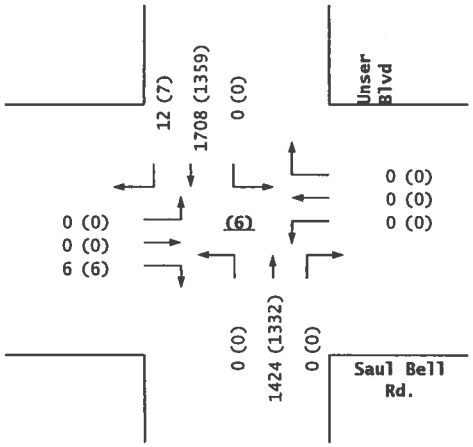
	Eastbound (Saul Bell Rd.)			Westbound (Saul Bell Rd.)			Northbound (Unser Blvd)			Southbound (Unser Blvd)		
2012 AM Peak Hr. Volumes	0	0	6	0	0	0	0	0	0	0	0	12
2012 PM Peak Hr. Volumes	0	0	6	0	0	0	0	0	0	0	0	7

Pass-by Trip Calculations:

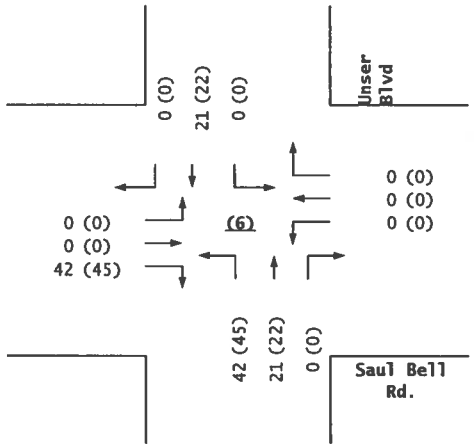
PM Pass-by Trips	***Eastbound (Saul Bell Rd.)***			***Westbound (Saul Bell Rd.)***			***Northbound (Unser Blvd)***			***Southbound (Unser Blvd)***		
Percent Entering	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*38.00%*	*-38.00%*	*0.00%*	*0.00%*	*-52.00%*	*0.00%*
Volume Entering	*0*	*0*	*0*	*0*	*0*	*0*	*10*	*-10*	*0*	*0*	*-14*	*0*
Percent Exiting	*0.00%*	*0.00%*	*32.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*20.00%*	*0.00%*
Volume Exiting	*0*	*0*	*9*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*5*	*0*
Net PM Passby Trips	***0***	***0***	***9***	***0***	***0***	***0***	***10***	***-10***	***0***	***0***	***-9***	***0***

	Entering	*Exiting*	
Pass-by Trips	*0*	*0*	*AM*
	27	*27*	*PM*

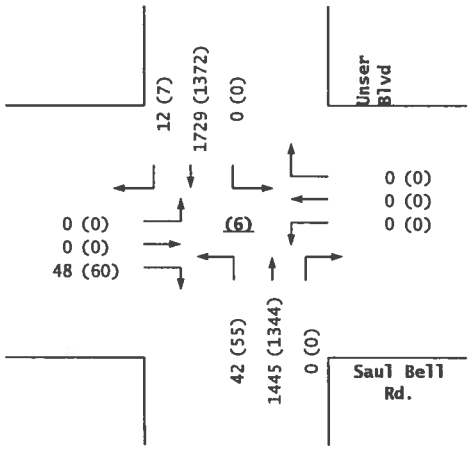
2012
NO BUILD



Trips



2012
BUILD



Saul Bell Rd. / Unser Blvd
Case "Y"

Valero Commercial Development (Los Volcanes Rd / Unser Blvd)

Projected Turning Movements Worksheet

Los Volcanes Rd / Driveway 'A'

INTERSECTION: E-W Street: **Los Volcanes Rd** (7)

N-S Street: **Driveway 'A'**

Year of Existing Counts 2010

Implementation Year **2012**

	Growth Rates	3.00%			3.00%			3.00%			3.00%		
		Eastbound (Los Volcanes Rd)			Westbound (Los Volcanes Rd)			Northbound (Driveway 'A')			Southbound (Driveway 'A')		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes		0	302	0	0	260	0	0	0	0	0	0	0
Background Traffic Growth		0	18	0	0	16	0	0	0	0	0	0	0
Subtotal		0	320	0	0	276	0	0	0	0	0	0	0
Unser Town Center Trips Generated		0	5	0	0	4	0	0	0	0	0	0	0
Subtotal (NO BUILD - A.M.)		***0***	***325***	***0***	***0***	***280***	***0***	***0***	***0***	***0***	***0***	***0***	***0***
Percent Commercial Trips Generated(Entering)		*0.00%*	*14.07%*	*4.69%*	*36.52%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*
Percent Commercial Trips Generated(Exiting)		*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*18.76%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*
Total Trips Generated		0	14	5	37	0	0	19	0	0	0	0	0
Total AM Peak Hour BUILD Volumes		**0**	**339**	**5**	**37**	**280**	**0**	**19**	**0**	**0**	**0**	**0**	**0**

		9.02%			8.01%			3.00%			3.00%		
		Eastbound (Los Volcanes Rd)			Westbound (Los Volcanes Rd)			Northbound (Driveway 'A')			Southbound (Driveway 'A')		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes		0	128	0	0	138	0	0	0	0	0	0	0
Background Traffic Growth		0	23	0	0	22	0	0	0	0	0	0	0
Subtotal		0	151	0	0	160	0	0	0	0	0	0	0
Unser Town Center Trips Generated		0	10	0	0	10	0	0	0	0	0	0	0
Subtotal (NO BUILD - P.M.)		***0***	***161***	***0***	***0***	***170***	***0***	***0***	***0***	***0***	***0***	***0***	***0***
Percent Commercial Trips Generated(Entering)		*0.00%*	*14.07%*	*4.69%*	*36.52%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*
Percent Commercial Trips Generated(Exiting)		*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*18.76%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*
Total Trips Generated		0	15	5	39	0	0	20	0	0	0	0	0
Subtotal PM Pk Hr. BUILD Volumes		**0**	**176**	**5**	**39**	**170**	**0**	**20**	**0**	**0**	**0**	**0**	**0**
Pass-by Trip Adjustments		*0*	*0*	*0*	*7*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Total PM Peak Hour BUILD Volumes		**0**	**176**	**5**	**46**	**170**	**0**	**20**	**0**	**0**	**0**	**0**	**0**

	Entering	Exiting		
Number of Commercial Trips Generated	**102**	**102**	A.M.	100% Commercial Development
	107	**107**	P.M.	

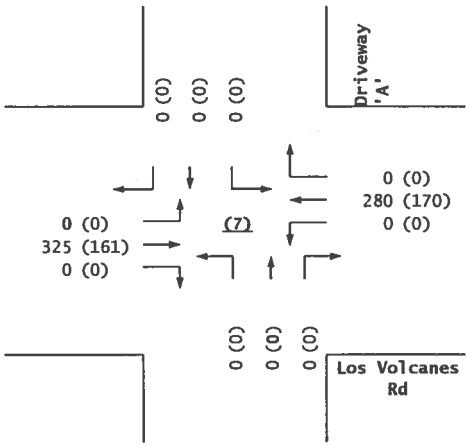
	Eastbound (Los Volcanes Rd)			Westbound (Los Volcanes Rd)			Northbound (Driveway 'A')			Southbound (Driveway 'A')		
2010 AM Peak Hr. Volumes	0	302	0	0	260	0	0	0	0	0	0	0
2010 PM Peak Hr. Volumes	0	128	0	0	138	0	0	0	0	0	0	0

Pass-by Trip Calculations:

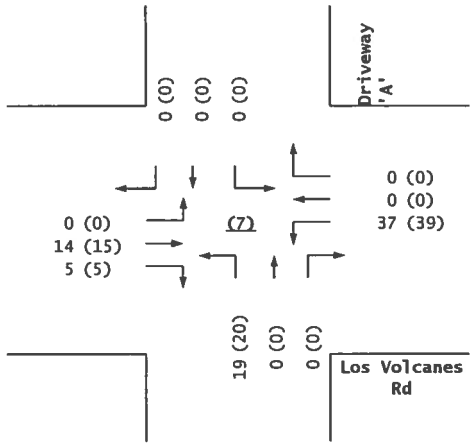
PM Pass-by Trips	***Eastbound (Los Volcanes Rd)***			***Westbound (Los Volcanes Rd)***			***Northbound (Driveway 'A')***			***Southbound (Driveway 'A')***		
Percent Entering	*0.00%*	*0.00%*	*0.00%*	*26.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*
Volume Entering	*0*	*0*	*0*	*7*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Percent Exiting	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*
Volume Exiting	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Net PM Passby Trips	*0*	*0*	*0*	*7*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*

	Entering	Exiting	
Pass-by Trips	*0*	*0*	*AM*
	27	*27*	*PM*

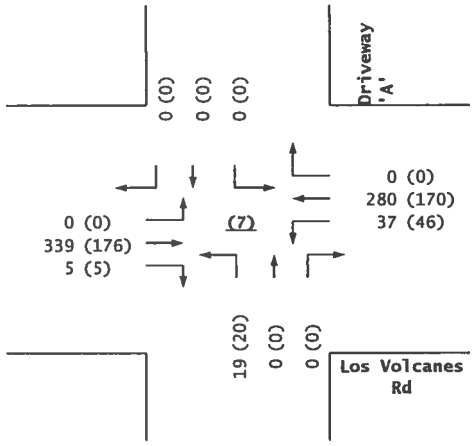
2012
NO BUILD



Trips



2012
BUILD



Los Volcanes Rd / Driveway 'A'
Case "Y"

Valero Commercial Development (Los Volcanes Rd / Unser Blvd)

Projected Turning Movements Worksheet

Los Volcanes Rd / Driveway 'B'

INTERSECTION: E-W Street: **Los Volcanes Rd** (8)

N-S Street: **Driveway 'B'**

Year of Existing Counts 2010

Implementation Year **2012**

Growth Rates	3.00%			3.00%			3.00%			3.00%		
	Eastbound (Los Volcanes Rd)			Westbound (Los Volcanes Rd)			Northbound (Driveway 'B')			Southbound (Driveway 'B')		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	0	302	0	0	260	0	0	0	0	0	0	0
Background Traffic Growth	0	18	0	0	16	0	0	0	0	0	0	0
Subtotal	0	320	0	0	276	0	0	0	0	0	0	0
Unser Town Center Trips Generated	0	5	0	0	4	0	0	0	0	0	0	0
Subtotal (NO BUILD - A.M.)	***0***	***325***	***0***	***0***	***280***	***0***	***0***	***0***	***0***	***0***	***0***	***0***
Percent Commercial Trips Generated(Entering)	*0.00%*	*0.00%*	*14.07%*	*0.00%*	*36.52%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*
Percent Commercial Trips Generated(Exiting)	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*36.52%*	*0.00%*	*0.00%*	*0.00%*
Total Trips Generated	0	0	14	0	37	0	0	0	37	0	0	0
Total AM Peak Hour BUILD Volumes	**0**	**325**	**14**	**0**	**317**	**0**	**0**	**0**	**37**	**0**	**0**	**0**

	9.02%			8.01%			3.00%			3.00%		
	Eastbound (Los Volcanes Rd)			Westbound (Los Volcanes Rd)			Northbound (Driveway 'B')			Southbound (Driveway 'B')		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	0	128	0	0	138	0	0	0	0	0	0	0
Background Traffic Growth	0	23	0	0	22	0	0	0	0	0	0	0
Subtotal	0	151	0	0	160	0	0	0	0	0	0	0
Unser Town Center Trips Generated	0	10	0	0	10	0	0	0	0	0	0	0
Subtotal (NO BUILD - P.M.)	***0***	***161***	***0***	***0***	***170***	***0***	***0***	***0***	***0***	***0***	***0***	***0***
Percent Commercial Trips Generated(Entering)	*0.00%*	*0.00%*	*14.07%*	*0.00%*	*36.52%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*
Percent Commercial Trips Generated(Exiting)	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*36.52%*	*0.00%*	*0.00%*	*0.00%*
Total Trips Generated	0	0	15	0	39	0	0	0	39	0	0	0
Subtotal PM Pk Hr. BUILD Volumes	**0**	**161**	**15**	**0**	**209**	**0**	**0**	**0**	**39**	**0**	**0**	**0**
Pass-by Trip Adjustments	*0*	*0*	*0*	*0*	*7*	*0*	*0*	*0*	*18*	*0*	*0*	*0*
Total PM Peak Hour BUILD Volumes	**0**	**161**	**15**	**0**	**216**	**0**	**0**	**0**	**57**	**0**	**0**	**0**

	Entering	Exiting		
Number of Commercial Trips Generated	**102**	**102**	A.M.	100% Commercial Development
	107	**107**	P.M.	

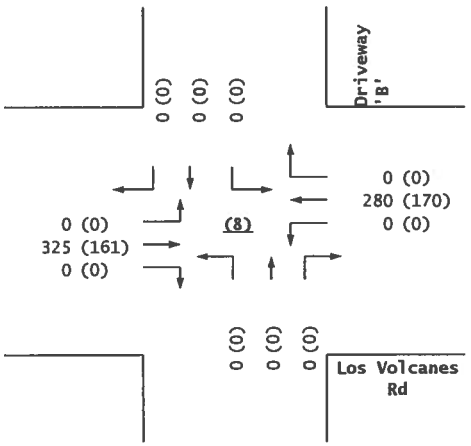
	Eastbound (Los Volcanes Rd)			Westbound (Los Volcanes Rd)			Northbound (Driveway 'B')			Southbound (Driveway 'B')		
2010 AM Peak Hr. Volumes	0	302	0	0	260	0	0	0	0	0	0	0
2010 PM Peak Hr. Volumes	0	128	0	0	138	0	0	0	0	0	0	0

Pass-by Trip Calculations:

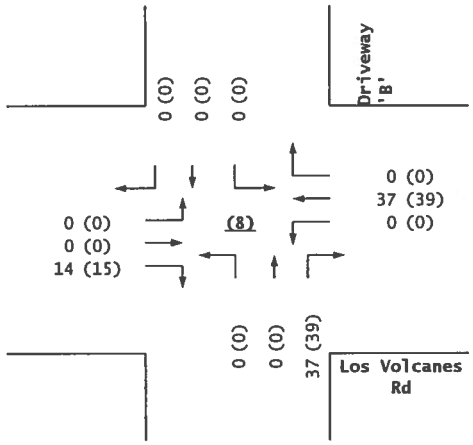
PM Pass-by Trips	*Eastbound (Los Volcanes Rd)*			*Westbound (Los Volcanes Rd)*			*Northbound (Driveway 'B')*			*Southbound (Driveway 'B')*		
Percent Entering	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*26.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*
Volume Entering	*0*	*0*	*0*	*0*	*7*	*0*	*0*	*0*	*0*	*0*	*0*	*0*
Percent Exiting	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*68.00%*	*0.00%*	*0.00%*	*0.00%*
Volume Exiting	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*18*	*0*	*0*	*0*
Net PM Passby Trips	*0*	*0*	*0*	*0*	*7*	*0*	*0*	*0*	*18*	*0*	*0*	*0*

	Entering	*Exiting*	
Pass-by Trips	*0*	*0*	*AM*
	27	*27*	*PM*

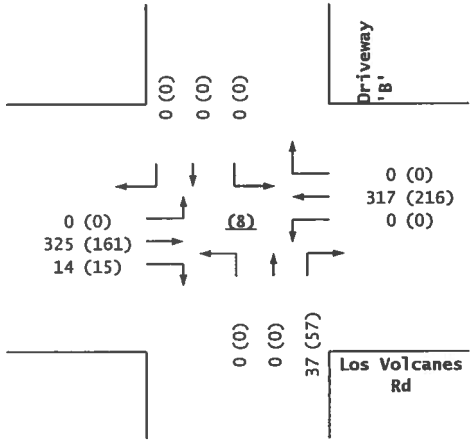
2012
NO BUILD



Trips



2012
BUILD



Los Volcanes Rd / Driveway 'B'

Case "Y"

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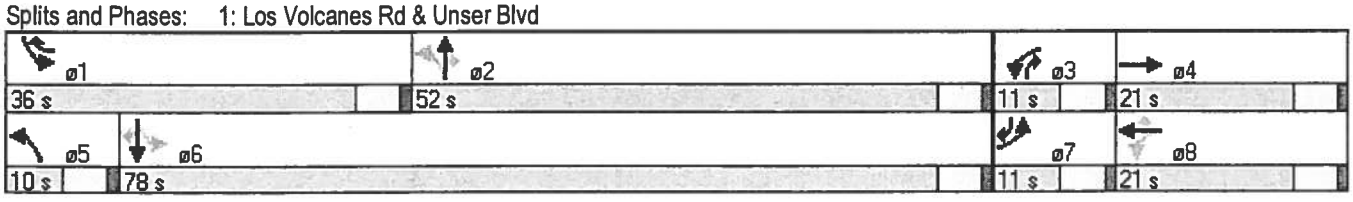
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Volume (vph)	182	127	94	32	152	24	1253	147	462	1614	220
Turn Type	Prot		pm+pt		pm+ov	pm+pt		pm+ov	pm+pt		pm+ov
Protected Phases	7	4	3	8	1	5	2	3	1	6	7
Permitted Phases			8		8	2		2	6		6
Detector Phase	7	4	3	8	1	5	2	3	1	6	7
Switch Phase											
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	21.0	10.0	21.0	10.0	10.0	21.0	10.0	10.0	21.0	10.0
Total Split (s)	11.0	21.0	11.0	21.0	36.0	10.0	52.0	11.0	36.0	78.0	11.0
Total Split (%)	9.2%	17.5%	9.2%	17.5%	30.0%	8.3%	43.3%	9.2%	30.0%	65.0%	9.2%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?											
Recall Mode	Min	Min	Min	Min	Min	Min	C-Max	Min	Min	C-Max	Min
Act Effct Green (s)	8.0	15.8	23.8	15.8	54.0	56.4	49.0	60.0	87.2	76.8	87.8
Actuated g/C Ratio	0.07	0.13	0.20	0.13	0.45	0.47	0.41	0.50	0.73	0.64	0.73
v/c Ratio	0.86	0.62	0.59	0.18	0.29	0.16	0.97	0.20	0.95	0.85	0.22
Control Delay	88.5	59.3	51.1	47.0	21.0	16.9	41.8	7.2	50.7	17.3	2.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	88.5	59.3	51.1	47.0	21.0	16.9	41.8	7.2	50.7	17.3	2.3
LOS	F	E	D	D	C	B	D	A	D	B	A
Approach Delay		75.8		34.1			37.8			22.6	
Approach LOS		E		C			D			C	

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 74 (62%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 100
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.97
Intersection Signal Delay: 32.0 — Intersection LOS: C
Intersection Capacity Utilization 86.2% — ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 1: Los Volcanes Rd & Unser Blvd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	182	127	12	94	32	152	24	1253	147	462	1614	220
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	0.97	1.00		1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3400	1821		1752	1845	1568	1752	3505	1568	1752	3505	1568
Flt Permitted	0.95	1.00		0.39	1.00	1.00	0.08	1.00	1.00	0.08	1.00	1.00
Satd. Flow (perm)	3400	1821		720	1845	1568	151	3505	1568	142	3505	1568
Peak-hour factor, PHF	0.93	0.93	0.93	0.75	0.75	0.75	0.90	0.90	0.90	0.85	0.85	0.85
Adj. Flow (vph)	196	137	13	125	43	203	27	1392	163	544	1899	259
RTOR Reduction (vph)	0	3	0	0	0	6	0	0	49	0	0	56
Lane Group Flow (vph)	196	147	0	125	43	197	27	1392	114	544	1899	203
Turn Type	Prot			pm+pt		pm+ov	pm+pt		pm+ov	pm+pt		pm+ov
Protected Phases	7	4		3	8	1	5	2	3	1	6	7
Permitted Phases				8		8	2		2	6		6
Actuated Green, G (s)	6.0	13.8		19.8	13.8	47.0	52.4	47.0	53.0	85.2	74.8	80.8
Effective Green, g (s)	8.0	15.8		23.8	15.8	51.0	56.4	49.0	57.0	87.2	76.8	84.8
Actuated g/C Ratio	0.07	0.13		0.20	0.13	0.42	0.47	0.41	0.48	0.73	0.64	0.71
Clearance Time (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	227	240		212	243	706	170	1431	784	575	2243	1147
v/s Ratio Prot	c0.06	c0.08		0.04	0.02	0.08	0.01	0.40	0.01	c0.28	0.54	0.01
v/s Ratio Perm				0.08		0.04	0.07		0.06	c0.41		0.12
v/c Ratio	0.86	0.61		0.59	0.18	0.28	0.16	0.97	0.15	0.95	0.85	0.18
Uniform Delay, d1	55.5	49.2		41.7	46.3	22.5	19.6	34.8	17.8	35.5	17.0	5.9
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.51	0.77	0.92	0.86	0.80	1.29
Incremental Delay, d2	27.0	4.6		4.2	0.4	0.2	0.3	14.1	0.1	19.5	3.0	0.1
Delay (s)	82.5	53.8		45.9	46.7	22.7	29.8	40.9	16.4	50.1	16.5	7.7
Level of Service	F	D		D	D	C	C	D	B	D	B	A
Approach Delay (s)		70.1			33.3			38.2			22.4	
Approach LOS		E			C			D			C	

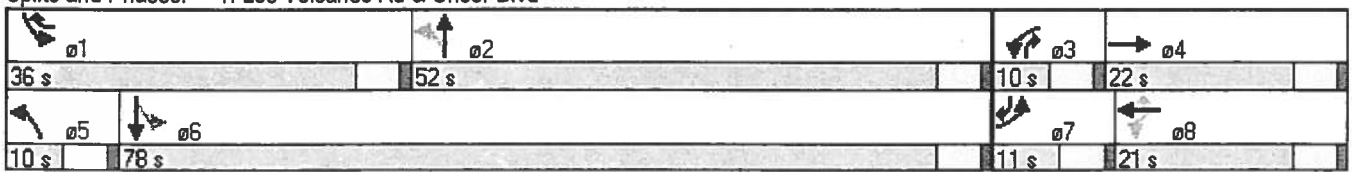
Intersection Summary			
HCM Average Control Delay	31.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	86.2%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Volume (vph)	182	143	94	48	152	45	1253	147	462	1614	220
Turn Type	Prot		pm+pt		pm+ov	pm+pt		pm+ov	pm+pt		pm+ov
Protected Phases	7	4	3	8	1	5	2	3	1	6	7
Permitted Phases			8		8	2		2	6		6
Detector Phase	7	4	3	8	1	5	2	3	1	6	7
Switch Phase											
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	21.0	10.0	21.0	10.0	10.0	21.0	10.0	10.0	21.0	10.0
Total Split (s)	11.0	22.0	10.0	21.0	36.0	10.0	52.0	10.0	36.0	78.0	11.0
Total Split (%)	9.2%	18.3%	8.3%	17.5%	30.0%	8.3%	43.3%	8.3%	30.0%	65.0%	9.2%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?											
Recall Mode	Min	Min	Min	Min	Min	Min	C-Max	Min	Min	C-Max	Min
Act Effct Green (s)	8.0	17.3	23.3	16.3	54.0	56.3	49.0	59.0	86.7	76.4	87.4
Actuated g/C Ratio	0.07	0.14	0.19	0.14	0.45	0.47	0.41	0.49	0.72	0.64	0.73
v/c Ratio	0.86	0.71	0.68	0.25	0.29	0.30	0.97	0.20	0.96	0.85	0.22
Control Delay	88.5	61.7	58.6	48.3	21.0	29.8	40.6	6.6	53.5	17.7	2.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	88.5	61.7	58.6	48.3	21.0	29.8	40.6	6.6	53.5	17.7	2.3
LOS	F	E	E	D	C	C	D	A	D	B	A
Approach Delay		75.4		37.4			36.8			23.4	
Approach LOS		E		D			D			C	

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 74 (62%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 100
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.97
Intersection Signal Delay: 32.7 — Intersection LOS: C
Intersection Capacity Utilization 88.3% — ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 1: Los Volcanes Rd & Unser Blvd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	182	143	33	94	48	152	45	1253	147	462	1614	220
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	0.97	1.00		1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3400	1793		1752	1845	1568	1752	3505	1568	1752	3505	1568
Flt Permitted	0.95	1.00		0.32	1.00	1.00	0.08	1.00	1.00	0.08	1.00	1.00
Satd. Flow (perm)	3400	1793		596	1845	1568	151	3505	1568	142	3505	1568
Peak-hour factor, PHF	0.93	0.93	0.93	0.75	0.75	0.75	0.90	0.90	0.90	0.85	0.85	0.85
Adj. Flow (vph)	196	154	35	125	64	203	50	1392	163	544	1899	259
RTOR Reduction (vph)	0	7	0	0	0	6	0	0	49	0	0	57
Lane Group Flow (vph)	196	182	0	125	64	197	50	1392	114	544	1899	202
Turn Type	Prot			pm+pt		pm+ov	pm+pt		pm+ov	pm+pt		pm+ov
Protected Phases	7	4		3	8	1	5	2	3	1	6	7
Permitted Phases				8		8	2		2	6		6
Actuated Green, G (s)	6.0	15.3		19.3	14.3	47.0	52.3	47.0	52.0	84.7	74.4	80.4
Effective Green, g (s)	8.0	17.3		23.3	16.3	51.0	56.3	49.0	56.0	86.7	76.4	84.4
Actuated g/C Ratio	0.07	0.14		0.19	0.14	0.42	0.47	0.41	0.47	0.72	0.64	0.70
Clearance Time (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	227	258		183	251	706	168	1431	771	568	2232	1142
v/s Ratio Prot	c0.06	c0.10		0.04	0.03	0.08	0.02	0.40	0.01	c0.28	0.54	0.01
v/s Ratio Perm				0.09		0.04	0.12		0.06	c0.42		0.12
v/c Ratio	0.86	0.71		0.68	0.25	0.28	0.30	0.97	0.15	0.96	0.85	0.18
Uniform Delay, d1	55.5	48.9		42.7	46.4	22.5	20.3	34.8	18.3	36.0	17.3	6.0
Progression Factor	1.00	1.00		1.00	1.00	1.00	2.03	0.75	0.81	0.86	0.80	1.31
Incremental Delay, d2	27.0	8.5		10.1	0.5	0.2	0.6	13.7	0.1	21.8	3.1	0.1
Delay (s)	82.5	57.4		52.7	47.0	22.7	41.8	39.7	15.0	52.8	16.9	8.0
Level of Service	F	E		D	D	C	D	D	B	D	B	A
Approach Delay (s)		70.2			36.2			37.2			23.3	
Approach LOS		E			D			D			C	

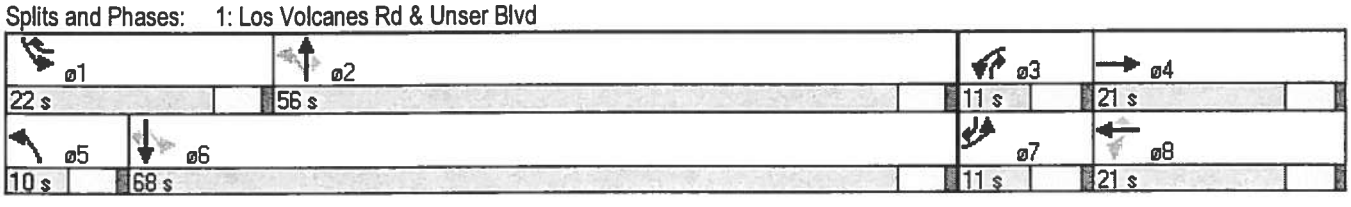
Intersection Summary			
HCM Average Control Delay	32.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	88.3%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Volume (vph)	113	21	180	23	269	11	1184	137	223	1167	111
Turn Type	Prot		pm+pt		pm+ov	pm+pt		pm+ov	pm+pt		pm+ov
Protected Phases	7	4	3	8	1	5	2	3	1	6	7
Permitted Phases			8		8	2		2	6		6
Detector Phase	7	4	3	8	1	5	2	3	1	6	7
Switch Phase											
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	21.0	10.0	21.0	10.0	10.0	21.0	10.0	10.0	21.0	10.0
Total Split (s)	11.0	21.0	11.0	21.0	22.0	10.0	56.0	11.0	22.0	68.0	11.0
Total Split (%)	10.0%	19.1%	10.0%	19.1%	20.0%	9.1%	50.9%	10.0%	20.0%	61.8%	10.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?											
Recall Mode	Min	Min	Min	Min	Min	Min	C-Max	Min	Min	C-Max	Min
Act Effct Green (s)	8.0	9.4	17.4	9.4	29.5	71.2	63.5	74.5	83.5	72.9	83.9
Actuated g/C Ratio	0.07	0.09	0.16	0.09	0.27	0.65	0.58	0.68	0.76	0.66	0.76
v/c Ratio	0.51	0.27	0.79	0.15	0.64	0.04	0.64	0.14	0.59	0.55	0.10
Control Delay	57.0	33.2	65.2	48.0	36.4	4.6	13.6	1.6	13.5	9.1	1.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	57.0	33.2	65.2	48.0	36.4	4.6	13.6	1.6	13.5	9.1	1.4
LOS	E	C	E	D	D	A	B	A	B	A	A
Approach Delay		50.7		47.9			12.3			9.2	
Approach LOS		D		D			B			A	

Intersection Summary

Cycle Length: 110
Actuated Cycle Length: 110
Offset: 48 (44%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.79
Intersection Signal Delay: 17.5 — Intersection LOS: B
Intersection Capacity Utilization 71.7% — ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 1: Los Volcanes Rd & Unser Blvd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	113	21	19	180	23	269	11	1184	137	223	1167	111
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	0.97	1.00		1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	0.93		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3400	1716		1752	1845	1568	1752	3505	1568	1752	3505	1568
Flt Permitted	0.95	1.00		0.73	1.00	1.00	0.19	1.00	1.00	0.12	1.00	1.00
Satd. Flow (perm)	3400	1716		1342	1845	1568	345	3505	1568	223	3505	1568
Peak-hour factor, PHF	0.89	0.89	0.89	0.94	0.94	0.94	0.91	0.91	0.91	0.92	0.92	0.92
Adj. Flow (vph)	127	24	21	191	24	286	12	1301	151	242	1268	121
RTOR Reduction (vph)	0	19	0	0	0	28	0	0	42	0	0	32
Lane Group Flow (vph)	127	26	0	191	24	258	12	1301	109	242	1268	89
Turn Type	Prot			pm+pt		pm+ov	pm+pt		pm+ov	pm+pt		pm+ov
Protected Phases	7	4		3	8	1	5	2	3	1	6	7
Permitted Phases				8		8	2		2	6		6
Actuated Green, G (s)	6.0	7.4		13.4	7.4	22.6	67.1	61.4	67.4	81.6	70.9	76.9
Effective Green, g (s)	8.0	9.4		17.4	9.4	26.6	71.1	63.4	71.4	83.6	72.9	80.9
Actuated g/C Ratio	0.07	0.09		0.16	0.09	0.24	0.65	0.58	0.65	0.76	0.66	0.74
Clearance Time (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	247	147		242	158	422	321	2020	1061	409	2323	1196
v/s Ratio Prot	0.04	0.02		c0.06	0.01	c0.10	0.00	c0.37	0.01	0.09	0.36	0.01
v/s Ratio Perm				c0.07		0.07	0.02		0.06	0.36		0.05
v/c Ratio	0.51	0.18		0.79	0.15	0.61	0.04	0.64	0.10	0.59	0.55	0.07
Uniform Delay, d1	49.1	46.7		43.9	46.6	37.1	7.3	15.7	7.3	14.7	9.8	4.1
Progression Factor	1.00	1.00		1.00	1.00	1.00	0.87	0.71	0.56	0.83	0.82	1.66
Incremental Delay, d2	1.8	0.6		15.6	0.4	2.6	0.0	1.4	0.0	1.8	0.7	0.0
Delay (s)	50.9	47.3		59.5	47.1	39.7	6.5	12.5	4.1	14.1	8.8	6.8
Level of Service	D	D		E	D	D	A	B	A	B	A	A
Approach Delay (s)		50.0			47.6			11.6			9.4	
Approach LOS		D			D			B			A	

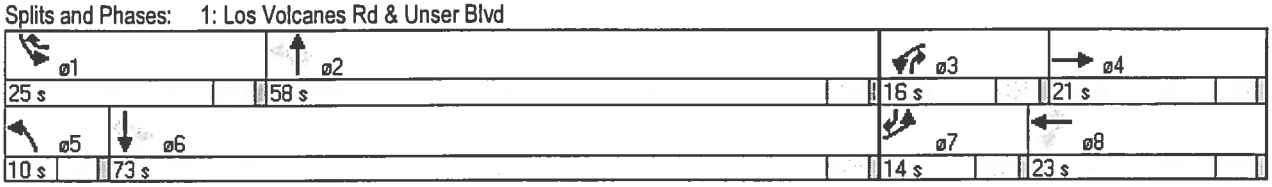
Intersection Summary			
HCM Average Control Delay	17.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	71.7%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Volume (vph)	136	38	180	40	269	36	1171	137	223	1163	115
Turn Type	Prot		pm+pt		pm+ov	pm+pt		pm+ov	pm+pt		pm+ov
Protected Phases	7	4	3	8	1	5	2	3	1	6	7
Permitted Phases			8		8	2		2	6		6
Detector Phase	7	4	3	8	1	5	2	3	1	6	7
Switch Phase											
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	21.0	10.0	21.0	10.0	10.0	21.0	10.0	10.0	21.0	10.0
Total Split (s)	14.0	21.0	16.0	23.0	25.0	10.0	58.0	16.0	25.0	73.0	14.0
Total Split (%)	11.7%	17.5%	13.3%	19.2%	20.8%	8.3%	48.3%	13.3%	20.8%	60.8%	11.7%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?											
Recall Mode	Min	Min	Min	Min	Min	Min	C-Max	Min	Min	C-Max	Min
Act Effct Green (s)	10.7	11.4	26.6	13.6	35.0	73.5	65.2	81.2	86.6	75.4	89.1
Actuated g/C Ratio	0.09	0.10	0.22	0.11	0.29	0.61	0.54	0.68	0.72	0.63	0.74
v/c Ratio	0.50	0.47	0.69	0.20	0.59	0.13	0.68	0.14	0.63	0.57	0.10
Control Delay	58.1	36.8	53.1	49.4	35.3	6.2	16.5	1.6	22.0	14.3	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	58.1	36.8	53.1	49.4	35.3	6.2	16.5	1.6	22.0	14.3	0.4
LOS	E	D	D	D	D	A	B	A	C	B	A
Approach Delay		50.0		43.0			14.7			14.4	
Approach LOS		D		D			B			B	

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 33 (28%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 75
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.69
Intersection Signal Delay: 20.6 — Intersection LOS: C
Intersection Capacity Utilization 71.4% — ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 1: Los Volcanes Rd & Unser Blvd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	136	38	46	180	40	269	36	1171	137	223	1163	115
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	0.97	1.00		1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	0.92		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3400	1693		1752	1845	1568	1752	3505	1568	1752	3505	1568
Flt Permitted	0.95	1.00		0.42	1.00	1.00	0.18	1.00	1.00	0.11	1.00	1.00
Satd. Flow (perm)	3400	1693		782	1845	1568	325	3505	1568	204	3505	1568
Peak-hour factor, PHF	0.89	0.89	0.89	0.94	0.94	0.94	0.91	0.91	0.91	0.92	0.92	0.92
Adj. Flow (vph)	153	43	52	191	43	286	40	1287	151	242	1264	125
RTOR Reduction (vph)	0	39	0	0	0	28	0	0	40	0	0	35
Lane Group Flow (vph)	153	56	0	191	43	258	40	1287	111	242	1264	90
Turn Type	Prot			pm+pt		pm+ov	pm+pt		pm+ov	pm+pt		pm+ov
Protected Phases	7	4		3	8	1	5	2	3	1	6	7
Permitted Phases				8		8	2		2	6		6
Actuated Green, G (s)	8.7	9.4		22.7	11.7	28.1	69.4	63.2	74.2	84.6	73.4	82.1
Effective Green, g (s)	10.7	11.4		26.7	13.7	32.1	73.4	65.2	78.2	86.6	75.4	86.1
Actuated g/C Ratio	0.09	0.10		0.22	0.11	0.27	0.61	0.54	0.65	0.72	0.63	0.72
Clearance Time (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	303	161		279	211	459	296	1904	1061	385	2202	1164
v/s Ratio Prot	0.05	0.03		c0.07	0.02	c0.09	0.01	c0.37	0.01	c0.10	0.36	0.01
v/s Ratio Perm				c0.08		0.08	0.07		0.06	0.36		0.05
v/c Ratio	0.50	0.35		0.68	0.20	0.56	0.14	0.68	0.10	0.63	0.57	0.08
Uniform Delay, d1	52.1	50.8		40.8	48.2	37.9	10.0	19.8	7.8	19.8	13.0	5.1
Progression Factor	1.00	1.00		1.00	1.00	1.00	0.78	0.68	0.47	1.10	0.98	0.30
Incremental Delay, d2	1.3	1.3		6.8	0.5	1.6	0.2	1.7	0.0	2.6	0.9	0.0
Delay (s)	53.4	52.1		47.6	48.7	39.5	8.0	15.3	3.7	24.4	13.6	1.5
Level of Service	D	D		D	D	D	A	B	A	C	B	A
Approach Delay (s)		52.9			43.2			13.9			14.3	
Approach LOS		D			D			B			B	

Intersection Summary			
HCM Average Control Delay	20.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	71.4%	ICU Level of Service	C
Analysis Period (min)	15		

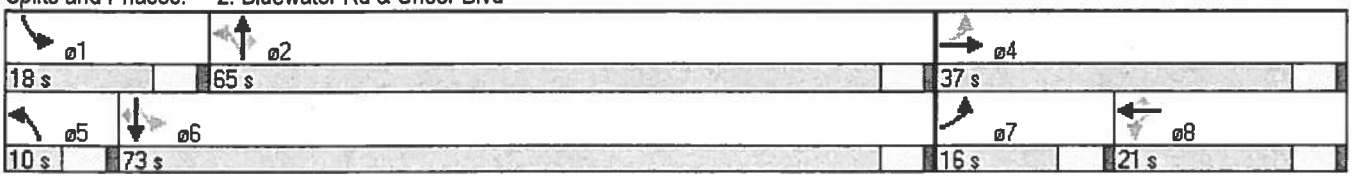
c Critical Lane Group

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Volume (vph)	184	81	48	49	55	75	1359	94	161	809	106
Turn Type	pm+pt		Perm		Perm	pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		8		5	2		1	6	
Permitted Phases	4		8		8	2		2	6		6
Detector Phase	7	4	8	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	21.0	21.0	21.0	21.0	10.0	21.0	21.0	10.0	21.0	21.0
Total Split (s)	16.0	37.0	21.0	21.0	21.0	10.0	65.0	65.0	18.0	73.0	73.0
Total Split (%)	13.3%	30.8%	17.5%	17.5%	17.5%	8.3%	54.2%	54.2%	15.0%	60.8%	60.8%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lead/Lag	Lead		Lag	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?											
Recall Mode	Min	Min	Min	Min	Min	Min	C-Max	C-Max	Min	C-Max	C-Max
Act Effct Green (s)	29.6	29.6	13.6	13.6	13.6	75.8	67.5	67.5	84.1	73.1	73.1
Actuated g/C Ratio	0.25	0.25	0.11	0.11	0.11	0.63	0.56	0.56	0.70	0.61	0.61
v/c Ratio	0.68	0.44	0.48	0.31	0.30	0.21	0.75	0.11	0.66	0.45	0.12
Control Delay	49.6	32.1	61.1	51.5	13.7	7.9	23.4	7.9	26.4	12.3	3.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.6	32.1	61.1	51.5	13.7	7.9	23.4	7.9	26.4	12.3	3.2
LOS	D	C	E	D	B	A	C	A	C	B	A
Approach Delay		41.4		40.9			21.7			13.5	
Approach LOS		D		D			C			B	

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 6 (5%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.75
Intersection Signal Delay: 22.2 Intersection LOS: C
Intersection Capacity Utilization 74.2% ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 2: Bluewater Rd & Unser Blvd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	184	81	84	48	49	55	75	1359	94	161	809	106
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	0.92		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1752	1704		1752	1845	1568	1752	3505	1568	1752	3505	1568
Flt Permitted	0.54	1.00		0.63	1.00	1.00	0.26	1.00	1.00	0.08	1.00	1.00
Satd. Flow (perm)	1002	1704		1167	1845	1568	477	3505	1568	142	3505	1568
Peak-hour factor, PHF	0.83	0.83	0.83	0.75	0.75	0.75	0.92	0.92	0.92	0.85	0.85	0.85
Adj. Flow (vph)	222	98	101	64	65	73	82	1477	102	189	952	125
RTOR Reduction (vph)	0	32	0	0	0	65	0	0	21	0	0	49
Lane Group Flow (vph)	222	167	0	64	65	8	82	1477	81	189	952	76
Turn Type	pm+pt			Perm		Perm	pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8		8	2		2	6		6
Actuated Green, G (s)	27.6	27.6		11.6	11.6	11.6	71.8	65.5	65.5	82.4	71.1	71.1
Effective Green, g (s)	29.6	29.6		13.6	13.6	13.6	75.8	67.5	67.5	84.4	73.1	73.1
Actuated g/C Ratio	0.25	0.25		0.11	0.11	0.11	0.63	0.56	0.56	0.70	0.61	0.61
Clearance Time (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	328	420		132	209	178	389	1972	882	286	2135	955
v/s Ratio Prot	c0.07	0.10			0.04		0.01	c0.42		c0.08	0.27	
v/s Ratio Perm	c0.09			0.05		0.01	0.12		0.05	0.39		0.05
v/c Ratio	0.68	0.40		0.48	0.31	0.05	0.21	0.75	0.09	0.66	0.45	0.08
Uniform Delay, d1	39.1	37.7		49.9	48.9	47.4	9.0	19.8	12.1	25.9	12.6	9.6
Progression Factor	1.00	1.00		1.00	1.00	1.00	0.98	0.97	0.97	1.01	0.91	1.56
Incremental Delay, d2	5.5	0.6		2.8	0.9	0.1	0.3	2.7	0.2	3.1	0.4	0.1
Delay (s)	44.6	38.4		52.7	49.7	47.5	9.1	21.9	12.0	29.3	11.8	15.1
Level of Service	D	D		D	D	D	A	C	B	C	B	B
Approach Delay (s)		41.6			49.9			20.7			14.7	
Approach LOS		D			D			C			B	

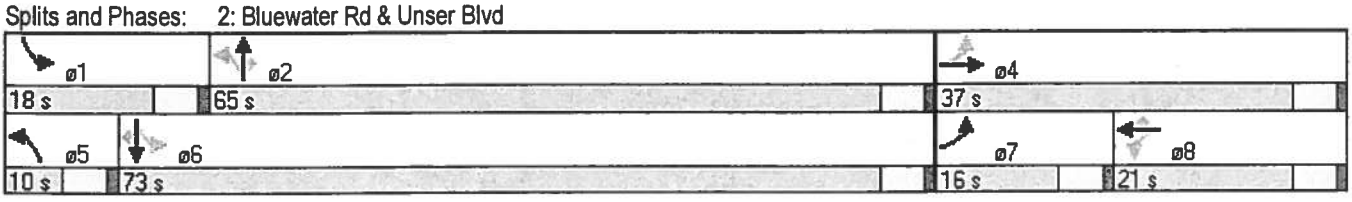
Intersection Summary			
HCM Average Control Delay	22.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	74.2%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Volume (vph)	184	81	48	49	70	75	1408	94	176	858	106
Turn Type	pm+pt		Perm		Perm	pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		8		5	2		1	6	
Permitted Phases	4		8		8	2		2	6		6
Detector Phase	7	4	8	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	21.0	21.0	21.0	21.0	10.0	21.0	21.0	10.0	21.0	21.0
Total Split (s)	16.0	37.0	21.0	21.0	21.0	10.0	65.0	65.0	18.0	73.0	73.0
Total Split (%)	13.3%	30.8%	17.5%	17.5%	17.5%	8.3%	54.2%	54.2%	15.0%	60.8%	60.8%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lead/Lag	Lead		Lag	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?											
Recall Mode	Min	Min	Min	Min	Min	Min	C-Max	C-Max	Min	C-Max	C-Max
Act Effct Green (s)	29.6	29.6	13.6	13.6	13.6	74.9	66.6	66.6	84.3	73.1	73.1
Actuated g/C Ratio	0.25	0.25	0.11	0.11	0.11	0.62	0.56	0.56	0.70	0.61	0.61
v/c Ratio	0.68	0.44	0.48	0.31	0.36	0.22	0.79	0.11	0.73	0.47	0.12
Control Delay	49.6	32.1	61.1	51.5	13.2	8.1	25.2	8.3	34.7	12.6	3.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.6	32.1	61.1	51.5	13.2	8.1	25.2	8.3	34.7	12.6	3.1
LOS	D	C	E	D	B	A	C	A	C	B	A
Approach Delay		41.4		38.2			23.4			15.1	
Approach LOS		D		D			C			B	

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 6 (5%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.79
Intersection Signal Delay: 23.3 — Intersection LOS: C
Intersection Capacity Utilization 76.4% — ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 2: Bluewater Rd & Unser Blvd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	184	81	84	48	49	70	75	1408	94	176	858	106
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	0.92		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1752	1704		1752	1845	1568	1752	3505	1568	1752	3505	1568
Flt Permitted	0.54	1.00		0.63	1.00	1.00	0.24	1.00	1.00	0.06	1.00	1.00
Satd. Flow (perm)	1002	1704		1167	1845	1568	444	3505	1568	118	3505	1568
Peak-hour factor, PHF	0.83	0.83	0.83	0.75	0.75	0.75	0.92	0.92	0.92	0.85	0.85	0.85
Adj. Flow (vph)	222	98	101	64	65	93	82	1530	102	207	1009	125
RTOR Reduction (vph)	0	32	0	0	0	82	0	0	21	0	0	47
Lane Group Flow (vph)	222	167	0	64	65	11	82	1530	81	207	1009	78
Turn Type	pm+pt			Perm		Perm	pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8		8	2		2	6		6
Actuated Green, G (s)	27.6	27.6		11.6	11.6	11.6	70.9	64.6	64.6	82.4	71.1	71.1
Effective Green, g (s)	29.6	29.6		13.6	13.6	13.6	74.9	66.6	66.6	84.4	73.1	73.1
Actuated g/C Ratio	0.25	0.25		0.11	0.11	0.11	0.62	0.55	0.55	0.70	0.61	0.61
Clearance Time (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	328	420		132	209	178	368	1945	870	285	2135	955
v/s Ratio Prot	c0.07	0.10			0.04		0.02	c0.44		c0.09	0.29	
v/s Ratio Perm	c0.09			0.05		0.01	0.12		0.05	0.42		0.05
v/c Ratio	0.68	0.40		0.48	0.31	0.06	0.22	0.79	0.09	0.73	0.47	0.08
Uniform Delay, d1	39.1	37.7		49.9	48.9	47.5	9.4	21.1	12.5	32.5	12.9	9.6
Progression Factor	1.00	1.00		1.00	1.00	1.00	0.98	0.97	0.98	0.99	0.91	1.33
Incremental Delay, d2	5.5	0.6		2.8	0.9	0.1	0.3	3.3	0.2	5.1	0.4	0.1
Delay (s)	44.6	38.4		52.7	49.7	47.6	9.5	23.8	12.5	37.2	12.1	12.9
Level of Service	D	D		D	D	D	A	C	B	D	B	B
Approach Delay (s)		41.6			49.7			22.4			16.0	
Approach LOS		D			D			C			B	

Intersection Summary			
HCM Average Control Delay	23.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	76.4%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Volume (vph)	109	58	96	94	194	70	1050	31	87	1217	130
Turn Type	pm+pt		Perm		Perm	pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		8		5	2		1	6	
Permitted Phases	4		8		8	2		2	6		6
Detector Phase	7	4	8	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	21.0	21.0	21.0	21.0	10.0	21.0	21.0	10.0	21.0	21.0
Total Split (s)	10.0	31.0	21.0	21.0	21.0	10.0	60.0	60.0	19.0	69.0	69.0
Total Split (%)	9.1%	28.2%	19.1%	19.1%	19.1%	9.1%	54.5%	54.5%	17.3%	62.7%	62.7%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lead/Lag	Lead		Lag	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?											
Recall Mode	Min	Min	Min	Min	Min	Min	C-Max	C-Max	Min	C-Max	C-Max
Act Effct Green (s)	25.2	25.2	15.2	15.2	15.2	74.2	66.5	66.5	77.3	68.1	68.1
Actuated g/C Ratio	0.23	0.23	0.14	0.14	0.14	0.67	0.60	0.60	0.70	0.62	0.62
v/c Ratio	0.54	0.36	0.60	0.39	0.52	0.27	0.52	0.03	0.26	0.61	0.14
Control Delay	43.3	26.1	59.2	46.9	10.8	7.7	13.8	5.2	6.9	14.1	3.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.3	26.1	59.2	46.9	10.8	7.7	13.8	5.2	6.9	14.1	3.6
LOS	D	C	E	D	B	A	B	A	A	B	A
Approach Delay		34.3		31.8			13.2			12.7	
Approach LOS		C		C			B			B	

Intersection Summary

Cycle Length: 110
Actuated Cycle Length: 110
Offset: 36 (33%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 70
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.61
Intersection Signal Delay: 16.9 — Intersection LOS: B
Intersection Capacity Utilization 63.4% — ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 2: Bluewater Rd & Unser Blvd

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	109	58	63	96	94	194	70	1050	31	87	1217	130
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	0.92		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1752	1700		1752	1845	1568	1752	3505	1568	1752	3505	1568
Flt Permitted	0.48	1.00		0.66	1.00	1.00	0.14	1.00	1.00	0.18	1.00	1.00
Satd. Flow (perm)	891	1700		1215	1845	1568	257	3505	1568	341	3505	1568
Peak-hour factor, PHF	0.78	0.78	0.78	0.95	0.95	0.95	0.95	0.95	0.95	0.92	0.92	0.92
Adj. Flow (vph)	140	74	81	101	99	204	74	1105	33	95	1323	141
RTOR Reduction (vph)	0	37	0	0	0	176	0	0	9	0	0	44
Lane Group Flow (vph)	140	118	0	101	99	28	74	1105	24	95	1323	97
Turn Type	pm+pt			Perm		Perm	pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8		8	2		2	6		6
Actuated Green, G (s)	23.2	23.2		13.2	13.2	13.2	70.2	64.5	64.5	73.4	66.1	66.1
Effective Green, g (s)	25.2	25.2		15.2	15.2	15.2	74.2	66.5	66.5	77.4	68.1	68.1
Actuated g/C Ratio	0.23	0.23		0.14	0.14	0.14	0.67	0.60	0.60	0.70	0.62	0.62
Clearance Time (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	259	389		168	255	217	278	2119	948	359	2170	971
v/s Ratio Prot	c0.03	0.07			0.05		0.02	0.32		c0.02	c0.38	
v/s Ratio Perm	c0.09			0.08		0.02	0.16		0.02	0.16		0.06
v/c Ratio	0.54	0.30		0.60	0.39	0.13	0.27	0.52	0.03	0.26	0.61	0.10
Uniform Delay, d1	35.9	35.1		44.6	43.2	41.6	8.8	12.6	8.7	7.2	12.8	8.5
Progression Factor	1.00	1.00		1.00	1.00	1.00	0.97	0.97	0.95	1.02	0.97	1.27
Incremental Delay, d2	2.3	0.4		5.9	1.0	0.3	0.5	0.9	0.0	0.3	1.1	0.2
Delay (s)	38.2	35.6		50.5	44.1	41.9	9.0	13.0	8.4	7.7	13.5	11.0
Level of Service	D	D		D	D	D	A	B	A	A	B	B
Approach Delay (s)		36.8			44.6			12.7			12.9	
Approach LOS		D			D			B			B	

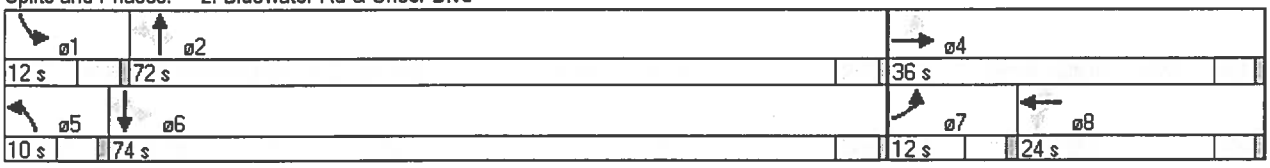
Intersection Summary			
HCM Average Control Delay	18.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	63.4%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Volume (vph)	109	58	96	94	210	70	1101	31	103	1268	130
Turn Type	pm+pt		Perm		Perm	pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		8		5	2		1	6	
Permitted Phases	4		8		8	2		2	6		6
Detector Phase	7	4	8	8	8	5	2	2	1	6	6
Switch Phase											
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	21.0	21.0	21.0	21.0	10.0	21.0	21.0	10.0	21.0	21.0
Total Split (s)	12.0	36.0	24.0	24.0	24.0	10.0	72.0	72.0	12.0	74.0	74.0
Total Split (%)	10.0%	30.0%	20.0%	20.0%	20.0%	8.3%	60.0%	60.0%	10.0%	61.7%	61.7%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lead/Lag	Lead		Lag	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?											
Recall Mode	Min	Min	Min	Min	Min	Min	C-Max	C-Max	Min	C-Max	C-Max
Act Effct Green (s)	28.6	28.6	16.6	16.6	16.6	81.2	73.2	73.2	83.6	74.4	74.4
Actuated g/C Ratio	0.24	0.24	0.14	0.14	0.14	0.68	0.61	0.61	0.70	0.62	0.62
v/c Ratio	0.51	0.35	0.60	0.39	0.61	0.29	0.54	0.03	0.34	0.63	0.14
Control Delay	43.8	28.0	62.8	50.4	20.8	8.7	15.0	5.4	8.8	14.6	5.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.8	28.0	62.8	50.4	20.8	8.7	15.0	5.4	8.8	14.6	5.0
LOS	D	C	E	D	C	A	B	A	A	B	A
Approach Delay		35.5		37.8			14.4			13.4	
Approach LOS		D		D			B			B	

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 9 (8%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 75
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.63
Intersection Signal Delay: 18.4
Intersection LOS: B
Intersection Capacity Utilization 64.8%
ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 2: Bluewater Rd & Unser Blvd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	109	58	63	96	94	210	70	1101	31	103	1268	130
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	0.92		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1752	1700		1752	1845	1568	1752	3505	1568	1752	3505	1568
Flt Permitted	0.48	1.00		0.66	1.00	1.00	0.12	1.00	1.00	0.17	1.00	1.00
Satd. Flow (perm)	886	1700		1215	1845	1568	231	3505	1568	317	3505	1568
Peak-hour factor, PHF	0.78	0.78	0.78	0.95	0.95	0.95	0.95	0.95	0.95	0.92	0.92	0.92
Adj. Flow (vph)	140	74	81	101	99	221	74	1159	33	112	1378	141
RTOR Reduction (vph)	0	34	0	0	0	144	0	0	9	0	0	38
Lane Group Flow (vph)	140	121	0	101	99	77	74	1159	24	112	1378	103
Turn Type	pm+pt			Perm		Perm	pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4			8		5	2		1	6	
Permitted Phases	4			8		8	2		2	6		6
Actuated Green, G (s)	26.6	26.6		14.6	14.6	14.6	77.2	71.2	71.2	79.6	72.4	72.4
Effective Green, g (s)	28.6	28.6		16.6	16.6	16.6	81.2	73.2	73.2	83.6	74.4	74.4
Actuated g/C Ratio	0.24	0.24		0.14	0.14	0.14	0.68	0.61	0.61	0.70	0.62	0.62
Clearance Time (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	276	405		168	255	217	258	2138	956	331	2173	972
v/s Ratio Prot	c0.04	0.07			0.05		0.02	0.33		c0.03	c0.39	
v/s Ratio Perm	0.08			c0.08		0.05	0.18		0.02	0.21		0.07
v/c Ratio	0.51	0.30		0.60	0.39	0.36	0.29	0.54	0.03	0.34	0.63	0.11
Uniform Delay, d1	38.0	37.5		48.6	47.1	46.9	10.2	13.6	9.3	8.6	14.3	9.3
Progression Factor	1.00	1.00		1.00	1.00	1.00	0.97	0.97	0.96	1.07	0.88	1.30
Incremental Delay, d2	1.5	0.4		5.9	1.0	1.0	0.6	1.0	0.0	0.5	1.2	0.2
Delay (s)	39.5	37.9		54.5	48.1	47.9	10.6	14.2	8.9	9.8	13.9	12.2
Level of Service	D	D		D	D	D	B	B	A	A	B	B
Approach Delay (s)		38.6			49.5			13.8			13.4	
Approach LOS		D			D			B			B	

Intersection Summary			
HCM Average Control Delay	19.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	64.8%	ICU Level of Service	C
Analysis Period (min)	15		

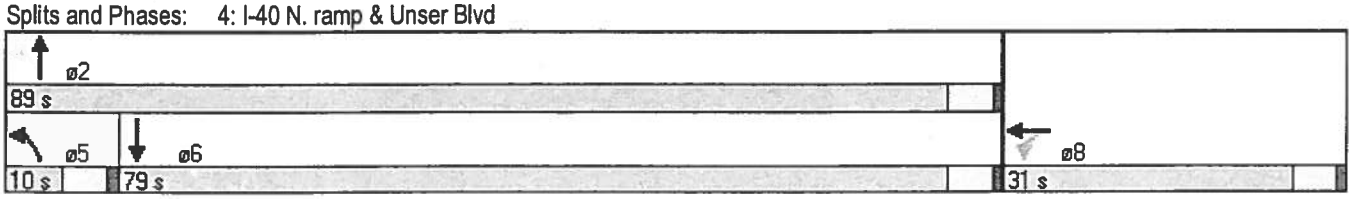
c Critical Lane Group

Lane Group	WBL	WBT	NBL	NBT	SBT
Lane Configurations					
Volume (vph)	391	1	36	659	2341
Turn Type	Perm		pm+pt		
Protected Phases		8	5	2	6
Permitted Phases	8		2		
Detector Phase	8	8	5	2	6
Switch Phase					
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	21.0	21.0	10.0	21.0	21.0
Total Split (s)	31.0	31.0	10.0	89.0	79.0
Total Split (%)	25.8%	25.8%	8.3%	74.2%	65.8%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0
Lead/Lag			Lead		Lag
Lead-Lag Optimize?					
Recall Mode	Min	Min	Min	C-Max	C-Max
Act Effct Green (s)	23.0	23.0	91.0	91.0	80.3
Actuated g/C Ratio	0.19	0.19	0.76	0.76	0.67
v/c Ratio	0.71	0.72	0.24	0.29	0.73
Control Delay	57.7	57.9	8.0	3.1	8.4
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	57.7	57.9	8.0	3.1	8.4
LOS	E	E	A	A	A
Approach Delay		57.8		3.3	8.4
Approach LOS		E		A	A

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 64 (53%), Referenced to phase 2:NBTL and 6:SBT, Start of Green
Natural Cycle: 70
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.73
Intersection Signal Delay: 13.3 — Intersection LOS: B
Intersection Capacity Utilization 74.4% — ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 4: I-40 N. ramp & Unser Blvd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	391	1	0	36	659	0	0	2341	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				3.0	3.0		3.0	3.0			3.0	
Lane Util. Factor				0.95	0.95		1.00	0.95			0.91	
Frt				1.00	1.00		1.00	1.00			1.00	
Flt Protected				0.95	0.95		0.95	1.00			1.00	
Satd. Flow (prot)				1665	1669		1752	3505			5036	
Flt Permitted				0.95	0.95		0.05	1.00			1.00	
Satd. Flow (perm)				1665	1669		89	3505			5036	
Peak-hour factor, PHF	0.85	0.85	0.85	0.86	0.86	0.86	0.85	0.85	0.85	0.95	0.95	0.95
Adj. Flow (vph)	0	0	0	455	1	0	42	775	0	0	2464	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	227	229	0	42	775	0	0	2464	0
Turn Type				Perm		Free	pm+pt					
Protected Phases					8		5	2			6	
Permitted Phases				8		Free	2					
Actuated Green, G (s)				21.0	21.0		89.0	89.0			78.2	
Effective Green, g (s)				23.0	23.0		91.0	91.0			80.2	
Actuated g/C Ratio				0.19	0.19		0.76	0.76			0.67	
Clearance Time (s)				5.0	5.0		5.0	5.0			5.0	
Vehicle Extension (s)				3.0	3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)				319	320		176	2658			3366	
v/s Ratio Prot							0.02	c0.22			c0.49	
v/s Ratio Perm				0.14	0.14		0.17					
v/c Ratio				0.71	0.72		0.24	0.29			0.73	
Uniform Delay, d1				45.4	45.4		12.4	4.5			12.9	
Progression Factor				1.00	1.00		1.36	0.59			0.60	
Incremental Delay, d2				7.3	7.4		0.4	0.2			0.1	
Delay (s)				52.7	52.8		17.3	2.8			7.9	
Level of Service				D	D		B	A			A	
Approach Delay (s)		0.0			52.8			3.6			7.9	
Approach LOS		A			D			A			A	

Intersection Summary				
HCM Average Control Delay	12.4	HCM Level of Service	B	
HCM Volume to Capacity ratio	0.70			
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	9.0	
Intersection Capacity Utilization	74.4%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				

Lane Group	WBL	WBT	NBL	NBT	SBT
Lane Configurations					
Volume (vph)	391	1	36	659	2341
Turn Type	Perm		pm+pt		
Protected Phases		8	5	2	6
Permitted Phases	8		2		
Detector Phase	8	8	5	2	6
Switch Phase					
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	21.0	21.0	10.0	21.0	21.0
Total Split (s)	31.0	31.0	10.0	89.0	79.0
Total Split (%)	25.8%	25.8%	8.3%	74.2%	65.8%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0
Lead/Lag			Lead		Lag
Lead-Lag Optimize?					
Recall Mode	Min	Min	Min	C-Max	C-Max
Act Effct Green (s)	23.0	23.0	91.0	91.0	80.3
Actuated g/C Ratio	0.19	0.19	0.76	0.76	0.67
v/c Ratio	0.71	0.72	0.24	0.29	0.73
Control Delay	57.7	57.9	8.0	3.0	8.4
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	57.7	57.9	8.0	3.0	8.4
LOS	E	E	A	A	A
Approach Delay		57.8		3.3	8.4
Approach LOS		E		A	A

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 64 (53%), Referenced to phase 2:NBTL and 6:SBT, Start of Green
Natural Cycle: 70
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.73
Intersection Signal Delay: 13.3 — Intersection LOS: B
Intersection Capacity Utilization 74.4% — ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 4: I-40 N. ramp & Unser Blvd

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	391	1	0	36	659	0	0	2341	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				3.0	3.0		3.0	3.0			3.0	
Lane Util. Factor				0.95	0.95		1.00	0.95			0.91	
Frt				1.00	1.00		1.00	1.00			1.00	
Flt Protected				0.95	0.95		0.95	1.00			1.00	
Satd. Flow (prot)				1665	1669		1752	3505			5036	
Flt Permitted				0.95	0.95		0.05	1.00			1.00	
Satd. Flow (perm)				1665	1669		89	3505			5036	
Peak-hour factor, PHF	0.85	0.85	0.85	0.86	0.86	0.86	0.85	0.85	0.85	0.95	0.95	0.95
Adj. Flow (vph)	0	0	0	455	1	0	42	775	0	0	2464	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	227	229	0	42	775	0	0	2464	0
Turn Type				Perm		Free	pm+pt					
Protected Phases					8		5	2			6	
Permitted Phases				8		Free	2					
Actuated Green, G (s)				21.0	21.0		89.0	89.0			78.2	
Effective Green, g (s)				23.0	23.0		91.0	91.0			80.2	
Actuated g/C Ratio				0.19	0.19		0.76	0.76			0.67	
Clearance Time (s)				5.0	5.0		5.0	5.0			5.0	
Vehicle Extension (s)				3.0	3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)				319	320		176	2658			3366	
v/s Ratio Prot							0.02	c0.22			c0.49	
v/s Ratio Perm				0.14	0.14		0.17					
v/c Ratio				0.71	0.72		0.24	0.29			0.73	
Uniform Delay, d1				45.4	45.4		12.4	4.5			12.9	
Progression Factor				1.00	1.00		1.36	0.59			0.60	
Incremental Delay, d2				7.3	7.4		0.4	0.2			0.1	
Delay (s)				52.7	52.8		17.4	2.8			7.9	
Level of Service				D	D		B	A			A	
Approach Delay (s)		0.0			52.8			3.6			7.9	
Approach LOS		A			D			A			A	

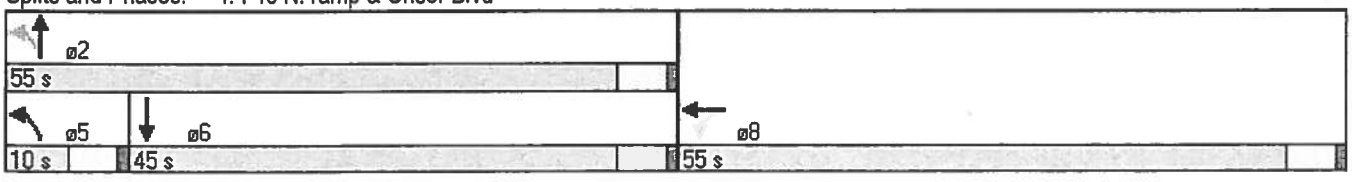
Intersection Summary				
HCM Average Control Delay	12.4	HCM Level of Service	B	
HCM Volume to Capacity ratio	0.70			
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	9.0	
Intersection Capacity Utilization	74.4%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				

Lane Group	WBL	WBT	NBL	NBT	SBT
Lane Configurations					
Volume (vph)	958	3	26	1034	1049
Turn Type	Perm		pm+pt		
Protected Phases		8	5	2	6
Permitted Phases	8		2		
Detector Phase	8	8	5	2	6
Switch Phase					
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	21.0	21.0	10.0	21.0	21.0
Total Split (s)	55.0	55.0	10.0	55.0	45.0
Total Split (%)	50.0%	50.0%	9.1%	50.0%	40.9%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0
Lead/Lag			Lead		Lag
Lead-Lag Optimize?					
Recall Mode	Min	Min	Min	C-Max	C-Max
Act Effct Green (s)	45.7	45.7	58.3	58.3	47.6
Actuated g/C Ratio	0.42	0.42	0.53	0.53	0.43
v/c Ratio	0.81	0.82	0.14	0.70	0.57
Control Delay	38.0	38.4	10.0	16.0	28.7
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	38.0	38.4	10.0	16.0	28.7
LOS	D	D	A	B	C
Approach Delay		38.2		15.8	28.7
Approach LOS		D		B	C

Intersection Summary

Cycle Length: 110
Actuated Cycle Length: 110
Offset: 41 (37%), Referenced to phase 2:NBTL and 6:SBT, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.82
Intersection Signal Delay: 27.0 — Intersection LOS: C
Intersection Capacity Utilization 132.4% — ICU Level of Service H
Analysis Period (min) 15

Splits and Phases: 4: I-40 N. ramp & Unser Blvd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	958	3	0	26	1034	0	0	1049	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				3.0	3.0		3.0	3.0			3.0	
Lane Util. Factor				0.95	0.95		1.00	0.95			0.91	
Frt				1.00	1.00		1.00	1.00			1.00	
Flt Protected				0.95	0.95		0.95	1.00			1.00	
Satd. Flow (prot)				1665	1670		1752	3505			5036	
Flt Permitted				0.95	0.95		0.13	1.00			1.00	
Satd. Flow (perm)				1665	1670		232	3505			5036	
Peak-hour factor, PHF	0.85	0.85	0.85	0.85	0.85	0.95	0.80	0.80	0.80	0.85	0.85	0.85
Adj. Flow (vph)	0	0	0	1127	4	0	32	1292	0	0	1234	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	563	568	0	32	1292	0	0	1234	0
Turn Type				Perm		Free	pm+pt					
Protected Phases					8		5	2			6	
Permitted Phases				8		Free	2					
Actuated Green, G (s)				43.7	43.7		56.3	56.3			45.6	
Effective Green, g (s)				45.7	45.7		58.3	58.3			47.6	
Actuated g/C Ratio				0.42	0.42		0.53	0.53			0.43	
Clearance Time (s)				5.0	5.0		5.0	5.0			5.0	
Vehicle Extension (s)				3.0	3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)				692	694		229	1858			2179	
v/s Ratio Prot							0.01	c0.37			0.25	
v/s Ratio Perm				0.34	0.34		0.06					
v/c Ratio				0.81	0.82		0.14	0.70			0.57	
Uniform Delay, d1				28.4	28.5		14.5	19.2			23.4	
Progression Factor				1.00	1.00		0.60	0.68			1.16	
Incremental Delay, d2				7.3	7.5		0.2	1.8			0.1	
Delay (s)				35.7	35.9		9.0	14.9			27.3	
Level of Service				D	D		A	B			C	
Approach Delay (s)		0.0			35.8			14.7			27.3	
Approach LOS		A			D			B			C	

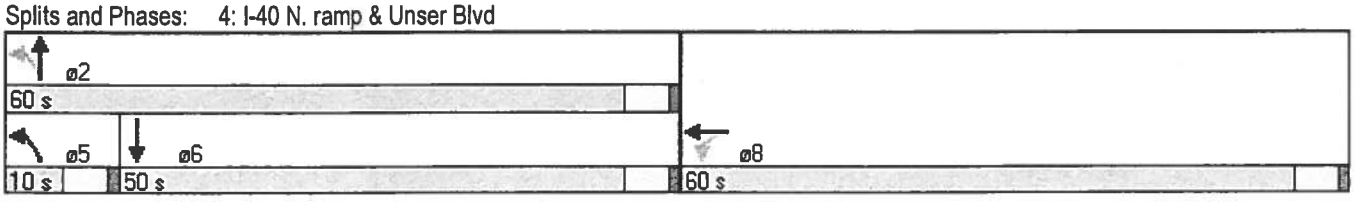
Intersection Summary			
HCM Average Control Delay	25.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	132.4%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	WBL	WBT	NBL	NBT	SBT
Lane Configurations					
Volume (vph)	958	3	26	1034	1049
Turn Type	Perm		pm+pt		
Protected Phases		8	5	2	6
Permitted Phases	8		2		
Detector Phase	8	8	5	2	6
Switch Phase					
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	21.0	21.0	10.0	21.0	21.0
Total Split (s)	60.0	60.0	10.0	60.0	50.0
Total Split (%)	50.0%	50.0%	8.3%	50.0%	41.7%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	3.0	3.0	3.0	3.0	3.0
Lead/Lag			Lead		Lag
Lead-Lag Optimize?					
Recall Mode	Min	Min	Min	C-Max	C-Max
Act Effct Green (s)	49.7	49.7	64.3	64.3	53.4
Actuated g/C Ratio	0.41	0.41	0.54	0.54	0.44
v/c Ratio	0.82	0.82	0.14	0.69	0.55
Control Delay	41.0	41.3	15.7	17.7	27.1
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	41.0	41.3	15.7	17.7	27.1
LOS	D	D	B	B	C
Approach Delay		41.1		17.6	27.1
Approach LOS		D		B	C

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 108 (90%), Referenced to phase 2:NBTL and 6:SBT, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.82
Intersection Signal Delay: 28.0 — Intersection LOS: C
Intersection Capacity Utilization 132.4% — ICU Level of Service H
Analysis Period (min) 15

Splits and Phases: 4: I-40 N. ramp & Unser Blvd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	958	3	0	26	1034	0	0	1049	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				3.0	3.0		3.0	3.0			3.0	
Lane Util. Factor				0.95	0.95		1.00	0.95			0.91	
Frt				1.00	1.00		1.00	1.00			1.00	
Flt Protected				0.95	0.95		0.95	1.00			1.00	
Satd. Flow (prot)				1665	1670		1752	3505			5036	
Flt Permitted				0.95	0.95		0.13	1.00			1.00	
Satd. Flow (perm)				1665	1670		239	3505			5036	
Peak-hour factor, PHF	0.85	0.85	0.85	0.85	0.85	0.95	0.80	0.80	0.80	0.85	0.85	0.85
Adj. Flow (vph)	0	0	0	1127	4	0	32	1292	0	0	1234	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	563	568	0	32	1292	0	0	1234	0
Turn Type				Perm		Free	pm+pt					
Protected Phases					8		5	2			6	
Permitted Phases				8		Free	2					
Actuated Green, G (s)				47.7	47.7		62.3	62.3			51.4	
Effective Green, g (s)				49.7	49.7		64.3	64.3			53.4	
Actuated g/C Ratio				0.41	0.41		0.54	0.54			0.44	
Clearance Time (s)				5.0	5.0		5.0	5.0			5.0	
Vehicle Extension (s)				3.0	3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)				690	692		228	1878			2241	
v/s Ratio Prot							0.01	c0.37			0.25	
v/s Ratio Perm				0.34	0.34		0.07					
v/c Ratio				0.82	0.82		0.14	0.69			0.55	
Uniform Delay, d1				31.1	31.2		15.4	20.5			24.5	
Progression Factor				1.00	1.00		0.93	0.72			1.05	
Incremental Delay, d2				7.4	7.7		0.2	1.7			0.1	
Delay (s)				38.5	38.9		14.5	16.5			25.8	
Level of Service				D	D		B	B			C	
Approach Delay (s)		0.0			38.7			16.5			25.8	
Approach LOS		A			D			B			C	

Intersection Summary			
HCM Average Control Delay	26.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	132.4%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	89	0	43	0	0	0	0	689	0	0	2272	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.78	0.78	0.78	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	114	0	55	0	0	0	0	811	0	0	2673	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)			6									
Median type								Raised			Raised	
Median storage veh)								1			1	
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	3078	3484	1336	2147	3484	405	2673			811		
vC1, stage 1 conf vol	2673	2673		811	811							
vC2, stage 2 conf vol	405	811		1336	2673							
vCu, unblocked vol	3078	3484	1336	2147	3484	405	2673			811		
tC, single (s)	7.6	6.6	7.0	7.6	6.6	7.0	4.2			4.2		
tC, 2 stage (s)	6.6	5.6		6.6	5.6							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	0	100	61	100	100	100	100			100		
cM capacity (veh/h)	20	38	142	74	38	592	151			805		

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	169	405	405	1336	1336
Volume Left	114	0	0	0	0
Volume Right	55	0	0	0	0
cSH	28	1700	1700	1700	1700
Volume to Capacity	6.14	0.24	0.24	0.79	0.79
Queue Length 95th (ft)	Err	0	0	0	0
Control Delay (s)	Err	0.0	0.0	0.0	0.0
Lane LOS	F				
Approach Delay (s)	Err	0.0		0.0	
Approach LOS	F				

Intersection Summary				
Average Delay	463.2			
Intersection Capacity Utilization	74.4%	ICU Level of Service	D	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	89	0	43	0	0	0	0	689	0	0	2272	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.78	0.78	0.78	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	114	0	55	0	0	0	0	811	0	0	2673	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)			6									
Median type								Raised			Raised	
Median storage veh)								1			1	
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	3078	3484	1336	2147	3484	405	2673			811		
vC1, stage 1 conf vol	2673	2673		811	811							
vC2, stage 2 conf vol	405	811		1336	2673							
vCu, unblocked vol	3078	3484	1336	2147	3484	405	2673			811		
tC, single (s)	7.6	6.6	7.0	7.6	6.6	7.0	4.2			4.2		
tC, 2 stage (s)	6.6	5.6		6.6	5.6							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	0	100	61	100	100	100	100			100		
cM capacity (veh/h)	20	38	142	74	38	592	151			805		

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	169	405	405	1336	1336
Volume Left	114	0	0	0	0
Volume Right	55	0	0	0	0
cSH	28	1700	1700	1700	1700
Volume to Capacity	6.14	0.24	0.24	0.79	0.79
Queue Length 95th (ft)	Err	0	0	0	0
Control Delay (s)	Err	0.0	0.0	0.0	0.0
Lane LOS	F				
Approach Delay (s)	Err	0.0		0.0	
Approach LOS	F				

Intersection Summary				
Average Delay	463.2			
Intersection Capacity Utilization	74.4%	ICU Level of Service	D	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	134	0	52	0	0	0	0	1060	0	0	1547	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.86	0.86	0.86	0.85	0.85	0.85	0.80	0.80	0.80	0.94	0.94	0.94
Hourly flow rate (vph)	156	0	60	0	0	0	0	1325	0	0	1646	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)			6									
Median type								Raised			Raised	
Median storage veh)								1			1	
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	2308	2971	823	2148	2971	662	1646			1325		
vC1, stage 1 conf vol	1646	1646		1325	1325							
vC2, stage 2 conf vol	662	1325		823	1646							
vCu, unblocked vol	2308	2971	823	2148	2971	662	1646			1325		
tC, single (s)	7.6	6.6	7.0	7.6	6.6	7.0	4.2			4.2		
tC, 2 stage (s)	6.6	5.6		6.6	5.6							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	0	100	81	100	100	100	100			100		
cM capacity (veh/h)	81	89	315	102	89	402	384			512		

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	216	662	662	823	823
Volume Left	156	0	0	0	0
Volume Right	60	0	0	0	0
cSH	104	1700	1700	1700	1700
Volume to Capacity	2.08	0.39	0.39	0.48	0.48
Queue Length 95th (ft)	461	0	0	0	0
Control Delay (s)	583.6	0.0	0.0	0.0	0.0
Lane LOS	F				
Approach Delay (s)	583.6	0.0		0.0	
Approach LOS	F				

Intersection Summary				
Average Delay	39.6			
Intersection Capacity Utilization	117.9%	ICU Level of Service	H	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	134	0	52	0	0	0	0	1060	0	0	1547	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.86	0.86	0.86	0.85	0.85	0.85	0.80	0.80	0.80	0.94	0.94	0.94
Hourly flow rate (vph)	156	0	60	0	0	0	0	1325	0	0	1646	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)			6									
Median type								Raised			Raised	
Median storage veh)								1			1	
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	2308	2971	823	2148	2971	662	1646			1325		
vC1, stage 1 conf vol	1646	1646		1325	1325							
vC2, stage 2 conf vol	662	1325		823	1646							
vCu, unblocked vol	2308	2971	823	2148	2971	662	1646			1325		
tC, single (s)	7.6	6.6	7.0	7.6	6.6	7.0	4.2			4.2		
tC, 2 stage (s)	6.6	5.6		6.6	5.6							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	0	100	81	100	100	100	100			100		
cM capacity (veh/h)	81	89	315	102	89	402	384			512		

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	216	662	662	823	823
Volume Left	156	0	0	0	0
Volume Right	60	0	0	0	0
cSH	104	1700	1700	1700	1700
Volume to Capacity	2.08	0.39	0.39	0.48	0.48
Queue Length 95th (ft)	461	0	0	0	0
Control Delay (s)	583.6	0.0	0.0	0.0	0.0
Lane LOS	F				
Approach Delay (s)	583.6	0.0		0.0	
Approach LOS	F				

Intersection Summary				
Average Delay	39.6			
Intersection Capacity Utilization	117.9%	ICU Level of Service	H	
Analysis Period (min)	15			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	0	6	0	1424	1708	12
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	0	7	0	1675	2009	14
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)				933	789	
pX, platoon unblocked	0.65	0.49	0.49			
vC, conflicting volume	2847	1005	2024			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	469	0	987			
tC, single (s)	6.9	7.0	4.2			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	99	100			
cM capacity (veh/h)	339	524	335			

Direction, Lane #	EB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	7	0	838	838	1005	1005	14
Volume Left	0	0	0	0	0	0	0
Volume Right	7	0	0	0	0	0	14
cSH	524	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.01	0.00	0.49	0.49	0.59	0.59	0.01
Queue Length 95th (ft)	1	0	0	0	0	0	0
Control Delay (s)	12.0	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	B						
Approach Delay (s)	12.0	0.0			0.0		
Approach LOS	B						

Intersection Summary				
Average Delay	0.0			
Intersection Capacity Utilization	57.2%	ICU Level of Service		B
Analysis Period (min)	15			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	0	48	42	1445	1729	12
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	0	56	49	1700	2034	14
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)				933	789	
pX, platoon unblocked	0.66	0.48	0.48			
vC, conflicting volume	2983	1017	2048			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	546	0	1016			
tC, single (s)	6.9	7.0	4.2			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	89	85			
cM capacity (veh/h)	259	519	323			

Direction, Lane #	EB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	56	49	850	850	1017	1017	14
Volume Left	0	49	0	0	0	0	0
Volume Right	56	0	0	0	0	0	14
cSH	519	323	1700	1700	1700	1700	1700
Volume to Capacity	0.11	0.15	0.50	0.50	0.60	0.60	0.01
Queue Length 95th (ft)	9	13	0	0	0	0	0
Control Delay (s)	12.8	18.2	0.0	0.0	0.0	0.0	0.0
Lane LOS	B	C					
Approach Delay (s)	12.8	0.5			0.0		
Approach LOS	B						

Intersection Summary			
Average Delay	0.4		
Intersection Capacity Utilization	57.8%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	0	6	0	1332	1359	7
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	0	7	0	1567	1599	8
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)				933	789	
pX, platoon unblocked	0.89	0.80	0.80			
vC, conflicting volume	2382	799	1607			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1374	241	1254			
tC, single (s)	6.9	7.0	4.2			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	99	100			
cM capacity (veh/h)	120	603	435			

Direction, Lane #	EB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	7	0	784	784	799	799	8
Volume Left	0	0	0	0	0	0	0
Volume Right	7	0	0	0	0	0	8
cSH	603	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.01	0.00	0.46	0.46	0.47	0.47	0.00
Queue Length 95th (ft)	1	0	0	0	0	0	0
Control Delay (s)	11.0	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	B						
Approach Delay (s)	11.0	0.0			0.0		
Approach LOS	B						

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	47.6%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	0	60	55	1344	1372	7
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	0	71	65	1581	1614	8
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)				933	789	
pX, platoon unblocked	0.87	0.78	0.78			
vC, conflicting volume	2534	807	1622			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1488	184	1231			
tC, single (s)	6.9	7.0	4.2			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	89	85			
cM capacity (veh/h)	85	641	433			

Direction, Lane #	EB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	71	65	791	791	807	807	8
Volume Left	0	65	0	0	0	0	0
Volume Right	71	0	0	0	0	0	8
cSH	641	433	1700	1700	1700	1700	1700
Volume to Capacity	0.11	0.15	0.47	0.47	0.47	0.47	0.00
Queue Length 95th (ft)	9	13	0	0	0	0	0
Control Delay (s)	11.3	14.8	0.0	0.0	0.0	0.0	0.0
Lane LOS	B	B					
Approach Delay (s)	11.3	0.6			0.0		
Approach LOS	B						

Intersection Summary				
Average Delay	0.5			
Intersection Capacity Utilization	48.3%	ICU Level of Service		A
Analysis Period (min)	15			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	339	5	37	280	19	5
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	399	6	44	329	22	6
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)				648		
pX, platoon unblocked						
vC, conflicting volume			405		818	402
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			405		818	402
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			96		93	99
cM capacity (veh/h)			1149		331	646

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	405	373	28
Volume Left	0	44	22
Volume Right	6	0	6
cSH	1700	1149	369
Volume to Capacity	0.24	0.04	0.08
Queue Length 95th (ft)	0	3	6
Control Delay (s)	0.0	1.3	15.6
Lane LOS		A	C
Approach Delay (s)	0.0	1.3	15.6
Approach LOS			C

Intersection Summary			
Average Delay	1.2		
Intersection Capacity Utilization	48.3%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	176	5	46	170	20	5
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	207	6	54	200	24	6
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)				648		
pX, platoon unblocked						
vC, conflicting volume			213		518	210
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			213		518	210
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			96		95	99
cM capacity (veh/h)			1351		495	828

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	213	254	29
Volume Left	0	54	24
Volume Right	6	0	6
cSH	1700	1351	538
Volume to Capacity	0.13	0.04	0.05
Queue Length 95th (ft)	0	3	4
Control Delay (s)	0.0	1.9	12.1
Lane LOS		A	B
Approach Delay (s)	0.0	1.9	12.1
Approach LOS			B

Intersection Summary			
Average Delay	1.7		
Intersection Capacity Utilization	34.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	325	14	0	317	0	37
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	382	16	0	373	0	44
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)				387		
pX, platoon unblocked					0.99	
vC, conflicting volume			399		764	391
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			399		754	391
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	93
cM capacity (veh/h)			1154		371	656

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	399	373	44
Volume Left	0	0	0
Volume Right	16	0	44
cSH	1700	1700	656
Volume to Capacity	0.23	0.22	0.07
Queue Length 95th (ft)	0	0	5
Control Delay (s)	0.0	0.0	10.9
Lane LOS			B
Approach Delay (s)	0.0	0.0	10.9
Approach LOS			B

Intersection Summary			
Average Delay	0.6		
Intersection Capacity Utilization	28.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	161	15	0	216	0	57
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	189	18	0	254	0	67
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)				387		
pX, platoon unblocked						
vC, conflicting volume			207		452	198
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			207		452	198
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	92
cM capacity (veh/h)			1358		563	840

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	207	254	67
Volume Left	0	0	0
Volume Right	18	0	67
cSH	1700	1700	840
Volume to Capacity	0.12	0.15	0.08
Queue Length 95th (ft)	0	0	6
Control Delay (s)	0.0	0.0	9.7
Lane LOS			A
Approach Delay (s)	0.0	0.0	9.7
Approach LOS			A

Intersection Summary			
Average Delay	1.2		
Intersection Capacity Utilization	19.6%	ICU Level of Service	A
Analysis Period (min)	15		

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Traffic Count Data Sheet

Volero Commercial Development (Los Volcanes Rd. / Unser Blvd.)

Year Counts Taken: 2010

E-W Street Los Volcanes Rd.

N-S Street: Unser Blvd.

SIGNALIZED

Speed Limit (Los Volcanes Rd.)= 30 MPH

Speed Limit (Unser Blvd.)= 45 MPH

Date of Count: 10/6/10

Begin Time	End Time	Eastbound (Los Volcanes Rd.)			Westbound (Los Volcanes Rd.)			Northbound (Unser Blvd.)			Southbound (Unser Blvd.)		
		L	T	R	L	T	R	L	T	R	L	T	R
7:00 AM	7:15 AM	~~55~~	~~12~~	~~2~~	~~22~~	~~9~~	~~33~~	~~9~~	~~301~~	~~66~~	~~59~~	~~186~~	~~17~~
7:15 AM	7:30 AM	~~54~~	~~14~~	~~4~~	~~20~~	~~10~~	~~29~~	~~5~~	~~325~~	~~61~~	~~62~~	~~196~~	~~14~~
7:30 AM	7:45 AM	57	23	1	28	11	36	2	325	31	59	266	19
7:45 AM	8:00 AM	43	33	2	11	3	38	4	316	28	119	422	52
8:00 AM	8:15 AM	33	33	4	11	8	39	10	274	22	103	438	81
8:15 AM	8:30 AM	39	30	4	8	7	23	7	241	34	124	385	56
8:30 AM	8:45 AM	~~27~~	~~8~~	~~2~~	~~5~~	~~2~~	~~36~~	~~2~~	~~244~~	~~16~~	~~68~~	~~237~~	~~25~~
8:45 AM	9:00 AM	~~39~~	~~7~~	~~1~~	~~5~~	~~3~~	~~28~~	~~2~~	~~260~~	~~16~~	~~37~~	~~169~~	~~9~~
AM Peak Hour Volumes		172	119	11	58	29	136	23	1156	115	405	1511	208
% of Total Traffic		4.4%	3.0%	0.3%	1.5%	0.7%	3.4%	0.6%	29.3%	2.9%	10.3%	38.3%	5.3%
% Directional			7.7%			5.7%			32.8%			53.9%	
AM Peak Hour Factor			*0.93*			*0.74*			*0.90*			*0.85*	

Begin Time	End Time	Eastbound (Los Volcanes Rd.)			Westbound (Los Volcanes Rd.)			Northbound (Unser Blvd.)			Southbound (Unser Blvd.)		
		L	T	R	L	T	R	L	T	R	L	T	R
4:00 PM	4:15 PM	~~19~~	~~7~~	~~1~~	~~16~~	~~5~~	~~47~~	~~5~~	~~197~~	~~15~~	~~42~~	~~291~~	~~49~~
4:15 PM	4:30 PM	~~25~~	~~7~~	~~3~~	~~14~~	~~3~~	~~39~~	~~5~~	~~194~~	~~8~~	~~35~~	~~288~~	~~22~~
4:30 PM	4:45 PM	~~18~~	~~3~~	~~1~~	~~15~~	~~6~~	~~35~~	~~3~~	~~231~~	~~9~~	~~39~~	~~289~~	~~26~~
4:45 PM	5:00 PM	24	7	5	14	7	58	2	236	11	44	312	25
5:00 PM	5:15 PM	21	6	4	18	3	49	4	242	25	32	268	34
5:15 PM	5:30 PM	31	2	3	17	5	55	2	287	25	36	306	21
5:30 PM	5:45 PM	20	1	4	19	5	47	2	280	22	29	261	28
5:45 PM	6:00 PM	~~20~~	~~2~~	~~5~~	~~13~~	~~5~~	~~32~~	~~6~~	~~261~~	~~15~~	~~15~~	~~276~~	~~39~~
PM Peak Hour Volumes		96	16	16	68	20	209	10	1045	83	141	1147	108
% of Total Traffic		3.2%	0.5%	0.5%	2.3%	0.7%	7.1%	0.3%	35.3%	2.8%	4.8%	38.8%	3.6%
% Directional			4.3%			10.0%			38.5%			47.2%	
PM Peak Hour Factor			*0.89*			*0.94*			*0.91*			*0.92*	

Traffic Count Data Sheet

Year Counts Taken: **2010**

E-W Street **Bluewater Rd**
N-S Street: **Unser Blvd**

Speed Limit (Bluewater Rd)= **25** MPH
Speed Limit (Unser Blvd)= **25** MPH
Date of Count: **10/12/2010**

Begin Time	End Time	Eastbound (Bluewater Rd)			Westbound (Bluewater Rd)			Northbound (Unser Blvd)			Southbound (Unser Blvd)		
		L	T	R	L	T	R	L	T	R	L	T	R
7:00 AM	7:15 AM	**47**	**20**	**10**	**7**	**5**	**6**	**8**	**327**	**24**	**32**	**138**	**16**
7:15 AM	7:30 AM	**45**	**15**	**12**	**9**	**13**	**13**	**5**	**353**	**20**	**35**	**199**	**15**
7:30 AM	7:45 AM	**48**	**16**	**22**	**20**	**9**	**20**	**18**	**300**	**18**	**30**	**180**	**26**
7:45 AM	8:00 AM	**37**	**28**	**37**	**9**	**19**	**13**	**39**	**253**	**27**	**51**	**187**	**40**
8:00 AM	8:15 AM	~~60~~	~~18~~	~~40~~	~~6~~	~~14~~	~~16~~	~~35~~	~~204~~	~~9~~	~~35~~	~~127~~	~~23~~
8:15 AM	8:30 AM	~~30~~	~~6~~	~~15~~	~~13~~	~~7~~	~~12~~	~~8~~	~~195~~	~~14~~	~~25~~	~~126~~	~~8~~
8:30 AM	8:45 AM	~~35~~	~~4~~	~~11~~	~~5~~	~~3~~	~~12~~	~~6~~	~~228~~	~~7~~	~~20~~	~~127~~	~~8~~
8:45 AM	9:00 AM	~~0~~	~~0~~	~~0~~	~~0~~	~~0~~	~~0~~	~~0~~	~~0~~	~~0~~	~~0~~	~~0~~	~~0~~
AM Peak Hour Volumes		**177**	**79**	**81**	**45**	**46**	**52**	**70**	**1233**	**89**	**148**	**704**	**97**
% of Total Traffic		6.3%	2.8%	2.9%	1.6%	1.6%	1.8%	2.5%	43.7%	3.2%	5.2%	25.0%	3.4%
% Directional			11.9%			5.1%			49.3%			33.6%	
AM Peak Hour Factor			*0.83*			*0.73*			*0.92*			*0.85*	

Begin Time	End Time	Eastbound (Bluewater Rd)			Westbound (Bluewater Rd)			Northbound (Unser Blvd)			Southbound (Unser Blvd)		
		L	T	R	L	T	R	L	T	R	L	T	R
4:00 PM	4:15 PM	~~15~~	~~6~~	~~11~~	~~19~~	~~15~~	~~28~~	~~13~~	~~171~~	~~8~~	~~13~~	~~237~~	~~32~~
4:15 PM	4:30 PM	~~14~~	~~10~~	~~13~~	~~11~~	~~10~~	~~24~~	~~19~~	~~158~~	~~5~~	~~17~~	~~266~~	~~34~~
4:30 PM	4:45 PM	**25**	**5**	**9**	**26**	**20**	**50**	**13**	**204**	**5**	**19**	**255**	**28**
4:45 PM	5:00 PM	**23**	**18**	**15**	**19**	**24**	**37**	**19**	**205**	**9**	**26**	**295**	**36**
5:00 PM	5:15 PM	**27**	**16**	**23**	**21**	**19**	**56**	**23**	**225**	**4**	**21**	**257**	**33**
5:15 PM	5:30 PM	**22**	**14**	**10**	**25**	**26**	**40**	**8**	**231**	**10**	**19**	**293**	**27**
5:30 PM	5:45 PM	~~32~~	~~15~~	~~2~~	~~21~~	~~13~~	~~33~~	~~15~~	~~198~~	~~11~~	~~12~~	~~226~~	~~47~~
5:45 PM	6:00 PM	~~0~~	~~0~~	~~0~~	~~0~~	~~0~~	~~0~~	~~0~~	~~0~~	~~0~~	~~0~~	~~0~~	~~0~~
PM Peak Hour Volumes		**97**	**53**	**57**	**91**	**89**	**183**	**63**	**865**	**28**	**85**	**1100**	**124**
% of Total Traffic		3.4%	1.9%	2.0%	3.2%	3.1%	6.5%	2.2%	30.5%	1.0%	3.0%	38.8%	4.4%
% Directional			7.3%			12.8%			33.7%			46.2%	
PM Peak Hour Factor			*0.78*			*0.95*			*0.95*			*0.92*	

Traffic Count Data Sheet

Valero Station (Los Volcanes Rd. / Unser Blvd.)

Year Counts Taken: **2010**

E-W Street **I-40 N. Ramp**

N-S Street: **Unser Blvd.**

Signalized

Speed Limit (I-40 N. Ramp)= **45** MPH

Speed Limit (Unser Blvd.)= **45** MPH

Date of Count: **10/13/10**

Begin Time	End Time	Eastbound (I-40 N. Ramp)			Westbound (I-40 N. Ramp)			Northbound (Unser Blvd.)			Southbound (Unser Blvd.)		
		L	T	R	L	T	R*	L	T	R	L	T	R*
7:00 AM	7:15 AM	0	0	0	85	0	0	7	116	0	0	521	0
7:15 AM	7:30 AM	0	0	0	89	0	0	7	133	0	0	627	0
7:30 AM	7:45 AM	0	0	0	93	0	0	8	177	0	0	564	0
7:45 AM	8:00 AM	0	0	0	109	0	0	11	176	0	0	510	0
8:00 AM	8:15 AM	0	0	0	95	0	0	3	127	0	0	361	0
8:15 AM	8:30 AM	0	0	0	100	0	0	7	119	0	0	380	0
8:30 AM	8:45 AM	0	0	0	62	0	0	8	127	0	0	332	0
8:45 AM	9:00 AM	0	0	0	74	0	0	8	140	0	0	340	0
AM Peak Hour Volumes		0	0	0	376	0	0	33	602	0	0	2222	0
% of Total Traffic		0.0%	0.0%	0.0%	11.6%	0.0%	0.0%	1.0%	18.6%	0.0%	0.0%	68.7%	0.0%
% Directional			0.0%			11.6%			19.6%			68.7%	
AM Peak Hour Factor						*0.86*			*0.85*			*0.89*	

Begin Time	End Time	Eastbound (I-40 N. Ramp)			Westbound (I-40 N. Ramp)			Northbound (Unser Blvd.)			Southbound (Unser Blvd.)		
		L	T	R	L	T	R*	L	T	R	L	T	R*
4:00 PM	4:15 PM	0	1	0	247	1	0	5	210	0	0	190	0
4:15 PM	4:30 PM	0	0	0	236	2	0	5	205	0	0	193	0
4:30 PM	4:45 PM	0	0	0	276	1	0	8	189	0	0	185	0
4:45 PM	5:00 PM	0	0	0	252	1	0	6	202	0	0	216	0
5:00 PM	5:15 PM	0	0	0	197	0	0	7	286	0	0	220	0
5:15 PM	5:30 PM	0	0	0	196	1	0	2	238	0	0	258	0
5:30 PM	5:45 PM	0	0	0	211	2	0	5	191	0	0	245	0
5:45 PM	6:00 PM	0	0	0	202	5	0	4	201	0	0	239	0
PM Peak Hour Volumes		0	0	0	921	3	0	23	915	0	0	879	0
% of Total Traffic		0.0%	0.0%	0.0%	33.6%	0.1%	0.0%	0.8%	33.4%	0.0%	0.0%	32.1%	0.0%
% Directional			0.0%			33.7%			34.2%			32.1%	
PM Peak Hour Factor						*0.83*			*0.80*			*0.85*	

NOTE: Westbound right turn and southbound right turn movements are a free right turn ramps that by-passes the signal.

Traffic Count Data Sheet

Valero Station (Los Volcanes Rd. / Unser Blvd.)

Year Counts Taken: **2010**

E-W Street **I-40 S. Ramp**

N-S Street: **Unser Blvd.**

UNSIGNALIZED

Speed Limit (I-40 S. Ramp)= **45** MPH

Speed Limit (Unser Blvd.)= **45** MPH

Date of Count: **10/14/10**

Begin Time	End Time	Eastbound (I-40 S. Ramp)			Westbound (I-40 S. Ramp)			Northbound (Unser Blvd.)			Southbound (Unser Blvd.)		
		L	T	R	L	T	R	L	T	R*	L*	T	R
7:00 AM	7:15 AM	~~12~~	~~0~~	~~6~~	~~0~~	~~0~~	~~0~~	~~0~~	~~123~~	~~0~~	~~0~~	~~262~~	~~0~~
7:15 AM	7:30 AM	~~17~~	~~0~~	~~5~~	~~0~~	~~0~~	~~0~~	~~0~~	~~140~~	~~0~~	~~0~~	~~272~~	~~0~~
7:30 AM	7:45 AM	**14**	**0**	**10**	**0**	**0**	**0**	**0**	**185**	**0**	**0**	**344**	**0**
7:45 AM	8:00 AM	**29**	**0**	**10**	**0**	**0**	**0**	**0**	**187**	**0**	**0**	**593**	**0**
8:00 AM	8:15 AM	**22**	**0**	**12**	**0**	**0**	**0**	**0**	**130**	**0**	**0**	**622**	**0**
8:15 AM	8:30 AM	**17**	**0**	**8**	**0**	**0**	**0**	**0**	**126**	**0**	**0**	**565**	**0**
8:30 AM	8:45 AM	~~15~~	~~0~~	~~7~~	~~0~~	~~0~~	~~0~~	~~0~~	~~135~~	~~0~~	~~0~~	~~330~~	~~0~~
8:45 AM	9:00 AM	~~12~~	~~0~~	~~11~~	~~0~~	~~0~~	~~0~~	~~0~~	~~148~~	~~0~~	~~0~~	~~215~~	~~0~~
AM Peak Hour Volumes		**82**	**0**	**40**	**0**	**0**	**0**	**0**	**628**	**0**	**0**	**2124**	**0**
% of Total Traffic		2.9%	0.0%	1.4%	0.0%	0.0%	0.0%	0.0%	21.9%	0.0%	0.0%	73.9%	0.0%
% Directional			4.2%			0.0%			21.9%			73.9%	
AM Peak Hour Factor			***0.78***						***0.84***			***0.85***	

Begin Time	End Time	Eastbound (I-40 S. Ramp)			Westbound (I-40 S. Ramp)			Northbound (Unser Blvd.)			Southbound (Unser Blvd.)		
		L	T	R	L	T	R	L	T	R*	L*	T	R
4:00 PM	4:15 PM	~~18~~	~~1~~	~~11~~	~~0~~	~~0~~	~~0~~	~~0~~	~~215~~	~~0~~	~~0~~	~~382~~	~~0~~
4:15 PM	4:30 PM	~~15~~	~~0~~	~~7~~	~~0~~	~~0~~	~~0~~	~~0~~	~~210~~	~~0~~	~~0~~	~~345~~	~~0~~
4:30 PM	4:45 PM	**22**	**0**	**13**	**0**	**0**	**0**	**0**	**197**	**0**	**0**	**354**	**0**
4:45 PM	5:00 PM	**27**	**0**	**16**	**0**	**0**	**0**	**0**	**208**	**0**	**0**	**381**	**0**
5:00 PM	5:15 PM	**35**	**0**	**7**	**0**	**0**	**0**	**0**	**293**	**0**	**0**	**334**	**0**
5:15 PM	5:30 PM	**38**	**0**	**11**	**0**	**0**	**0**	**0**	**240**	**0**	**0**	**363**	**0**
5:30 PM	5:45 PM	~~31~~	~~0~~	~~12~~	~~0~~	~~0~~	~~0~~	~~0~~	~~196~~	~~0~~	~~0~~	~~318~~	~~0~~
5:45 PM	6:00 PM	~~22~~	~~0~~	~~12~~	~~0~~	~~0~~	~~0~~	~~0~~	~~205~~	~~0~~	~~0~~	~~330~~	~~0~~
PM Peak Hour Volumes		**122**	**0**	**47**	**0**	**0**	**0**	**0**	**938**	**0**	**0**	**1432**	**0**
% of Total Traffic		4.8%	0.0%	1.9%	0.0%	0.0%	0.0%	0.0%	36.9%	0.0%	0.0%	56.4%	0.0%
% Directional			6.7%			0.0%			36.9%			56.4%	
PM Peak Hour Factor			***0.86***						***0.80***			***0.94***	

NOTE: Northbound right and southbound left turn movements are free right turn ramps (loops) that by-pass the intersection.

Signalized Intersection Information Sheet

Intersection: **Los Volcanes Rd. / Unser Blvd.**

Speed Limit - E-W Street: 30 M.P.H.
Speed Limit - N-S Street: 45 M.P.H.
Type of Intersection Control: Signalized

Date: **10/14/2010**

East Bound Approach: Los Volcanes Rd.

	Left Turn Lanes	Thru / Lefts	Left/Thru/Right	Thru Lanes	Thru / Rights	Right Turn Lanes
No. Lanes -	2	-	-	-	1	-
Length -	90					0

	Left Turn Arrow?	Thru Green	Right Turn Arrow?
Protected ->	YES	YES	YES

Is there a right turn slip laned that by-passes the traffic signal? NO

West Bound Approach: Los Volcanes Rd.

	Left Turn Lanes	Thru / Lefts	Left/Thru/Right	Thru Lanes	Thru / Rights	Right Turn Lanes
No. Lanes -	1	-		1	-	1
Length -	130					130

	Left Turn Arrow?	Thru Green	Right Turn Arrow?
Permitted/Protected ->	YES	YES	NO

Is there a right turn slip laned that by-passes the traffic signal? NO

North Bound Approach: Unser Blvd.

	Left Turn Lanes	Thru / Lefts	Left/Thru/Right	Thru Lanes	Thru / Rights	Right Turn Lanes
No. Lanes -	1	-		2	-	1
Length -	575					150

	Left Turn Arrow?	Thru Green	Right Turn Arrow?
Permitted/Protected ->	YES	YES	NO

Is there a right turn slip laned that by-passes the traffic signal? NO

South Bound Approach: Unser Blvd.

	Left Turn Lanes	Thru / Lefts	Left/Thru/Right	Thru Lanes	Thru / Rights	Right Turn Lanes
No. Lanes -	1	-		2	-	1
Length -	999					130

	Left Turn Arrow?	Thru Green	Right Turn Arrow?
Permitted/Protected ->	YES	YES	YES

Is there a right turn slip laned that by-passes the traffic signal? NO

NOTE: Existing Geometry

Signalized Intersection Information Sheet

Intersection: **Bluewater Rd. / Unser Blvd.**

Speed Limit - E-W Street: 30 M.P.H.
Speed Limit - N-S Street: 45 M.P.H.
Type of Intersection Control: Signalized

Date: **10/14/2010**

East Bound Approach: Bluewater Rd.

	Left Turn Lanes	Thru / Lefts	Left/Thru/Right	Thru Lanes	Thru / Rights	Right Turn Lanes
No. Lanes -	1	-	-	-	1	-
Length -	90					0
	Left Turn Arrow?			Thru Green	Right Turn Arrow?	
Permitted/Protected ->	YES			YES	NO	

Is there a right turn slip laned that by-passes the traffic signal? NO

West Bound Approach: Bluewater Rd.

	Left Turn Lanes	Thru / Lefts	Left/Thru/Right	Thru Lanes	Thru / Rights	Right Turn Lanes
No. Lanes -	1	-		1	-	1
Length -	130					130
	Left Turn Arrow?			Thru Green	Right Turn Arrow?	
Permitted ->	NO			YES	NO	

Is there a right turn slip laned that by-passes the traffic signal? NO

North Bound Approach: Unser Blvd.

	Left Turn Lanes	Thru / Lefts	Left/Thru/Right	Thru Lanes	Thru / Rights	Right Turn Lanes
No. Lanes -	1	-		2	-	1
Length -	110					340
	Left Turn Arrow?			Thru Green	Right Turn Arrow?	
Permitted/Protected ->	YES			YES	NO	

Is there a right turn slip laned that by-passes the traffic signal? YES-Yield

South Bound Approach: Unser Blvd.

	Left Turn Lanes	Thru / Lefts	Left/Thru/Right	Thru Lanes	Thru / Rights	Right Turn Lanes
No. Lanes -	1	-		2	-	1
Length -	160					160
	Left Turn Arrow?			Thru Green	Right Turn Arrow?	
Permitted/Protected ->	YES			YES	NO	

Is there a right turn slip laned that by-passes the traffic signal? YES-Yield

NOTE: Existing Geometry