Sun Valley Commercial Development

(Osuna Rd. / Edith Blvd.)

Traffic Impact Study

FINAL

February 26, 2009

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Presented to:

Transportation Development Division
City of Albuquerque

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Sun Valley Commercial Development
(Osuna Rd. / Edith Blvd - SW Corner)
TRAFFIC IMPACT STUDY

STUDY PURPOSE

The study is being conducted in conjunction with a request for approval of an office development plan for the property located at the southwest corner of Osuna Rd. / Edith Blvd. The purpose of this study is to identify the impact of the 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 facility. This report is being prepared to meet the requirements of the City of Albuquerque Transportation Development Section in association with the development of the proposed project associated with this site plan.

STUDY PROCEDURES

A telephone scoping meeting was held in February, 2007 with City of Albuquerque staff (Tony Loyd) prior to beginning the original Sun Valley Commercial Development study to discuss scope and methodology to be utilized within that report.

The basic procedure followed is described as follows:

1) Calculate the generated trips for the proposed commercial development consisting of 72,000 S.F. of general office space and 3500 S.F. of specialty retail space. (See Pages A-7 and A-9 in Appendix).
2) Calculate trip distribution for the newly generated trips by this development. The office trips shall be distributed based on 2008 DASZ population data citywide.
3) Determine Trip Assignments for the newly generated trips (for both scenarios) based on the results of the Trip Distribution Analysis and logical routing to and from the site. (See Pages A-10 thru A-15 in Appendix).
4) Obtain AM Peak Hour and PM Peak Hour turning movement traffic counts at the intersection Osuna Rd. / Edith Blvd. and Osuna Rd. / Second St. (See Pages A-69 thru A-72 in Appendix).
5) Calculate Historic Growth Rates for each of the approaches to the intersections targeted for analysis where the historic data was available. (See Pages A-18 thru A-24 in Appendix).
6) Determine 2008 NO BUILD intersection volumes by growing the data from the existing traffic counts at the calculated historic growth rate to the analysis year (2008), then add in traffic volumes generated by nearby recently approved undeveloped projects. (See Pages A-25 thru A-39 in Appendix).
7) Add in data from Trip Assignments Maps and Tables to the 2008 NO BUILD Volumes to obtain 2008 BUILD Volumes for this project. (See Pages A-25 thru A-39 in Appendix).
8) Provide NOBUILD and BUILD signalized and unsignalized intersection analyses for the following intersections:

INTERSECTION	TYPE CONTROL	NO BUILD	BUILD
Osuna Rd. / Edith Blvd.	Traffic Signal	2008	2008
Osuna Rd. / Second St.	Traffic Signal	2008	2008
Osuna Rd. / Driveway "A"	Stop Sign	2008	2008
Osuna Rd. / Driveway "B"	Stop Sign	N/A	2008
Driveway "C" / Edith Blvd.	Stop Sign	N/A	2008

9) Provide signalized and unsignalized intersection analyses for the BUILD Condition of the intersections listed above. (See Pages A-40 thru A-68 in Appendix).

PREVIOUS RELATED TRAFFIC IMPACT STUDIES

There is a previous related Traffic Impact Study to consider in this study. The Vista del Norte Subdivision (residential portion) is approximately 100% implemented. Therefore, it is assumed that the Vista del Norte Subdivision is generating fully implemented traffic volumes and there will be little increase in the future.

There is one other development project to be considered: the Vista del Norte Commercial Development at the corner of Osuna Rd / Vista del Norte Dr. This project is going through the approval process at the City of Albuquerque and is planned to be implemented in 2009. The trips generated by the Vista del Norte Commercial Development will be added in to the background volumes in this study.

GENERAL AREA CHARACTERISTICS

Surrounding land uses consist of mostly commercial uses along the Osuna Rd. corridor and the Edith Blvd. corridor. Also, there is some residential mobile home development to the south and to the west of this project.

AREA STREET NETWORK

Osuna Rd. is classified as a Principal Arterial roadway on the Long Range Roadway Plan for the Albuquerque Metropolitan Area. It is currently a paved urban four-lane facility with raised medians and curbs and gutters on both sides of the street. The posted speed limit on Osuna Rd. from I-25 to 2nd St. is 45 M.P.H.

Edith Blvd. is classified as a Minor Arterial roadway on the Long Range Roadway Plan for the Albuquerque Metropolitan Area. In the vicinity of Osuna Rd., it is a mix of rural-type and urban-type two lane and four-lane paved roadway.

FUTURE C.I.P. IMPROVEMENTS TO TRANSPORTATION SYSTEM

The City of Albuquerque has plans to widen Osuna Rd. from Edith Blvd. to Jefferson St. to provide three thru lanes eastbound and westbound. The most recent scoping study incorporated Osuna Rd. from Sun Valley east to I-25. The projected is targeted for

construction in 2008. However, funding may limit the scope of what can be constructed at that time. The City of Albuquerque's Ten Year Plan designates $ 300,000 for the year 2009 and $ 3,000,000 for the year 2011. Construction of the additional eastbound and westbound thru lanes on Osuna Rd. would provide enough additional capacity to solve most of the capacity shortfalls revealed in this study for the projected 2008 NO BUILD and BUILD Conditions. Osuna Rd. is a City street from the railroad tracks between 2nd St. and Edith Blvd. east to Interstate 25. It is a County street west of the railroad tracks.

EXISTING TRAFFIC VOLUMES

2005 Average Weekday Traffic Volumes (AWDT) for major streets in the site plan area are shown on Page A-3 in the Appendix.

Traffic volumes for the intersections of Osuna Rd. / Edith Blvd., Osuna Rd. / Second St. and Osuna Rd / Driveway 'A' were recently counted by the consulting engineer performing this study.

The existing traffic counts are included Appendix Pages A-69 thru A-72.

EXISTING 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. In addition to consideration of the overall level-of-service of the signalized intersection, the levels-of-service of each individual movement should be considered also.

Existing levels-of-service were not provided in this study since the implementation year is only one year from now. The implementation year NO BUILD analysis should approximate the existing levels-of-service.

PROPOSED DEVELOPMENT

The development plan is a proposed 6 acre office use consisting of approximately 72,000 S.F. of office space and approximately 3,500 S. F. of specialty retail floor space at the east end of the site. The land uses utilized for this analysis should be representative of the type of uses that will result from the proposed development. Should the development occur in such a manner that the actual number of trips generated significantly exceed that projected in this study, the City of Albuquerque may require an updated Traffic Impact Study.

Access is provided into the proposed facility via an existing full access driveway onto Osuna Rd. west of Edith Blvd and two existing (but not utilized) right-in/right-out access driveways. The existing driveway onto Osuna Rd. is designated as Driveway "A" in this study. It is located approximately 550 feet to the west of Edith Blvd. (centerline to centerline).

The two other driveways are both designated as right-in/right-out only unsignalized driveways. These driveways will access only the commercial portion of the development. Driveway "B" is proposed to access Osuna Rd, while Driveway "C" is proposed to access Edith Blvd. Each driveway is approximately 150 feet from the curb intersection of Osuna / Edith.

A site development plan for most of this project was approved by the City of Albuquerque in 2002. A minor portion of the site plan has been implemented. A traffic count was recently performed at the driveway to the project to determine the trip generation rate of the existing facility. The traffic count indicated that the currently constructed buildings did not generate a significant volume of traffic. The existing trip generation rate was less than 50 vehicles per hour total (entering and exiting) for both the AM and PM Peak Hours. The vacancy rate of the existing buildings is not known and the exact date of implementation of each of the buildings is not known. The traffic count for Osuna Rd. / Edith Blvd. was conducted in 2005 and the traffic count for Osuna Rd. / 2nd St. was conducted in 2006. Since the existing trip generation volumes are fairly low and the time frames in which the existing buildings were implemented relative to the traffic counts, it will be assumed in this study that the existing buildings did not generate any significant traffic during the time that the previous traffic counts were conducted. Therefore, the 2005 and 2006 traffic counts for Osuna Rd. / Edith Blvd. and Osuna Rd. / 2nd St. are assumed to contain none of the traffic from this development. Those volumes will be utilized as the basis to calculate the NO BUILD volumes. Subsequently, the trip generation rate for the entire 72,000 S.F. office development plus the 3,500 S.F. retail use will be added to obtain the BUILD volumes.

TRIP GENERATION

Projected trips were calculated from data in the Institute of Transportation Engineers Trip Generation report (7th Edition, 2003). Trips for the development were determined based on land uses projected to be associated with this property.

The resulting number of trips generated for the proposed development is summarized in the following table:

Sun Valley Commercial Development

Trip Generation Data

	USE (ITE CODE)		24 HR VOL	A. M. PEAK HR.		P. M. PEAK HR.	
	DESCRIPTION		*GROSS*	*ENTER*	*EXIT*	*ENTER*	*EXIT*
	Summary Sheet	Units					
	General Office Building (710)	72.00	1,036	127	17	27	132
	Specialty Retail Center (814)	3.50	187	58	74	13	17
	Subtotal		**1,223**	**185**	**91**	**40**	**149**

(See Pages A-7 thru A-9 in the Appendix of this report for Trip Generation Worksheets and Summary Table.)

The tract at the northeast corner of the project is assumed to be a commercial use in this study. It is possible that it may be developed as an office use. The assumption of the commercial use will provide a conservative worst case scenario.

TRIP DISTRIBUTION

Primary and Diverted Linked Trips:

Trips were distributed as follows:

Office Land Uses

Primary and diverted linked trips for office development have been distributed proportionally to the 2008 projected population of Subareas area-wide. Population data for 2005 and 2010 were taken from the 2025 Socioeconomic Forecasts for Data Analysis Subzones for the Mid-Region of New Mexico, S-03-01 (April 2003), Appendix B, supplied by the Mid-Region Council of Governments (MRCOG). Population Data was interpolated linearly to obtain 2008 values and adjusted for distance from the proposed new facility. The trip distribution worksheets and associated map of subareas are shown on Appendix Pages A-10 thru A-12. The Trip Distribution Map for Office use can be found in the Appendix on Page A-13.

TRIP ASSIGNMENT

Trip assignments 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 in the Appendix, Pages A-14 thru A-15. No Pass-by trip reduction was applied to this development.

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 2000, 2001, 2002, 2003, and 2004 Traffic Flow maps prepared by the Mid-Region Council of Governments. Almost all of the Traffic Flow Data for the years 2000 thru 2004 taken from the MRCOG Traffic Flow Maps were Standard Data. The data from those years for each approach was plotted on a graph and a linear "regression trend line" calculated using the equation format $y=mx+b$. The growth rate was determined by calculating the average volume increase per year during the time period considered and dividing that volume into the most recent AWDT used in the analysis from which future volumes will be calculated. The rate of growth of that trend line was utilized as the growth rate for each approach if that calculated rate appeared feasible. However, there were some instances where the rate indicated a negative growth trend. In those cases, an appropriate growth rate from an adjacent segment of the same roadway was used or a shorter time span was used to determine the growth rate, or a generic growth rate was utilized. In this area of Albuquerque, the generic growth rate utilized was usually 3% per year. Due to the potential for growth in the area, it was believed that a zero percent growth rate was inappropriate for this study. Additionally, if the R^2 value of the trend line was low, other means of establishing a probable growth rate from the data

accumulated was considered. Historical Growth Rate Graphs with linear regression trendlines are shown on Appendix Pages A-16 thru A-23. Additionally, the growth rate utilized for each approach to an intersection is printed at the top of the Turning Movement sheets for each intersection (Appendix Pages A-27 thru A-36).

PROJECTED PEAK HOUR TURNING MOVEMENTS FOR 2008 BUILDOUT

The calculated annual growth rates were applied to the existing (2005 and 2006) peak hour traffic counts furnished by the consultant to establish the 2008 background traffic volumes. To these volumes, the generated trips based on implementation of the proposed assumed land uses were added to obtain the 2008 BUILD volumes for the intersection analyses. See Appendix Pages A-25 thru A-36 for further information regarding turning movement counts for this project. 2008 NO BUILD Volumes Map, Trips Generated Map, and 2008 BUILD Volumes Map for this project are on Pages A-37 thru A-39 in the Appendix.

INTERSECTION CAPACITY ANALYSIS

Intersection capacity analyses were performed in accordance with the procedures for signalized and unsignalized intersections in the Highway Capacity Manual, Special Report 209, Transportation Research Board, 2000, using TEAPAC's Signal 2000 Software for signalized intersections and HiCAP Version 2 for unsignalized intersections. For signalized intersections, the operational method of analysis was used for 2008 conditions (NO BUILD and BUILD). In addition to utilizing the operational analysis for the intersections, the 1985 planning method may also be used to provide additional information at the intersection to help define critical lane volumes and to help analyze a solution.

Capacity analyses were performed for the following traffic conditions.

- ⇒ 2008 without development of the subject property (NO BUILD)
- ⇒ 2008 with development as per the assumed land uses (BUILD)

The results of the 2008 NO BUILD and the 2008 BUILD capacity analyses are summarized in the following sections - *Results and Discussion of Intersection Capacity Analyses.*

RESULTS OF SIGNALIZED INTERSECTION CAPACITY ANALYSES

IMPLEMENTATION YEAR (2008)

Intersection #1 - Osuna Rd. / 2nd St. – Pages A-40 thru A-47

The results of the 2008 implementation year analysis of the signalized intersection of Osuna Rd. / 2nd St. are summarized in the following table:

Osuna Rd. / 2nd St.	2008 No Build		2008 BUILD	
	A.M.	P.M.	A.M.	P.M.
Existing Geometry	C – 34.3	***E – 57.8***	D – 38.1	***E – 59.8***
Exist. Geometry – Add Northbound Thru Lane				C – 33.8

D - 38.3 – Bold Italicized LOS / Delay designates that one or more turning movements operate at LOS "E" or worse.

Existing Geometry (Osuna Rd. / 2nd St.)

Approach	Left Turn Lanes	Thru/Lefts	Thru Lanes	Thru/Rights	Right Turn Lanes
EB Osuna Rd.	1	0	2	0	1
WB Osuna Rd.	1	0	1	0	1
NB 2nd St.	1	0	2	1	0
SB 2nd St.	1	0	2	0	1

The intersection of Osuna Rd. / 2nd St. is near capacity for the 2008 PM Peak Hour NO BUILD and BUILD analysis. The volumes added from the Sun Valley Commercial Development have a very minimal impact the intersection. Mitigation of the impact consists of construction of a third northbound thru lane at the intersection. The new thru lane should be constructed to accommodate the projected intersection queues and should extend through the intersection at least 750 feet beyond. This is also the recommendation associated with the Vista del Norte Commercial Development Traffic Impact Study currently under review.

The trips generated by the proposed Sun Valley commercial development comprises less than 2% of the overall 2008 projected BUILD traffic volumes at the intersection of Osuna Rd. / 2nd St.

The Queuing Analysis for this intersection results in the lanes length changes summarized in the following table:

Queueing Analysis Summary Sheet

Project: Sun Valley Commercial Development
Intersection: **Osuna Rd / Second St**

2008

Approach	Left Turns			Thru Movements			Right Turns		
Eastbound	# Lanes	Vol.	Length	# Lanes	Vol.	Length	# Lanes	Vol.	Length
Existing Lane Length	*1*	*66*	*150*	*2*	*365*	*Cont*	*1*	*57*	*150*
AM NO BUILD Queue	1	70	100	2	421	275	1	60	100
AM BUILD Queue	**1**	**70**	**100**	**2**	**429**	**275**	**1**	**60**	**100**
Existing Lane Length	*1*	*89*	*150*	*2*	*174*	*Cont*	*1*	*70*	*150*
PM NO BUILD Queue	1	94	175	2	242	225	1	74	150
PM BUILD Queue	**1**	**94**	**175**	**2**	**244**	**225**	**1**	**74**	**150**
Westbound	# Lanes	Vol.	Length	# Lanes	Vol.	Length	# Lanes	Vol.	Length
Existing Lane Length	*1*	*105*	*225*	*1*	*188*	*Cont*	*1*	*188*	*500+*
AM NO BUILD Queue	1	126	175	1	227	275	1	219	250
AM BUILD Queue	**1**	**131**	**175**	**1**	**231**	**275**	**1**	**232**	**275**
Existing Lane Length	*1*	*256*	*225*	*1*	*451*	*Cont*	*1*	*618*	*500+*
PM NO BUILD Queue	1	274	375	1	540	675	1	698	850
PM BUILD Queue	**1**	**282**	**400**	**1**	**547**	**675**	**1**	**720**	**875**
Northbound	# Lanes	Vol.	Length	# Lanes	Vol.	Length	# Lanes	Vol.	Length
Existing Lane Length	*1*	*38*	*200*	*2*	*553*	*Cont*	*0*	*240*	*0*
AM NO BUILD Queue	1	40	75	2	575	350	0	268	300
AM BUILD Queue	**1**	**40**	**75**	**2**	**575**	**350**	**0**	**280**	**325**
Existing Lane Length	*1*	*68*	*200*	*2*	*884*	*Cont*	*0*	*160*	*0*
PM NO BUILD Queue	1	71	125	2	919	650	0	196	300
PM BUILD Queue	**1**	**71**	**125**	**2**	**919**	**650**	**0**	**199**	**300**
Southbound	# Lanes	Vol.	Length	# Lanes	Vol.	Length	# Lanes	Vol.	Length
Existing Lane Length	*1*	*387*	*225*	*2*	*1,145*	*Cont*	*1*	*35*	*300*
AM NO BUILD Queue	1	426	450	2	1,191	625	1	36	75
AM BUILD Queue	**1**	**453**	**475**	**2**	**1,191**	**625**	**1**	**36**	**75**
Existing Lane Length	*1*	*285*	*225*	*2*	*776*	*Cont*	*1*	*77*	*300*
PM NO BUILD Queue	1	336	450	2	807	575	1	80	150
PM BUILD Queue	**1**	**342**	**450**	**2**	**807**	**575**	**1**	**80**	**150**

	AM	PM
Cycle Length:	100	130

NOTE: Queue lengths are in feet.

Intersection #2 - Osuna Rd. / Edith Blvd.

The results of the 2008 implementation year analysis of the signalized intersection of Osuna Rd. / Edith Blvd. are summarized in the following table:

Osuna Rd. / Edith Blvd.	2008 No Build		2008 BUILD	
	A.M.	P.M.	A.M.	P.M.
Existing Geometry	***D - 50.9***	D - 45.2	***E - 66.6***	D - 49.9
Exist. Geom. – ADD EB Thru Lane			D – 35.4	

D - 38.3 – Bold Italicized LOS / Delay designates that one or more turning movements operate at LOS "E" or worse.

Existing Geometry (Osuna Rd. / Edith Blvd.)

Approach	Left Turn Lanes	Thru/Lefts	Thru Lanes	Thru/Rights	Right Turn Lanes
EB Osuna Rd.	1	0	1	1	0
WB Osuna Rd.	1	0	1	1	0
NB Edith Blvd.	1	0	1	0	1
SB Edith Blvd.	1	0	0	1	0

The intersection of Osuna Rd. / Edith Blvd. is at capacity for the 2008 AM Peak Hour NO BUILD analysis as well as for the BUILD Analysis. The volumes added from the Sun Valley Commercial Development impact the intersection, especially during the AM Peak Hour. Mitigation of the impact consists of construction of a third eastbound thru lane on Osuna Rd. through the intersection. The new thru lane should be constructed to accommodate the projected intersection queues and should extend through the intersection at least 750 feet beyond. This is the same recommendation for the intersection of Osuna Rd. / Edith Blvd. that was made in the Vista del Norte Commercial Development Traffic Impact Study that is currently being reviewed by the City of Albuquerque.

The City's Plan to improve Osuna Blvd. targeted for construction in 2011 should include improvements to the intersection of Osuna Rd. / Edith Blvd. to address capacity issues projected for the 2008 AM Peak Hour conditions analyzed in this study. There will be a capacity shortfall at the intersection for the 2008 AM Peak Hour NO BUILD Condition if the City does not address this issue with the Osuna project.

The trips generated by the proposed Sun Valley commercial development comprises only about 2% or less of the overall 2008 projected BUILD traffic volumes at the intersection of Osuna Rd. / Edith Blvd.

The Queuing Analysis for this intersection results in the lanes length changes summarized in the following table:

Queueing Analysis Summary Sheet

Project: Sun Valley Commercial Development
Intersection: Osuna Rd / Edith Blvd

2008

Approach	Left Turns			Thru Movements			Right Turns		
Eastbound	# Lanes	Vol.	Length	# Lanes	Vol.	Length	# Lanes	Vol.	Length
Existing Lane Length	*1*	*27*	*225*	*2*	*815*	*Cont*	*0*	*225*	*0*
AM NO BUILD Queue	1	29	50	2	964	525	0	245	275
AM BUILD Queue	**1**	**29**	**50**	**2**	**1,037**	**575**	**0**	**246**	**275**
Existing Lane Length	*1*	*45*	*225*	*2*	*404*	*Cont*	*0*	*116*	*0*
PM NO BUILD Queue	1	49	100	2	568	**425**	0	126	200
PM BUILD Queue	**1**	**50**	**100**	**2**	**687**	**500**	**0**	**128**	**200**
Westbound	# Lanes	Vol.	Length	# Lanes	Vol.	Length	# Lanes	Vol.	Length
Existing Lane Length	*1*	*152*	*325*	*2*	*341*	*Cont*	*0*	*64*	*0*
AM NO BUILD Queue	1	169	200	2	414	275	0	71	125
AM BUILD Queue	**1**	**216**	**250**	**2**	**508**	**325**	**0**	**71**	**125**
Existing Lane Length	*1*	*155*	*325*	*2*	*961*	*Cont*	*0*	*152*	*0*
PM NO BUILD Queue	1	185	**275**	2	1,126	**750**	0	168	250
PM BUILD Queue	**1**	**195**	**300**	**2**	**1,157**	**775**	**0**	**168**	**250**
Northbound	# Lanes	Vol.	Length	# Lanes	Vol.	Length	# Lanes	Vol.	Length
Existing Lane Length	*1*	*144*	*225*	*1*	*214*	*Cont*	*1*	*142*	*500+*
AM NO BUILD Queue	1	153	200	1	227	275	1	165	200
AM BUILD Queue	**1**	**156**	**200**	**1**	**227**	**275**	**1**	**165**	**200**
Existing Lane Length	*1*	*278*	*225*	*1*	*437*	*Cont*	*1*	*150*	*500+*
PM NO BUILD Queue	1	295	400	1	463	600	1	183	275
PM BUILD Queue	**1**	**296**	**400**	**1**	**463**	**600**	**1**	**183**	**275**
Southbound	# Lanes	Vol.	Length	# Lanes	Vol.	Length	# Lanes	Vol.	Length
Existing Lane Length	*1*	*164*	*90*	*1*	*347*	*Cont*	*0*	*24*	*0*
AM NO BUILD Queue	1	185	225	1	378	400	0	26	50
AM BUILD Queue	**1**	**185**	**225**	**1**	**378**	**400**	**0**	**27**	**50**
Existing Lane Length	*1*	*101*	*90*	*1*	*272*	*Cont*	*0*	*52*	*0*
PM NO BUILD Queue	1	121	200	1	296	400	0	57	125
PM BUILD Queue	**1**	**121**	**200**	**1**	**296**	**400**	**0**	**57**	**125**

	AM	PM
Cycle Length:	100	130

NOTE: Queue lengths are in feet.

RESULTS OF UNSIGNALIZED INTERSECTION CAPACITY ANALYSES

IMPLEMENTATION YEAR (2008)

Intersection #3 - Osuna Rd / Driveway 'A'

The results of the analysis of the unsignalized intersection of Osuna Rd / Driveway 'A' are summarized in the following table:

	2008 NO BUILD		2008 BUILD	
	AM	PM	AM	PM
Osuna Rd / Driveway 'A'				
Minor Street (Driveway 'A')				
NB Left	N/A	D – 33.6	N/A	C – 21.0
NB Thru	N/A	D – 33.6	N/A	C – 21.0
NB Right	N/A	D – 33.6	N/A	C – 21.0
Minor Street (Driveway 'A')				
SB Left	C – 18.8	E – 44.3	E – 35.3	F – 52.7
SB Thru	N/A	E – 44.3	N/A	F – 52.7
SB Right	C – 18.8	E – 44.3	E – 35.3	F – 52.7
Major Street (Osuna Rd)				
EB Left	A – 9.4	A – 9.4	B – 14.3	B – 14.5
WB Left	N/A	C – 16.8	N/A	A – 9.8

This analysis indicates that the intersection of Osuna Rd / Driveway 'A' will operate at satisfactory levels-of-service for all conditions analyzed in this study except for the southbound approach of the driveway across the street from this development. The fact that there are existing traffic signals on either side of this driveway will improve the operation of the driveway to a level better than that indicated in the calculated level-of-service above. The adjacent traffic signals will operate to create gaps in eastbound and westbound traffic on Osuna Rd. at Driveway "A", thus allowing traffic to enter onto Osuna Rd. eastbound or westbound with acceptable delays. It is recommended that Driveway "A" be configured to provide a dedicated northbound left turn lane for northbound to westbound left turn exiting traffic. The northbound left turn lane should be at least 30 feet long.

An eastbound right turn deceleration lane is warranted on Osuna Rd. at Driveway "A". There is an existing eastbound right turn deceleration lane on Osuna Rd. at Driveway "A" that satisfies the requirement for a right turn deceleration lane.

A 120 feet long westbound left turn lane exists on Osuna Rd. at Driveway "A". The projected full build condition volume for the westbound left turn movement into Driveway "A" is 90 vehicles per hour during the AM Peak Hour and 20 vehicles per hour during the PM Peak Hour. A three-minute long queue associated with the 90 vehicles per hour is 125 feet long. Therefore, it is concluded that the existing westbound left turn lane substantially satisfies the City's requirement for the length of the left turn lane.

Intersection #4 - Osuna Rd / Driveway 'B'

This driveway is proposed as a right-in / right-out only driveway, accessing only the commercial portion of the development. The results of the analysis of the unsignalized intersection of Osuna Rd / Driveway 'B' are summarized in the following table:

	2008 NO BUILD		2008 BUILD	
	AM	PM	AM	PM
Osuna Rd / Driveway 'B'				
Minor Street (Driveway 'B')				
NB Left	N/A	N/A	N/A	N/A
NB Right	N/A	N/A	C – 16.0	B – 12.7
Major Street (Osuna Rd)				
WB Left	N/A	N/A	N/A	N/A

This analysis indicates that the intersection of Osuna Rd / Driveway 'B' will operate at satisfactory levels-of-service for all conditions analyzed in this study.

Intersection #5 - Driveway 'C' / Edith Blvd

This driveway is proposed as a right-in / right-out only driveway, accessing only the commercial portion of the development. The results of the analysis of the unsignalized intersection of Driveway "C" / Edith Blvd are summarized in the following table:

	2008 BUILD	
	AM	PM
Driveway "C"/ Edith Blvd		
Minor Street (Driveway "C")		
EB Left	N/A	N/A
EB Right	C – 17.2	C – 15.6
Major Street (Edith Blvd.)		
NB Left	N/A	N/A

This analysis indicates that the intersection of Driveway 'C' / Edith Blvd. will operate at satisfactory levels-of-service for all conditions analyzed in this study.

The fact that there are two right-turn-in, right-turn-out only driveways that access the proposed commercial portion of this development will result in the necessity for creating U-Turns on Osuna Rd. in order the travel west on Osuna Rd. for exiting traffic. This study considers that exiting traffic from the commercial component of the development will turn east on Osuna Rd. and then make a U-Turn east of Edith Blvd. to travel west on Osuna Rd. Similarly, traffic entering the commercial component of this project from the south on Edith Blvd. will turn west on Osuna and then make a U-Turn at Driveway "A" to access Driveway "B". It should be noted, however, that the volume of traffic projected to make these U-Turns is a very small percentage and should not present a significant problem, especially since the median on Osuna is so wide.

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

This analysis was conducted using the following methodology: Trip Generation was established using the Institute of Transportation Engineers' (ITE's) Trip Generation Manual (7th Edition). Generated Trips were distributed proportionately based on the Population Subareas citywide for all uses in the project; Growth rate of background traffic volumes was established from historical data from 2001 through 2005; and the intersection analyses were performed in accordance with the 2000 Highway Capacity Manual, Special Report 209. The Traffic Impact Study showed a moderate increase in traffic congestion for the adjacent transportation network based on 100% buildout of the proposed project.

There were some minor capacity shortfalls noted, especially at the intersections of Osuna Rd. / Edith Blvd. that will be resolved when the City constructs the Osuna Rd. widening project in 2011 to implement a third eastbound and a third westbound thru lane on Osuna Rd. from Edith Blvd. to Jefferson St.

In summary, the proposed 2008 development plan for the Sun Valley Commercial Development facility at the southwest corner of Osuna Rd. / Edith Blvd will present no significant adverse impact to the adjacent transportation system provided that the following recommendations are followed:

RECOMMENDATIONS

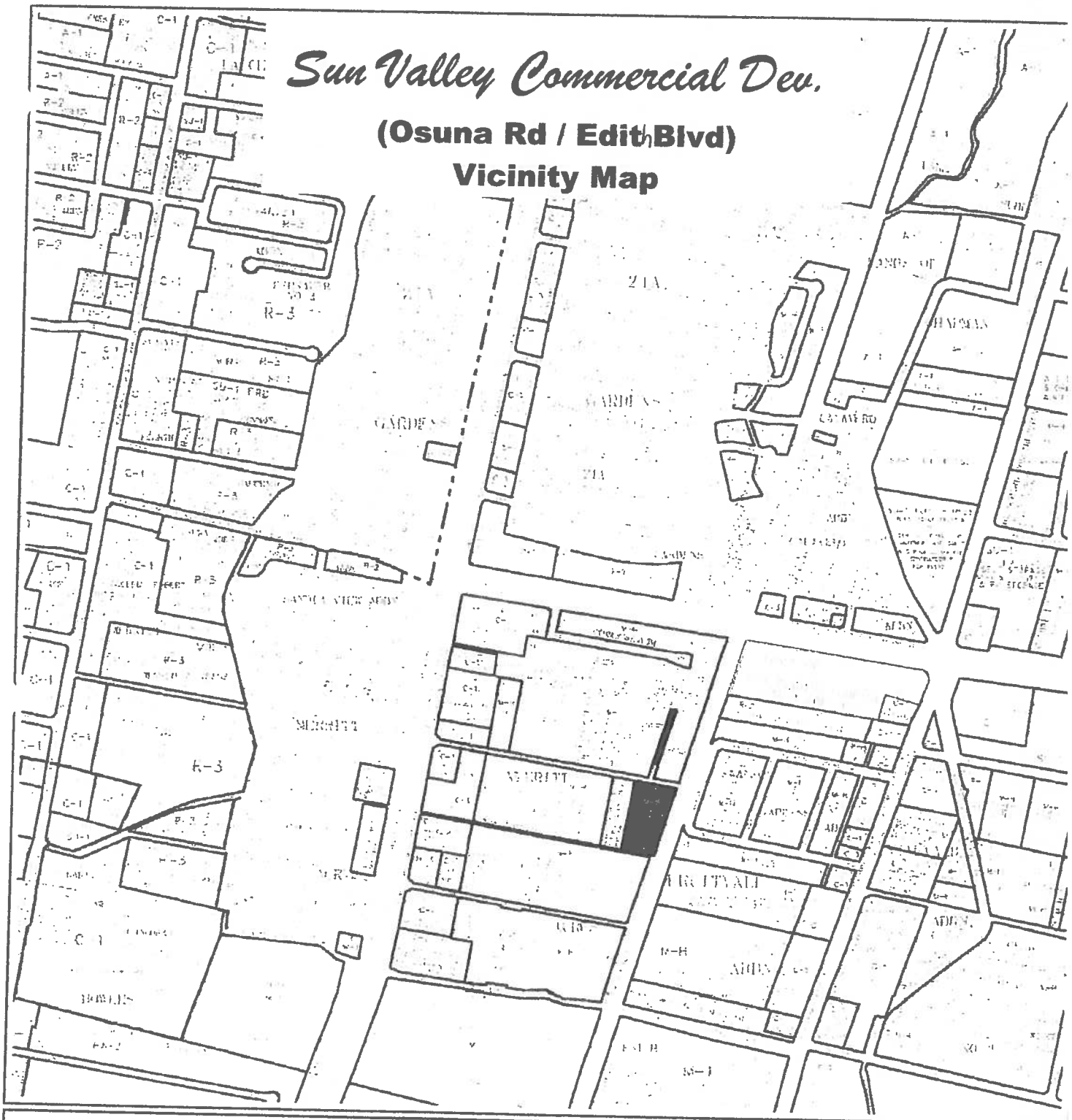
FROM IMPLEMENTATION YEAR (2008) ANALYSIS

- Design and construction of the proposed development should insure that adequate site distances are maintained to the extent possible at all proposed driveways and intersections, and at existing intersections contingent to this site.
- **Osuna Rd. / 2nd St.** – Construct a new northbound thru lane on 2nd St. through Osuna Rd. (See discussion on Page 7). The trips generated by the proposed Sun Valley

Sun Valley Commercial Dev.

(Osuna Rd / Edith Blvd)

Vicinity Map



CITY OF ALBUQUERQUE 1706 NEW MEXICO

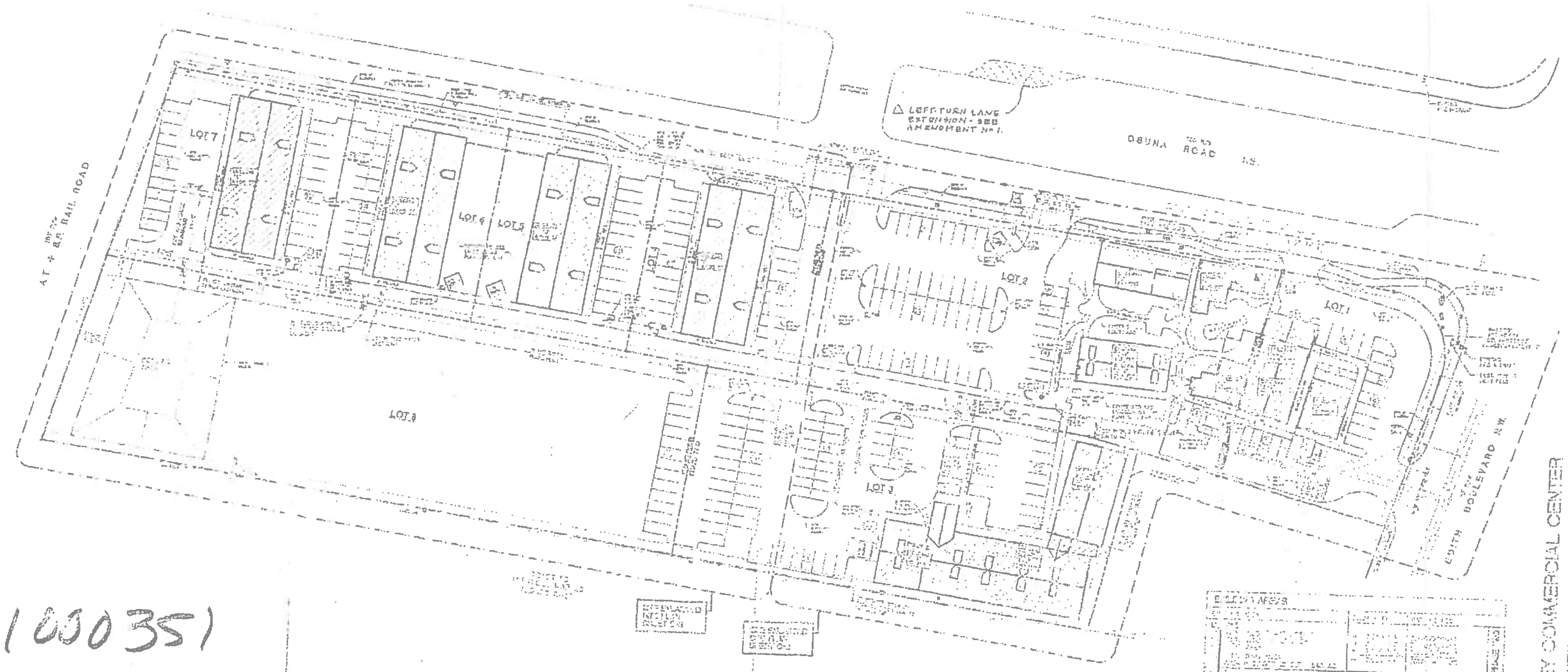
PLANNING DEPARTMENT

Zone Atlas Page

E-15-Z

Map Amended through July 06, 2004

2002 Approved Site Plan



PROJ 1000351

PROJECT # 1000351

Amendment: 02500-00072

00128-00600-00404

00450-00050-01657

12/21/00

1-23-03

12/20/00

N

1 / C1 SITE PLAN

SITE PLAN AMENDMENT No. 1

The approved Site Plan is amended as follows:

At the time of development of the next phase (Lots 1, 4, 5, 6, 7 or 8) the existing left turn lane into the site from Osuna Road NE shall be lengthened per the City Transportation Engineer or an approved Traffic Impact Study.

GENERAL NOTES

PARKING REQUIRED

LANDSCAPING REQUIREMENTS

SUN VALLEY COMMERCIAL CENTER

ALBUQUERQUE, NEW MEXICO

PROJECT# 9903

12-10-2002

rick bennett architect

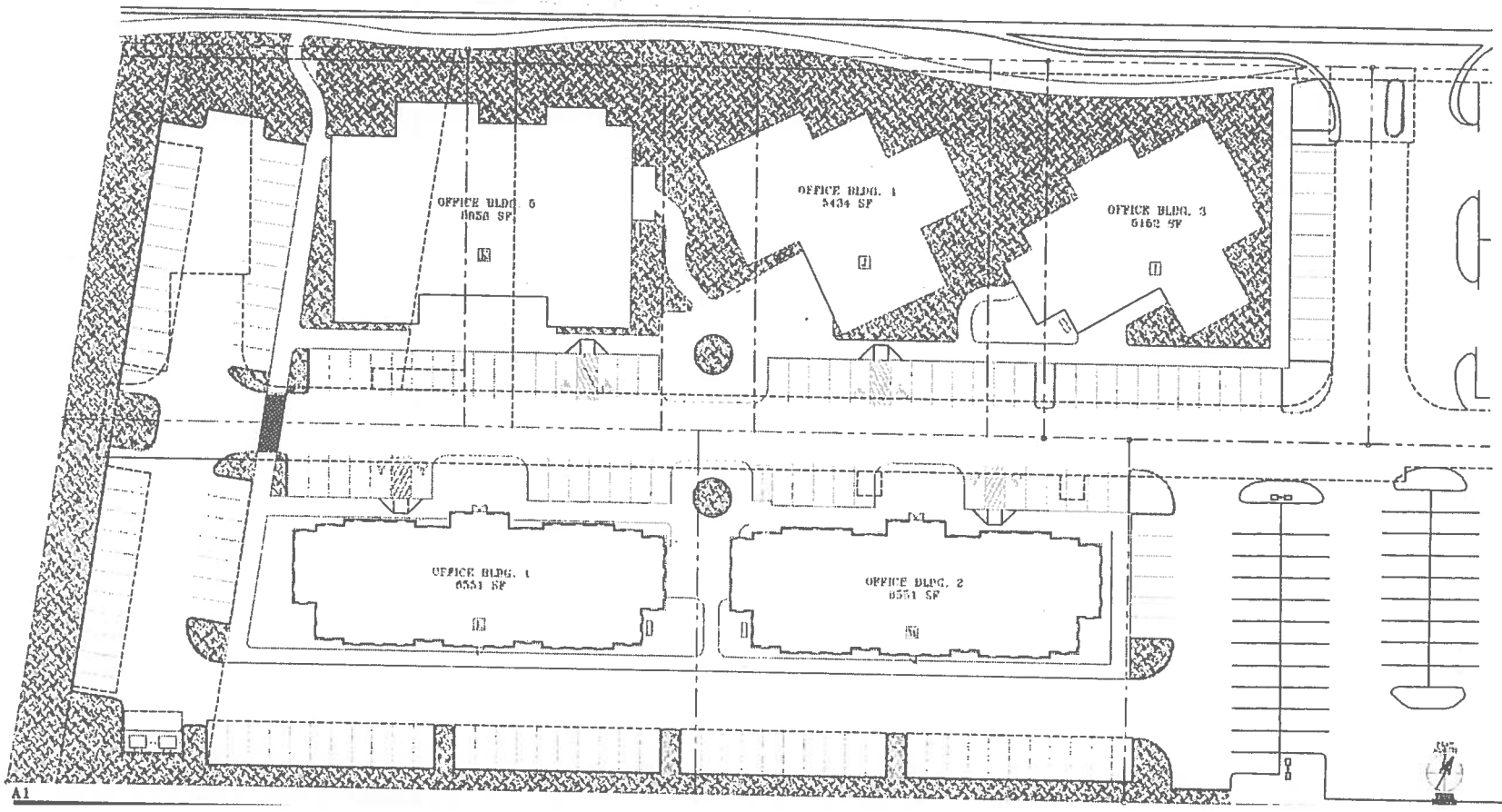
1116 Park Avenue SW

11-21-2001

C-1

SITE PLAN LEGEND

D-4 VICINITY MAP - E15



Proposed New Site Plan

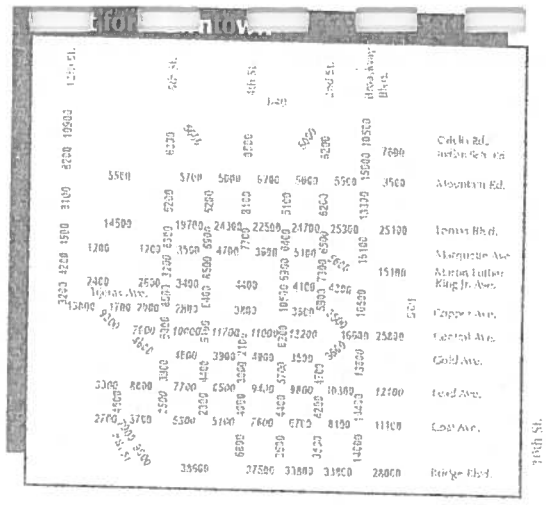
SITE DEVELOPMENT PLAN FOR BUILDING PERMIT

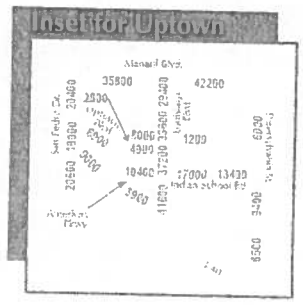
A1

Sun Valley Commercial Dev.

(Osuna Rd / Edith Blvd)

Aerial Photo - 2004





RIO RANCHO

CORRALES

BERNALILLO

BERNALILLO CO.

SANDOVAL CO.

Sandia Indian Reservation

LOS RANCHOS DE ALBUQUERQUE

ALBUQUERQUE

Isleta Indian Reservation

See Inset for Downtown

See Inset for Uptown

Average Weekday Traffic Flows

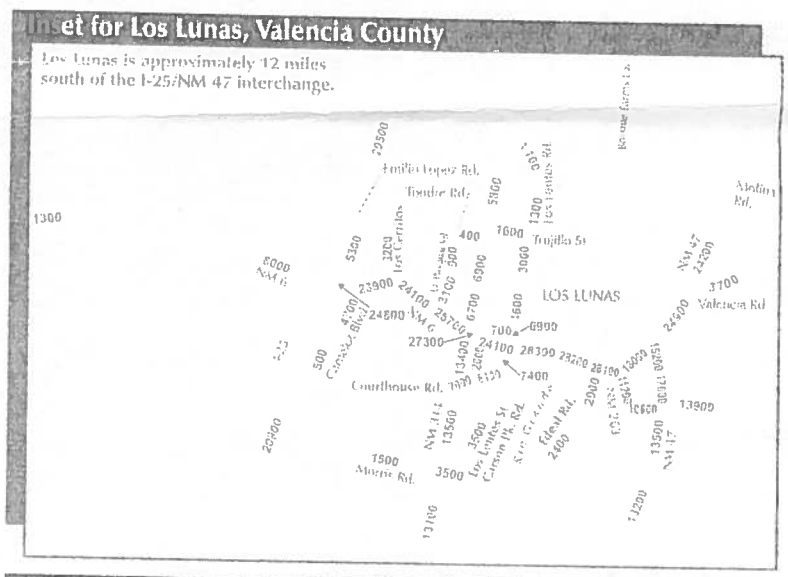
- 0 - 900
- 1000 - 4900
- 5000 - 14900
- 15000 - 24900
- 25000 - 34900
- 35000 - 44900
- 45000 - 54900
- 55000 - 184900

Standard Data 9500 — Link Volume is based on traffic count data accepted by the NM Department of Transportation Traffic Monitoring System (TMS) as standard in accordance with the New Mexico State Traffic Monitoring Standards (NMSTAMS).

Non-Standard Data 9500 — Link Volume is based either on traffic count data not in compliance with the NMSTMS or on professional judgement. NMDOT recommends that nonstandard data be used with caution.

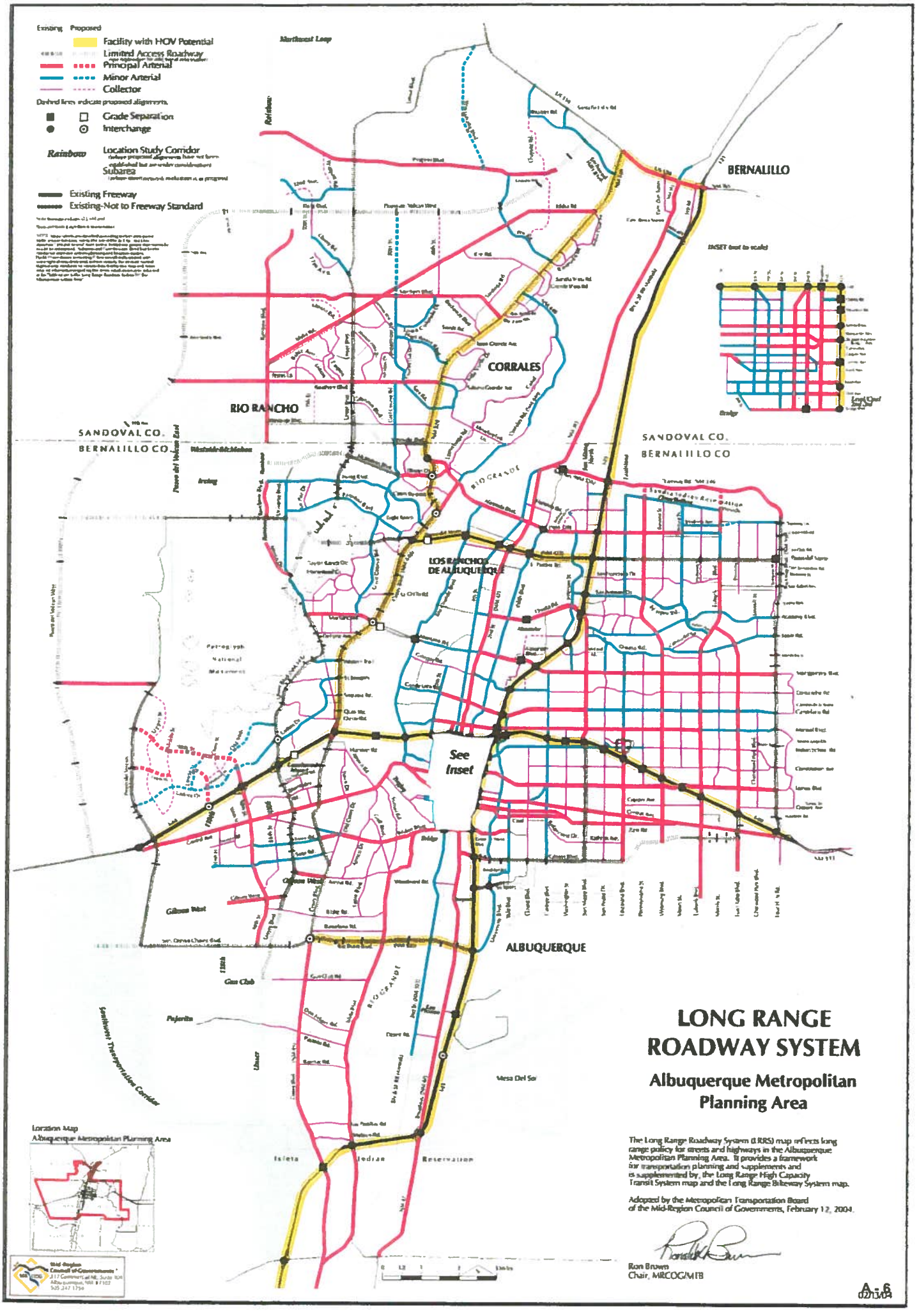
0 1 2 3 4 Miles

Map prepared by the Mid-Region Council of Governments in cooperation with the New Mexico Department of Transportation, the local governments in the Albuquerque Metropolitan Planning Area, and the U.S. Department of Transportation, Federal Highway Administration.



2005 Traffic Flows

for the Greater Albuquerque Area


Existing Proposed
Facility with HOV Potential
Limited Access Roadway
Principal Arterial
Minor Arterial
Collector
Dashed lines indicate proposed alignments.
Grade Separation
Interchange
Rainbow
Location Study Corridor
Subarea
Existing Freeway
Existing-Not to Freeway Standard
Northwest Loop
BERNALILLO
CORRALES
RIO RANCHO
SANDOVAL CO.
BERNALILLO CO.
RIO GRANDE
LOS RANCHOS DE ALBUQUERQUE
See Inset
ALBUQUERQUE
Petroglyph National Monument
Gibson West
Gun Club
Pajarito
Isleta
Indian Reservation
Mesa Del Sol
Southwest Transportation Corridor
Location Map
Albuquerque Metropolitan Planning Area
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
A-6
02/13/04

Sun Valley Commercial Development

Trip Generation Data

COMMENT	USE (ITE CODE) DESCRIPTION	Units	24 HR VOL GROSS	A. M. PEAK HR. ENTER	A. M. PEAK HR. EXIT	P. M. PEAK HR. ENTER	P. M. PEAK HR. EXIT
	Summary Sheet						
revised office componer	General Office Building (710)	72.00	1,036	127	17	27	132
Tract No.	Specialty Retail Center (814)	3.50	187	58	74	13	17
	Subtotal		**1,223**	**185**	**91**	**40**	**149**

Sun Valley Commercial Development
Trip Generation Data

USE (ITE CODE)		24 HOUR TWO-WAY VOLUME	A.M. PEAK HOUR		P.M. PEAK HOUR	
		GROSS	ENTER	EXIT	ENTER	EXIT
	Units					
General Office Building (710)	*72.00*	1,036	127	17	27	132
	1,000 S.F.					

ITE Trip Generation Equations:

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

Ln(T) = *0.77* Ln(X) + *3.65*
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)

Ln(T) = *0.8* Ln(X) + *1.55*
88% Enter, *12%* 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 = *1.12* (X) + *78.81*
17% Enter, *83%* Exit

Comments:
revised office component

Based on ITE Trip Generation Manual - 7th Edition

Sun Valley Commercial Development
Trip Generation Data

USE (ITE CODE)		24 HOUR TWO-WAY VOLUME	A. M. PEAK HOUR		P. M. PEAK HOUR	
		GROSS	ENTER	EXIT	ENTER	EXIT
	Units					
Specialty Retail Center (814)	*3.50*	187	58	74	13	17
	1,000 S.F.					

ITE Trip Generation Equations:

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

T = ***42.78*** (X) + ***37.66***
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)

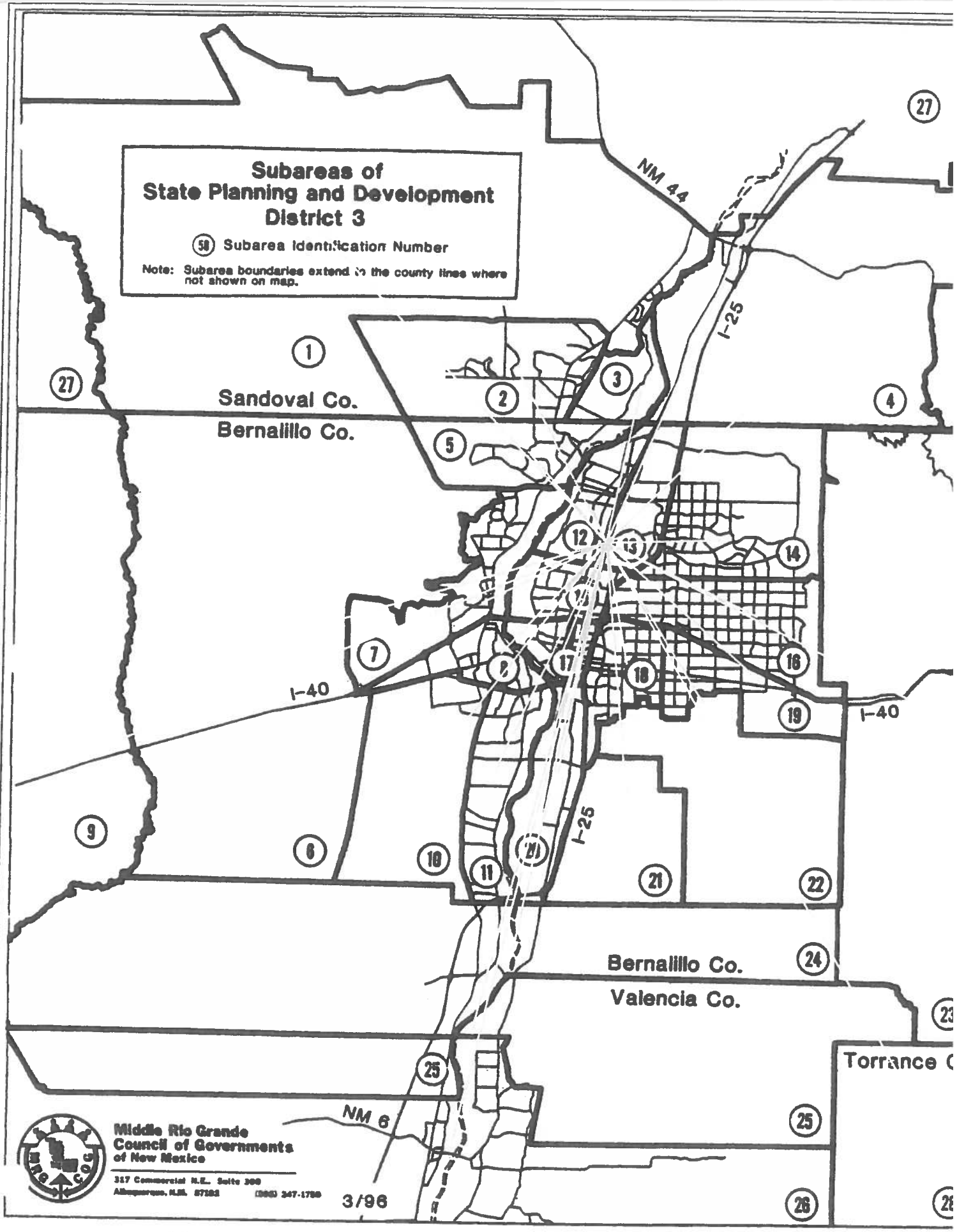
T = ***4.9*** (X) + ***115.59***
44% Enter, ***56%*** Exit

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

T = ***2.4*** (X) + ***21.48***
44% Enter, ***56%*** Exit

Comments:
Tract No.

Based on ITE Trip Generation Manual - 7th Edition



Sun Valley Comm. Dev. (Osuna Rd / Edith Blvd)
Trip Distribution - Subarea Map

Figure

Trip Distribution Table

Sun Valley Commercial Development

Sub Area Population Data:
For determination of Trip Distribution for Proposed Office Development

2000 and 2025 Data Taken from Mid-Region Council of Governments' 2025 Socioeconomic
2025 Socioeconomic Forecasts by Data Analysis Subzones for the Mid-Region of New Mexico (S-03-01)

Sub Area I.D.#	% Sub Area In Study	2005 Population	2010 Population	Interpolated Population for the Year	Population In Study	Dist. (Mi.)	Population / Distance	% Population / Distance	(2N) Second St (Rem) % Utilizing	% Population / Dist. Utilizing	Population	(EN) Eubn Blvd North % Utilizing	% Population / Dist. Utilizing	Population	(OE) Osuna Rd East % Utilizing	% Population / Dist. Utilizing	Population
		2005	2010	2008													
1	100%	26,972	39,738	34,632	2,008	21.17	95	0.09%	0%	0.00%	0	0%	0.00%	0	100%	0.09%	95
2	100%	39,348	40,610	40,105	34,632	9.31	3,719	3.47%	100%	3.47%	3,719	0%	0.00%	0	0%	0.00%	0
3	100%	7,865	8,728	8,383	8,383	7.77	1,079	1.01%	100%	1.01%	1,079	0%	0.00%	0	0%	0.00%	0
4	100%	13,387	14,936	14,316	14,316	16.95	845	0.79%	0%	0.00%	0	0%	0.00%	0	100%	0.79%	845
5	100%	35,968	44,203	40,909	40,909	6.03	6,784	6.33%	100%	6.33%	6,784	0%	0.00%	0	0%	0.00%	0
6	100%	2,784	3,950	3,484	3,484	17.09	204	0.19%	0%	0.00%	0	0%	0.00%	0	100%	0.19%	204
7	100%	48,565	59,615	55,195	55,195	6.90	7,998	7.46%	0%	0.00%	0	0%	0.00%	0	100%	7.46%	7,998
8	100%	27,546	28,553	28,150	28,150	7.64	3,686	3.44%	0%	0.00%	0	0%	0.00%	0	100%	3.44%	3,686
9	100%	1,678	1,888	1,804	1,804	28.61	63	0.06%	0%	0.00%	0	0%	0.00%	0	100%	0.06%	63
10	100%	39,532	4,822	18,706	18,706	14.47	1,293	1.21%	0%	0.00%	0	0%	0.00%	0	100%	1.21%	1,293
11	100%	32,051	33,202	32,742	32,742	13.00	2,519	2.35%	0%	0.00%	0	0%	0.00%	0	100%	2.35%	2,519
12	100%	16,144	16,146	16,145	16,145	1.81	8,925	8.33%	45%	3.75%	4,016	0%	0.00%	0	0%	0.00%	0
13	100%	8,715	10,146	9,574	9,574	1.01	9,526	8.89%	0%	0.00%	0	7%	0.62%	667	93%	7.65%	8,192
14	100%	93,104	94,279	93,809	93,809	5.70	16,472	15.37%	0%	0.00%	0	0%	0.00%	0	100%	15.37%	16,472
15	100%	24,691	25,262	25,034	25,034	3.15	7,950	7.42%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
16	100%	108,882	108,353	108,565	108,565	8.44	12,860	12.00%	0%	0.00%	0	0%	0.00%	0	100%	12.00%	12,860
17	100%	20,920	21,196	21,086	21,086	5.83	3,617	3.38%	0%	0.00%	0	0%	0.00%	0	100%	3.38%	3,617
18	100%	42,078	41,670	41,833	41,833	6.16	6,787	6.33%	0%	0.00%	0	0%	0.00%	0	100%	6.33%	6,787
19	100%	59,027	58,888	58,944	58,944	10.25	5,750	5.37%	0%	0.00%	0	0%	0.00%	0	100%	5.37%	5,750
20	100%	9,482	9,699	9,612	9,612	11.73	820	0.77%	0%	0.00%	0	0%	0.00%	0	100%	0.77%	820
21	100%	6	6	6	6	14.74	0	0.00%	0%	0.00%	0	0%	0.00%	0	100%	0.00%	0
22	100%	4,231	3,629	3,870	3,870	14.87	260	0.24%	0%	0.00%	0	0%	0.00%	0	100%	0.24%	260
23	100%	18,140	20,390	19,490	19,490	17.15	1,136	1.06%	0%	0.00%	0	0%	0.00%	0	100%	1.06%	1,136
24	100%	2,393	2,554	2,490	2,490	20.70	120	0.11%	0%	0.00%	0	0%	0.00%	0	100%	0.11%	120
25	100%	1,009	1,062	1,041	1,041	25.13	41	0.04%	0%	0.00%	0	0%	0.00%	0	100%	0.04%	41
26	100%	75,506	85,654	81,595	81,595	31.16	2,619	2.44%	0%	0.00%	0	0%	0.00%	0	100%	2.44%	2,619
27	100%	20,955	22,276	21,748	21,748	19.56	1,112	1.04%	0%	0.00%	0	0%	0.00%	0	100%	1.04%	1,112
28	100%	19,524	21,690	20,824	20,824	33.97	613	0.57%	0%	0.00%	0	0%	0.00%	0	100%	0.57%	613
29	100%	11,360	13,771	12,807	12,807	50.92	252	0.23%	0%	0.00%	0	0%	0.00%	0	100%	0.23%	252
		811,863	836,916	826,895	788,798		107,143	100.00%		14.56%	15,598		0.62%	667		72.20%	77,354
											14.56%			0.62%			72.20%

* - Subarea in which the site it located.

Trip Distribution Table

Sun Valley Commercial Development

Sub Area Population Data:
For determination of Trip Distribution for Proposed Office Development

2000 and 2025 Data Taken from Mid-Region Council of Governments' 2025 Socioeconomic
2025 Socioeconomic Forecasts by Data Analysis Subzones for the Mid-Region of New Mexico (S-03-01)

Sub Area I.D.#	% Sub Area in Study	2005 Population	2010 Population	Interpolated Population for the Year	Population in Study	Dist. (Mi.)	Population / Distance	% Utilizing	(ES) Cable Blvd South: % Population / Dist. Utilizing	(ES) Cable Blvd South: Population	(2S) Second St South: % Utilizing	(2S) Second St South: % Population / Dist. Utilizing	(2S) Second St South: Population	(OW) Osuna Rd West: % Utilizing	(OW) Osuna Rd West: % Population / Dist. Utilizing	(OW) Osuna Rd West: Population
		2005	2010	2008												
1	75%	26,972	39,738	34,632	2,008	21.17	95	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
2	100%	39,348	40,610	40,105	34,632	9.31	3,719	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
3	100%	7,865	8,728	8,383	8,383	7.77	1,079	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
4	100%	13,387	14,936	14,316	14,316	16.95	845	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5	100%	35,968	44,203	40,909	40,909	6.03	6,784	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
6	100%	2,784	3,950	3,484	3,484	17.09	204	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
7	100%	48,565	59,615	55,195	55,195	6.90	7,998	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
8	100%	27,546	28,553	28,150	28,150	7.64	3,686	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
9	100%	1,678	1,888	1,804	1,804	28.61	63	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
10	100%	39,532	4,822	18,706	18,706	14.47	1,293	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
11	100%	32,051	33,202	32,742	32,742	13.00	2,519	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
12	100%	16,144	16,146	16,145	16,145	1.81	8,925	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
13	100%	8,715	10,146	9,574	9,574	1.01	9,526	15%	0.62%	667	0%	1.25%	1,339	40%	3.33%	3,570
14	100%	93,104	94,279	93,809	93,809	5.70	16,472	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
15	100%	24,691	25,262	25,034	25,034	3.15	7,950	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
16	100%	108,882	108,353	108,565	108,565	8.44	12,860	75%	1.11%	1,192	70%	5.19%	5,565	15%	1.11%	1,192
17	100%	20,920	21,196	21,086	21,086	5.83	3,617	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
18	100%	42,078	41,670	41,833	41,833	6.16	6,787	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
19	100%	59,027	58,888	58,944	58,944	10.25	5,750	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
20	100%	9,482	9,699	9,612	9,612	11.73	820	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
21	100%	6	6	6	6	14.74	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
22	100%	4,231	3,629	3,870	3,870	14.87	260	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
23	100%	18,140	20,390	19,490	19,490	17.15	1,136	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
24	100%	2,393	2,554	2,490	2,490	20.70	120	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
25	100%	1,009	1,062	1,041	1,041	25.13	41	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
26	100%	75,506	85,654	81,595	81,595	31.16	2,619	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
27	100%	20,955	22,276	21,748	21,748	19.56	1,112	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
28	100%	19,524	21,690	20,824	20,824	33.97	613	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
29	100%	11,360	13,771	12,807	12,807	50.92	252	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
		811,863	836,916	826,895	788,798		107,143		1.74%	1,859		6.44%	6,904		4.44%	4,762
										1.74%			6.44%			4.44%

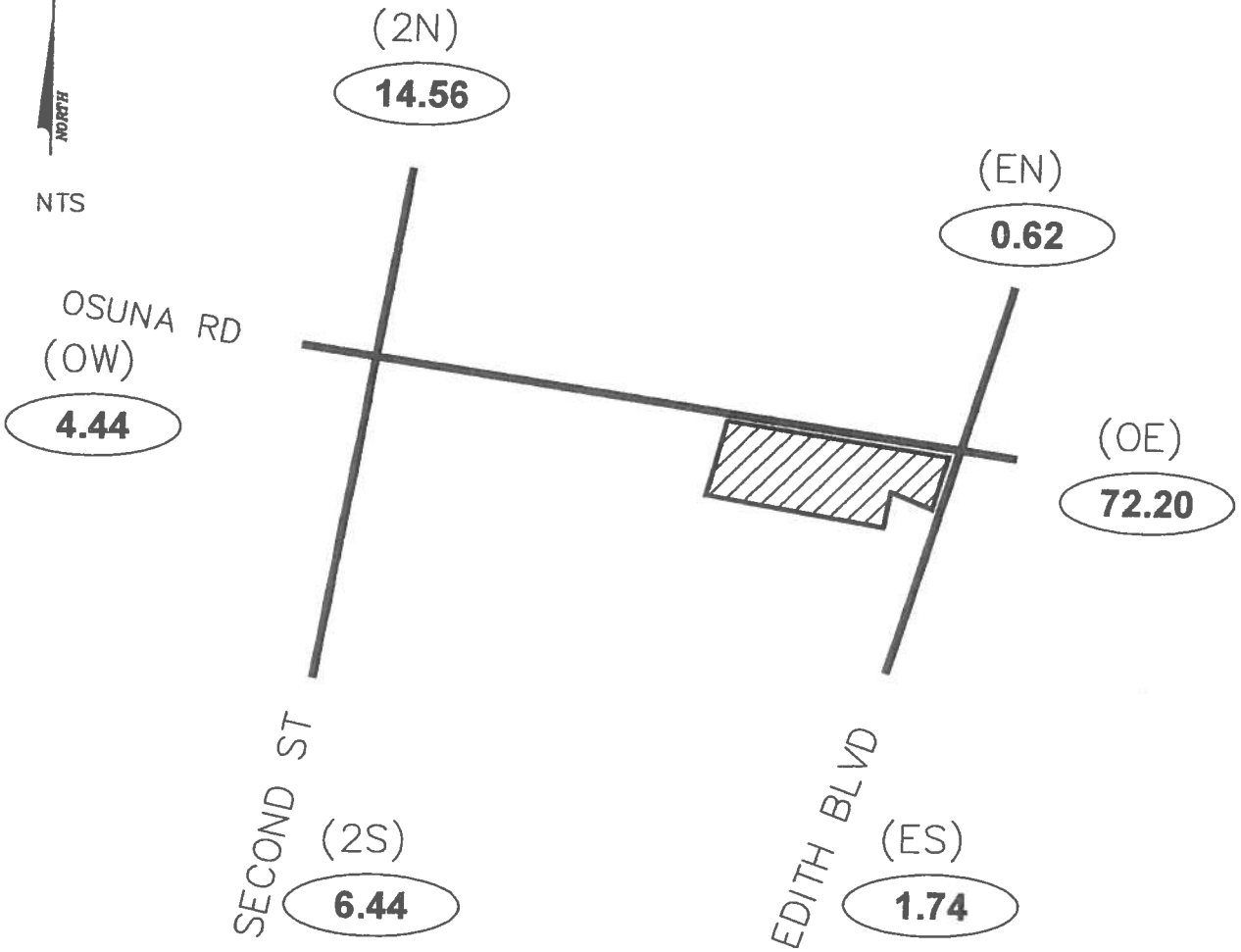
* - Subarea in which the site it located.

Sun Valley Commercial Development

(Osuna Rd / Edith Blvd)

Trip Distribution Map (%)

NTS



Terry O. Brown, P.E.
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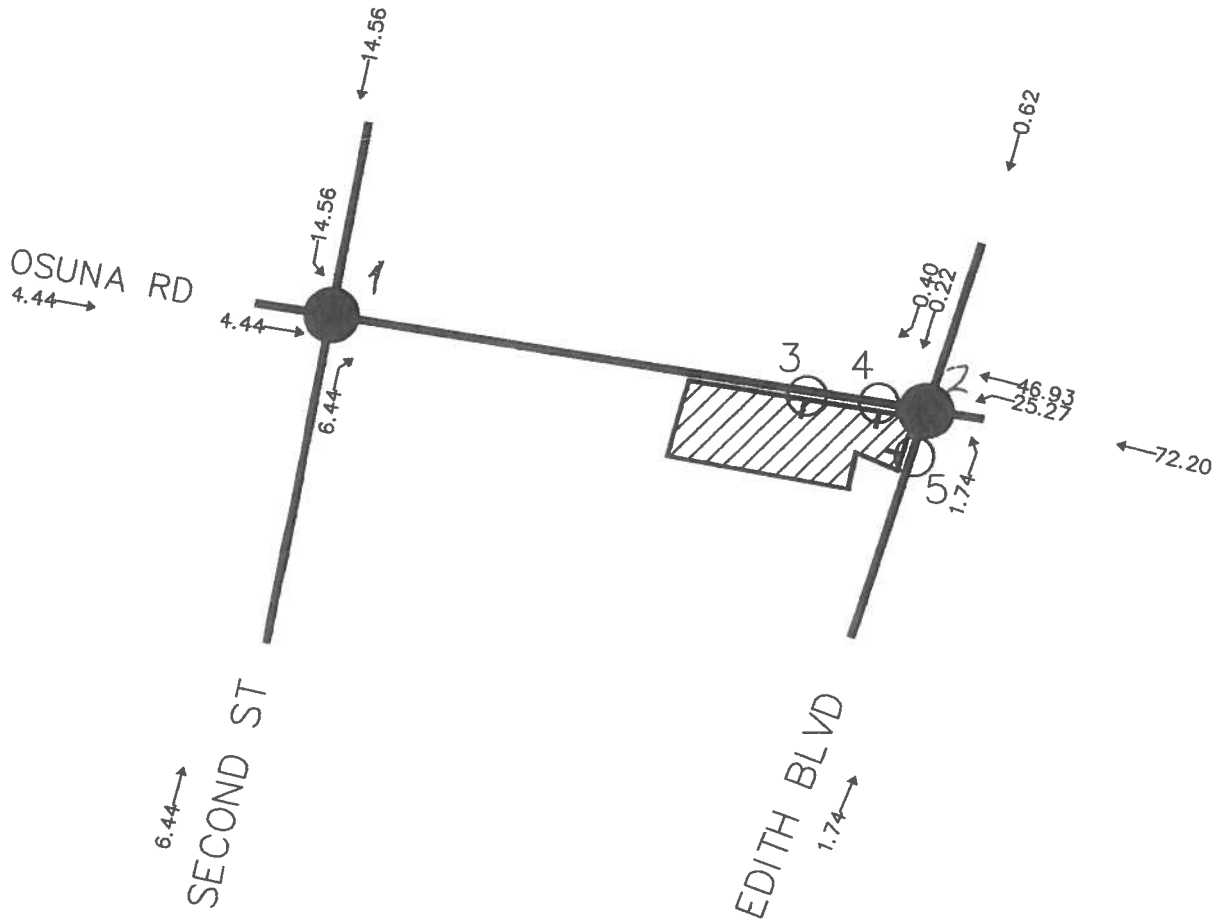
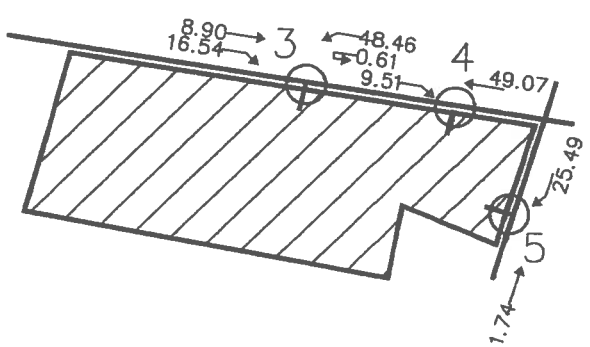
Sun Valley Commercial Development

(Osuna Rd / Edith Blvd)

Trip Assignments (% Entering)

NTS





DRIVEWAY DETAIL

● SIGNALIZED INTERSECTION

○ UNSIGNALIZED INTERSECTION

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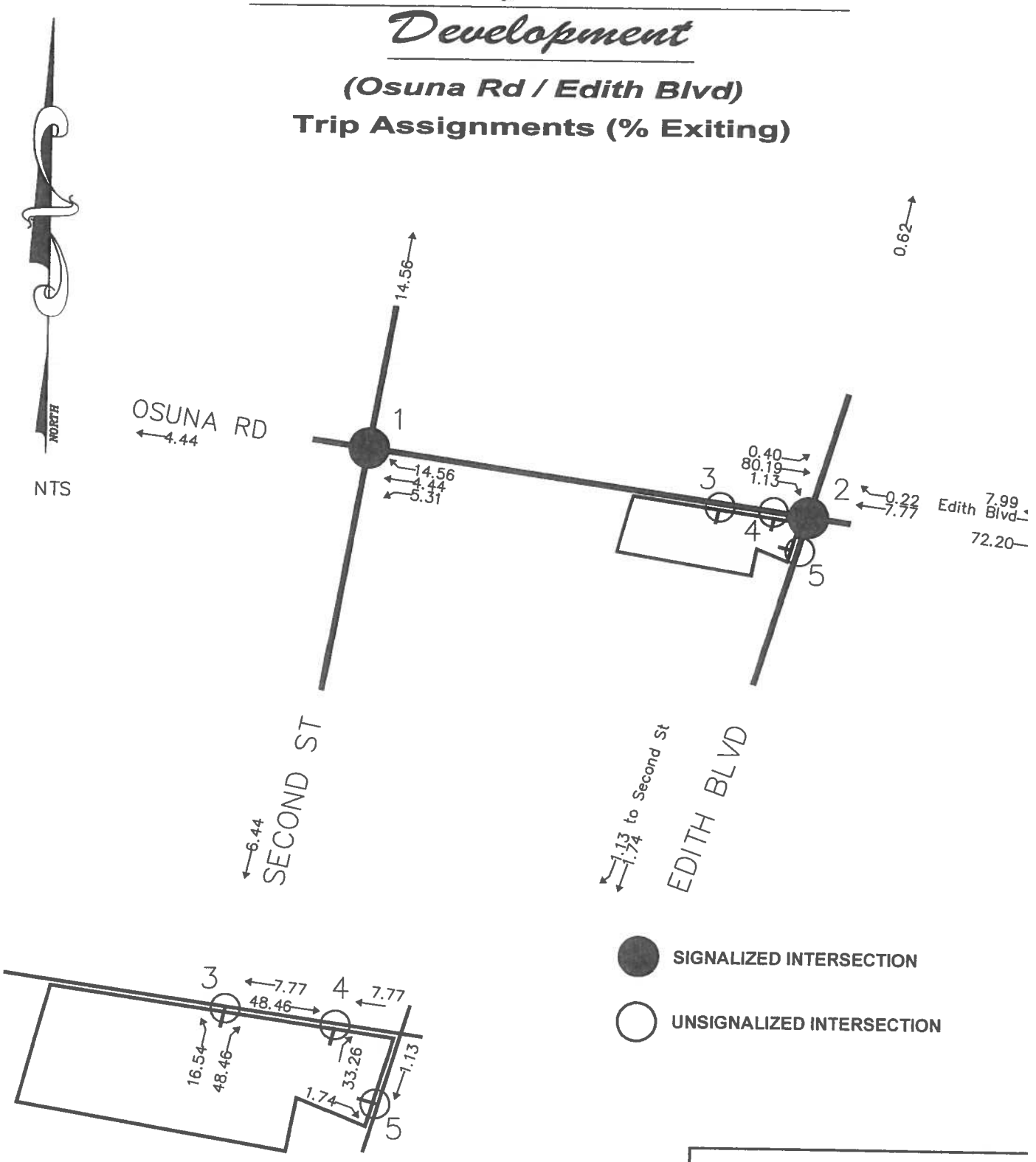
Sun Valley Commercial Development

(Osuna Rd / Edith Blvd)

Trip Assignments (% Exiting)



DRIVEWAY DETAIL

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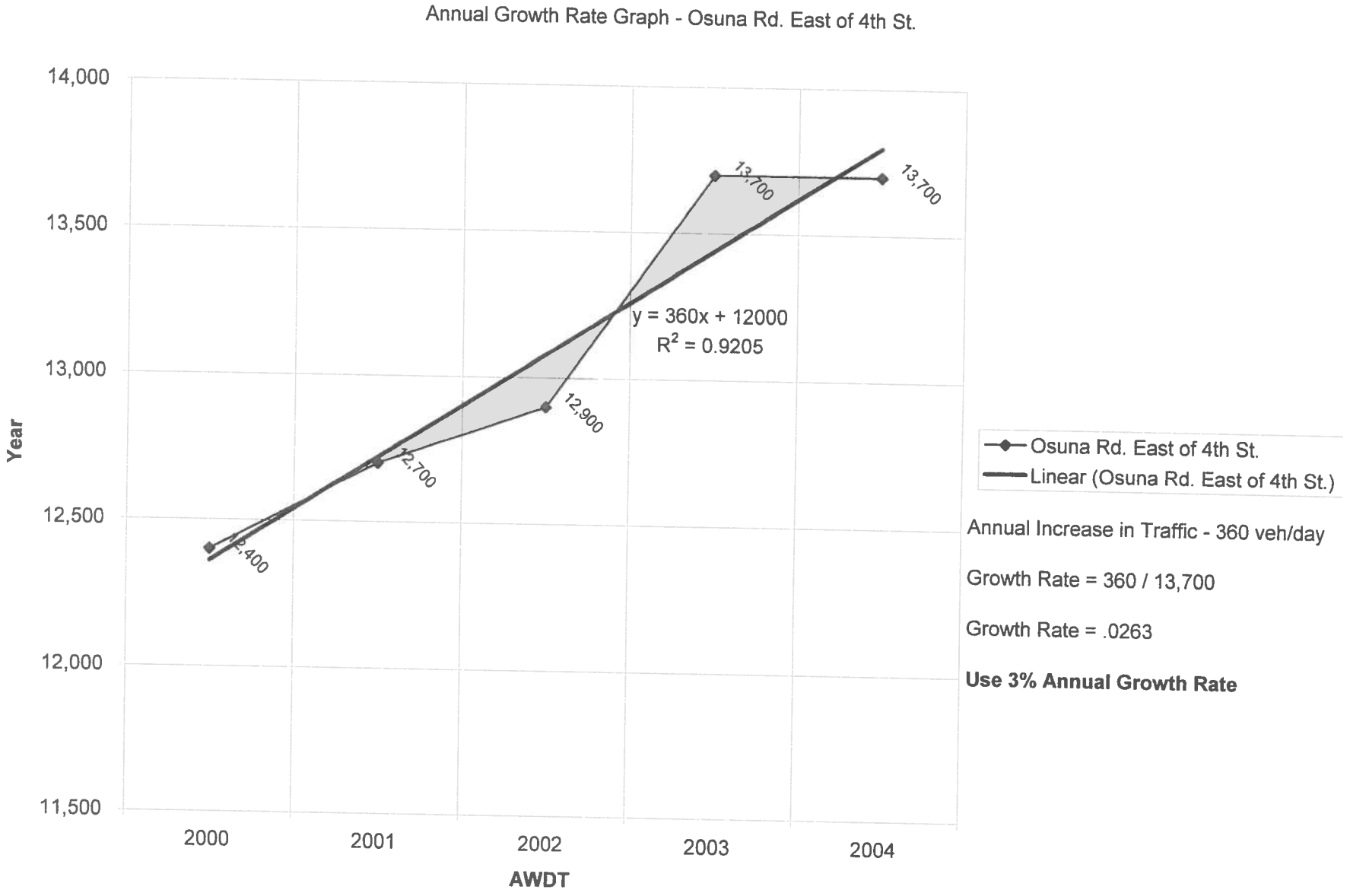
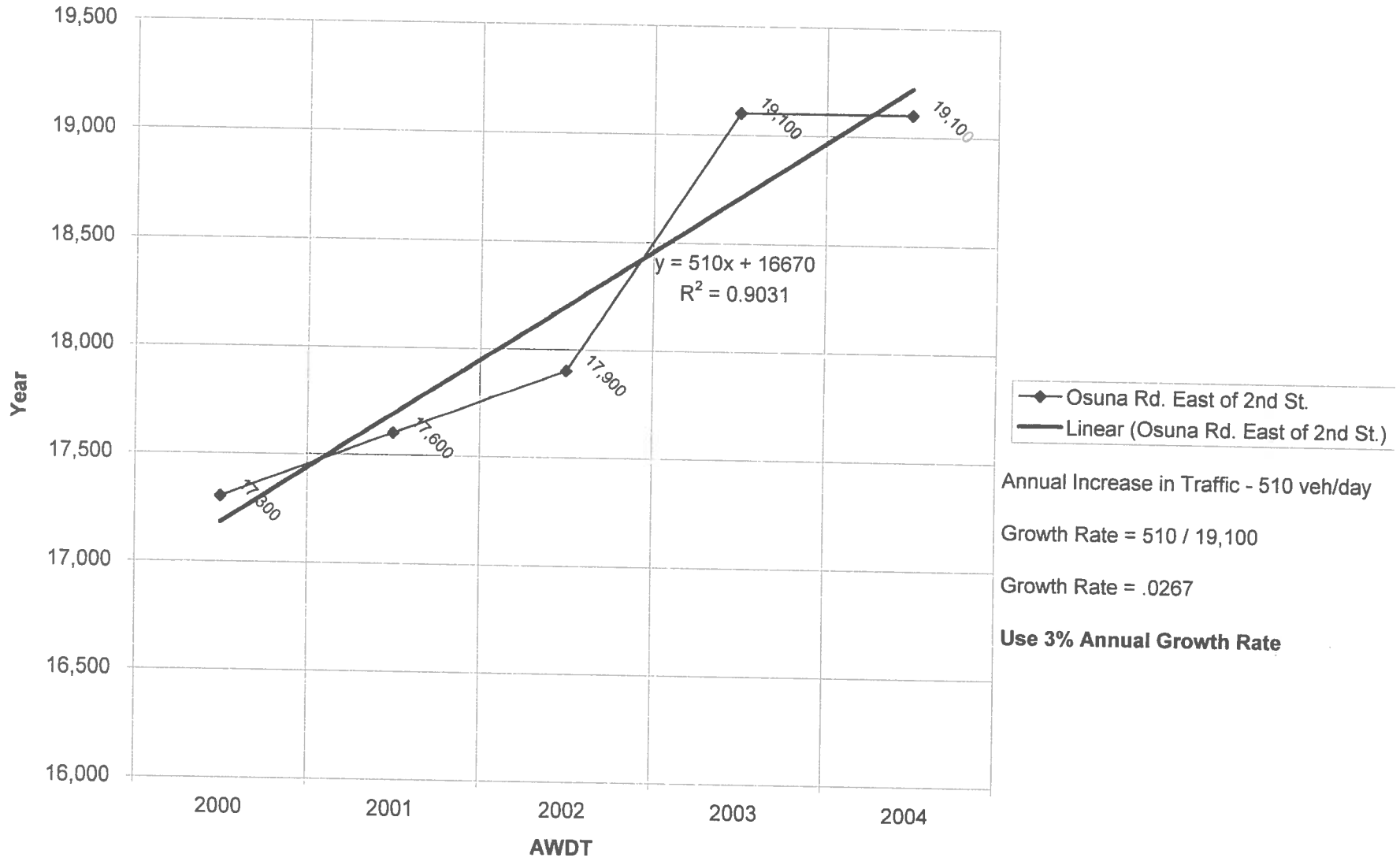
Growth Data for Sun Valley Commercial Development

	2000	2001	2002	2003	2004
Osuna Rd. East of 4th St.	12,400	12,700	12,900	13,700	13,700
Osuna Rd. East of 2nd St.	17,300	17,600	17,900	19,100	19,100
Osuna Rd. East of Edith Blvd.	20,400	21,000	21,500	20,500	21,100
2nd St. South of Osuna Rd.	24,900	25,400	25,900	25,800	25,300
2nd St. North of Osuna Rd.	28,100	28,700	29,200	26,300	26,200
Edith Blvd.South of Osuna Rd.	11,300	11,500	11,700	12,100	12,100
Edith Blvd. North of Osuna Rd.	8,000	8,200	8,300	8,800	8,700


Annual Growth Rate Graph - Osuna Rd. East of 4th St.
14,000
13,500
13,000
12,500
12,000
11,500
Year
2000
2001
2002
2003
2004
AWDT
12,400
12,700
12,900
13,700
13,700
y = 360x + 12000
R² = 0.9205
Osuna Rd. East of 4th St.
Linear (Osuna Rd. East of 4th St.)
Annual Increase in Traffic - 360 veh/day
Growth Rate = 360 / 13,700
Growth Rate = .0263
Use 3% Annual Growth Rate

Annual Growth Rate Graph - Osuna Rd. East of 2nd St.



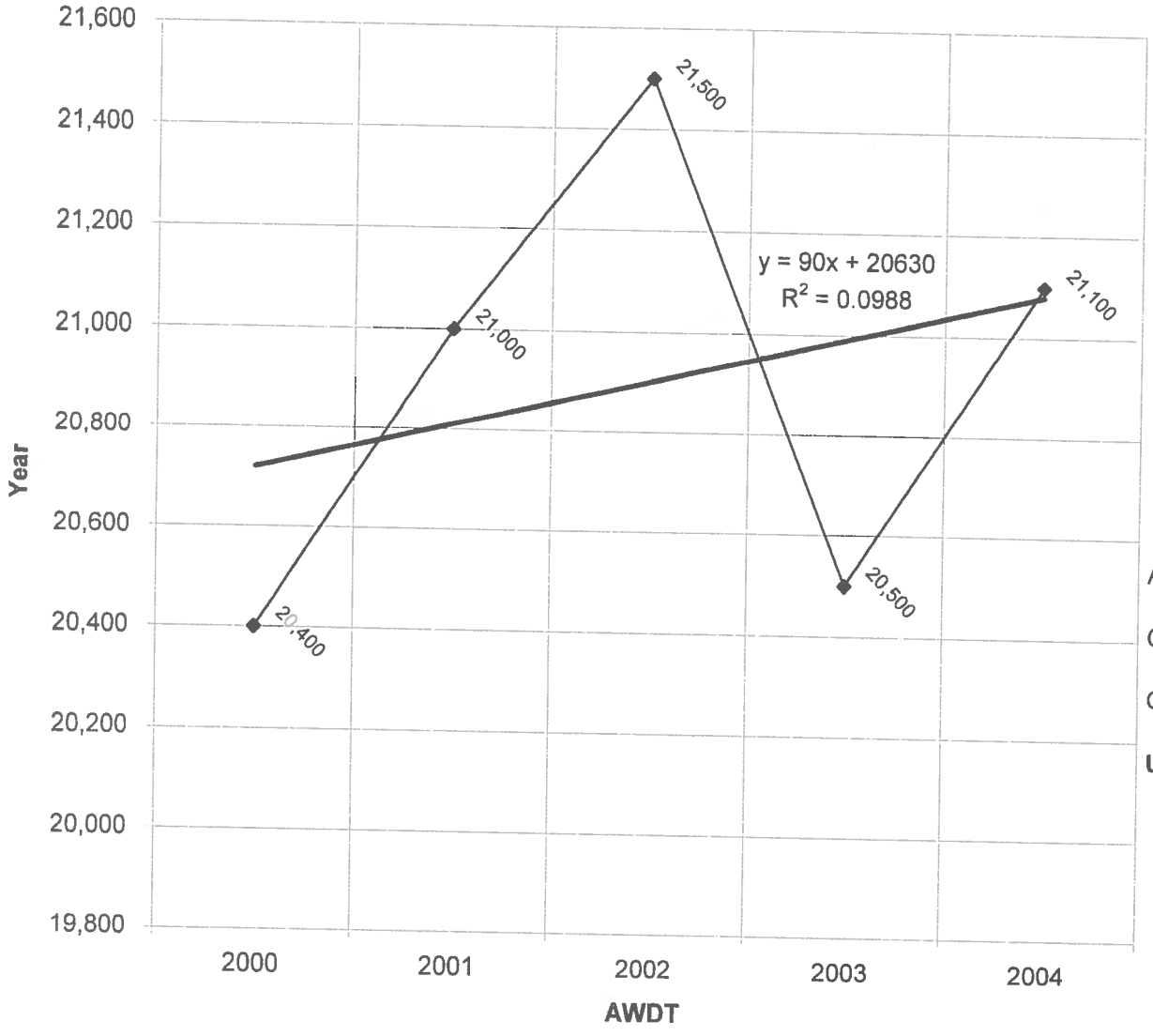
Annual Increase in Traffic - 510 veh/day

Growth Rate = 510 / 19,100

Growth Rate = .0267

Use 3% Annual Growth Rate

Annual Growth Rate Graph - Osuna Rd. East of Edith Blvd.



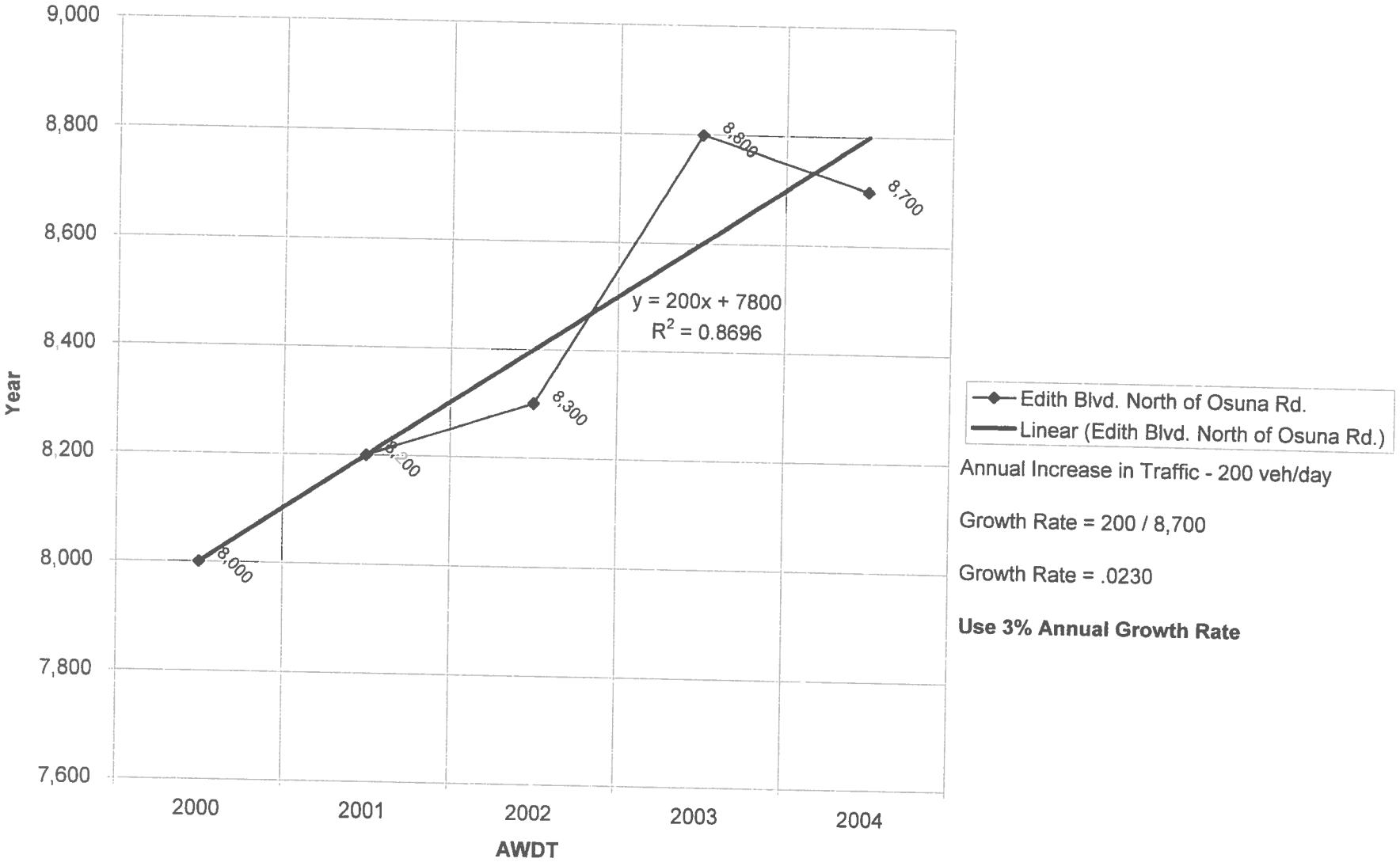
Annual Increase in Traffic - 90 veh/day

Growth Rate = 90 / 21,100

Growth Rate = .0043

Use 1% Annual Growth Rate

Annual Growth Rate Graph - Edith Blvd. North of Osuna Rd.



Annual Increase in Traffic - 200 veh/day

Growth Rate = 200 / 8,700

Growth Rate = .0230

Use 3% Annual Growth Rate

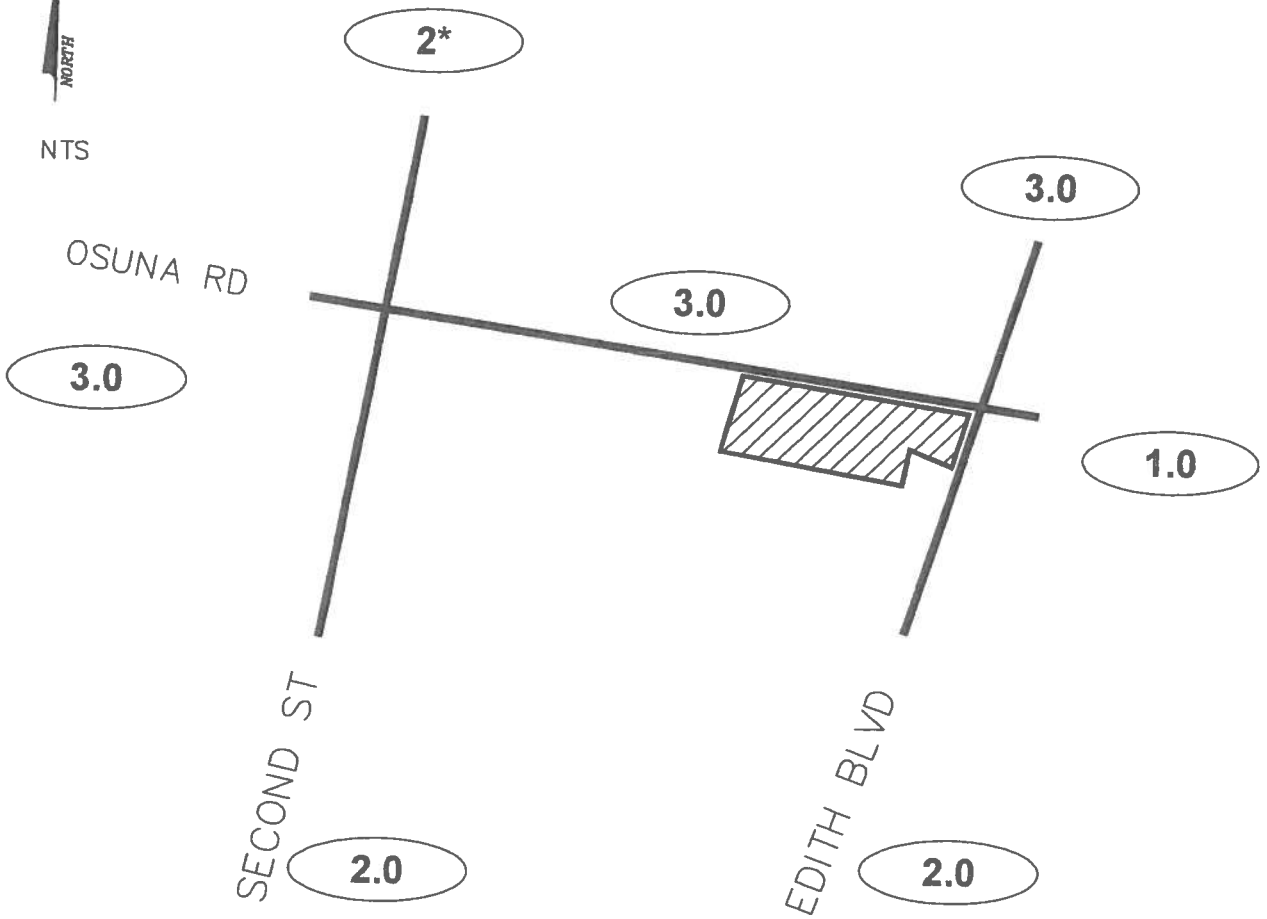
Sun Valley Commercial Development

(Osuna Rd / Edith Blvd)

Growth Rate Map (%)

NTS

* Generic growth rate of 2% used where rate is negative or unavailable



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Sun Valley Commercial Development

Projected Turning Movements SUMMARY

PROPOSED DEVELOPMENT (2008) - 100% Development

INTERSECTION: **Summary**

Osuna Rd / Second St

(1)

3.0% Truck

Existing (2007)

2008 (NO BUILD - A.M.)

2008 (BUILD - A.M.)

	0.92			0.75			0.84			0.91		PHF
	Eastbound (Osuna Rd)			Westbound (Osuna Rd)			Northbound (Second St)			Southbound (Second St)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
	68	376	59	108	194	194	39	564	245	395	1,168	36
	70	*421*	*60*	*126*	*227*	*219*	*40*	*575*	*268*	*426*	*1,191*	*36*
	70	***429***	***60***	***131***	***231***	***232***	***40***	***575***	***280***	***453***	***1,191***	***36***

Existing (2007)

2008 (NO BUILD - P.M.)

2008 (BUILD - P.M.)

	0.93			0.96			0.94			0.89		PHF
	Eastbound (Osuna Rd)			Westbound (Osuna Rd)			Northbound (Second St)			Southbound (Second St)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
	92	179	72	264	465	637	69	902	163	291	792	79
	94	*242*	*74*	*274*	*540*	*698*	*71*	*919*	*196*	*336*	*807*	*80*
	94	***244***	***74***	***282***	***547***	***720***	***71***	***919***	***199***	***342***	***807***	***80***

Osuna Rd / Edith Blvd

(2)

3.0% Truck

Existing (2007)

2008 (NO BUILD - A.M.)

2008 (BUILD - A.M.)

	0.90			0.80			0.81			0.90		PHF
	Eastbound (Osuna Rd)			Westbound (Osuna Rd)			Northbound (Edith Blvd)			Southbound (Edith Blvd)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
	29	864	239	155	348	65	150	223	148	174	368	25
	29	*964*	*245*	*169*	*414*	*71*	*153*	*227*	*165*	*185*	*378*	*26*
	29	***1,037***	***246***	***216***	***508***	***71***	***156***	***227***	***165***	***185***	***378***	***27***

Existing (2007)

2008 (NO BUILD - P.M.)

2008 (BUILD - P.M.)

	0.87			0.91			0.87			0.84		PHF
	Eastbound (Osuna Rd)			Westbound (Osuna Rd)			Northbound (Edith Blvd)			Southbound (Edith Blvd)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
	48	428	123	158	980	155	289	454	156	107	288	55
	49	*568*	*126*	*185*	*1,126*	*168*	*295*	*463*	*183*	*121*	*296*	*57*
	50	***687***	***128***	***195***	***1,157***	***168***	***296***	***463***	***183***	***121***	***296***	***57***

Osuna Rd / Driveway 'A'

(3)

3.0% Truck

Existing (2007)

2008 (NO BUILD - A.M.)

2008 (BUILD - A.M.)

	0.89			0.75			0.85			0.83		PHF
	Eastbound (Osuna Rd)			Westbound (Osuna Rd)			Northbound (Driveway 'A')			Southbound (Driveway 'A')		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
	4	1,207	0	0	505	6	0	0	0	13	0	5
	4	*1,318*	*0*	*0*	*582*	*6*	*0*	*0*	*0*	*14*	*0*	*5*
	4	***1,334***	***31***	***91***	***589***	***6***	***15***	***0***	***44***	***14***	***0***	***5***

Existing (2007)

2008 (NO BUILD - P.M.)

2008 (BUILD - P.M.)

	0.85			0.90			0.85			0.75		PHF
	Eastbound (Osuna Rd)			Westbound (Osuna Rd)			Northbound (Driveway 'A')			Southbound (Driveway 'A')		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
	5	583	0	0	1,282	7	0	0	0	6	0	0
	5	*728*	*0*	*0*	*1,456*	*7*	*0*	*0*	*0*	*6*	*0*	*0*
	5	***732***	***7***	***20***	***1,468***	***7***	***25***	***0***	***72***	***6***	***0***	***0***

Sun Valley Commercial Development

Projected Turning Movements Worksheet

Osuna Rd / Second St

INTERSECTION: E-W Street: **Osuna Rd** (1)

N-S Street: **Second St**

Year of Existing Counts: 2006

Implementation Year: **2008**

Growth Rates	3.00%			3.00%			2.00%			2.00%		
	Eastbound (Osuna Rd)			Westbound (Osuna Rd)			Northbound (Second St)			Southbound (Second St)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	66	365	57	105	188	188	38	553	240	387	1,145	35
Background Traffic Growth	4	22	3	6	11	11	2	22	10	15	46	1
Subtotal	70	387	60	111	199	199	40	575	250	402	1,191	36
Vista del Norte	0	34	0	15	28	20	0	0	18	24	0	0
Subtotal (NO BUILD - A.M.)	***70***	***421***	***60***	***126***	***227***	***219***	***40***	***575***	***268***	***426***	***1,191***	***36***
Percent Office Trips Generated(Entering)	*0.00%*	*4.44%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*6.44%*	*14.56%*	*0.00%*	*0.00%*
Percent Office Trips Generated(Exiting)	*0.00%*	*0.00%*	*0.00%*	*5.31%*	*4.44%*	*14.56%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*
Total Trips Generated	0	8	0	5	4	13	0	0	12	27	0	0
Total AM Peak Hour BUILD Volumes	**70**	**429**	**60**	**131**	**231**	**232**	**40**	**575**	**280**	**453**	**1,191**	**36**

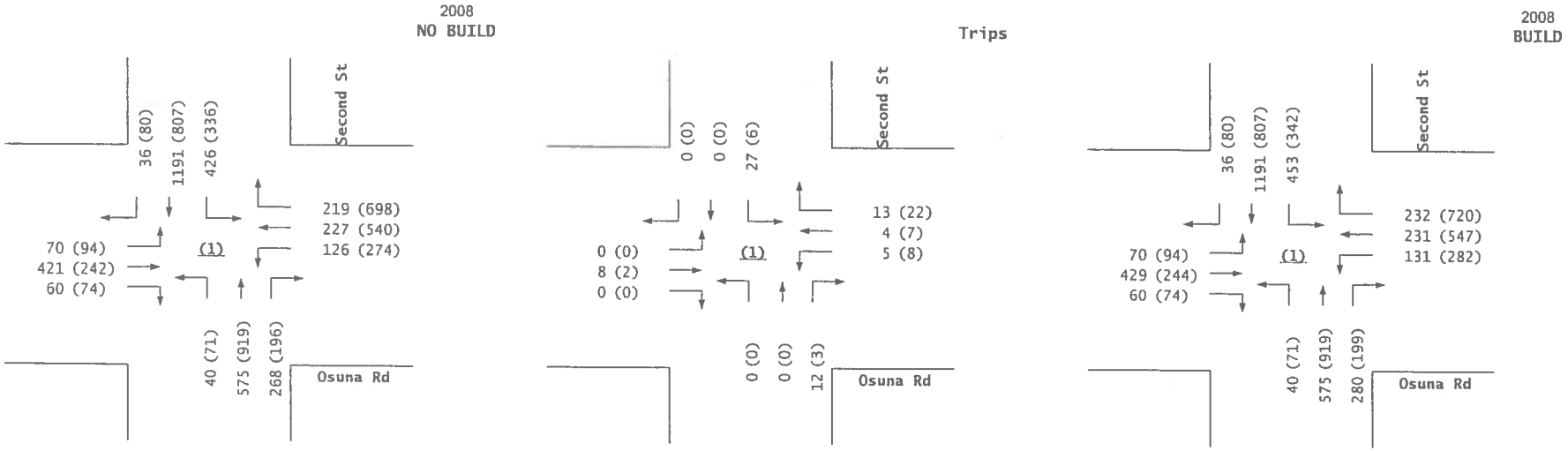
	Eastbound (Osuna Rd)			Westbound (Osuna Rd)			Northbound (Second St)			Southbound (Second St)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	89	174	70	256	451	618	68	884	160	285	776	77
Background Traffic Growth	5	10	4	15	27	37	3	35	6	11	31	3
Subtotal	94	184	74	271	478	655	71	919	166	296	807	80
Vista del Norte	0	58	0	3	62	43	0	0	30	40	0	0
Subtotal (NO BUILD - P.M.)	***94***	***242***	***74***	***274***	***540***	***698***	***71***	***919***	***196***	***336***	***807***	***80***
Percent Office Trips Generated(Entering)	*0.00%*	*4.44%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*6.44%*	*14.56%*	*0.00%*	*0.00%*
Percent Office Trips Generated(Exiting)	*0.00%*	*0.00%*	*0.00%*	*5.31%*	*4.44%*	*14.56%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*
Total Trips Generated	0	2	0	8	7	22	0	0	3	6	0	0
Total PM Peak Hour BUILD Volumes	**94**	**244**	**74**	**282**	**547**	**720**	**71**	**919**	**199**	**342**	**807**	**80**

Number of Office Trips Generated	Entering	Exiting		
	185	91	A.M.	100% Office Development
	40	149	P.M.	

	Eastbound (Osuna Rd)			Westbound (Osuna Rd)			Northbound (Second St)			Southbound (Second St)		
2007 AM Peak Hr. Volumes	68	376	59	108	194	194	39	564	245	395	1,168	36
2007 PM Peak Hr. Volumes	92	179	72	264	465	637	69	902	163	291	792	79

MRCOG Forecast Volumes Worksheet

Based on 2006 Traffic Count				
2006 AM Link Volume	488	481	831	1,567
2006 PM Link Volume	333	1,325	1,112	1,138
Based on MRCOG Model (2025 Data Set)				
2005 AM Link Volume	**370**	**327**	**1248**	**1049**
2005 PM Link Volume	**313**	**1024**	**1058**	**1246**
2025 AM Link Volume	1468	848	1609	777
2025 PM Link Volume	923	1753	1389	1534
Growth Rate to Apply to Existing Counts to Match 2025 Forecasts				
2006-2025 AM Growth Rates	**10.57%**	**4.02%**	**4.93%**	**-2.65%**
2006-2025 PM Growth Rates	**9.33%**	**1.70%**	**1.31%**	**1.83%**
Growth Rate to Apply to 2005 Model Volumes to Match 2025 Forecasts				
2006-2025 AM Growth Rates	14.84%	7.97%	1.45%	-1.30%
2006-2025 PM Growth Rates	9.74%	3.56%	1.56%	1.16%



Osuna Rd / Second St

Sun Valley Commercial Development

Projected Turning Movements Worksheet

Driveway 'C' / Edith Blvd

INTERSECTION: E-W Street: **Driveway 'C'** (5)

N-S Street: **Edith Blvd**

Year of Existing Counts 2005

Implementation Year **2008**

	Growth Rates	3.00%			3.00%			2.00%			2.00%		
		Eastbound (Driveway 'C')			Westbound (Driveway 'C')			Northbound (Edith Blvd)			Southbound (Edith Blvd)		
		Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes		0	0	0	0	0	0	0	500	0	0	724	0
Background Traffic Growth		0	0	0	0	0	0	0	30	0	0	43	0
Subtotal		0	0	0	0	0	0	0	530	0	0	767	0
Vista del Norte		0	0	0	0	0	0	0	14	0	0	12	0
Subtotal (NO BUILD - A.M.)		***0***	***0***	***0***	***0***	***0***	***0***	***0***	***544***	***0***	***0***	***779***	***0***
Percent Office Trips Generated(Entering)		*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*1.74%*	*0.00%*	*0.00%*	*0.00%*	*25.49%*
Percent Office Trips Generated(Exiting)		*0.00%*	*0.00%*	*1.74%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*1.13%*	*0.00%*
Total Trips Generated		0	0	2	0	0	0	0	3	0	0	1	47
Total AM Peak Hour BUILD Volumes		**0**	**0**	**2**	**0**	**0**	**0**	**0**	**547**	**0**	**0**	**780**	**47**

	Eastbound (Driveway 'C')			Westbound (Driveway 'C')			Northbound (Edith Blvd)			Southbound (Edith Blvd)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	0	0	0	0	0	0	0	865	0	0	543	0
Background Traffic Growth	0	0	0	0	0	0	0	52	0	0	33	0
Subtotal	0	0	0	0	0	0	0	917	0	0	576	0
Vista del Norte	0	0	0	0	0	0	0	24	0	0	25	0
Subtotal (NO BUILD - P.M.)	***0***	***0***	***0***	***0***	***0***	***0***	***0***	***941***	***0***	***0***	***601***	***0***
Percent Office Trips Generated(Entering)	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*1.74%*	*0.00%*	*0.00%*	*0.00%*	*25.49%*
Percent Office Trips Generated(Exiting)	*0.00%*	*0.00%*	*1.74%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*1.13%*	*0.00%*
Total Trips Generated	0	0	3	0	0	0	0	1	0	0	2	10
Total PM Peak Hour BUILD Volumes	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**942**	**0**	**0**	**603**	**10**

Number of Office Trips Generated	Entering	Exiting		
	185	**91**	A.M.	100% Office Development
	40	**149**	P.M.	

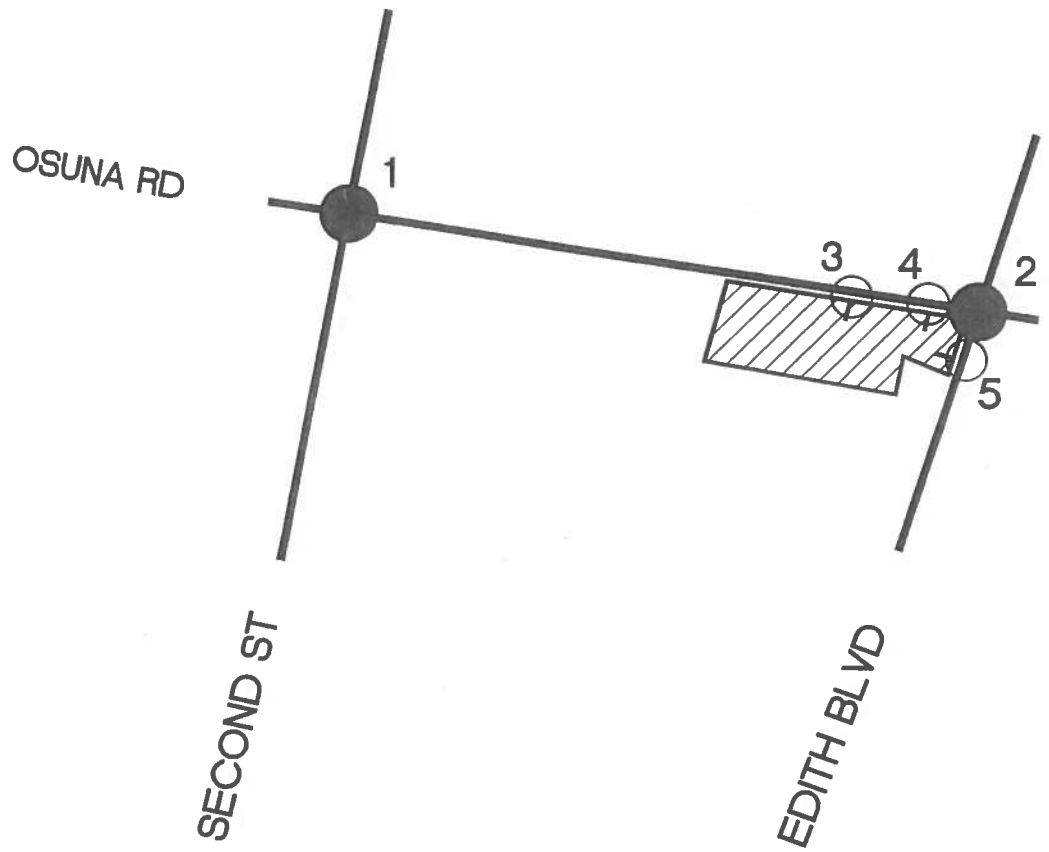
	Eastbound (Driveway 'C')			Westbound (Driveway 'C')			Northbound (Edith Blvd)			Southbound (Edith Blvd)		
2007 AM Peak Hr. Volumes	0	0	0	0	0	0	0	520	0	0	753	0
2007 PM Peak Hr. Volumes	0	0	0	0	0	0	0	900	0	0	565	0

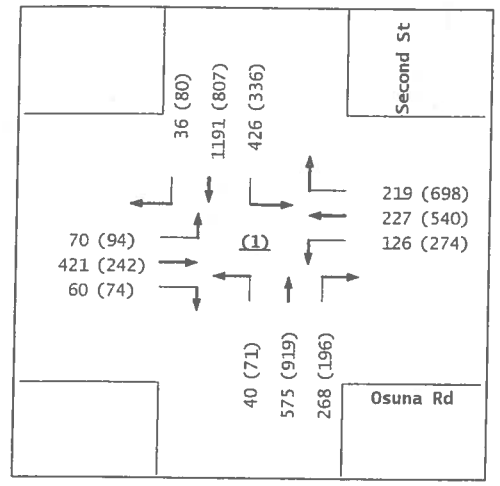
Sun Valley Commercial Development

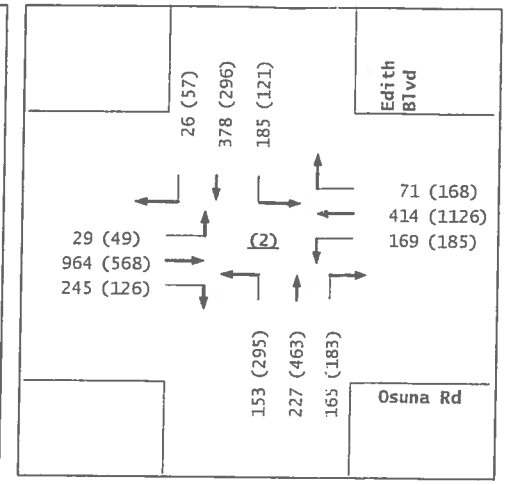
(Osuna Rd / Edith Blvd)

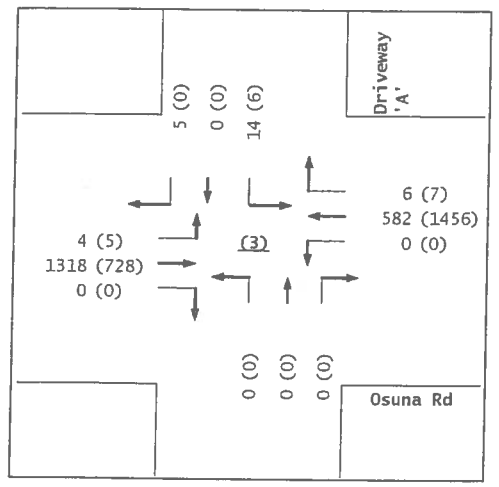
2008 NO BUILD Volumes - AM(PM)

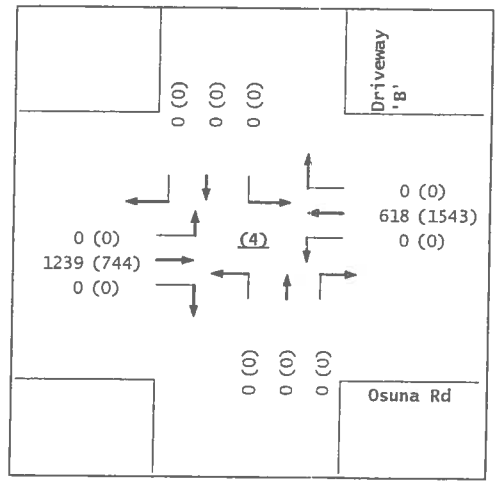
NTS

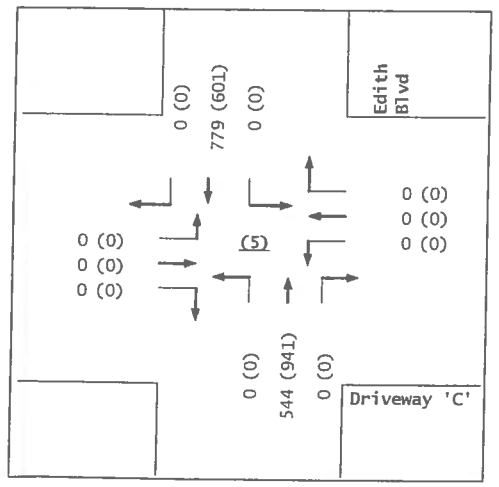






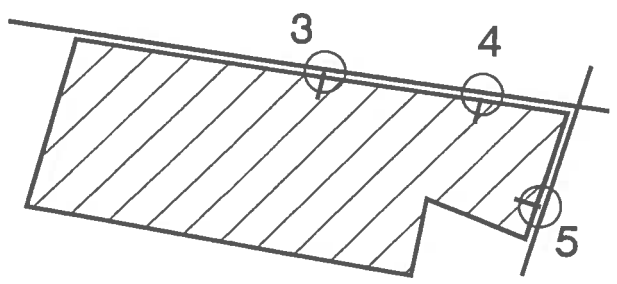






SIGNALIZED INTERSECTION

UNSIGNALIZED INTERSECTION



DRIVEWAY DETAIL

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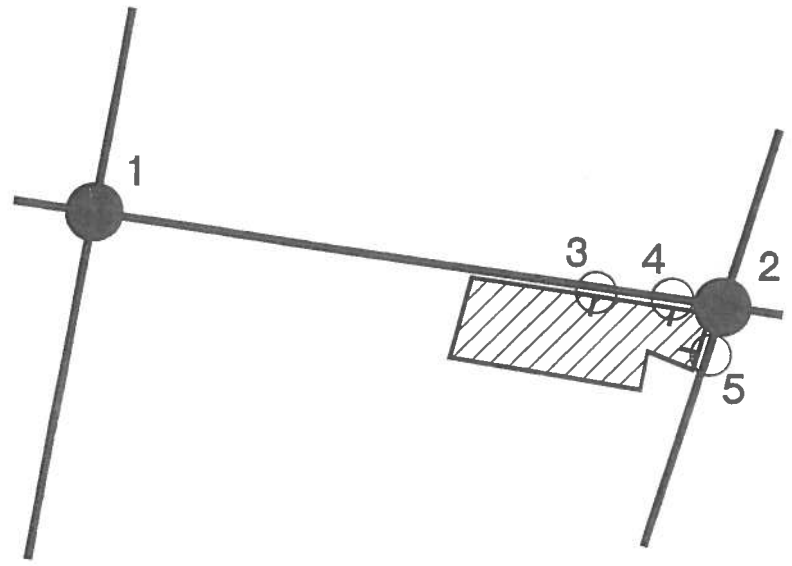
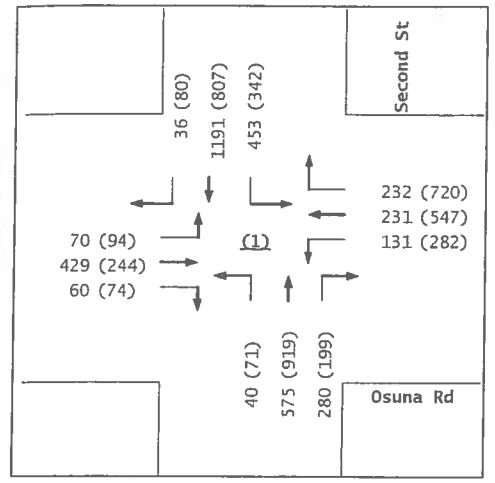
Sun Valley Commercial Development

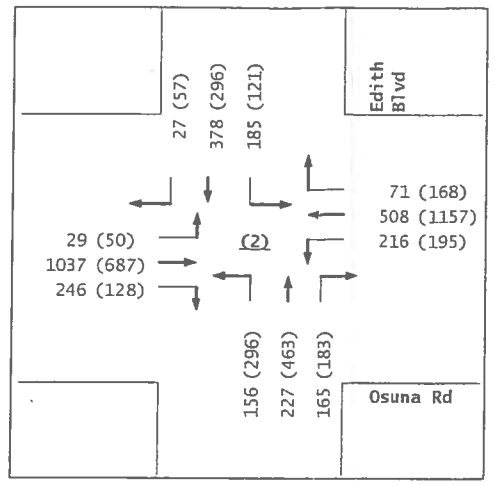
(Osuna Rd / Edith Blvd)

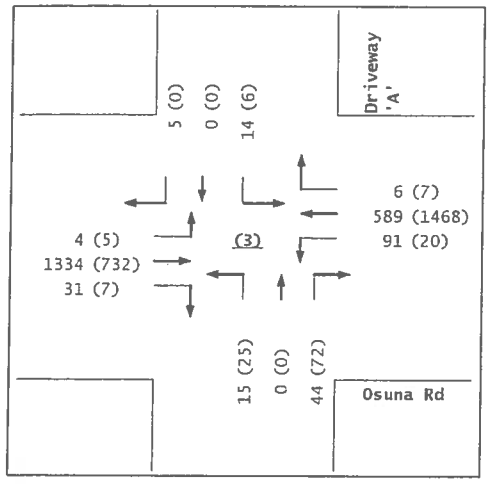
2008 BUILD Volumes - AM(PM)

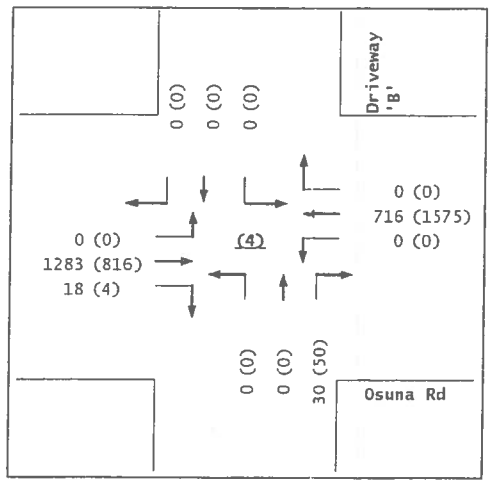
NTS

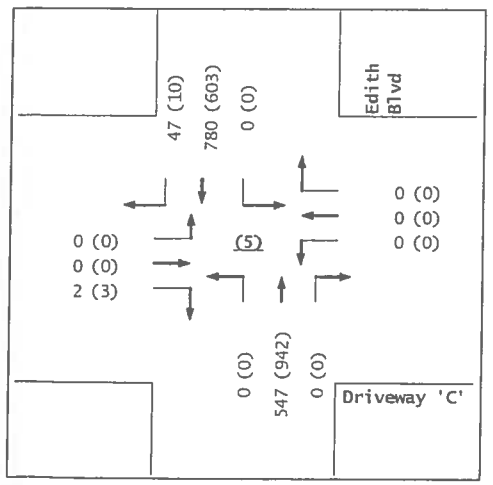






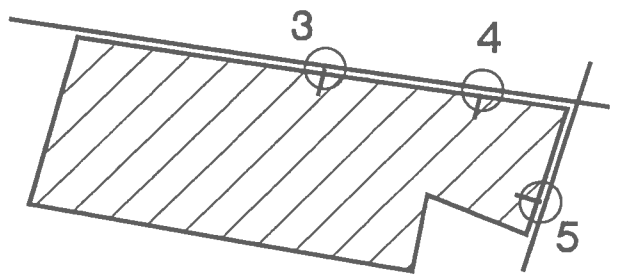






SIGNALIZED INTERSECTION

UNSIGNALIZED INTERSECTION



DRIVEWAY DETAIL

Terry O. Brown, P.E.
P.O. Box 92051
Albuquerque, NM 87199-2051
(505)883-8807 (Voice)
(505)212-0267 (Fax)

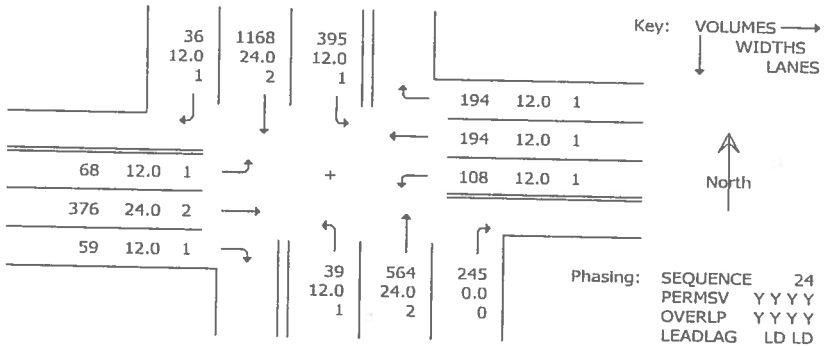
Analysis of Intersection #1

Osuna Rd / Second St

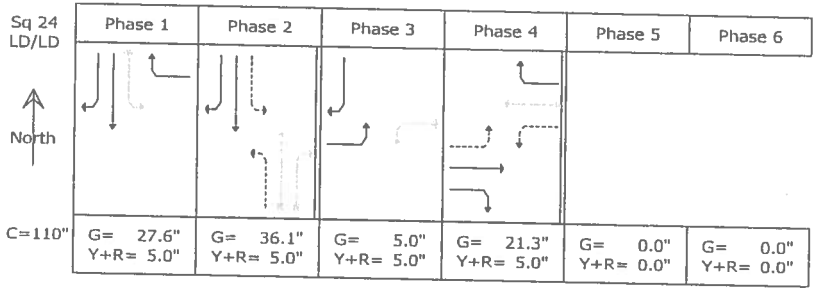
SIGNAL2000/TEAPAC[Ver 2.70.28] - HCM Input Worksheet

Intersection # 1 -

Area Location Type: NONCBD

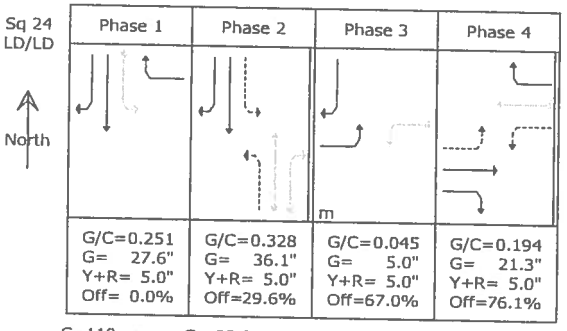


	SB RT	SB TH	SB LT	WB RT	WB TH	WB LT	NB RT	NB TH	NB LT	EB RT	EB TH	EB LT
Heavy veh, %HV	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Pk-hr fact, PHF	.91	.91	.91	.75	.75	.75	.84	.84	.84	.92	.92	.92
Pretimed or Act	A	A	A	A	A	A	A	A	A	A	A	A
Strtup lost, l1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Ext eff grn, e	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Arrival typ, AT	3	3	3	3	3	3	3	3	3	3	3	3
Ped vol, vped		0			0			0			0	
Bike vol, vbic		0			0			0			0	
Parking locatns		NO			NO			NO			NO	
Park mnvrs, Nm		0			0			0			0	
Bus stops, NB		0			0			0			0	
Grade, %G		.0			.0			.0			.0	



SIGNAL2000/TEAPAC[Ver 2.70.28] - Capacity Analysis Summary

Intersection Averages for Int # 1 -
V/C 0.666 (Critical V/C 0.881) Control Delay 31.1 Level of Service C



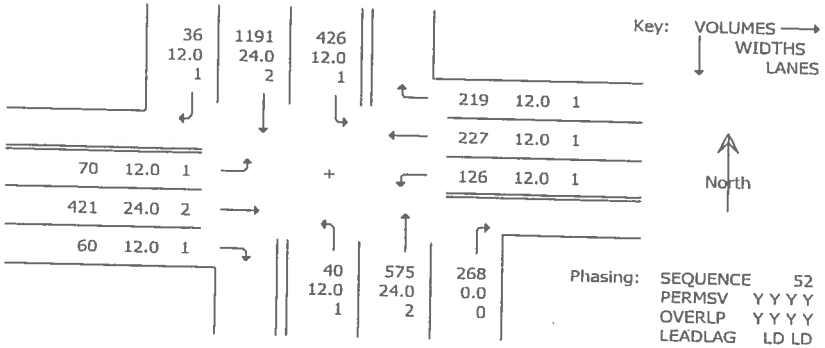
C=110 sec G= 90.0 sec = 81.8% Y=20.0 sec = 18.2% Ped= 0.0 sec = 0.0%

Lane Group	Width/ Lanes	g/C Reqd	g/C Used	Service Rate @D (vph)	Service Rate @E	Adj Volume	v/c	HCM Delay	LOS	Queue Model 1
SB Approach								20.1	C+	
RT	12/1	0.053	0.715	1121	1121	40	0.036	4.6	A	18 ft
TH	24/2	0.372	0.624	2193	2193	1284	0.585	12.6	B+	546 ft
LT	12/1	0.231	0.251	470	506	434	0.858	43.7	*D+	539 ft
NB Approach								42.3	D+	
RT+TH	24/2	0.302	0.328	1059	1100	963	0.875	42.9	*D+	699 ft
LT	12/1	0.188	0.328	100	116	46	0.351	29.7	C	54 ft
WB Approach								35.7	D+	
RT	12/1	0.206	0.490	753	768	259	0.337	17.4	B	225 ft
TH	12/1	0.179	0.194	289	343	259	0.723	48.6	*D	357 ft
LT	12/1	0.036	0.045	161	188	144	0.709	45.5	*D	202 ft
EB Approach								40.0	D+	
RT	12/1	0.074	0.194	240	287	64	0.211	37.6	D+	78 ft
TH	24/2	0.144	0.194	595	681	409	0.601	41.9	D+	283 ft
LT	12/1	0.003	0.045	153	179	74	0.379	31.7	C	89 ft

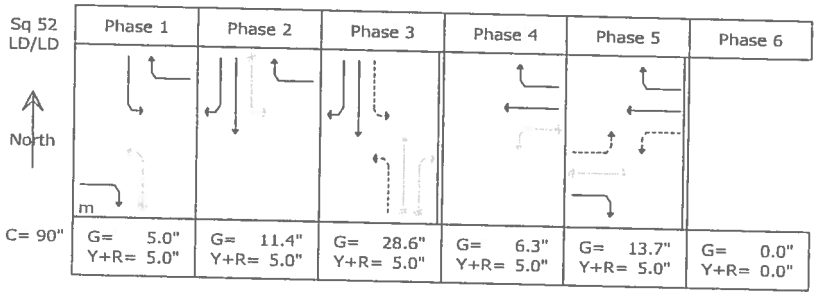
SIGNAL2000/TEAPAC[Ver 2.70.28] - HCM Input Worksheet

Intersection # 1 -

Area Location Type: NONCBD



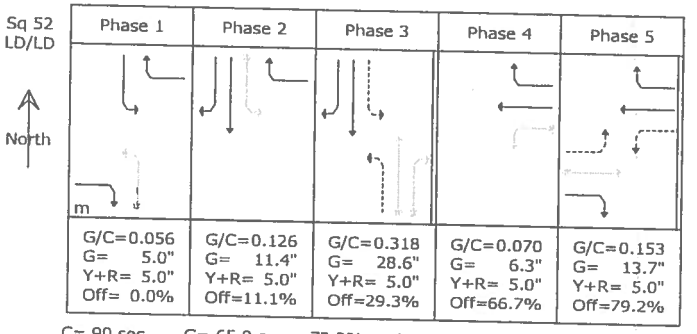
	SB RT	SB TH	SB LT	WB RT	WB TH	WB LT	NB RT	NB TH	NB LT	EB RT	EB TH	EB LT
Heavy veh, %HV	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Pk-hr fact, PHF	.91	.91	.91	.75	.75	.75	.84	.84	.84	.92	.92	.92
Pretimed or Act	A	A	A	A	A	A	A	A	A	A	A	A
Strtup lost, l1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Ext eff grn, e	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Arrival typ, AT	3	3	3	3	3	3	3	3	3	3	3	3
Ped vol, vped		0			0			0			0	
Bike vol, vbic		0			0			0			0	
Parking locatns		NO			NO			NO			NO	
Park mnvrs, Nm		0			0			0			0	
Bus stops, NB		0			0			0			0	
Grade, %G		.0			.0			.0			.0	



Sun Valley Comm. Dev. (Osuna Rd / Edith Blvd)
Analysis of Osuna Rd / Second St - [1_08ANX]
2008 AM Peak NOBUILD Conditions
03/01/07
21:28:10

SIGNAL2000/TEAPAC[Ver 2.70.28] - Capacity Analysis Summary

Intersection Averages for Int # 1 -
V/C 0.763 (Critical V/C 0.948) Control Delay 34.3 Level of Service C



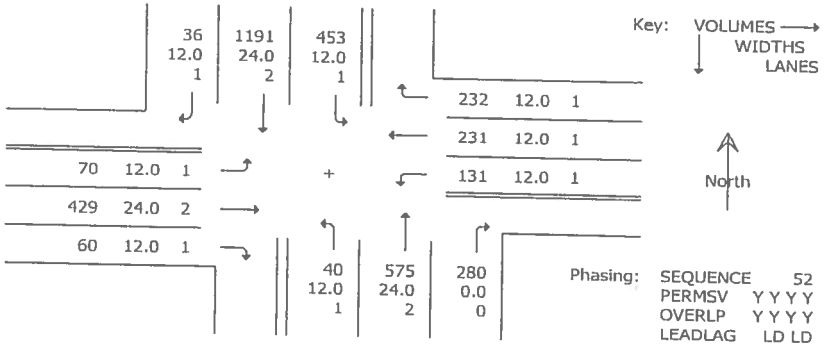
C= 90 sec G= 65.0 sec = 72.2% Y=25.0 sec = 27.8% Ped= 0.0 sec = 0.0%

Lane Group	Width/ Lanes	g/C Reqd	g/C Used	Service Rate @D (vph)	Service Rate @E	Adj Volume	v/c	HCM Delay	L S	Queue Model 1
SB Approach								27.6	C	
RT	12/1	0.043	0.500	784	784	40	0.051	11.6	B+	25 ft
TH	24/2	0.370	0.500	1756	1756	1309	0.745	19.7	B	625 ft
LT	12/1	0.233	0.238	477	498	468	0.940	51.0	*D	581 ft
NB Approach								44.7	D+	
RT+TH	24/2	0.305	0.318	1050	1063	1004	0.944	45.9	*D	676 ft
LT	12/1	0.000	0.056	170	188	48	0.249	19.1	*B	41 ft
WB Approach								27.1	C+	
RT	12/1	0.215	0.571	895	895	292	0.326	10.4	B+	183 ft
TH	12/1	0.190	0.278	477	513	303	0.591	29.9	C	307 ft
LT	12/1	0.067	0.070	173	195	168	0.824	50.9	*D	216 ft
EB Approach								45.6	D	
RT	12/1	0.064	0.264	374	413	65	0.157	25.6	C+	60 ft
TH	24/2	0.146	0.153	481	536	458	0.854	49.9	*D	313 ft
LT	12/1	0.104	0.153	123	146	76	0.469	37.0	D+	87 ft

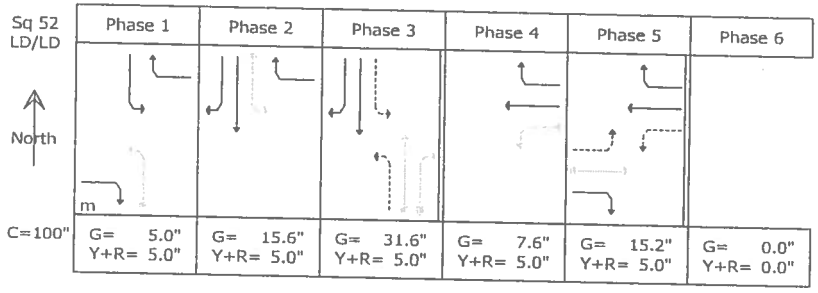
SIGNAL2000/TEAPAC[Ver 2.70.28] - HCM Input Worksheet

Intersection # 1 -

Area Location Type: NONCBD

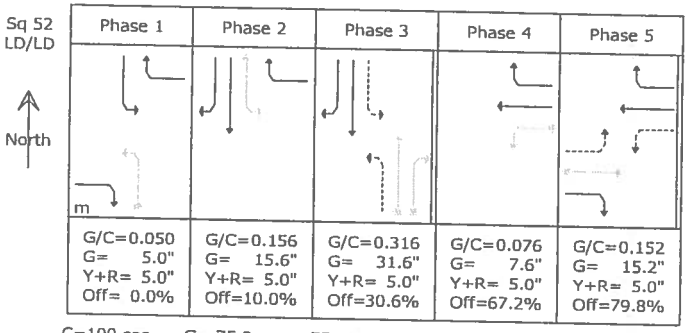


	SB RT	SB TH	SB LT	WB RT	WB TH	WB LT	NB RT	NB TH	NB LT	EB RT	EB TH	EB LT
Heavy veh, %HV	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Pk-hr fact, PHF	.91	.91	.91	.75	.75	.75	.84	.84	.84	.92	.92	.92
Pretimed or Act	A	A	A	A	A	A	A	A	A	A	A	A
Strtup lost, l1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Ext eff grn, e	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Arrival typ, AT	3	3	3	3	3	3	3	3	3	3	3	3
Ped vol, vped		0			0			0			0	
Bike vol, vbic		0			0			0			0	
Parking locatns		NO			NO			NO			NO	
Park mnvrs, Nm		0			0			0			0	
Bus stops, NB		0			0			0			0	
Grade, %G		.0			.0			.0			.0	



SIGNAL2000/TEAPAC[Ver 2.70.28] - Capacity Analysis Summary

Intersection Averages for Int # 1 -
V/C 0.764 (Critical V/C 0.962) Control Delay 38.1 Level of Service D+



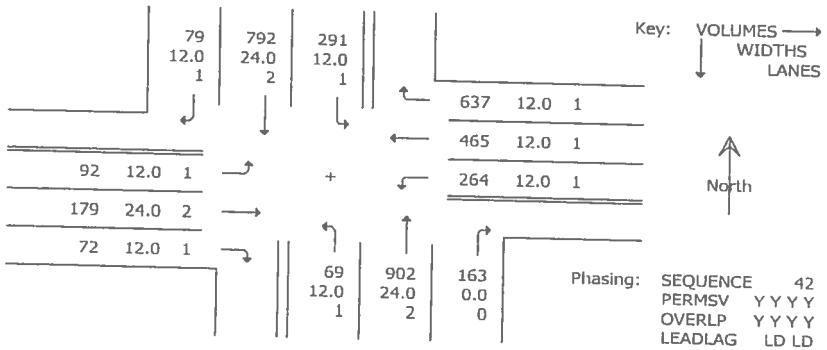
C=100 sec G= 75.0 sec = 75.0% Y=25.0 sec = 25.0% Ped= 0.0 sec = 0.0%

Lane Group	Width/ Lanes	g/C Reqd	g/C Used	Service Rate @D (vph)	Service Rate @E	Adj Volume	v/c	HCM Delay	L S	Queue Model 1
SB Approach								29.3	C	
RT	12/1	0.047	0.522	819	819	40	0.049	11.7	B+	26 ft
TH	24/2	0.374	0.522	1834	1834	1309	0.714	19.5	B	653 ft
LT	12/1	0.258	0.256	496	523	498	0.952	56.3	*E+	681 ft
NB Approach								51.7	D	
RT+TH	24/2	0.314	0.316	1027	1056	1018	0.964	53.2	*D	765 ft
LT	12/1	0.000	0.050	170	189	48	0.245	21.4	*C+	46 ft
WB Approach								29.8	C	
RT	12/1	0.230	0.584	915	915	309	0.338	11.0	B+	210 ft
TH	12/1	0.198	0.278	466	512	308	0.602	33.3	C	345 ft
LT	12/1	0.077	0.076	173	196	175	0.845	56.9	*E+	250 ft
EB Approach								51.6	D	
RT	12/1	0.068	0.252	346	392	65	0.165	29.4	C	67 ft
TH	24/2	0.154	0.152	460	531	466	0.874	56.4	*E+	354 ft
LT	12/1	0.110	0.152	116	141	76	0.475	41.0	D+	96 ft

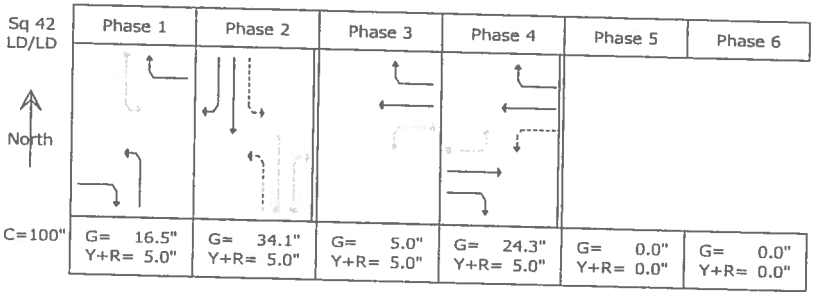
SIGNAL2000/TEAPAC[Ver 2.70.28] - HCM Input Worksheet

Intersection # 1 -

Area Location Type: NONCBD



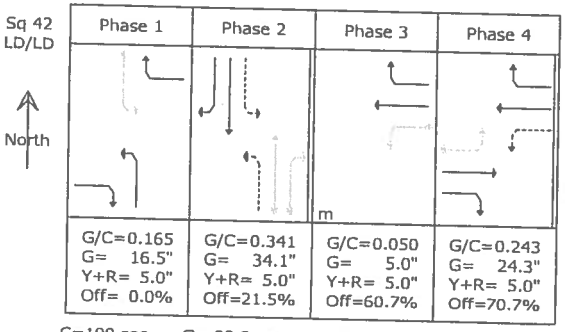
	SB RT	SB TH	SB LT	WB RT	WB TH	WB LT	NB RT	NB TH	NB LT	EB RT	EB TH	EB LT
Heavy veh, %HV	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Pk-hr fact, PHF	.89	.89	.89	.96	.96	.96	.94	.94	.94	.93	.93	.93
Pretimed or Act	A	A	A	A	A	A	A	A	A	A	A	A
Strtup lost, l1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Ext eff grn, e	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Arrival typ, AT	3	3	3	3	3	3	3	3	3	3	3	3
Ped vol, vped		0			0			0			0	
Bike vol, vbic		0			0			0			0	
Parking locatns		NO			NO			NO			NO	
Park mnvrs, Nm		0			0			0			0	
Bus stops, NB		0			0			0			0	
Grade, %G		.0			.0			.0			.0	



Sun Valley Comm. Dev. (Osuna Rd / Edith Blvd)
Analysis of Osuna Rd / Second St - [1_07PX]
2007 PM Peak Existing Conditions
03/01/07
21:30:26

SIGNAL2000/TEAPAC[Ver 2.70.28] - Capacity Analysis Summary

Intersection Averages for Int # 1 -
V/C 0.761 (Critical V/C 0.892) Control Delay 37.0 Level of Service D+



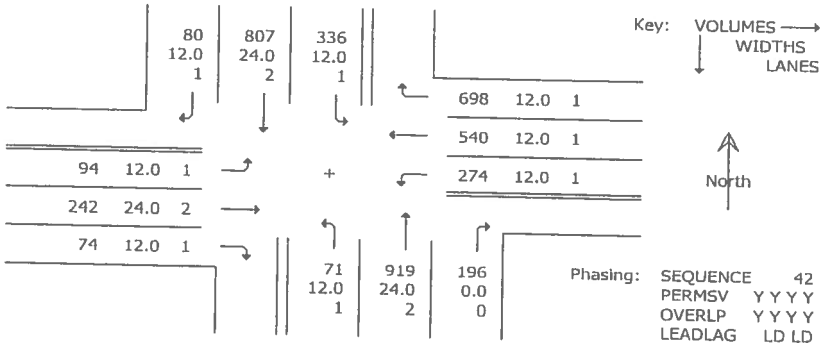
C=100 sec G= 80.0 sec = 80.0% Y=20.0 sec = 20.0% Ped= 0.0 sec = 0.0%

Lane Group	Width/ Lanes	g/C Reqd	g/C Used	Service Rate @D (vph)	Service Rate @E	Adj Volume	v/c	HCM Delay	L S	Queue Model 1
SB Approach								36.2	D+	
RT	12/1	0.087	0.341	499	535	89	0.166	23.1	C+	82 ft
TH	24/2	0.266	0.341	1181	1199	890	0.742	31.6	C	530 ft
LT	12/1	0.163	0.165	332	364	327	0.898	52.4	*D	434 ft
NB Approach								48.9	D	
RT+TH	24/2	0.336	0.341	1153	1172	1133	0.967	51.1	*D	840 ft
LT	12/1	0.005	0.165	360	385	73	0.190	13.5	B+	50 ft
WB Approach								28.5	C	
RT	12/1	0.436	0.559	876	876	664	0.758	20.8	C+	647 ft
TH	12/1	0.287	0.343	599	633	484	0.765	34.8	C	556 ft
LT	12/1	0.017	0.050	339	377	275	0.729	36.0	*D+	328 ft
EB Approach								33.3	C	
RT	12/1	0.077	0.459	705	719	77	0.107	15.5	B	58 ft
TH	24/2	0.075	0.243	803	854	192	0.225	30.4	C	106 ft
LT	12/1	0.238	0.243	102	120	99	0.728	52.6	*D	136 ft

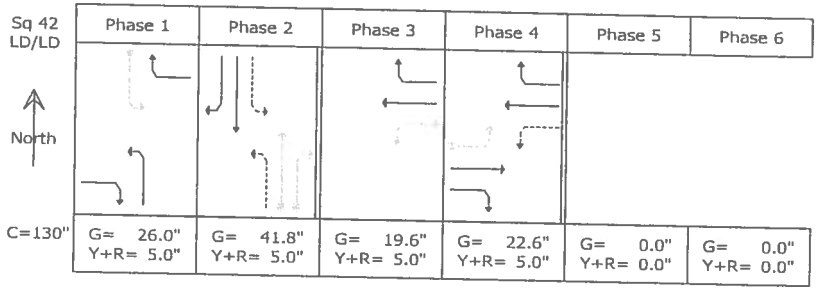
SIGNAL2000/TEAPAC[Ver 2.70.28] - HCM Input Worksheet

Intersection # 1 -

Area Location Type: NONCBD



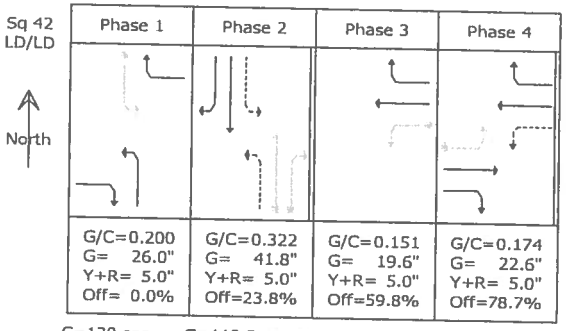
	SB RT	SB TH	SB LT	WB RT	WB TH	WB LT	NB RT	NB TH	NB LT	EB RT	EB TH	EB LT
Heavy veh, %HV	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Pk-hr fact, PHF	.89	.89	.89	.96	.96	.96	.94	.94	.94	.93	.93	.93
Pretimed or Act	A	A	A	A	A	A	A	A	A	A	A	A
Strtup lost, l1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Ext eff grn, e	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Arrival typ, AT	3	3	3	3	3	3	3	3	3	3	3	3
Ped vol, vped		0			0			0			0	
Bike vol, vbic		0			0			0			0	
Parking locatns		NO			NO			NO			NO	
Park mnvrs, Nm		0			0			0			0	
Bus stops, NB		0			0			0			0	
Grade, %G		.0			.0			.0			.0	



Sun Valley Comm. Dev. (Osuna Rd / Edith Blvd)
Analysis of Osuna Rd / Second St - [1_08PNX]
2008 PM Peak NOBUILD Conditions
03/01/07
21:31:38

SIGNAL2000/TEAPAC[Ver 2.70.28] - Capacity Analysis Summary

Intersection Averages for Int # 1 -
V/C 0.827 (Critical V/C 1.047) Control Delay 57.8 Level of Service E+



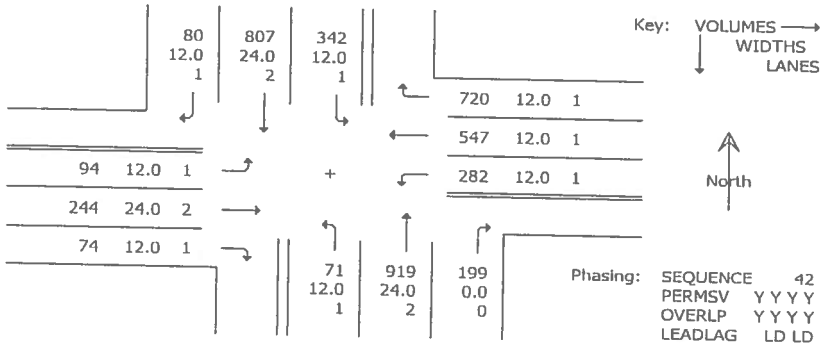
C=130 sec G=110.0 sec = 84.6% Y=20.0 sec = 15.4% Ped= 0.0 sec = 0.0%

Lane Group	Width/ Lanes	g/C Reqd	g/C Used	Service Rate @D (vph)	Service Rate @E (vph)	Adj Volume	v/c	HCM Delay	L S	Queue Model 1
SB Approach								50.2	D	
RT	12/1	0.122	0.322	432	497	90	0.179	31.9	C	110 ft
TH	24/2	0.288	0.322	1043	1129	907	0.803	44.6	D+	715 ft
LT	12/1	0.217	0.200	349	398	378	0.929	67.8	*E	640 ft
NB Approach								90.9	F	
RT+TH	24/2	0.366	0.322	1013	1099	1187	1.080	95.6	*F	1238 ft
LT	12/1	0.023	0.200	367	413	76	0.182	17.8	B	66 ft
WB Approach								34.2	C	
RT	12/1	0.484	0.602	943	943	727	0.771	23.2	C+	861 ft
TH	12/1	0.343	0.363	606	670	563	0.840	47.3	D	843 ft
LT	12/1	0.104	0.151	375	420	285	0.675	36.1	*D+	406 ft
EB Approach								71.3	E	
RT	12/1	0.117	0.412	597	647	80	0.124	23.7	C+	84 ft
TH	24/2	0.129	0.174	444	588	260	0.425	48.3	D	206 ft
LT	12/1	0.273	0.174	51	72	101	1.074	168.1	*F	249 ft

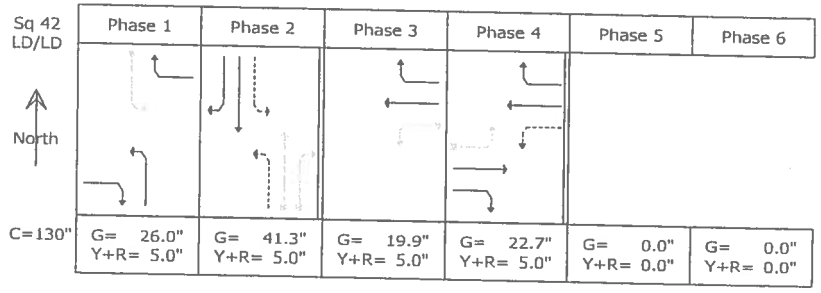
SIGNAL2000/TEAPAC[Ver 2.70.28] - HCM Input Worksheet

Intersection # 1 -

Area Location Type: NONCBD



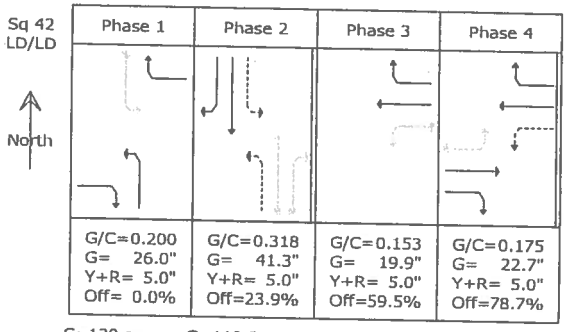
	SB RT	SB TH	SB LT	WB RT	WB TH	WB LT	NB RT	NB TH	NB LT	EB RT	EB TH	EB LT
Heavy veh, %HV	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Pk-hr fact, PHF	.89	.89	.89	.96	.96	.96	.94	.94	.94	.93	.93	.93
Pretimed or Act	A	A	A	A	A	A	A	A	A	A	A	A
Strtup lost, l1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Ext eff grn, e	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Arrival typ, AT	3	3	3	3	3	3	3	3	3	3	3	3
Ped vol, vped		0			0			0			0	
Bike vol, vbic		0			0			0			0	
Parking locatns		NO			NO			NO			NO	
Park mnvrs, Nm		0			0			0			0	
Bus stops, NB		0			0			0			0	
Grade, %G		.0			.0			.0			.0	



Sun Valley Comm. Dev. (Osuna Rd / Edith Blvd)
Analysis of Osuna Rd / Second St - [1_08PBX]
2008 PM Peak BUILD Conditions
03/01/07
21:32:38

SIGNAL2000/TEAPAC[Ver 2.70.28] - Capacity Analysis Summary

Intersection Averages for Int # 1 -
V/C 0.837 (Critical V/C 1.055) Control Delay 59.8 Level of Service E+



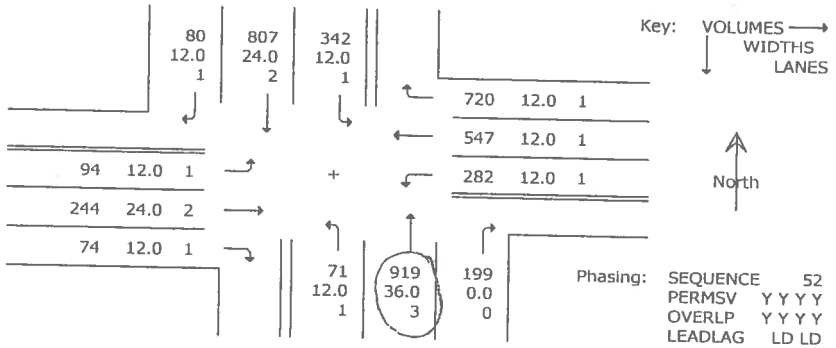
C=130 sec G=110.0 sec = 84.6% Y=20.0 sec = 15.4% Ped= 0.0 sec = 0.0%

Lane Group	Width/ Lanes	g/C Reqd	g/C Used	Service Rate @D (vph)	Service Rate @E (vph)	Adj Volume	v/c	HCM Delay	LOS	Queue Model 1
SB Approach								51.5	D	
RT	12/1	0.122	0.318	427	491	90	0.180	32.2	C	110 ft
TH	24/2	0.288	0.318	1029	1117	907	0.812	45.4	D	720 ft
LT	12/1	0.220	0.200	351	400	384	0.941	70.6	*E	663 ft
NB Approach								96.3	F	
RT+TH	24/2	0.367	0.318	1000	1087	1190	1.095	101.3	*F	1263 ft
LT	12/1	0.024	0.200	364	411	76	0.183	18.1	B	66 ft
WB Approach								34.5	C	
RT	12/1	0.497	0.605	949	949	750	0.790	24.0	C+	905 ft
TH	12/1	0.347	0.366	613	676	570	0.843	47.3	D	853 ft
LT	12/1	0.109	0.153	380	426	294	0.689	36.4	*D+	421 ft
EB Approach								73.1	E	
RT	12/1	0.117	0.413	598	648	80	0.123	23.7	C+	84 ft
TH	24/2	0.130	0.175	445	589	262	0.427	48.3	D	208 ft
LT	12/1	0.277	0.175	50	70	101	1.098	176.4	*F	256 ft

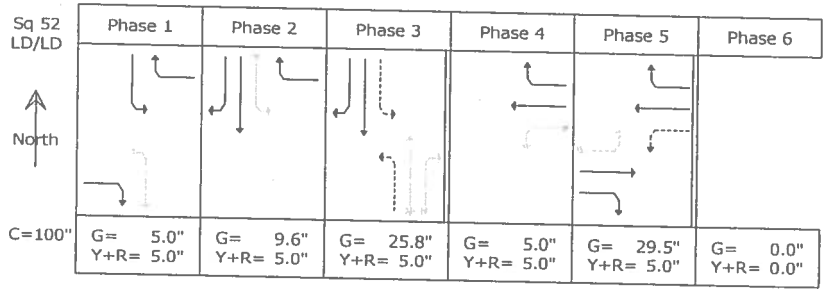
SIGNAL2000/TEAPAC[Ver 2.70.28] - HCM Input Worksheet

Intersection # 1 -

Area Location Type: NONCBD



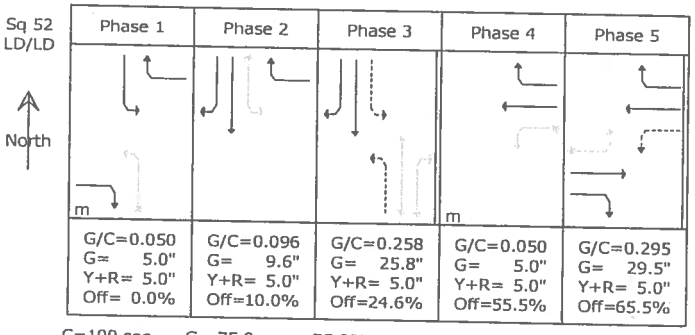
	SB RT	SB TH	SB LT	WB RT	WB TH	WB LT	NB RT	NB TH	NB LT	EB RT	EB TH	EB LT
Heavy veh, %HV	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Pk-hr fact, PHF	.89	.89	.89	.96	.96	.96	.94	.94	.94	.93	.93	.93
Pretimed or Act	A	A	A	A	A	A	A	A	A	A	A	A
Strtup lost, l1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Ext eff grn, e	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Arrival typ, AT	3	3	3	3	3	3	3	3	3	3	3	3
Ped vol, vped		0			0			0			0	
Bike vol, vbic		0			0			0			0	
Parking locatns		NO			NO			NO			NO	
Park mnvrs, Nm		0			0			0			0	
Bus stops, NB		0			0			0			0	
Grade, %G		.0			.0			.0			.0	



Sun Valley Comm. Dev. (Osuna Rd / Edith Blvd)
Analysis of Osuna Rd / Second St - [1_08PB1]
2008 PM Peak BUILD Conditions - Add NB Thru Lane
03/01/07
22:21:55

SIGNAL2000/TEAPAC[Ver 2.70.28] - Capacity Analysis Summary

Intersection Averages for Int # 1 -
V/C 0.736 (Critical V/C 0.881) Control Delay 33.8 Level of Service C



C=100 sec G= 75.0 sec = 75.0% Y=25.0 sec = 25.0% Ped= 0.0 sec = 0.0%

Lane Group	Width/ Lanes	g/C Reqd	g/C Used	Service Rate @D (vph)	Service Rate @E	Adj Volume	v/c	HCM Delay	L S	Queue Model 1
SB Approach								32.2	C	
RT	12/1	0.088	0.405	609	634	90	0.142	18.9	B	75 ft
TH	24/2	0.271	0.405	1421	1421	907	0.638	24.9	C+	482 ft
LT	12/1	0.194	0.196	389	418	384	0.919	52.5	*D	524 ft
NB Approach								48.6	D	
RT+TH	36/3	0.252	0.258	1225	1264	1190	0.941	50.0	*D	625 ft
LT	12/1	0.000	0.050	195	220	76	0.333	25.9	*C+	80 ft
WB Approach								24.4	C+	
RT	12/1	0.484	0.642	1006	1006	750	0.746	15.4	B	656 ft
TH	12/1	0.329	0.395	707	730	570	0.781	31.9	C	637 ft
LT	12/1	0.012	0.050	369	401	294	0.733	32.9	*C	341 ft
EB Approach								30.9	C	
RT	12/1	0.080	0.395	593	620	80	0.129	19.4	B	67 ft
TH	24/2	0.096	0.295	1004	1038	262	0.252	26.9	C+	137 ft
LT	12/1	0.285	0.295	106	123	101	0.737	50.5	*D	137 ft

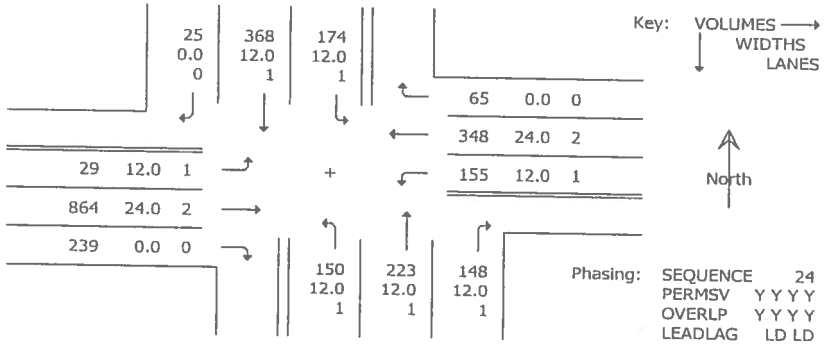
Analysis of Intersection #2

Osuna Rd / Edith Blvd

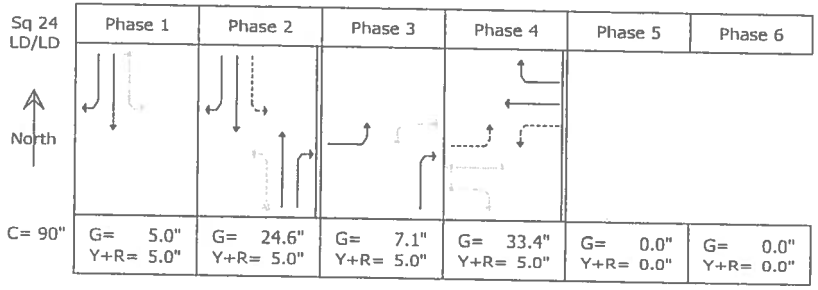
SIGNAL2000/TEAPAC[Ver 2.70.28] - HCM Input Worksheet

Intersection # 2 -

Area Location Type: NONCBD



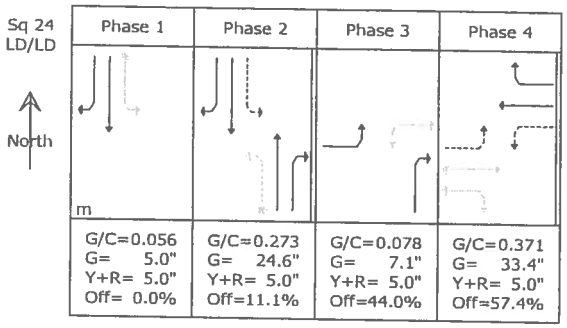
	SB RT	SB TH	SB LT	WB RT	WB TH	WB LT	NB RT	NB TH	NB LT	EB RT	EB TH	EB LT
Heavy veh, %HV	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Pk-hr fact, PHF	.90	.90	.90	.80	.80	.80	.81	.81	.81	.90	.90	.90
Pretimed or Act	A	A	A	A	A	A	A	A	A	A	A	A
Strtup lost, l1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Ext eff grn, e	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Arrival typ, AT	3	3	3	3	3	3	3	3	3	3	3	3
Ped vol, vped		0			0			0			0	
Bike vol, vbic		0			0			0			0	
Parking locatns		NO			NO			NO			NO	
Park mnvrs, Nm		0			0			0			0	
Bus stops, NB		0			0			0			0	
Grade, %G		.0			.0			.0			.0	



Sun Valley Comm. Dev. (Osuna Rd / Edith Blvd)
Analysis of Osuna Rd / Edith Blvd - [2_07AX]
2007 AM Peak Existing Conditions
03/01/07
21:43:54

SIGNAL2000/TEAPAC[Ver 2.70.28] - Capacity Analysis Summary

Intersection Averages for Int # 2 -
V/C 0.716 (Critical V/C 0.922) Control Delay 35.5 Level of Service D+



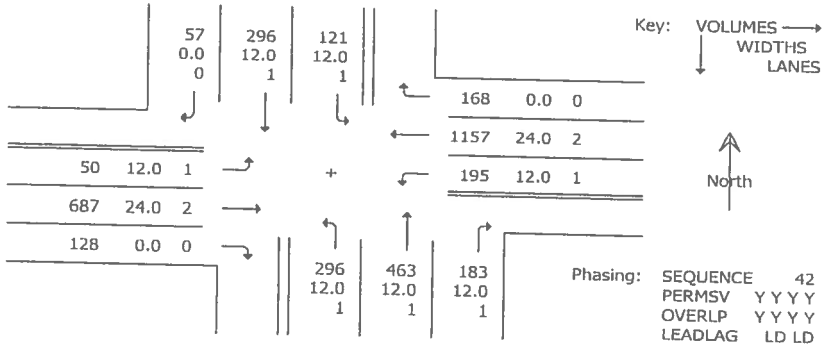
C= 90 sec G= 70.0 sec = 77.8% Y=20.0 sec = 22.2% Ped= 0.0 sec = 0.0%

Lane Group	Width/ Lanes	g/C Reqd	g/C Used	Service Rate @D (vph)	Service Rate @E	Adj Volume	v/c	HCM Delay	L S	Queue Model 1
SB Approach								24.8	C+	
RT+TH	12/1	0.261	0.384	685	702	437	0.623	24.2	C+	408 ft
LT	12/1	0.009	0.056	282	312	193	0.619	26.4	*C+	194 ft
NB Approach								32.2	C	
RT	12/1	0.146	0.407	621	638	183	0.287	18.2	B	145 ft
TH	12/1	0.175	0.273	466	503	275	0.547	29.2	C	276 ft
LT	12/1	0.265	0.273	192	218	185	0.815	50.6	*D	233 ft
WB Approach								29.2	C	
RT+TH	24/2	0.166	0.371	1272	1272	516	0.406	21.2	C+	234 ft
LT	12/1	0.076	0.078	199	218	194	0.882	50.7	*D	249 ft
EB Approach								46.1	D	
RT+TH	24/2	0.360	0.371	1260	1260	1226	0.973	47.0	*D	837 ft
LT	12/1	0.000	0.078	391	406	32	0.079	11.9	B+	20 ft

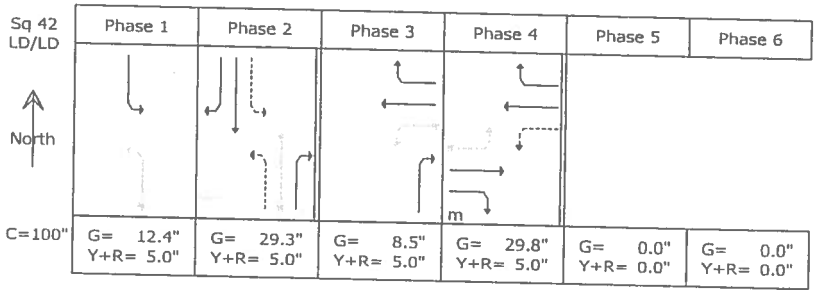
SIGNAL2000/TEAPAC[Ver 2.70.28] - HCM Input Worksheet

Intersection # 2 -

Area Location Type: NONCBD



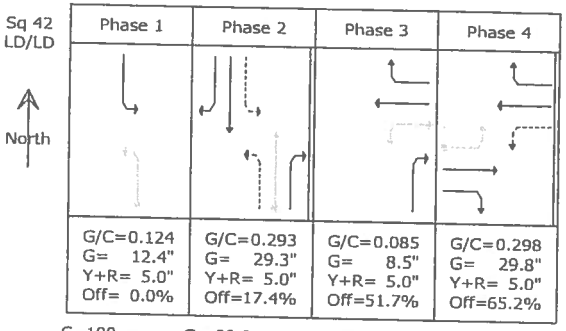
	SB RT	SB TH	SB LT	WB RT	WB TH	WB LT	NB RT	NB TH	NB LT	EB RT	EB TH	EB LT
Heavy veh, %HV	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Pk-hr fact, PHF	.84	.84	.84	.91	.91	.91	.87	.87	.87	.87	.87	.87
Pretimed or Act	A	A	A	A	A	A	A	A	A	A	A	A
Strtup lost, l1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Ext eff grn, e	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Arrival typ, AT	3	3	3	3	3	3	3	3	3	3	3	3
Ped vol, vped		0			0			0			0	
Bike vol, vbic		0			0			0			0	
Parking locatns		NO			NO			NO			NO	
Park mnvrs, Nm		0			0			0			0	
Bus stops, NB		0			0			0			0	
Grade, %G		.0			.0			.0			.0	



Sun Valley Comm. Dev. (Osuna Rd / Edith Blvd)
Analysis of Osuna Rd / Edith Blvd - [2_08PBX]
2008 PM Peak BUILD Conditions
03/01/07
21:49:35

SIGNAL2000/TEAPAC[Ver 2.70.28] - Capacity Analysis Summary

Intersection Averages for Int # 2 -
V/C 0.897 (Critical V/C 0.991) Control Delay 49.9 Level of Service D



C=100 sec G= 80.0 sec = 80.0% Y=20.0 sec = 20.0% Ped= 0.0 sec = 0.0%

Lane Group	Width/ Lanes	g/C Reqd	g/C Used	Service Rate @D (vph)	Service Rate @E	Adj Volume	v/c	HCM Delay	LOS	Queue Model 1
SB Approach								35.9	D+	
RT+TH	12/1	0.261	0.293	484	528	420	0.795	40.9	D+	513 ft
LT	12/1	0.055	0.124	263	291	144	0.495	21.6	C+	138 ft
NB Approach								60.3	E+	
RT	12/1	0.169	0.428	652	672	210	0.313	19.1	B	181 ft
TH	12/1	0.311	0.293	497	541	532	0.983	69.4	*E	786 ft
LT	12/1	0.135	0.124	320	339	340	1.003	71.4	*E	553 ft
WB Approach								49.0	D	
RT+TH	24/2	0.419	0.433	1492	1492	1456	0.976	45.6	D	1053 ft
LT	12/1	0.094	0.085	199	220	214	0.960	71.9	*E	343 ft
EB Approach								47.9	D	
RT+TH	24/2	0.284	0.298	988	1022	937	0.917	46.5	D	667 ft
LT	12/1	0.325	0.298	52	61	57	0.770	70.2	*E	84 ft

Analysis of Intersection #3

Osuna Rd / Arno St (Drive 'A')

CHAPTER 17 - TWSC - UNSIGNALIZED INTERSECTIONS WORKSHEET

Analysis Summary

General Information

Analyst	Nancy
Agency or Company	Terry Brown, P.E.
Analysis Period/Year	AM Peak Hour 2007
Comment	2007 AM Peak Existing Conditions

Site Information

Jurisdiction/Date	City of ABQ 3/1/2007
Major Street	Osuna Rd
Minor Street	Arno St

Input Data

Lane Configuration	EB	WB	NB	SB
Lane 1 (curb)	T	TR		LR
Lane 2	T	T		
Lane 3	L			
Lane 4				
Lane 5				

	EB			WB			NB			SB		
Movement	1 (LT)	2 (TH)	3 (RT)	4 (LT)	5 (TH)	6 (RT)	7 (LT)	8 (TH)	9 (RT)	10 (LT)	11 (TH)	12 (RT)
Volume (veh/h)	4	1207			505	6				13		5
PHF	0.89	0.89			0.75	0.75				0.83		0.83
Percent of heavy vehicles, HV	3	3			3	3				3		3
Flow rate	4	1356			673	8				16		6
Flare storage (# of vehs)												
Median storage (# of vehs)										1		

Signal upstream of Movement 2 _____ ft Movement 5 _____ ft

Length of study period (h) 0.25

Output Data

	Lane	Movement	Flow Rate (veh/h)	Capacity (veh/h)	v/c	Queue Length (veh)	Control Delay (s)	LOS	Approach Delay and LOS
NB	1								
	2								
	3								
SB	1	LR	22	324	0.068	0	16.9	C	16.9
	2								
	3								C
EB		(1)	4	901	0.005	0	9.0	A	
WB		(4)							

3 - 3_07AX
1 of 1

CHAPTER 17 - TWSC - UNSIGNALIZED INTERSECTIONS WORKSHEET

Analysis Summary

General Information

Analyst	Nancy
Agency or Company	Terry Brown, P.E.
Analysis Period/Year	AM Peak Hour 2008
Comment	2008 AM Peak NOBUILD Conditions

Site Information

Jurisdiction/Date	City of ABQ 3/1/2007
Major Street	Osuna Rd
Minor Street	Arno St

Input Data

Lane Configuration	EB	WB	NB	SB
Lane 1 (curb)	T	TR		LR
Lane 2	T	T		
Lane 3	L			
Lane 4				
Lane 5				

	EB			WB			NB			SB		
Movement	1 (LT)	2 (TH)	3 (RT)	4 (LT)	5 (TH)	6 (RT)	7 (LT)	8 (TH)	9 (RT)	10 (LT)	11 (TH)	12 (RT)
Volume (veh/h)	4	1318			582	6				14		5
PHF	0.89	0.89			0.75	0.75				0.83		0.83
Percent of heavy vehicles, HV	3	3			3	3				3		3
Flow rate	4	1481			776	8				17		6
Flare storage (# of vehs)												
Median storage (# of vehs)											1	

Signal upstream of Movement 2 _____ ft Movement 5 _____ ft

Length of study period (h) 0.25

Output Data

	Lane	Movement	Flow Rate (veh/h)	Capacity (veh/h)	v/c	Queue Length (veh)	Control Delay (s)	LOS	Approach Delay and LOS
NB	1								
	2								
	3								
SB	1	LR	23	283	0.081	0	18.8	C	18.8
	2								
	3								C
EB		(1)	4	824	0.005	0	9.4	A	
WB		(4)							

CHAPTER 17 - TWSC - UNSIGNALIZED INTERSECTIONS WORKSHEET

Analysis Summary

General Information

Analyst	Nancy
Agency or Company	Terry Brown, P.E.
Analysis Period/Year	AM Peak Hour 2008
Comment	2008 AM Peak BUILD Conditions

Site Information

Jurisdiction/Date	City of ABQ 3/1/2007
Major Street	Osuna Rd
Minor Street	Arno St

Input Data

Lane Configuration	EB	WB	NB	SB
Lane 1 (curb)	R	TR	LTR	LTR
Lane 2	T	T		
Lane 3	T	L		
Lane 4	L			
Lane 5				

	EB			WB			NB			SB		
Movement	1 (LT)	2 (TH)	3 (RT)	4 (LT)	5 (TH)	6 (RT)	7 (LT)	8 (TH)	9 (RT)	10 (LT)	11 (TH)	12 (RT)
Volume (veh/h)	4	1334	31	91	589	6	15	1	44	14	1	5
PHF	0.89	0.89	0.89	0.75	0.75	0.75	0.85	0.85	0.85	0.83	0.83	0.83
Percent of heavy vehicles, HV	3	3	3	3	3	3	3	3	3	3	3	3
Flow rate	4	1499	35	121	785	8	18	1	52	17	1	6
Flare storage (# of vehs)												
Median storage (# of vehs)							1			1		

Signal upstream of Movement 2 _____ ft Movement 5 _____ ft

Length of study period (h) 0.25

Output Data

	Lane	Movement	Flow Rate (veh/h)	Capacity (veh/h)	v/c	Queue Length (veh)	Control Delay (s)	LOS	Approach Delay and LOS
NB	1	LTR	71	195	0.363	2	33.6	D	33.6
	2								
	3								D
SB	1	LTR	24	115	0.208	1	44.3	E	44.3
	2								
	3								E
EB		(1)	4	817	0.006	0	9.4	A	
WB		(4)	121	425	0.285	1	16.8	C	

CHAPTER 17 - TWSC - UNSIGNALIZED INTERSECTIONS WORKSHEET

Analysis Summary

General Information

Analyst	Nancy
Agency or Company	Terry Brown, P.E.
Analysis Period/Year	PM Peak Hour 2007
Comment	2007 PM Peak Existing Conditions

Site Information

Jurisdiction/Date	City of ABQ 3/1/2007
Major Street	Osuna Rd
Minor Street	Arno St

Input Data

	EB	WB	NB	SB
Lane Configuration				
Lane 1 (curb)	T	TR		LR
Lane 2	T	T		
Lane 3	L			
Lane 4				
Lane 5				

	EB			WB			NB			SB		
Movement	1 (LT)	2 (TH)	3 (RT)	4 (LT)	5 (TH)	6 (RT)	7 (LT)	8 (TH)	9 (RT)	10 (LT)	11 (TH)	12 (RT)
Volume (veh/h)	5	583			1282	7				6		1
PHF	0.85	0.85			0.90	0.90				0.75		0.75
Percent of heavy vehicles, HV	3	3			3	3				3		3
Flow rate	6	686			1424	8				8		1
Flare storage (# of vehs)												
Median storage (# of vehs)										1		

Signal upstream of Movement 2 _____ ft Movement 5 _____ ft

Length of study period (h) 0.25

Output Data

	Lane	Movement	Flow Rate (veh/h)	Capacity (veh/h)	v/c	Queue Length (veh)	Control Delay (s)	LOS	Approach Delay and LOS
NB	1								
	2								
	3								
SB	1	LR	9	163	0.055	0	28.3	D	28.3 D
	2								
	3								
EB		(1)	6	465	0.013	0	12.8	B	
WB		(4)							

CHAPTER 17 - TWSC - UNSIGNALIZED INTERSECTIONS WORKSHEET

Analysis Summary

General Information

Analyst	Nancy
Agency or Company	Terry Brown, P.E.
Analysis Period/Year	PM Peak Hour 2008
Comment	2008 PM Peak NOBUILD Conditions

Site Information

Jurisdiction/Date	City of ABQ 3/1/2007
Major Street	Osuna Rd
Minor Street	Arno St

Input Data

Lane Configuration	EB	WB	NB	SB
Lane 1 (curb)	T	TR		LR
Lane 2	T	T		
Lane 3	L			
Lane 4				
Lane 5				

	EB			WB			NB			SB		
Movement	1 (LT)	2 (TH)	3 (RT)	4 (LT)	5 (TH)	6 (RT)	7 (LT)	8 (TH)	9 (RT)	10 (LT)	11 (TH)	12 (RT)
Volume (veh/h)	5	728			1456	7				6		1
PHF	0.85	0.85			0.90	0.90				0.75		0.75
Percent of heavy vehicles, HV	3	3			3	3				3		3
Flow rate	6	856			1618	8				8		1
Flare storage (# of vehs)												
Median storage (# of vehs)											1	

Signal upstream of Movement 2 _____ ft Movement 5 _____ ft

Length of study period (h) 0.25

Output Data

	Lane	Movement	Flow Rate (veh/h)	Capacity (veh/h)	v/c	Queue Length (veh)	Control Delay (s)	LOS	Approach Delay and LOS
NB	1								
	2								
	3								
SB	1	LR	9	128	0.070	0	35.3	E	35.3
	2								
	3								E
EB		(1)	6	391	0.015	0	14.3	B	
WB		(4)							

CHAPTER 17 - TWSC - UNSIGNALIZED INTERSECTIONS WORKSHEET

Analysis Summary

General Information

Analyst	Nancy
Agency or Company	Terry Brown, P.E.
Analysis Period/Year	PM Peak Hour 2008
Comment	2008 PM Peak BUILD Conditions

Site Information

Jurisdiction/Date	City of ABQ 3/1/2007
Major Street	Osuna Rd
Minor Street	Arno St

Input Data

Lane Configuration	EB	WB	NB	SB
Lane 1 (curb)	R	TR	LTR	LTR
Lane 2	T	T		
Lane 3	T	L		
Lane 4	L			
Lane 5				

	EB			WB			NB			SB		
Movement	1 (LT)	2 (TH)	3 (RT)	4 (LT)	5 (TH)	6 (RT)	7 (LT)	8 (TH)	9 (RT)	10 (LT)	11 (TH)	12 (RT)
Volume (veh/h)	5	732	7	20	1468	7	25	1	72	6	1	1
PHF	0.85	0.85	0.85	0.90	0.90	0.90	0.85	0.85	0.85	0.75	0.75	0.75
Percent of heavy vehicles, HV	3	3	3	3	3	3	3	3	3	3	3	3
Flow rate	6	861	8	22	1631	8	29	1	85	8	1	1
Flare storage (# of vehs)												
Median storage (# of vehs)							1			1		

Signal upstream of Movement 2 _____ ft Movement 5 _____ ft

Length of study period (h) 0.25

Output Data

	Lane	Movement	Flow Rate (veh/h)	Capacity (veh/h)	v/c	Queue Length (veh)	Control Delay (s)	LOS	Approach Delay and LOS
NB	1	LTR	115	339	0.339	1	21.0	C	21.0
	2								
	3								C
SB	1	LTR	10	85	0.117	0	52.7	F	52.7
	2								
	3								F
EB		(1)	6	387	0.015	0	14.5	B	
WB		(4)	22	765	0.029	0	9.8	A	

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1 of 1

Analysis of Intersection #4

Osuna Rd / Driveway 'B'

CHAPTER 17 - TWSC - UNSIGNALIZED INTERSECTIONS WORKSHEET

Analysis Summary

General Information

Analyst	Nancy
Agency or Company	Terry Brown, P.E.
Analysis Period/Year	AM Peak Hour 2008
Comment	2008 AM Peak BUILD Conditions

Site Information

Jurisdiction/Date	City of ABQ 3/1/2007
Major Street	Osuna Rd
Minor Street	Driveway 'B'

Input Data

Lane Configuration	EB	WB	NB	SB
Lane 1 (curb)	TR	T	R	
Lane 2	T	T		
Lane 3				
Lane 4				
Lane 5				

	EB			WB			NB				SB	
Movement	1 (LT)	2 (TH)	3 (RT)	4 (LT)	5 (TH)	6 (RT)	7 (LT)	8 (TH)	9 (RT)	10 (LT)	11 (TH)	12 (RT)
Volume (veh/h)		1283	18		952				30			
PHF		0.89	0.89		0.75				0.85			
Percent of heavy vehicles, HV		3	3		3				3			
Flow rate		1442	20		1269				35			
Flare storage (# of vehs)												
Median storage (# of vehs)							1					

Signal upstream of Movement 2 _____ ft Movement 5 _____ ft

Length of study period (h) 0.25

Output Data

	Lane	Movement	Flow Rate (veh/h)	Capacity (veh/h)	v/c	Queue Length (veh)	Control Delay (s)	LOS	Approach Delay and LOS
NB	1	R	35	362	0.097	0	16.0	C	16.0
	2								
	3								C
SB	1								
	2								
	3								
EB		(1)							
WB		(4)							

CHAPTER 17 - TWSC - UNSIGNALIZED INTERSECTIONS WORKSHEET

Analysis Summary

General Information

Analyst	Nancy
Agency or Company	Terry Brown, P.E.
Analysis Period/Year	PM Peak Hour 2008
Comment	2008 PM Peak BUILD Conditions

Site Information

Jurisdiction/Date	City of ABQ 3/1/2007
Major Street	Osuna Rd
Minor Street	Driveway 'B'

Input Data

Lane Configuration	EB	WB	NB	SB
Lane 1 (curb)	TR	T	R	
Lane 2	T	T		
Lane 3				
Lane 4				
Lane 5				

	EB			WB			NB				SB	
Movement	1 (LT)	2 (TH)	3 (RT)	4 (LT)	5 (TH)	6 (RT)	7 (LT)	8 (TH)	9 (RT)	10 (LT)	11 (TH)	12 (RT)
Volume (veh/h)		816	4		1575				50			
PHF		0.85	0.85		0.90				0.85			
Percent of heavy vehicles, HV		3	3		3				3			
Flow rate		960	5		1750				59			
Flare storage (# of vehs)												
Median storage (# of vehs)							1					

Signal upstream of Movement 2 _____ ft Movement 5 _____ ft

Length of study period (h) 0.25

Output Data

	Lane	Movement	Flow Rate (veh/h)	Capacity (veh/h)	v/c	Queue Length (veh)	Control Delay (s)	LOS	Approach Delay and LOS
NB	1	R	59	527	0.112	0	12.7	B	12.7
	2								
	3								B
SB	1								
	2								
	3								
EB		(1)							
WB		(4)							

Analysis of Intersection #5

Driveway 'C' / Edith Blvd

CHAPTER 17 - TWSC - UNSIGNALIZED INTERSECTIONS WORKSHEET

Analysis Summary

General Information

Analyst	Nancy
Agency or Company	Terry Brown, P.E.
Analysis Period/Year	AM Peak Hour 2008
Comment	2008 AM Peak BUILD Conditions

Site Information

Jurisdiction/Date	City of ABQ 3/1/2007
Major Street	Edith Blvd
Minor Street	Driveway 'C'

Input Data

Lane Configuration	NB	SB	WB	EB
Lane 1 (curb)	T	TR		R
Lane 2				
Lane 3				
Lane 4				
Lane 5				

	NB			SB			WB			EB		
Movement	1 (LT)	2 (TH)	3 (RT)	4 (LT)	5 (TH)	6 (RT)	7 (LT)	8 (TH)	9 (RT)	10 (LT)	11 (TH)	12 (RT)
Volume (veh/h)		547			780	47						2
PHF		0.81			0.81	0.81						0.85
Percent of heavy vehicles, HV		3			3	3						3
Flow rate		675			963	58						2
Flare storage (# of vehs)												
Median storage (# of vehs)											1	

Signal upstream of Movement 2 _____ ft Movement 5 _____ ft

Length of study period (h) 0.25

Output Data

	Lane	Movement	Flow Rate (veh/h)	Capacity (veh/h)	v/c	Queue Length (veh)	Control Delay (s)	LOS	Approach Delay and LOS
WB	1								
	2								
	3								
EB	1	R	2	297	0.007	0	17.2	C	17.2
	2								
	3								C
NB		(1)							
SB		(4)							

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1 of 1

Traffic Count Data Sheet

Year Counts Taken: **2006**

E-W Street Osuna
N-S Street: 2nd St

Speed Limit (Osuna)= 45 MPH
Speed Limit (2nd St)= 45 MPH
Date of Count: 3/16/06

SIGNALIZED

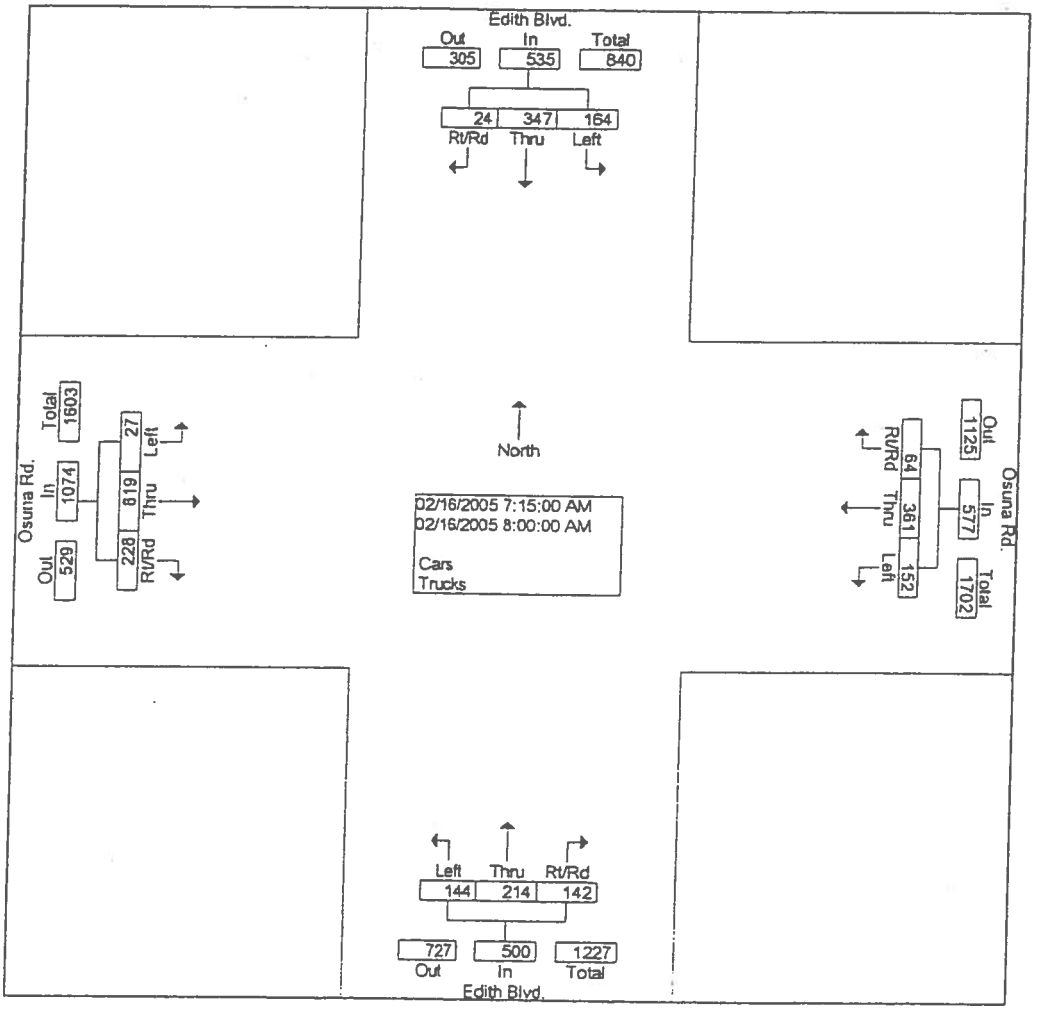
Begin Time	End Time	Eastbound (Osuna)			Westbound (Osuna)			Northbound (2nd St)			Southbound (2nd St)		
		L	T	R	L	T	R	L	T	R	L	T	R
7:00 AM	7:15 AM	**16**	**94**	**16**	**23**	**36**	**41**	**8**	**123**	**59**	**101**	**285**	**9**
7:15 AM	7:30 AM	**12**	**97**	**7**	**28**	**36**	**52**	**5**	**119**	**55**	**115**	**303**	**11**
7:30 AM	7:45 AM	**22**	**96**	**19**	**19**	**45**	**35**	**9**	**147**	**58**	**82**	**291**	**7**
7:45 AM	8:00 AM	**16**	**96**	**15**	**35**	**71**	**60**	**16**	**164**	**68**	**89**	**266**	**8**
8:00 AM	8:15 AM	~~16~~	~~68~~	~~8~~	~~30~~	~~47~~	~~49~~	~~18~~	~~128~~	~~62~~	~~87~~	~~233~~	~~10~~
8:15 AM	8:30 AM	~~13~~	~~79~~	~~25~~	~~27~~	~~49~~	~~33~~	~~12~~	~~126~~	~~45~~	~~81~~	~~229~~	~~12~~
8:30 AM	8:45 AM	~~14~~	~~61~~	~~17~~	~~22~~	~~45~~	~~65~~	~~11~~	~~108~~	~~40~~	~~76~~	~~166~~	~~19~~
8:45 AM	9:00 AM	~~12~~	~~47~~	~~20~~	~~23~~	~~51~~	~~36~~	~~15~~	~~126~~	~~33~~	~~69~~	~~187~~	~~9~~
AM Peak Hour Volumes		**66**	**383**	**57**	**105**	**188**	**188**	**38**	**553**	**240**	**387**	**1145**	**35**
% of Total Traffic		1.9%	11.3%	1.7%	3.1%	5.6%	5.6%	1.1%	16.3%	7.1%	11.4%	33.8%	1.0%
% Directional			14.9%			14.2%			24.5%			46.3%	
AM Peak Hour Factor			*0.92*			*0.72*			*0.84*			*0.91*	

Begin Time	End Time	Eastbound (Osuna)			Westbound (Osuna)			Northbound (2nd St)			Southbound (2nd St)		
		L	T	R	L	T	R	L	T	R	L	T	R
4:00 PM	4:15 PM	~~25~~	~~60~~	~~22~~	~~54~~	~~77~~	~~127~~	~~17~~	~~198~~	~~28~~	~~53~~	~~181~~	~~18~~
4:15 PM	4:30 PM	~~11~~	~~72~~	~~15~~	~~70~~	~~111~~	~~141~~	~~21~~	~~196~~	~~29~~	~~16~~	~~162~~	~~15~~
4:30 PM	4:45 PM	**18**	**44**	**19**	**53**	**102**	**162**	**11**	**193**	**36**	**74**	**217**	**28**
4:45 PM	5:00 PM	**21**	**45**	**22**	**69**	**116**	**151**	**20**	**224**	**45**	**76**	**195**	**15**
5:00 PM	5:15 PM	**24**	**52**	**14**	**69**	**116**	**151**	**22**	**220**	**46**	**76**	**195**	**15**
5:15 PM	5:30 PM	**26**	**35**	**15**	**65**	**129**	**154**	**15**	**247**	**33**	**59**	**169**	**19**
5:30 PM	5:45 PM	~~28~~	~~64~~	~~15~~	~~63~~	~~102~~	~~106~~	~~23~~	~~196~~	~~38~~	~~53~~	~~141~~	~~24~~
5:45 PM	6:00 PM	~~23~~	~~49~~	~~16~~	~~62~~	~~109~~	~~115~~	~~17~~	~~183~~	~~30~~	~~51~~	~~145~~	~~21~~
PM Peak Hour Volumes		**89**	**176**	**70**	**256**	**463**	**618**	**68**	**884**	**160**	**285**	**776**	**77**
% of Total Traffic		2.3%	4.5%	1.8%	6.5%	11.8%	15.8%	1.7%	22.5%	4.1%	7.3%	19.8%	2.0%
% Directional			8.5%			34.1%			28.4%			29.0%	
PM Peak Hour Factor			*0.93*			*0.96*			*0.94*			*0.89*	

Mid-Region Council of Governments
IntersectionTurning Movement Analysis

File Name : Osuna Rd. and Edit Blv
Site Code : 00025601
Start Date : 02/16/2005
Page No : 3

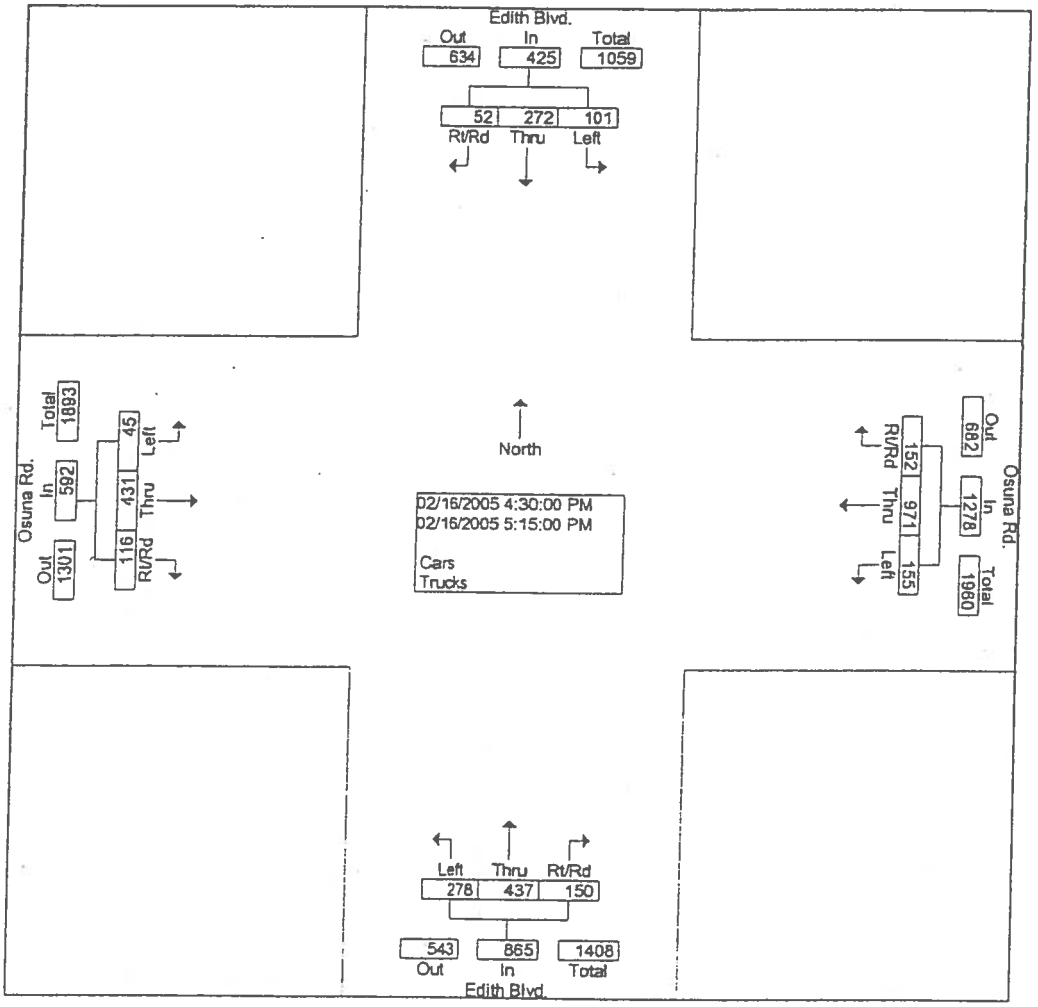
	Edith Blvd. From North					Osuna Rd. From East					Edith Blvd. From South					Osuna Rd. From West					
Start Time	Left	Thru	Right	Rt/Rd	App. Total	Left	Thru	Right	Rt/Rd	App. Total	Left	Thru	Right	Rt/Rd	App. Total	Left	Thru	Right	Rt/Rd	App. Total	Int. Total
Peak Hour From 06:45 to 09:30 - Peak 1 of 1																					
Intersection	07:15																				
Volume	164	347	22	2	535	152	361	60	4	577	144	214	91	51	500	27	819	217	11	1074	2686
Percent	30.7	64.9	4.1	0.4		26.3	62.6	10.4	0.7		28.8	42.8	18.2	10.2		2.5	76.3	20.2	1.0		
Volume	164	347	22	2	535	152	361	60	4	577	144	214	91	51	500	27	819	217	11	1074	2686
Volume	38	108	2	1	149	54	115	11	1	181	53	60	26	15	154	5	216	78	1	300	784
Peak Factor																					0.857
High Int.	07:45					07:45					07:45					07:45					
Volume	38	108	2	1	149	54	115	11	1	181	53	60	26	15	154	5	216	78	1	300	
Peak Factor					0.898					0.797					0.812					0.895	



Mid-Region Council of Governments
IntersectionTurning Movement Analysis

File Name : Osuna Rd. and Edit Blv
Site Code : 00025601
Start Date : 02/16/2005
Page No : 5

	Edith Blvd. From North					Osuna Rd. From East					Edith Blvd. From South					Osuna Rd. From West					
Start Time	Left	Thru	Right	Rt/Rd	App. Total	Left	Thru	Right	Rt/Rd	App. Total	Left	Thru	Right	Rt/Rd	App. Total	Left	Thru	Right	Rt/Rd	App. Total	Int. Total
Peak Hour From 15:00 to 17:45 - Peak 1 of 1																					
Intersection	16:30																				
Volume	101	272	48	4	425	155	971	142	10	1278	278	437	102	48	865	45	431	104	12	592	3160
Percent	23.8	64.0	11.3	0.9		12.1	76.0	11.1	0.8		32.1	50.5	11.8	5.5		7.6	72.8	17.6	2.0		
Volume	101	272	48	4	425	155	971	142	10	1278	278	437	102	48	865	45	431	104	12	592	3160
Volume	16	62	19	1	98	43	269	37	1	350	87	114	38	9	248	10	107	19	1	137	833
Peak Factor																					0.948
High Int.	16:30					17:15					17:15					16:30					
Volume	32	84	11	0	127	43	269	37	1	350	87	114	38	9	248	12	121	35	2	170	
Peak Factor					0.837					0.913					0.872					0.871	



Terry O. Brown, P.E.
P. O. Box 92051
Albuquerque, NM 87199-2051
(505) 883-8807 - Voice
(505) 212-0267 - FAX
e-mail: tobe@swcp.com

Wednesday, June 20, 2007

Tony J. Loyd, Traffic Engineer
City of Albuquerque Transportation Development Section
600 2nd St. NW
Albuquerque, NM 87102

Re: Sun Valley Commercial Center (Osuna Rd. / Edith Blvd.)

Dear Tony:

I have performed additional signalized intersection analyses for the referenced project assuming that the Vista del Norte (Wal-Mart) project is not constructed. Of primary concern were the intersections of Osuna Rd. / 2nd St., and Osuna Rd. / Edith Blvd. The following table summarizes the results of the proposed 2008 BUILD condition at the intersections of Osuna / 2nd St., and Osuna / Edith Blvd.

2008	BUILD Condition	
Osuna Rd. / 2nd St.	**AM Peak**	**PM Peak**
March, 2007 Traffic Impact Study	D - 38.1	E - 59.8
June 20, 2007 Supplement (NO Walmart)	C - 32.3	D - 39.6

2008	BUILD Condition	
Osuna Rd. / Edith Blvd.	**AM Peak**	**PM Peak**
March, 2007 Traffic Impact Study	E - 66.6	D - 49.9
June 20, 2007 Supplement (NO Walmart)	E - 58.1	D - 36.8

Attached for your review are the modified turning movement worksheets revised to omit the traffic from the proposed Vista del Norte project (Wal-Mart) and the modified Signal 2000 analysis worksheets for the new condition. Also attached are the percentage contributions of this project to the two intersections.

The revised analysis demonstrates that the intersection of Osuna / 2nd St. will no longer require mitigation. The operation of the intersection of Osuna / 2nd St. is shown to operate at satisfactory levels-of-service.

The revised analysis also demonstrates that the intersection of Osuna / Edith Blvd. will operate at marginally acceptable levels-of-service for the a.m. peak hour and acceptable levels-of-service for the PM peak hour. The projected a.m. peak hour delay of 58.1 seconds is only about three seconds above level-of-service "D".

Terry O. Brown, P.E.
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Albuquerque, NM 87199-2051
(505) 883-8807 - Voice
(505) 212-0267 - FAX
e-mail: tobe@swcp.com

Wednesday, June 20, 2007

Tony J. Loyd, Traffic Engineer
City of Albuquerque Transportation Development Section
600 2nd St. NW
Albuquerque, NM 87102

Re: Sun Valley Commercial Center (Osuna Rd. / Edith Blvd.)

Dear Tony:

I have performed additional signalized intersection analyses for the referenced project assuming that the Vista del Norte (Wal-Mart) project is not constructed. Of primary concern were the intersections of Osuna Rd. / 2nd St., and Osuna Rd. / Edith Blvd. The following table summarizes the results of the proposed 2008 BUILD condition at the intersections of Osuna / 2nd St., and Osuna / Edith Blvd.

2008	BUILD Condition	
Osuna Rd. / 2nd St.	**AM Peak**	**PM Peak**
March, 2007 Traffic Impact Study	D - 38.1	E - 59.8
June 20, 2007 Supplement (NO Walmart)	C - 32.3	D - 39.6

2008	BUILD Condition	
Osuna Rd. / Edith Blvd.	**AM Peak**	**PM Peak**
March, 2007 Traffic Impact Study	E - 66.6	D - 49.9
June 20, 2007 Supplement (NO Walmart)	E - 58.1	D - 36.8

Attached for your review are the modified turning movement worksheets revised to omit the traffic from the proposed Vista del Norte project (Wal-Mart) and the modified Signal 2000 analysis worksheets for the new condition. Also attached are the percentage contributions of this project to the two intersections.

The revised analysis demonstrates that the intersection of Osuna / 2nd St. will no longer require mitigation. The operation of the intersection of Osuna / 2nd St. is shown to operate at satisfactory levels-of-service.

The revised analysis also demonstrates that the intersection of Osuna / Edith Blvd. will operate at marginally acceptable levels-of-service for the a.m. peak hour and acceptable levels-of-service for the PM peak hour. The projected a.m. peak hour delay of 58.1 seconds is only about three seconds above level-of-service "D".

Tony J. Loyd
Wednesday, June 20, 2007

Re: Sun Valley Commercial Center (Osuna Rd. / Edith Blvd.)

The original Traffic Impact Study for this project recommended improvements to the intersection of Osuna Rd. / 2nd St. and Osuna Rd. / Edith Blvd. In light of the updated data omitting the Vista del Norte Commercial Center (Walmart) traffic, the recommendations in the Traffic Impact Study for the intersections of Osuna Rd. / 2nd St. and Osuna Rd. / Edith Blvd. should be omitted.

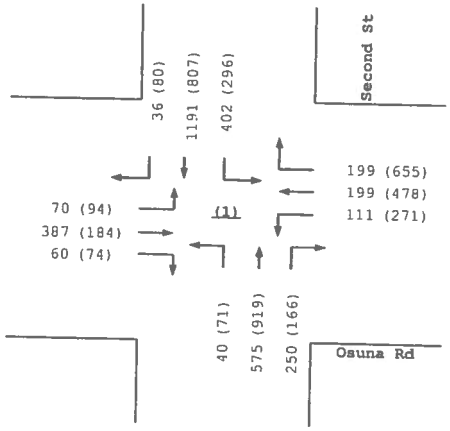
Please call me to discuss before I prepare the final letter to the city.

Best regards,

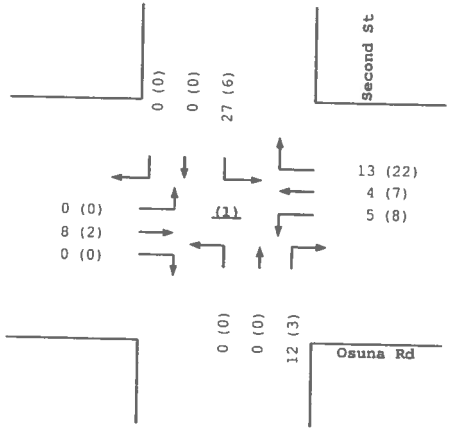
Terry O. Brown

attachments as noted

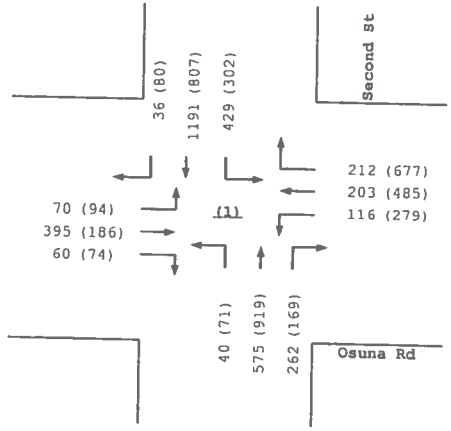
2008
NO BUILD



Trips



2008
BUILD



Osuna Rd / Second St

Sun Valley Commercial Development (NO WALMART)

Projected Turning Movements Worksheet

Osuna Rd / Edith Blvd

INTERSECTION: E-W Street: Osuna Rd (2)

N-S Street: Edith Blvd

Year of Existing Counts 2005

Implementation Year **2008**

Growth Rates	3.00%			1.00%			2.00%			3.00%		
	Eastbound (Osuna Rd)			Westbound (Osuna Rd)			Northbound (Edith Blvd)			Southbound (Edith Blvd)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	27	815	225	152	341	64	144	214	142	164	347	24
Background Traffic Growth	2	73	20	5	10	2	9	13	9	15	31	2
Subtotal (NO BUILD - A.M.)	*29*	*888*	*245*	*157*	*351*	*66*	*153*	*227*	*151*	*179*	*378*	*26*
Percent Office Trips Generated(Entering)	*0.00%*	*0.00%*	*0.00%*	*25.27%*	*46.93%*	*0.00%*	*1.74%*	*0.00%*	*0.00%*	*0.00%*	*0.22%*	*0.40%*
Percent Office Trips Generated(Exiting)	*0.40%*	*80.19%*	*1.13%*	*0.00%*	*7.77%*	*0.22%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*
Total Trips Generated	0	73	1	47	94	0	3	0	0	0	0	1
Total AM Peak Hour BUILD Volumes	**29**	**961**	**246**	**204**	**445**	**66**	**156**	**227**	**151**	**179**	**378**	**27**

	Eastbound (Osuna Rd)			Westbound (Osuna Rd)			Northbound (Edith Blvd)			Southbound (Edith Blvd)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	45	404	116	155	961	152	278	437	150	101	272	52
Background Traffic Growth	4	36	10	5	29	5	17	26	9	9	24	5
Subtotal (NO BUILD - P.M.)	*49*	*440*	*126*	*160*	*990*	*157*	*295*	*463*	*159*	*110*	*296*	*57*
Percent Office Trips Generated(Entering)	*0.00%*	*0.00%*	*0.00%*	*25.27%*	*46.93%*	*0.00%*	*1.74%*	*0.00%*	*0.00%*	*0.00%*	*0.22%*	*0.40%*
Percent Office Trips Generated(Exiting)	*0.40%*	*80.19%*	*1.13%*	*0.00%*	*7.77%*	*0.22%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*
Total Trips Generated	1	119	2	10	31	0	1	0	0	0	0	0
Total PM Peak Hour BUILD Volumes	**50**	**559**	**128**	**170**	**1,021**	**157**	**296**	**463**	**159**	**110**	**296**	**57**

Number of Office Trips Generated	Entering	Exiting		
	185	**91**	A.M.	100% Office Development
	40	**149**	P.M.	

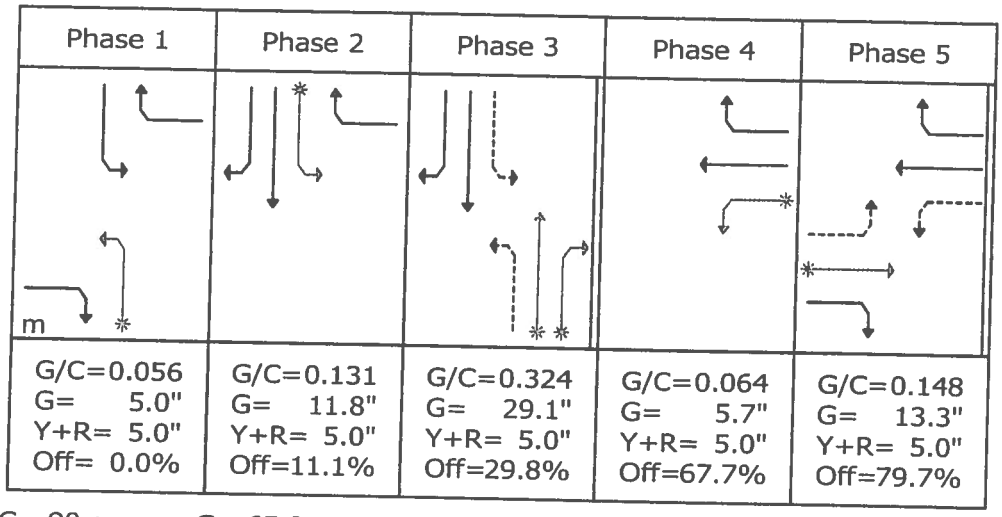
	Eastbound (Osuna Rd)			Westbound (Osuna Rd)			Northbound (Edith Blvd)			Southbound (Edith Blvd)		
2007 AM Peak Hr. Volumes	29	864	239	155	348	65	150	223	148	174	368	25
2007 PM Peak Hr. Volumes	48	428	123	158	980	155	289	454	156	107	288	55

SIGNAL2000/TEAPAC[Ver 2.80.00] - Capacity Analysis Summary

Intersection Averages for Int # 1 -
V/C 0.745 (Critical V/C 0.934) Control Delay 32.3 Level of Service C

Sq 52
LD/LD

North



Phase 1	Phase 2	Phase 3	Phase 4	Phase 5
G/C=0.056 G= 5.0" Y+R= 5.0" Off= 0.0%	G/C=0.131 G= 11.8" Y+R= 5.0" Off=11.1%	G/C=0.324 G= 29.1" Y+R= 5.0" Off=29.8%	G/C=0.064 G= 5.7" Y+R= 5.0" Off=67.7%	G/C=0.148 G= 13.3" Y+R= 5.0" Off=79.7%

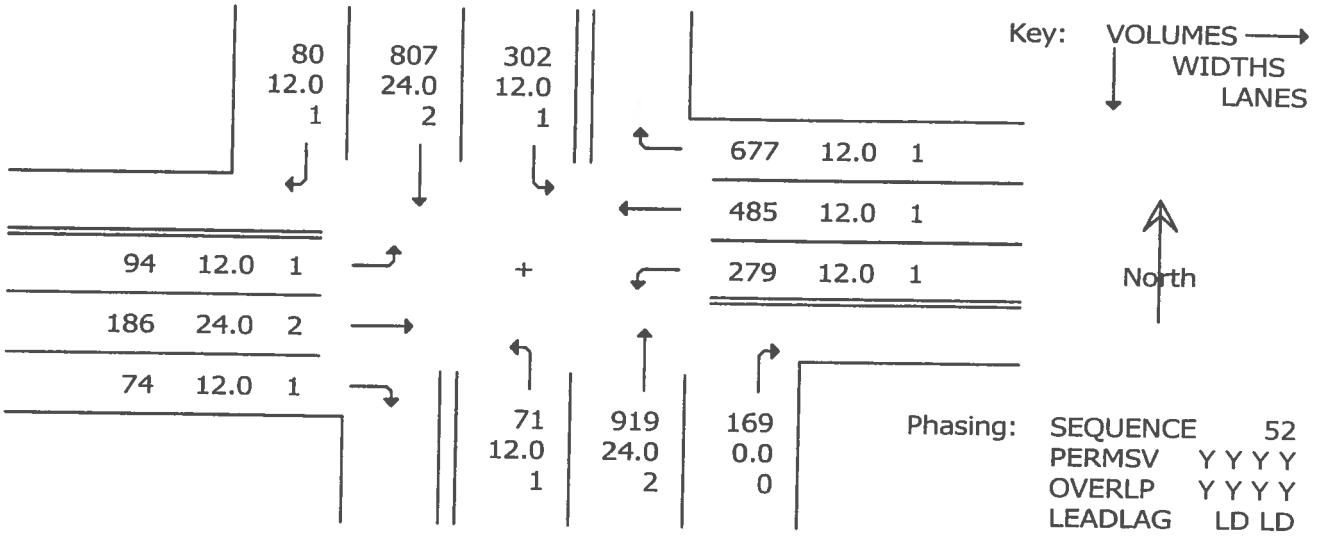
C= 90 sec G= 65.0 sec = 72.2% Y=25.0 sec = 27.8% Ped= 0.0 sec = 0.0%

Lane Group	Width/ Lanes	g/C Reqd	g/C Used	Service Rate @D (vph)	Service Rate @E	Adj Volume	v/c	HCM Delay	L S	Queue Model 1
SB Approach								26.2	C+	
RT	12/1	0.043	0.511	801	801	40	0.050	11.1	B+	24 ft
TH	24/2	0.370	0.511	1794	1794	1309	0.730	18.7	B	611 ft
LT	12/1	0.234	0.243	487	507	471	0.929	48.4	*D	568 ft
NB Approach								40.6	D+	
RT+TH	24/2	0.303	0.324	1073	1084	997	0.920	41.7	*D+	647 ft
LT	12/1	0.000	0.056	177	196	48	0.240	18.6	*B	41 ft
WB Approach								26.3	C+	
RT	12/1	0.209	0.565	886	886	283	0.319	10.6	B+	178 ft
TH	12/1	0.173	0.267	455	493	271	0.550	29.7	C	274 ft
LT	12/1	0.060	0.064	163	184	155	0.799	48.9	*D	196 ft
EB Approach								43.9	D+	
RT	12/1	0.064	0.259	367	406	65	0.160	26.0	C+	60 ft
TH	24/2	0.139	0.148	463	519	429	0.827	47.8	*D	288 ft
LT	12/1	0.102	0.148	123	146	76	0.469	37.3	D+	87 ft

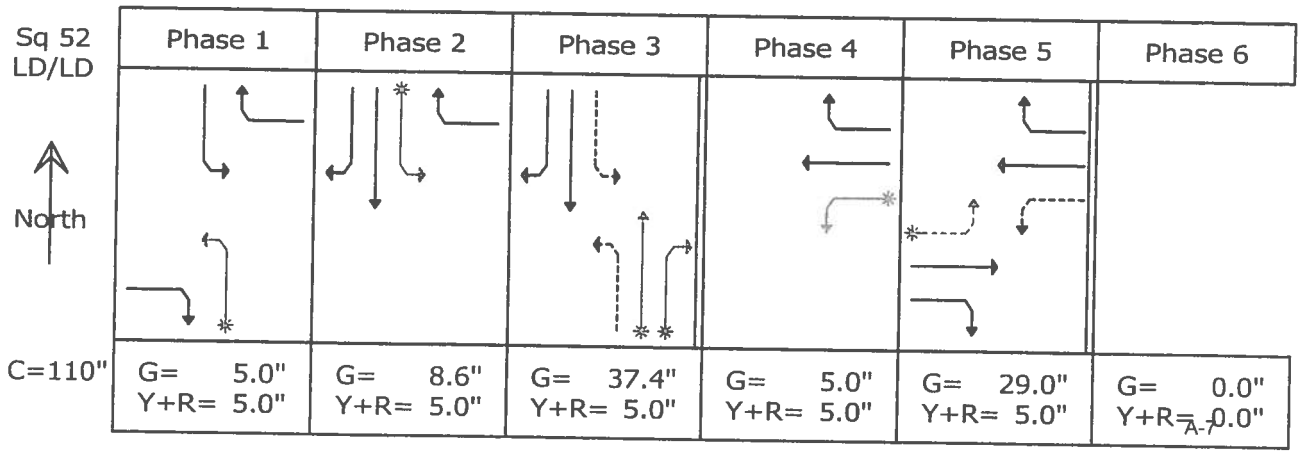
SIGNAL2000/TEAPAC[Ver 2.80.00] - HCM Input Worksheet

Intersection # 1 -

Area Location Type: NONCBD



	SB			WB			NB			EB		
	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT
Heavy veh, %HV	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Pk-hr fact, PHF	.89	.89	.89	.96	.96	.96	.94	.94	.94	.93	.93	.93
Pretimed or Act	A	A	A	A	A	A	A	A	A	A	A	A
Strtup lost, l1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Ext eff grn, e	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Arrival typ, AT	3	3	3	3	3	3	3	3	3	3	3	3
Ped vol, vped		0			0			0			0	
Bike vol, vbic		0			0			0			0	
Parking locatns		NO			NO			NO			NO	
Park mnvrs, Nm		0			0			0			0	
Bus stops, NB		0			0			0			0	
Grade, %G		.0			.0			.0			.0	

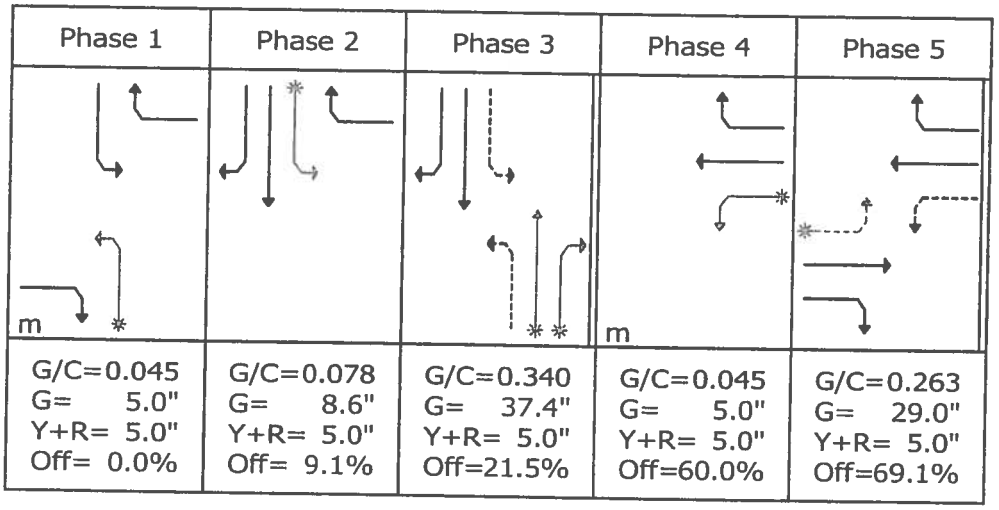


SIGNAL2000/TEAPAC[Ver 2.80.00] - Capacity Analysis Summary

Intersection Averages for Int # 1 -
V/C 0.742 (Critical V/C 0.866) Control Delay 39.6 Level of Service D+

Sq 52
LD/LD

North



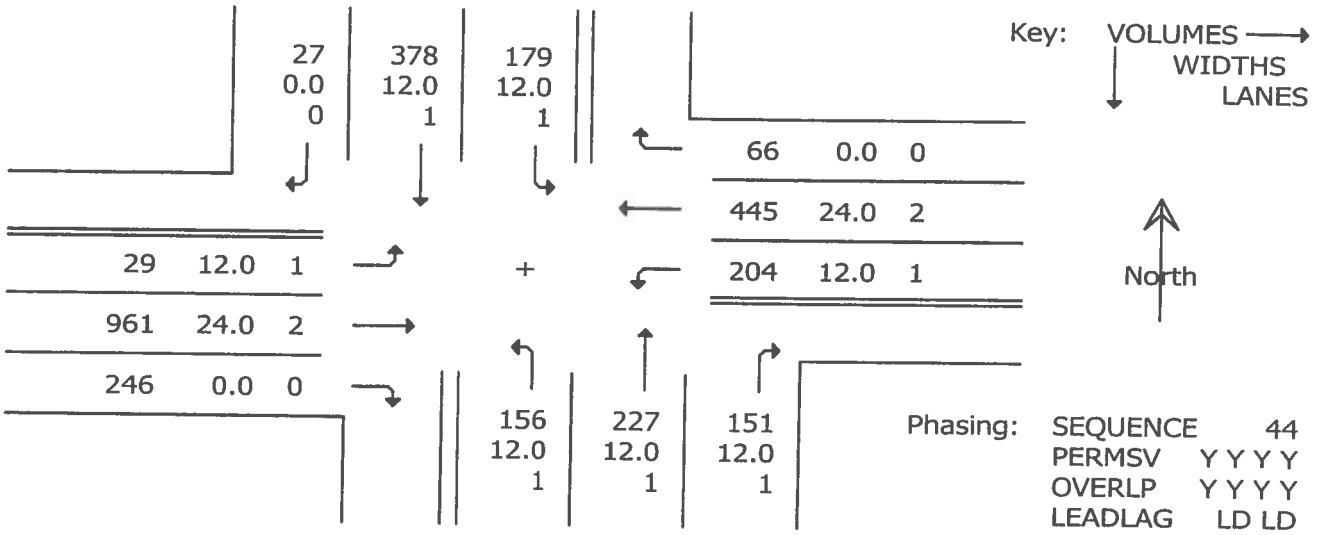
C=110 sec G= 85.0 sec = 77.3% Y=25.0 sec = 22.7% Ped= 0.0 sec = 0.0%

Lane Group	Width/ Lanes	g/C Reqd	g/C Used	Service Rate @D (vph)	Service Rate @E	Adj Volume	v/c	HCM Delay	L S	Queue Model 1
SB Approach								31.9	C	
RT	12/1	0.094	0.464	707	728	90	0.124	16.8	B	74 ft
TH	24/2	0.275	0.464	1630	1630	907	0.556	21.7	C+	471 ft
LT	12/1	0.178	0.169	325	363	339	0.931	63.3	*E+	513 ft
NB Approach								58.2	E+	
RT+TH	24/2	0.347	0.340	1131	1167	1158	0.992	60.6	*E+	959 ft
LT	12/1	0.000	0.045	232	259	76	0.288	22.3	*C+	78 ft
WB Approach								31.4	C	
RT	12/1	0.463	0.569	892	892	705	0.790	23.4	C+	764 ft
TH	12/1	0.303	0.354	611	653	505	0.773	37.3	D+	628 ft
LT	12/1	0.020	0.045	340	382	291	0.758	40.2	*D+	383 ft
EB Approach								38.4	D+	
RT	12/1	0.086	0.354	512	555	80	0.144	24.3	C+	79 ft
TH	24/2	0.084	0.263	861	925	200	0.216	31.8	C	118 ft
LT	12/1	0.276	0.263	95	113	101	0.777	62.7	*E+	156 ft

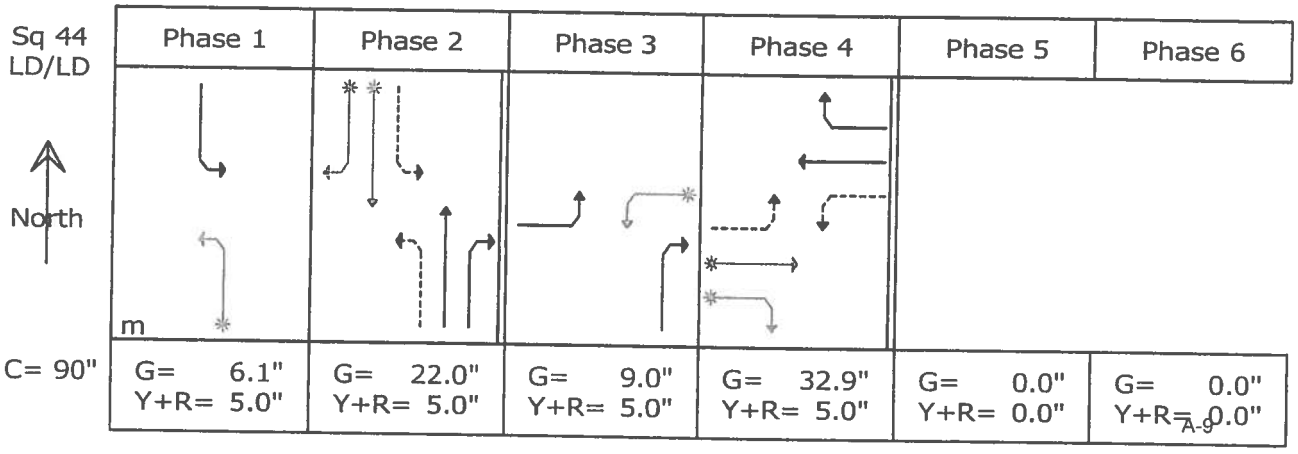
SIGNAL2000/TEAPAC[Ver 2.80.00] - HCM Input Worksheet

Intersection # 2 -

Area Location Type: NONCBD



	SB			WB			NB			EB		
	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT
Heavy veh, %HV	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Pk-hr fact, PHF	.90	.90	.90	.80	.80	.80	.81	.81	.81	.90	.90	.90
Pretimed or Act	A	A	A	A	A	A	A	A	A	A	A	A
Strtup lost, l1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Ext eff grn, e	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Arrival typ, AT	3	3	3	3	3	3	3	3	3	3	3	3
Ped vol, vped		0			0			0			0	
Bike vol, vbic		0			0			0			0	
Parking locatns		NO			NO			NO			NO	
Park mnvrs, Nm		0			0			0			0	
Bus stops, NB		0			0			0			0	
Grade, %G		.0			.0			.0			.0	



SIGNAL2000/TEAPAC[Ver 2.80.00] - Capacity Analysis Summary

Intersection Averages for Int # 2 -
V/C 0.847 (Critical V/C 1.024) Control Delay 58.1 Level of Service E+

Sq 44
LD/LD

North

Phase 1	Phase 2	Phase 3	Phase 4
G/C=0.067 G= 6.1" Y+R= 5.0" Off= 0.0%	G/C=0.245 G= 22.0" Y+R= 5.0" Off=12.3%	G/C=0.100 G= 9.0" Y+R= 5.0" Off=42.4%	G/C=0.366 G= 32.9" Y+R= 5.0" Off=57.9%

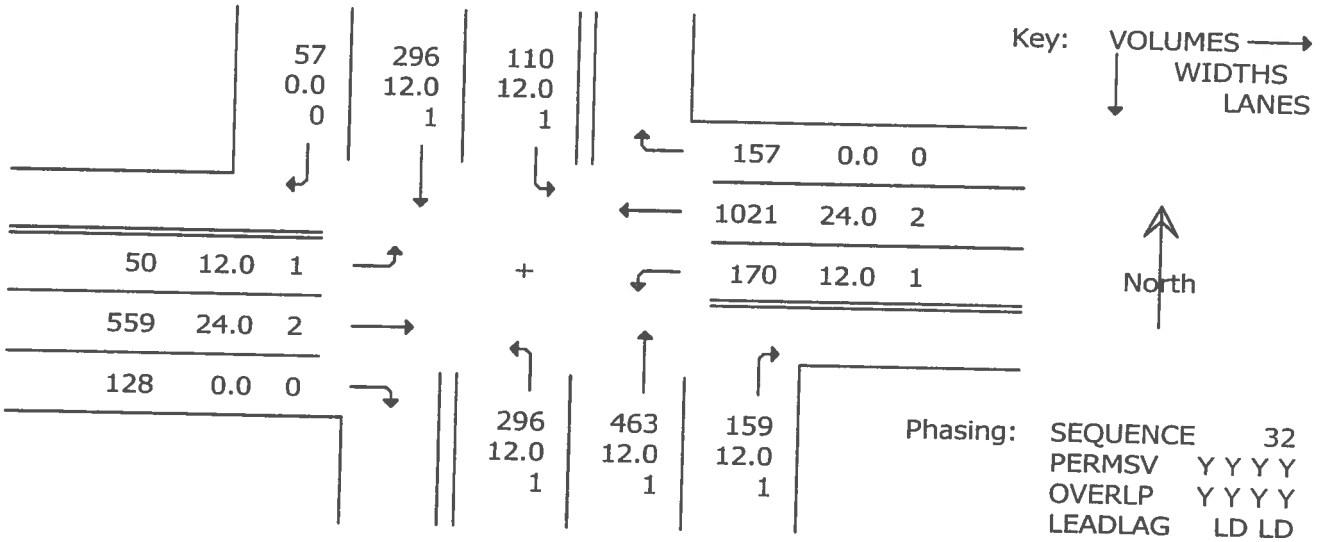
C= 90 sec G= 70.0 sec = 77.8% Y=20.0 sec = 22.2% Ped= 0.0 sec = 0.0%

Lane Group	Width/ Lanes	g/C Reqd	g/C Used	Service Rate @D (vph)	Service Rate @E	Adj Volume	v/c	HCM Delay	L S	Queue Model 1
SB Approach								63.2	E+	
RT+TH	12/1	0.268	0.245	406	447	450	1.007	78.2	*E	655 ft
LT	12/1	0.034	0.067	264	292	199	0.679	29.2	C	212 ft
NB Approach								42.4	D+	
RT	12/1	0.148	0.400	609	627	186	0.297	18.6	B	150 ft
TH	12/1	0.178	0.245	411	452	280	0.619	32.8	C	296 ft
LT	12/1	0.078	0.067	175	194	193	0.965	79.1	*E	293 ft
WB Approach								38.5	D+	
RT+TH	24/2	0.199	0.366	1260	1260	638	0.506	22.6	C+	302 ft
LT	12/1	0.113	0.100	233	257	255	0.992	78.4	*E	392 ft
EB Approach								76.0	E	
RT+TH	24/2	0.390	0.366	1245	1245	1341	1.077	77.5	*E	1079 ft
LT	12/1	0.000	0.100	371	384	32	0.083	11.6	B+	20 ft

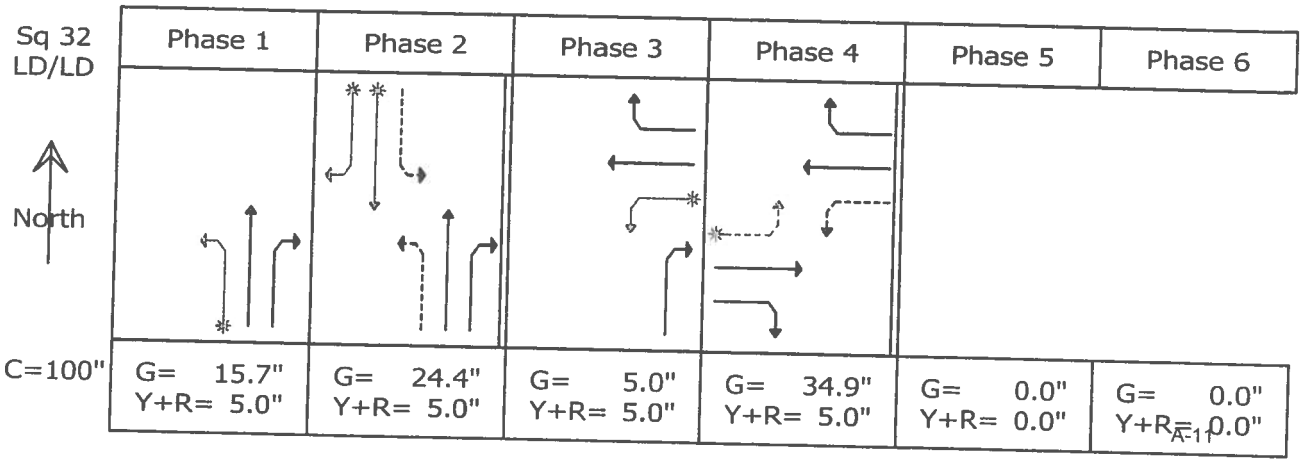
SIGNAL2000/TEAPAC[Ver 2.80.00] - HCM Input Worksheet

Intersection # 2 -

Area Location Type: NONCBD



	SB RT	SB TH	SB LT	WB RT	WB TH	WB LT	NB RT	NB TH	NB LT	EB RT	EB TH	EB LT
Heavy veh, %HV	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Pk-hr fact, PHF	.84	.84	.84	.91	.91	.91	.87	.87	.87	.87	.87	.87
Pretimed or Act	A	A	A	A	A	A	A	A	A	A	A	A
Strtup lost, l1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Ext eff grn, e	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Arrival typ, AT	3	3	3	3	3	3	3	3	3	3	3	3
Ped vol, vped		0			0			0			0	
Bike vol, vbic		0			0			0			0	
Parking locatns		NO			NO			NO			NO	
Park mnvrs, Nm		0			0			0			0	
Bus stops, NB		0			0			0			0	
Grade, %G		.0			.0			.0			.0	

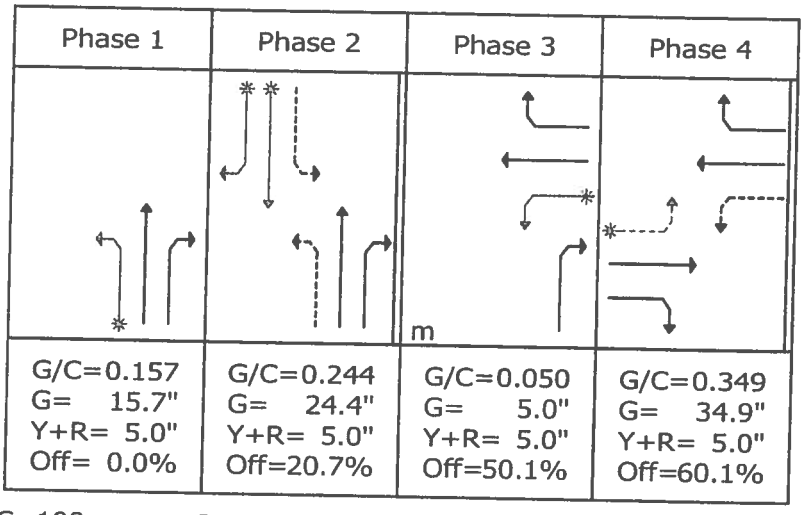


SIGNAL2000/TEAPAC[Ver 2.80.00] - Capacity Analysis Summary

Intersection Averages for Int # 2 -
V/C 0.763 (Critical V/C 0.880) Control Delay 36.8 Level of Service D+

Sq 32
LD/LD

North



Phase 1	Phase 2	Phase 3	Phase 4
G/C=0.157 G= 15.7" Y+R= 5.0" Off= 0.0%	G/C=0.244 G= 24.4" Y+R= 5.0" Off=20.7%	G/C=0.050 G= 5.0" Y+R= 5.0" Off=50.1%	G/C=0.349 G= 34.9" Y+R= 5.0" Off=60.1%

C=100 sec G= 80.0 sec = 80.0% Y=20.0 sec = 20.0% Ped= 0.0 sec = 0.0%

Lane Group	Width/ Lanes	g/C Reqd	g/C Used	Service Rate @D (vph)	Service Rate @E	Adj Volume	v/c	HCM Delay	L S	Queue Model 1
SB Approach								62.2	E+	
RT+TH	12/1	0.261	0.244	388	438	420	0.957	69.3	*E	618 ft
LT	12/1	0.202	0.244	169	196	131	0.624	39.4	D+	163 ft
NB Approach								35.7	D+	
RT	12/1	0.151	0.551	864	864	183	0.212	11.5	B+	123 ft
TH	12/1	0.311	0.451	821	832	532	0.639	22.8	C+	515 ft
LT	12/1	0.168	0.157	321	349	340	0.974	68.8	*E	525 ft
WB Approach								31.1	C	
RT+TH	24/2	0.378	0.449	1546	1546	1295	0.838	28.6	C	771 ft
LT	12/1	0.047	0.050	195	216	187	0.846	48.5	*D	254 ft
EB Approach								31.5	C	
RT+TH	24/2	0.246	0.349	1176	1192	790	0.663	29.0	C	449 ft
LT	12/1	0.371	0.349	53	61	57	0.770	67.2	*E+	83 ft