

Vista del Norte Commercial Dev. – 2007 Plan

(Osuna Rd. / Vista del Norte Dr.)

Traffic Impact Study

FINAL

February 26, 2009

Terry O. Brown, P.E.

Presented to:

***Transportation Development Division
City of Albuquerque***

Prepared for:

**Tierra West, LLC
5571 Midway Park Place NE
Albuquerque, NM 87100**



Terry O. Brown

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Thursday, June 14, 2007

Ronald R. Bohannon
Tierra West, LLC
5571 Midway Park Place NE
Albuquerque, NM 87109

Re: Vista del Norte Commercial Development – Sunday Analysis

Dear Ron:

As a linear average, a Walmart generates about **3.87** trips per 1,000 S.F. during the **weekday peak hour** of adjacent street traffic. The actual trip generation rate for Walmart is fairly linear, but does vary a bit as the building size changes. In our case, the trip generation rate utilized in the TIS was **3.86** trips per 1,000 (based on actual ITE formula). ITE also defines the **Sunday peak hour** of generator at **4.27** trips per 1,000 S.F. (it is actually a non-linear equation, but that is the linear average approximation).

Also, we counted the Walmart at Southern Blvd. / Unser Blvd. and at Rio Bravo / Coors to determine those trip generation rates on Sundays from 8:00 am to 1:00 pm. The Sunday peak hour trip generation rate for those two stores were **3.73 trips / 1,000 S.F. for RB / Coors** and **4.29 trips per / 1,000 S.F. for Southern Blvd. / Unser Blvd.** The 4.29 is very close to ITE's data. Therefore, a Walmart should generate a bit more traffic on Sunday from about 11:45 to 12:45 than the PM weekday peak.

However, based on ITE data, the rest of commercial center will generate less traffic because much of it will be closed on Sunday. Overall, the trip generation rate of the entire center (including non-Walmart use) is less than the weekday PM Peak Hour. In fact, the Sunday peak volumes of the overall center should be about **15% less than the weekday PM Peak Hour** volumes generated by the site.

Using the ITE Sunday peak hour generation rate of 4.27 trips / 1,000 S.F. and the ITE Sunday peak hour generation rate for retail commercial, I forecast the 2009 Sunday peak volumes and ran the analysis of the unsignalized (two-way stop) intersection of the Desert Springs driveway (VdN Commercial Center driveway) / Vista del Norte. The resulting LOS was "D" for the worst case (eastbound and westbound left turns from the driveways). The reason that the LOS was not worse than "D" is because the northbound and southbound thru volumes on Vista del Norte at noon Sunday are low.

In summary, the peak hour Sunday volumes generated by the Walmart only will be slightly higher than the weekday PM Peak for Walmart only. The entire center, however, will generate less

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Ronald R. Bohannon

Thursday, June 14, 2007

Re: Vista del Norte Commercial Development – Sunday Analysis

traffic during the Sunday peak hour than during the weekday PM Peak Hour, probably due to the fact that most other uses will be closed and / or less busy on Sunday. Analysis of the Desert Springs driveway (based on recent traffic count data) with the new Vista del Norte Commercial Center driveway will operate at LOS "D" for the 2009 Sunday Peak Hour Conditions as a standard two-way stop unsignalized intersection. The Vista del Norte Commercial Center should not cause the intersection to fail during the Sunday Peak Hour when Desert Springs is active. Implementation of a roundabout at the intersection should increase capacity and operate even better.

Please call me if you have questions or if you need additional information.

Sincerely Yours,



Terry O. Brown

Vista del Norte Retail Center
Trip Generation Data

USE (ITE CODE)	DESCRIPTION	24 HR VOL	A. M. PEAK HR.		P. M. PEAK HR.	
		GROSS	ENTER	EXIT	ENTER	EXIT

Summary Sheet

Units

Shopping Center (820)	12.85	1,789	28	18	78	84
Specialty Retail Center (814)	12.42	569	78	99	23	29
High Turnover (Sit-Down) Restaurant (932)	12.42	1,579	74	69	83	53
Shopping Center (820)	11.98	1,710	27	17	74	80
Subtotal		5,647	207	203	258	246

Trips Generated by Walmart Plan **12,889** **222** **190** **529** **561**
NOTE: Walmart Plan - 156,000 S.F. Walmart Supercenter plus 68,360 S.F. of Retail Commercial Floor Space.

2009 AM / PM Operational Characteristics
Osuna Rd. / Vista del Norte
Based on 2007 Traffic Impact Study

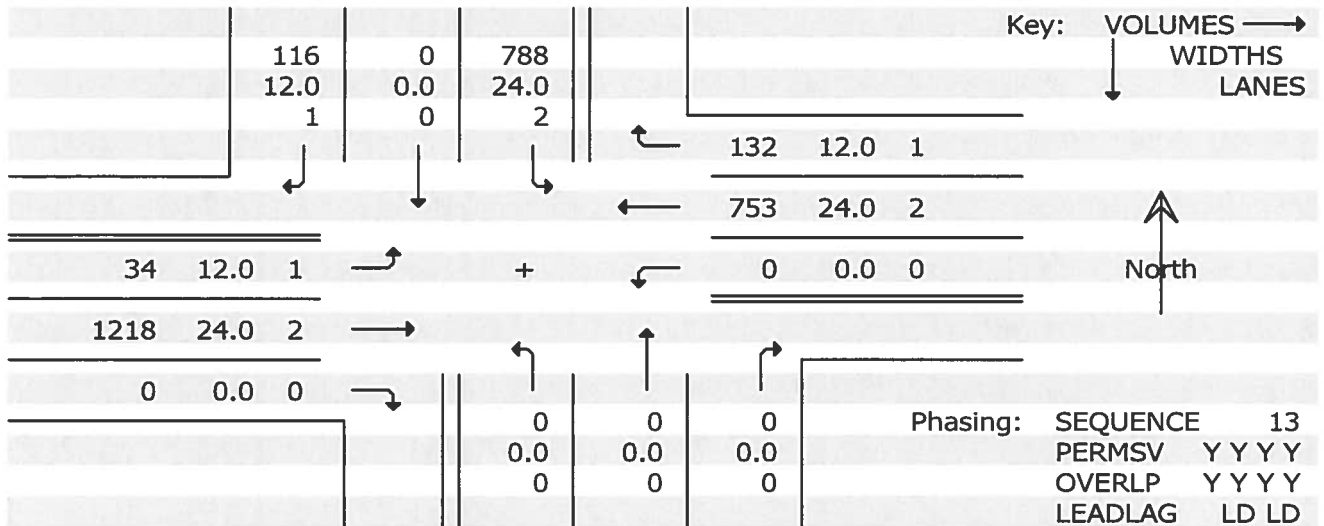
	SB Left Turn Movement				Intersection LOS	
Condition	AM LOS	AM Queue	PM LOS	PM Queue	AM	PM
2009 NO BUILD	C - 26.7	549 Ft.	D - 44.4	167 Ft.	C - 23.1	B - 10.4
2009 BUILD*	C - 28.7	573 Ft.	D - 42.0	178 Ft.	C - 23.8	B - 14.0

* BUILD Condition includes Walmart Site Plan w/NO Park

SIGNAL2000/TEAPAC[Ver 2.70.28] - 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	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Pk-hr fact, PHF	.80	.80	.80	.73	.73	.73	.85	.85	.85	.87	.87	.87
Pretimed or Act	A	A	A	A	A	A	A	A	A	A	A	A
Startup 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	

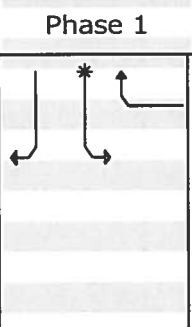
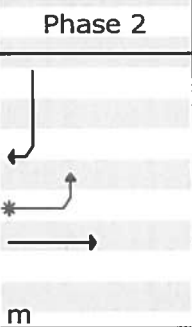
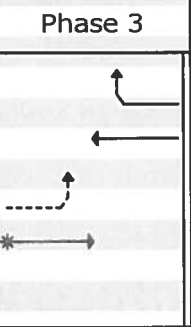
Sq 13 LD/LD	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Phase 6
North						
C=100"	G= 40.9" Y+R= 4.0"	G= 5.0" Y+R= 4.0"	G= 42.1" Y+R= 4.0"	G= 0.0" Y+R= 0.0"	G= 0.0" Y+R= 0.0"	G= 0.0" Y+R= 0.0"

SIGNAL2000/TEAPAC[Ver 2.70.28] - Capacity Analysis Summary

Intersection Averages for Int # 1 -
 V/C 0.692 (Critical V/C 0.762)

Control Delay 23.1

Level of Service C+

Sq 13 LD/LD	Phase 1	Phase 2	Phase 3
			
North ↑	G/C=0.409 G= 40.9" Y+R= 4.0" Off= 0.0%	G/C=0.050 G= 5.0" Y+R= 4.0" Off=44.9%	G/C=0.421 G= 42.1" Y+R= 4.0" Off=53.9%

C=100 sec G= 88.0 sec = 88.0% Y=12.0 sec = 12.0% Ped= 0.0 sec = 0.0%

Lane Group	Width/ Lanes	g/C Reqd Used	Service Rate @C (vph) @E	Adj Volume	v/c	HCM Delay	L S	Queue Model 1
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SB Approach

25.1 C+

RT	12/1	0.214	0.499	682	767	145	0.189	14.0	B+	107 ft
LT	24/2	0.353	0.409	1212	1364	985	0.722	26.7	*C+	549 ft

WB Approach

21.9 C+

RT	12/1	0.229	0.870	1338	1338	181	0.135	1.0	A	40 ft
TH	24/2	0.356	0.421	1308	1452	1032	0.711	25.5	C+	572 ft

EB Approach

22.5 C+

TH	24/2	0.444	0.511	1675	1762	1400	0.795	22.7	*C+	770 ft
LT	12/1	0.001	0.050	150	189	39	0.202	16.1	*B	30 ft

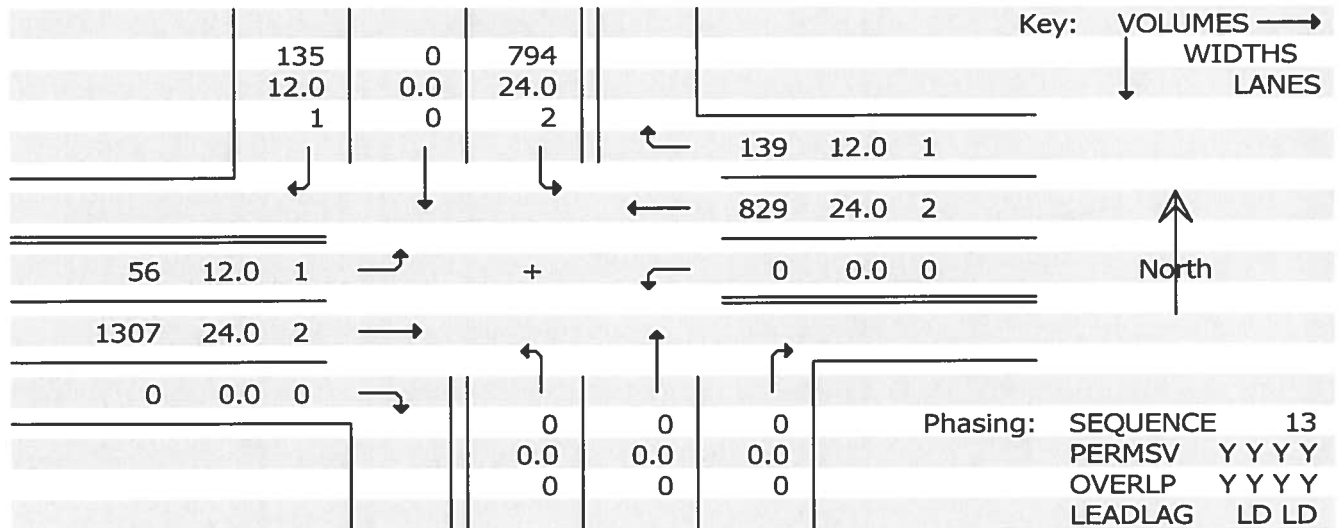
Vista del Norte Commercial Development (Osuna / VdN)
 Analysis of Osuna Rd. / Vista del Norte - [6N_09ABX]
 2009 AM Peak Hour BUILD Conditions - NO Park

05/21/07
 22:01:26

SIGNAL2000/TEAPAC[Ver 2.71.07] - HCM Input Worksheet

Intersection # 1 -

Area Location Type: NONCBD



	RT	SB TH	LT	RT	WB TH	LT	RT	NB TH	LT	RT	EB TH	LT
Heavy veh, %HV	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Pk-hr fact, PHF	.80	.80	.80	.73	.73	.73	.85	.85	.85	.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	

Sq 13 LD/LD	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Phase 6
North						
C=100"	G= 39.3" Y+R= 4.0"	G= 5.0" Y+R= 4.0"	G= 43.7" Y+R= 4.0"	G= 0.0" Y+R= 0.0"	G= 0.0" Y+R= 0.0"	G= 0.0" Y+R= 0.0"

Vista del Norte Commercial Development (Osuna / VdN)
 Analysis of Osuna Rd. / Vista del Norte - [6N_09ABX]
 2009 AM Peak Hour BUILD Conditions - NO Park

05/21/07
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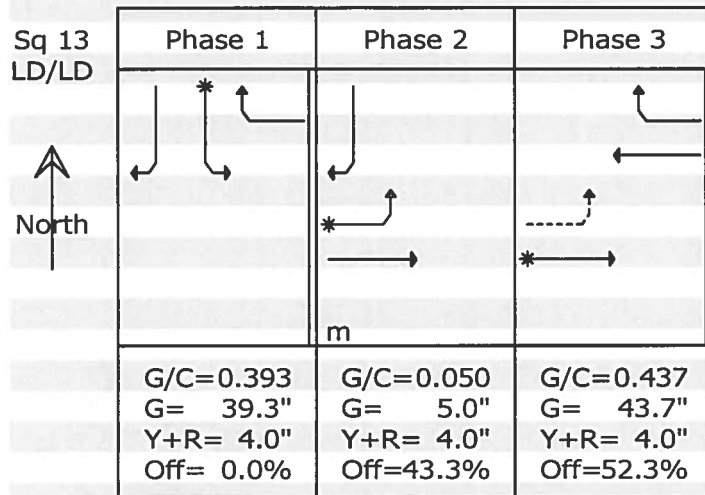
SIGNAL2000/TEAPAC[Ver 2.71.07] - Capacity Analysis Summary

Intersection Averages for Int # 1 -

V/C 0.725 (Critical V/C 0.797)

Control Delay 23.8

Level of Service C+



C=100 sec G= 88.0 sec = 88.0% Y=12.0 sec = 12.0% Ped= 0.0 sec = 0.0%

Lane Group	Width/ Lanes	g/C Reqd Used	Service Rate @C (vph) @E	Adj Volume	v/c	HCM Delay	L S	Queue Model 1
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SB Approach

26.8 C+

RT	12/1	0.223	0.483	654	743	169	0.227	15.2	B	131 ft
LT	24/2	0.355	0.393	1150	1313	992	0.756	28.7	*C	573 ft

WB Approach

22.3 C+

RT	12/1	0.234	0.870	1338	1338	190	0.142	1.0	A	43 ft
TH	24/2	0.381	0.437	1370	1504	1136	0.755	25.9	C+	642 ft

EB Approach

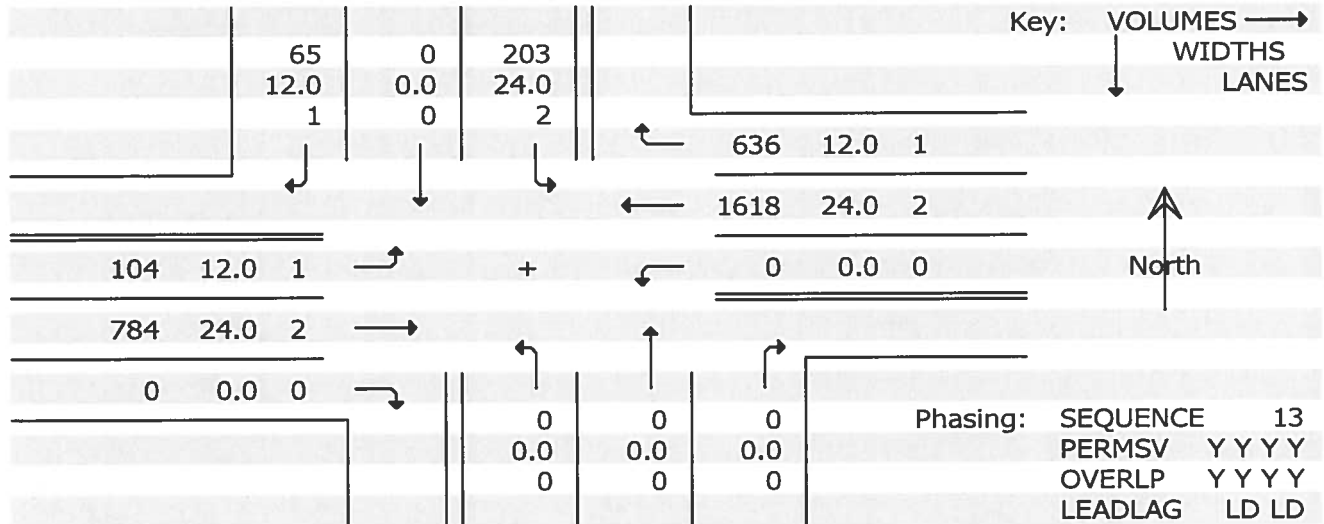
23.0 C+

TH	24/2	0.469	0.527	1736	1815	1502	0.828	23.2	*C+	846 ft
LT	12/1	0.010	0.050	134	172	64	0.364	17.5	*B	54 ft

SIGNAL2000/TEAPAC[Ver 2.70.28] - 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	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Pk-hr fact, PHF	.86	.86	.86	.92	.92	.92	.85	.85	.85	.89	.89	.89
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	

Sq 13 LD/LD	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Phase 6
North						
C=110"	G= 15.7" Y+R= 4.0"	G= 5.0" Y+R= 4.0"	G= 77.3" Y+R= 4.0"	G= 0.0" Y+R= 0.0"	G= 0.0" Y+R= 0.0"	G= 0.0" Y+R= 0.0"

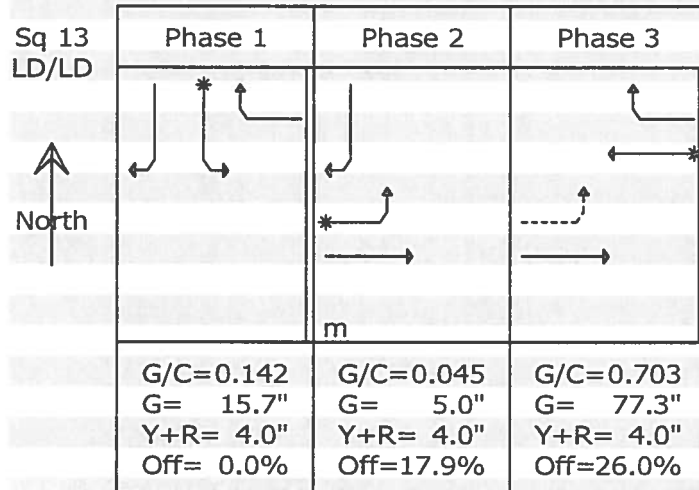
SIGNAL2000/TEAPAC[Ver 2.70.28] - Capacity Analysis Summary

Intersection Averages for Int # 1 -

V/C 0.565 (Critical V/C 0.703)

Control Delay 10.4

Level of Service B+



C=110 sec G= 98.0 sec = 89.1% Y=12.0 sec = 10.9% Ped= 0.0 sec = 0.0%

Lane Group	Width/ Lanes	g/C Reqd	Used	Service Rate @C (vph)	@E	Adj Volume	v/c	HCM Delay	L S	Queue Model 1
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SB Approach

42.1 D+

RT	12/1	0.226	0.224	71	332	76	0.220	35.2	D+	91 ft
LT	24/2	0.233	0.142	1	460	236	0.497	44.4	*D+	167 ft

WB Approach

8.4 A

RT	12/1	0.511	0.882	1356	1356	691	0.510	1.7	A	241 ft
TH	24/2	0.539	0.703	2423	2423	1759	0.726	11.0	*B+	774 ft

EB Approach

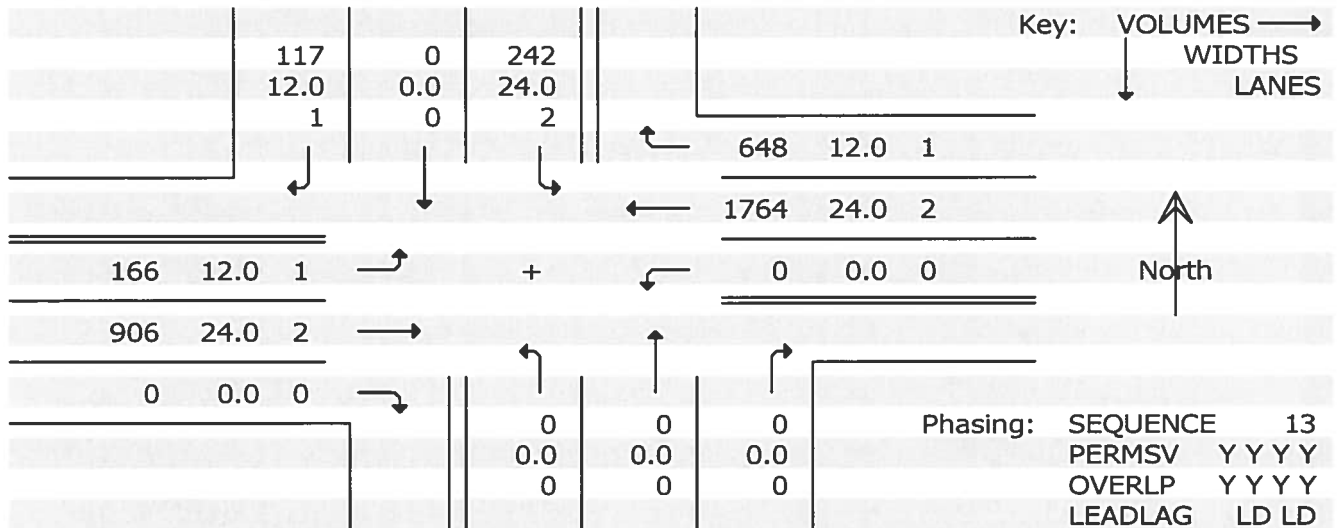
5.5 A

TH	24/2	0.340	0.785	2705	2705	881	0.326	3.5	A	201 ft
LT	12/1	0.028	0.045	141	175	117	0.646	20.9	*C+	93 ft

SIGNAL2000/TEAPAC[Ver 2.71.07] - HCM Input Worksheet

Intersection # 1 -

Area Location Type: NONCBD



	RT	SB TH	LT	RT	WB TH	LT	RT	NB TH	LT	RT	EB TH	LT
Heavy veh, %HV	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Pk-hr fact, PHF	.86	.86	.86	.92	.92	.92	.85	.85	.85	.89	.89	.89
Pretimed or Act	A	A	A	A	A	A	A	A	A	A	A	A
Startup 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	

Sq 13 LD/LD	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Phase 6
North						
C= 90"	G= 11.2" Y+R= 4.0"	G= 8.7" Y+R= 4.0"	G= 58.1" Y+R= 4.0"	G= 0.0" Y+R= 0.0"	G= 0.0" Y+R= 0.0"	G= 0.0" Y+R= 0.0"

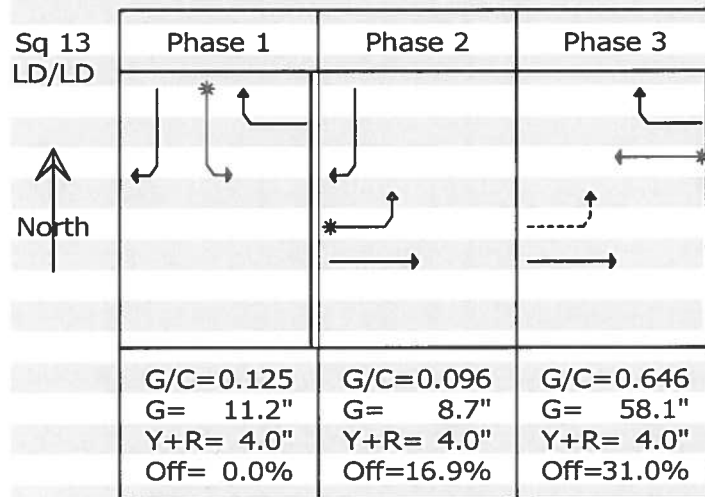
SIGNAL2000/TEAPAC[Ver 2.71.07] - Capacity Analysis Summary

Intersection Averages for Int # 1 -

V/C 0.661 (Critical V/C 0.850)

Control Delay 14.0

Level of Service B+



C = 90 sec G = 78.0 sec = 86.7% Y = 12.0 sec = 13.3% Ped = 0.0 sec = 0.0%

Lane Group	Width/ Lanes	g/C Reqd Used	Service Rate @C (vph) @E	Adj Volume	v/c	HCM Delay	L S	Queue Model 1
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SB Approach

37.1 D+

RT	12/1	0.176	0.265	285	408	136	0.333	27.1	C+	132 ft
LT	24/2	0.166	0.125	40	411	281	0.675	42.0	*D+	178 ft

WB Approach

12.9 B+

RT	12/1	0.504	0.815	1254	1254	704	0.561	3.4	A	303 ft
TH	24/2	0.567	0.646	2226	2226	1917	0.861	16.4	*B	940 ft

EB Approach

8.5 A

TH	24/2	0.340	0.787	2710	2710	1018	0.376	3.0	A	202 ft
LT	12/1	0.102	0.096	180	240	187	0.763	38.4	*D+	150 ft

Vista del Norte Commercial Development (May, 2007 Plan)
(Osuna Rd. / Vista del Norte Dr. - NE Corner)
TRAFFIC IMPACT STUDY

STUDY PURPOSE

The study is being conducted in conjunction with a request for approval of a commercial development plan for the property located at the northeast corner of Osuna Rd. / Vista del Norte Dr. 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. This study considers two scenarios of the proposed plan. The first scenario considers that an approximately 3.8 acre park facility will be constructed on the northwest corner of the site (see Appendix Page A-2). The second scenario considers that the site will be developed into commercial uses and that there will be no park.

STUDY PROCEDURES

A scoping meeting was held on Friday, February 22, 2006 with City of Albuquerque staff (Tony Loyd and Steele Nowak) prior to beginning the original Vista del Norte Commercial Development study to discuss scope and methodology to be utilized within that report. This supplement considering the May, 2007 plan will use the same methodology.

The basic procedure followed is described as follows:

- 1) Calculate the generated trips for the proposed commercial development consisting of a proposed 156,000 S.F. free-standing discount superstore and additional retail commercial floor space. The 4.05 acre tract at the southwest corner of the site is proposed to be a retail commercial center containing approximately 34,180 S.F. of floor area. The 3.80 acre parcel at the northwest corner of the project is proposed to be either a 3.80 acre park or a retail commercial center containing approximately 34,180 S.F. of floor area. (See Page A-2 in Appendix).
- 2) Calculate trip distribution for the newly generated trips by both scenarios of this development. The commercial trips shall be distributed based on 2009 DASZ population data within a market draw area defined by the relative locations of other similar uses. To determine the market area, the nearest adjacent discount stores were plotted on a map and the market area determined by drawing a line midpoint between this project and the nearest discount store location. The actual market draw area map (and trip distribution map) is found on Page A-13 in the Appendix of this report. (See Pages A-13 thru A-16 in Appendix).
- 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-17 thru A-22 in Appendix).

- 4) Obtain AM Peak Hour and PM Peak Hour turning movement traffic counts at the intersection Osuna Rd. / 2nd St., Osuna Rd. / Edith Blvd., Osuna Rd. / Chappell Rd., Osuna Rd. / Academy Parkway Dr., Osuna Rd. / Jefferson St., Osuna Rd. / Vista del Norte Dr., El Pueblo Rd. / Las Lomitas Dr., and Vista del Norte Dr. / Las Lomitas Dr. (See Pages A-162 thru A-179 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-23 thru A-34 in Appendix).
- 6) Determine 2009 NO BUILD intersection volumes by growing the data from the existing traffic counts at the calculated historic growth rate to the analysis year (2009), then add in traffic volumes generated by nearby recently approved undeveloped projects. (See Pages A-35 thru A-59 in Appendix).
- 7) Add in data from Trip Assignments Maps and Tables to the 2009 NO BUILD Volumes to obtain 2009 BUILD Volumes for this project. The 2009 BUILD Volumes will be calculated for both the 2007 Plan with Park and the 2007 Plan with NO Park (See Pages A-35 thru A-84 in Appendix).
- 8) Provide signalized and unsignalized intersection analyses for the following intersections:

INTERSECTION	TYPE CONTROL	NO BUILD	BUILD
Osuna Rd. / Edith Blvd.	Traffic Signal	2009	2009
Osuna Rd. / Chappell Dr.	Traffic Signal	2009	2009
Osuna Rd. / Academy Parkway Dr.	Traffic Signal	2009	2009
Osuna Rd. / Jefferson St.	Traffic Signal	2009	2009
Osuna Rd. / Vista del Norte Dr.	Traffic Signal	2009	2009
El Pueblo Rd. / Las Lomitas Dr.	Stop Sign	2009	2009
Vista del Norte Dr. / Las Lomitas Dr.	Stop Sign	2009	2009
Osuna Rd. / Driveway "A"	Stop Sign	N/A	2009
Driveway "B" / Vista del Norte Dr.	Stop Sign	2009	2009
Osuna Rd. / Driveway "C"	Stop Sign	N/A	2009

- 9) Provide signalized and unsignalized intersection analyses for the BUILD Condition of the intersections listed above considering both scenarios of the development plan. (See Pages A-85 thru A-161 in Appendix).

PREVIOUS RELATED TRAFFIC IMPACT STUDIES

There were no previous related Traffic Impact Study to consider in this study. The Vista del Norte Subdivision is approximately 100% implemented. Traffic generated by the proposed Las Lomitas Industrial Park at the north end of Vista del Norte Subdivision was calculated and added into the background traffic volumes utilized in this study. There was no Traffic Impact Study that was performed solely for the Las Lomitas Industrial Park.

There is a minor development project (Agave Subdivision) consisting of the development of 31 residential lots (single family detached homes) that have been approved by the City of Albuquerque and recently constructed. The access to the Agave Subdivision is shared with the main driveway into Desert Springs Church on Vista del Norte Dr. The proposed Driveway "B" for the Vista del Norte Commercial Development will align with the Desert Springs Church / Agave Subdivision driveway. Trips from the Agave Subdivision were calculated and added into the background traffic volumes in this study also.

GENERAL AREA CHARACTERISTICS

Surrounding land uses consist of residential and apartments to the north. This project is located within a relatively active development area. To the south across Osuna is industrial development.

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 two lane and four-lane paved roadway.

Jefferson St. is classified as a Minor Arterial roadway on the Long Range Roadway Plan for the Albuquerque Metropolitan Area. It is an urban four lane paved roadway from I-25 north to Alameda Blvd. with raised medians and curbs and gutters on both sides of the street.

Chappell Dr., Academy Parkway, Vista del Norte Dr., Las Lomitas Dr. are not classified on the Long Range Roadway Plan for the Albuquerque Urban Area.

El Pueblo Rd. serves as a south frontage road to Paseo del Norte from Rio Grande Blvd. to Jefferson St. It is primarily a two lane paved rural type of roadway.

Vista del Norte Dr. is not classified on the Long Range Roadway System Map for the Albuquerque Metropolitan Planning Area. It is a four-lane divided urban roadway from Osuna Rd. north to Vista Monte Dr. (about 2,200 feet of four lane roadway) after which Vista del Norte Dr. becomes a two-lane urban roadway. The capacity of the four lane section of Vista del Norte Dr. from Osuna Rd. to Vista Monte Dr. is approximately 30,000 vehicles per day.

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 Vista del Norte east to I-25. The project is targeted for construction in 2011. 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 2008 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 2009 NO 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.

Existing AM and PM peak hour turning movement counts for the year 2004 to 2006 were provided by the City of Albuquerque for the following intersections:

Osuna Rd. / Edith Blvd. (2005)
Osuna Rd. / Chappell Dr. (2004)
Osuna Rd. / Jefferson St.. (2004)

The existing traffic counts are included Appendix Pages A-162 thru A-172.

Traffic volumes for the intersections of Osuna Rd. / Academy Parkway Dr., Osuna Rd. / Vista del Norte Dr., Vista del Norte / Las Lomas, and El Pueblo / Las Lomas were recently counted by the consulting engineer performing this study.

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 two years from now. The implementation year NO BUILD analysis should approximate the existing levels-of-service.

PROPOSED DEVELOPMENT

The development plan is a proposed 21.2 acre Commercial use consisting approximately of a 156,000 S.F. Free-Standing Discount Superstore (including garden area and mezzanine), approximately 34,180 S. F. of retail commercial floor space at the southwest corner of the site, and either a 3.8 acre park (scenario 1 – with park) or approximately 34,180 S.F. of retail commercial floor space (scenario 2 – NO Park) at the northwest corner of the project. 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 two full access driveways onto Osuna Rd. east of Vista del Norte and one full access driveway onto Vista del Norte Dr. The proposed driveways onto Osuna Rd. are designated as Driveway "A" and Driveway "C" in this study. They are located approximately 425 feet to the east of Vista del Norte Dr. (centerline to centerline) and 810 feet to the east of Vista del Norte Dr. (centerline to centerline) respectively.

Driveway "B" on Vista del Norte Dr. is located approximately 620 feet to the north of Osuna Rd. (centerline to centerline). It is a proposed full access unsignalized driveway which aligns with the existing driveway to Desert Springs Church.

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 the zone change request for this property.

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

Park Plan:

Vista del Norte Commercial Development (2007 Plan) **With Park** **Trip Generation Data**

USE (ITE CODE)	24 HR VOL	A. M. PEAK HR.		P. M. PEAK HR.		
		GROSS	ENTER	EXIT	ENTER	EXIT
DESCRIPTION						
Summary Sheet		Units				
Free-Standing Discount Superstore (813)	156.00	7,586	146	141	295	307
Shopping Center (820)	34.18	3,380	50	32	148	161
City Park (411)	4.00	6	-	-	-	-
Subtotal		10,972	196	173	443	468
Pass-by Trips		30%			(133)	(140)
Net New Trips to System		10,972	196	173	310	328

NO Park Plan:

Vista del Norte Commercial Development (2007 Plan)

Without Park Trip Generation Data

USE (ITE CODE)	DESCRIPTION	24 HR VOL	A. M. PEAK HR.		P. M. PEAK HR.		
		GROSS	ENTER	EXIT	ENTER	EXIT	
Summary Sheet		Units					
	Free-Standing Discount Superstore (813)	156.00	7,586	146	141	295	307
	Shopping Center (820)	68.36	5,303	76	49	234	254
	Subtotal		12,889	222	190	529	561
	Pass-by Trips	30%				(159)	(168)
	Net New Trips to System		12,889	222	190	370	393

(See Pages A-6 thru A-12 in the Appendix of this report for Trip Generation Worksheets and Summary Table.)

TRIP DISTRIBUTION

Primary and Diverted Linked Trips:

Trips were distributed as follows:

Commercial Land Use

Primary and diverted linked trips for the commercial land use development were distributed proportionally to the 2009 projected population of Data Analysis Subzones within an irregular boundary around the proposed development based on locations of existing similar types of facilities. Population data for the years 2000 and 2025 were taken from the 2025 Socioeconomic Forecasts by Data Analysis Subzones for the Mid-Region of New Mexico, S-03-01 (2000), Appendix B and Appendix C, supplied by the Mid-Region Council of Governments (MRCOG). Population data from the years 2000 and 2025 was interpolated linearly to obtain 2008 population data to utilize for this analysis. Population Subzones were grouped based on the most likely major street(s) or route(s) to the subject development. The trip distribution worksheets and associated map of data analysis subzones is shown in the Appendix on Pages A-13 thru A-16.

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-17 thru A-22. A 30% Pass-by trip reduction was applied to this development for the PM Peak Hour volumes.

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 3% growth rate was utilized. In this area of Albuquerque, the generic growth rate utilized was usually 5% 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-23 thru A-34. 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-35 thru A-84).

PROJECTED PEAK HOUR TURNING MOVEMENTS FOR 2009 BUILDOUT

The calculated annual growth rates were applied to the existing (2004, 2005, or 2006) peak hour traffic counts furnished by the City of Albuquerque or counted by the consultant to establish the 2009 background traffic volumes. Calculated trips generated by the new Las Lomas Industrial Park were added to obtain the NO BUILD Volumes utilized in this report. To these volumes, the generated trips based on implementation of the proposed assumed land uses were added to obtain the 2009 BUILD volumes for the intersection analyses. See Appendix Pages A-35 thru A-84 for further information regarding turning movement counts for this project. 2009 NO BUILD Volumes Map, Trips Generated Map, and 2009 BUILD Volumes Map for this project are on Pages A-84a thru A-84e in the Appendix.

Three scenarios are evaluated in this study:

- 2009 NO BUILD Volumes
- 2009 BUILD Volumes (Plan w/Park)
- 2009 BUILD Volumes (Plan with NO Park)

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 2009 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.

- ⇒ 2009 without development of the subject property (NO BUILD)
- ⇒ 2009 with development as per the assumed land uses considering total implementation of the plan with the Park in the northwest corner of the property.
- ⇒ 2009 with development as per the assumed land uses considering total implementation of the plan with NO Park.

The results of the 2009 NO BUILD and the 2009 BUILD capacity analyses are summarized in the following sections - *Results and Discussion of Intersection Capacity Analyses*.

RESULTS OF SIGNALIZED INTERSECTION CAPACITY ANALYSES

IMPLEMENTATION YEAR (2009)

Intersection #1 - Osuna Rd. / 2nd St.

The results of the 2009 implementation year analysis of the signalized intersection of Osuna Rd. / 2nd St. are summarized in the following table:

Osuna Rd. / 2 nd St.	2009 No Build		2009 BUILD / Park	
	A.M.	P.M.	A.M.	P.M.
Existing Geometry	C - 30.0	D - 41.4	C - 34.0	E - 65.7
Exist. Geometry – Add Northbound Thru Lane				C - 33.5

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

Analysis of BUILD Condition for Vista del Norte Commercial Center Plan with NO Park:

Osuna Rd. / 2 nd St.	2009 BUILD – NO Park	
	A.M.	P.M.
Existing Geometry	C - 34.6	E - 68.5
Exist. Geometry – Add Northbound Thru Lane		D - 35.1

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 2 nd St.	1	0	2	1	0
SB 2 nd St.	1	0	2	0	1

The intersection of Osuna Rd. / 2nd St. is near capacity for the 2009 PM Peak Hour BUILD analysis. The volumes added from the Vista del Norte Commercial Development impact the intersection, especially during the PM Peak Hour. 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.

The trips generated by the proposed Vista del Norte commercial development comprises only about 7% or less of the overall 2009 projected BUILD traffic volumes at the intersection of Osuna Rd. / 2nd St.

Queueing Analysis Summary Sheet

Project:

Vista del Norte Commercial Development (Osuna Rd. / Vista del Norte)

Intersection:

Osuna Rd. / 2nd St.

2009

Approach	Left Turns			Thru Movements			Right Turns		
Eastbound	# Lanes	Vol.	Length	# Lanes	Vol.	Length	# Lanes	Vol.	Length
Existing Lane Length	1	66	120	2	383	Cont	1	57	125
AM NO BUILD Queue	1	72	125	2	417	300	1	62	125
AM BUILD Queue	1	72	125	2	456	325	1	62	125
Existing Lane Length	1	89	120	2	176	Cont	1	70	125
PM NO BUILD Queue	1	97	175	2	192	175	1	76	150
PM BUILD Queue	1	97	175	2	258	225	1	76	150
Westbound	# Lanes	Vol.	Length	# Lanes	Vol.	Length	# Lanes	Vol.	Length
Existing Lane Length	1	105	225	1	188	Cont	1	188	999
AM NO BUILD Queue	1	114	175	1	205	275	1	205	275
AM BUILD Queue	1	131	200	1	239	325	1	229	300
Existing Lane Length	1	256	225	1	463	Cont	1	618	999
PM NO BUILD Queue	1	279	400	1	505	650	1	674	825
PM BUILD Queue	1	315	425	1	575	725	1	723	875
Northbound	# Lanes	Vol.	Length	# Lanes	Vol.	Length	# Lanes	Vol.	Length
Existing Lane Length	1	38	400	2	553	Cont	0	240	0
AM NO BUILD Queue	1	40	75	2	586	400	0	254	350
AM BUILD Queue	1	40	75	2	586	400	0	274	350
Existing Lane Length	1	68	400	2	884	Cont	0	160	0
PM NO BUILD Queue	1	72	125	2	937	650	0	170	250
PM BUILD Queue	1	72	125	2	937	650	0	204	300
Southbound	# Lanes	Vol.	Length	# Lanes	Vol.	Length	# Lanes	Vol.	Length
Existing Lane Length	1	387	225	2	1,145	Cont	1	35	350
AM NO BUILD Queue	1	410	500	2	1,214	750	1	37	75
AM BUILD Queue	1	438	525	2	1,214	750	1	37	75
Existing Lane Length	1	285	225	2	776	Cont	1	77	350
PM NO BUILD Queue	1	302	425	2	823	575	1	82	150
PM BUILD Queue	1	348	475	2	823	575	1	82	150

Cycle Length: AM 120 PM 130

NOTE: Queue lengths are in feet.

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

Intersection #2 - Osuna Rd. / Edith Blvd.

The results of the 2009 implementation year analysis of the signalized intersection of Osuna Rd. / Edith Blvd. are summarized in the following table:

Osuna Rd. / Edith Blvd.	2009 No Build		2009 BUILD w/Park	
	A.M.	P.M.	A.M.	P.M.
Existing Geometry	<i>D - 43.0</i>	D - 36.0	<i>D - 48.9</i>	D - 44.3
Exist. Geom. - ADD EB Thru Lane			C - 29.7	

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

Analysis of BUILD Condition for Vista del Norte Commercial Center Plan with NO Park:

Osuna Rd. / Edith Blvd.	2009 BUILD – NO Park	
	A.M.	P.M.
Existing Geometry	<i>D - 50.1</i>	<i>D - 48.2</i>
Exist. Geom. - ADD EB Thru Lane	C - 30.2	D - 40.2

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 near capacity for the 2009 AM Peak Hour NO BUILD and BUILD analyses. The volumes added from the Vista del Norte Commercial Development impact the intersection, especially during the AM Peak Hour. Mitigation of the impact consists of construction of a third eastbound 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.

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 2009 AM Peak Hour conditions analyzed in this study. The intersection will be at capacity for the 2009 AM Peak Hour BUILD Condition if the City does not address this issue with the Osuna project.

The trips generated by the proposed Vista del Norte commercial development comprises only about 10% or less of the overall 2009 projected BUILD traffic volumes at the intersection of Osuna Rd. / Edith Blvd.

Queueing Analysis Summary Sheet

Project:
Intersection:

Vista del Norte Commercial Development (Osuna Rd. / Vista del Norte)
Osuna Rd. / Edith Blvd.

2009

Approach	Left Turns			Thru Movements			Right Turns		
Eastbound	# Lanes	Vol.	Length	# Lanes	Vol.	Length	# Lanes	Vol.	Length
Existing Lane Length	1	27	200	2	819	Cont	0	225	0
AM NO BUILD Queue	1	30	75	2	917	600	0	252	325
AM BUILD Queue	1	30	75	2	1,004	650	0	252	325
Existing Lane Length	1	45	200	2	431	Cont	0	116	0
PM NO BUILD Queue	1	50	100	2	483	375	0	130	200
PM BUILD Queue	1	50	100	2	629	475	0	130	200
Westbound	# Lanes	Vol.	Length	# Lanes	Vol.	Length	# Lanes	Vol.	Length
Existing Lane Length	1	152	330	2	361	Cont	0	64	0
AM NO BUILD Queue	1	158	225	2	375	275	0	67	125
AM BUILD Queue	1	172	250	2	450	325	0	73	125
Existing Lane Length	1	155	330	2	971	Cont	0	152	0
PM NO BUILD Queue	1	161	250	2	1,010	700	0	158	250
PM BUILD Queue	1	189	275	2	1,165	775	0	171	275
Northbound	# Lanes	Vol.	Length	# Lanes	Vol.	Length	# Lanes	Vol.	Length
Existing Lane Length	1	144	200	1	214	Cont	1	142	999
AM NO BUILD Queue	1	156	225	1	231	325	1	153	225
AM BUILD Queue	1	156	225	1	231	325	1	169	250
Existing Lane Length	1	278	200	1	437	Cont	1	150	999
PM NO BUILD Queue	1	300	425	1	472	600	1	162	250
PM BUILD Queue	1	300	425	1	472	600	1	189	275
Southbound	# Lanes	Vol.	Length	# Lanes	Vol.	Length	# Lanes	Vol.	Length
Existing Lane Length	1	164	100	1	347	Cont	0	24	0
AM NO BUILD Queue	1	184	250	1	389	475	0	27	75
AM BUILD Queue	1	191	275	1	389	475	0	27	75
Existing Lane Length	1	101	100	1	272	Cont	0	52	0
PM NO BUILD Queue	1	113	200	1	305	425	0	58	125
PM BUILD Queue	1	125	200	1	305	425	0	58	125

Cycle Length: AM PM
 120 130

NOTE: Queue lengths are in feet.

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

It is usually acceptable to divide the calculated right turn queue length by 2 to account for right turns on red, and right turn overlaps.

Intersection #3 - Osuna Rd. / Chappell Dr.

The results of the 2009 implementation year analysis of the signalized intersection of Osuna Rd. / Chappell Dr. are summarized in the following table:

Osuna Rd. / Chappell Dr.	2009 No Build		2009 BUILD w/Park	
	A.M.	P.M.	A.M.	P.M.
Existing Geometry	<i>D - 46.0</i>	D - 40.8	<i>D - 51.2</i>	<i>D - 50.7</i>

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

Analysis of BUILD Condition for Vista del Norte Commercial Center Plan with NO Park:

Osuna Rd. / Chappell Dr.	2009 BUILD – NO Park	
	A.M.	P.M.
Existing Geometry	<i>D - 51.7</i>	<i>D - 53.2</i>

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

Existing Geometry (Osuna Rd. / Chappell Dr.)

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 Chappell Dr.	0	1	0	0	1
SB Chappell Dr.	0	0	1+	0	0

1+ designates a single lane approach that serves all turning movements.

The intersection of Osuna Rd. / Chappell Dr. is close to capacity for the 2009 AM Peak Hour NO BUILD analysis. Consequently, some of the turning movements operate at LOS "E". The volumes added from the Vista del Norte Commercial Development impact the intersection, especially during the PM Peak Hour. Since the overall operation of the intersection did not exceed LOS "D" and there was no individual movement that exceeded LOS "E", then no recommendation was made to mitigate the impact of the development on this intersection.

The widening of Osuna Rd. to three eastbound and three westbound thru lanes will provide more capacity for this intersection. The Osuna Rd. widening project is targeted to occur in 2009 or 2010. Also, this study recommends that the City consider widening the northbound and southbound approaches on Chappell Dr. to accommodate exclusive left turn lanes and a thru / right turn lane for both legs. The northbound left turn volume for the projected 2009 implementation year analyzed in this study is above 250 vehicles per hour. That volume should warrant consideration of an exclusive left turn lane to prevent split phasing of the signal in the future. The implementation of a southbound left turn lane on the north leg of the intersection will probably require additional right of way.

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

Queueing Analysis Summary Sheet

Project:
Intersection:

Vista del Norte Commercial Development (Osuna Rd. / Vista del Norte)
Osuna Rd. / Chappel Dr.

2009

Approach	Left Turns			Thru Movements			Right Turns		
Eastbound	# Lanes	Vol.	Length	# Lanes	Vol.	Length	# Lanes	Vol.	Length
Existing Lane Length	1	23	125	2	1,342	Cont	0	251	0
AM NO BUILD Queue	1	30	75	2	1,745	>1,000	0	326	425
AM BUILD Queue	1	30	75	2	1,827	>1,000	0	326	425
Existing Lane Length	1	3	125	2	810	Cont	0	61	0
PM NO BUILD Queue	1	4	25	2	1,053	725	0	79	150
PM BUILD Queue	1	4	25	2	1,223	825	0	80	150
Westbound	# Lanes	Vol.	Length	# Lanes	Vol.	Length	# Lanes	Vol.	Length
Existing Lane Length	1	105	180	2	813	Cont	0	38	0
AM NO BUILD Queue	1	137	200	2	1,057	675	0	49	100
AM BUILD Queue	1	137	200	2	1,153	725	0	49	100
Existing Lane Length	1	94	180	2	1,430	Cont	0	5	0
PM NO BUILD Queue	1	122	200	2	1,859	>1,000	0	7	25
PM BUILD Queue	1	122	200	2	2,019	>1,000	0	7	25
Northbound	# Lanes	Vol.	Length	# Lanes	Vol.	Length	# Lanes	Vol.	Length
Existing Lane Length	0	64	0	1	5	Cont	1	88	50
AM NO BUILD Queue	0	80	150	1	6	25	1	110	175
AM BUILD Queue	0	80	150	1	6	25	1	110	175
Existing Lane Length	0	209	0	1	2	Cont	1	151	50
PM NO BUILD Queue	0	261	375	1	3	25	1	189	275
PM BUILD Queue	0	262	375	1	3	25	1	189	275
Southbound	# Lanes	Vol.	Length	# Lanes	Vol.	Length	# Lanes	Vol.	Length
Existing Lane Length	0	5	0	1	1	Cont	0	4	0
AM NO BUILD Queue	0	6	25	1	1	0	0	5	25
AM BUILD Queue	0	6	25	1	1	0	0	5	25
Existing Lane Length	0	48	0	1	20	Cont	0	24	0
PM NO BUILD Queue	0	60	125	1	25	75	0	30	75
PM BUILD Queue	0	60	125	1	25	75	0	30	75

Cycle Length: AM PM
 120 130

NOTE: Queue lengths are in feet.

It is usually acceptable to divide the calculated right turn queue length by 2 to account for right turns on red and right turn overlaps.

Intersection #4 - Osuna Rd. / Academy Parkway Dr.

The results of the 2009 implementation year analysis of the signalized intersection of Osuna Rd. / Academy Parkway Dr. are summarized in the following table:

Osuna Rd. / Academy Parkway Dr.	2009 No Build		2009 BUILD w/Park	
	A.M.	P.M.	A.M.	P.M.
Existing Geometry	A - 4.4	A - 8.1	A - 4.7	A - 9.2

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

Analysis of BUILD Condition for Vista del Norte Commercial Center Plan with NO Park:

Osuna Rd. / Academy Parkway Dr.	2009 BUILD – NO Park	
	A.M.	P.M.
Existing Geometry	A - 4.7	A - 9.4

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

Existing Geometry (Osuna Rd. / Academy Parkway Dr.)

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 Academy Parkway	0	1	0	0	1
SB Academy Parkway	0	0	1+	0	0

1+ designates a single lane approach that serves all turning movements.

The analysis of the intersection of Osuna Rd. / Academy Parkway Dr. indicates that the intersection will operate at satisfactory levels-of-service for all conditions analyzed in this study, and that the implementation of the proposed Vista del Norte Commercial Development will have minimal impact on the signalized intersection.

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

Queueing Analysis Summary Sheet

Project:

Vista del Norte Commercial Development (Osuna Rd. / Vista del Norte)

Intersection:

Osuna Rd. / Academy Parkway

2009

Approach				Left Turns			Thru Movements			Right Turns		
Eastbound				# Lanes	Vol.	Length	# Lanes	Vol.	Length	# Lanes	Vol.	Length
<i>Existing Lane Length</i>				1	54	150	2	1,303	Cont	0	4	0
AM NO BUILD Queue				1	64	125	2	1,538	>1,000	0	5	25
AM BUILD Queue				1	64	125	2	1,620	>1,000	0	5	25
<i>Existing Lane Length</i>				1	8	150	2	1,095	Cont	0	0	0
PM NO BUILD Queue				1	9	25	2	1,292	850	0	0	0
PM BUILD Queue				1	9	25	2	1,462	>1,000	0	0	0
Westbound				# Lanes	Vol.	Length	# Lanes	Vol.	Length	# Lanes	Vol.	Length
<i>Existing Lane Length</i>				1	39	125	2	845	Cont	0	89	0
AM NO BUILD Queue				1	46	100	2	997	650	0	105	175
AM BUILD Queue				1	46	100	2	1,093	700	0	105	175
<i>Existing Lane Length</i>				1	29	125	2	1,444	Cont	0	21	0
PM NO BUILD Queue				1	34	75	2	1,704	>1,000	0	25	75
PM BUILD Queue				1	34	75	2	1,864	>1,000	0	25	75
Northbound				# Lanes	Vol.	Length	# Lanes	Vol.	Length	# Lanes	Vol.	Length
<i>Existing Lane Length</i>				0	6	0	1	0	Cont	1	23	50
AM NO BUILD Queue				0	7	25	1	0	0	1	26	75
AM BUILD Queue				0	7	25	1	0	0	1	26	75
<i>Existing Lane Length</i>				0	24	0	1	0	Cont	1	56	50
PM NO BUILD Queue				0	28	75	1	0	0	1	64	125
PM BUILD Queue				0	28	75	1	0	0	1	64	125
Southbound				# Lanes	Vol.	Length	# Lanes	Vol.	Length	# Lanes	Vol.	Length
<i>Existing Lane Length</i>				0	52	0	1	0	Cont	0	17	0
AM NO BUILD Queue				0	60	125	1	0	0	0	20	50
AM BUILD Queue				0	60	125	1	0	0	0	20	50
<i>Existing Lane Length</i>				0	83	0	1	1	Cont	0	42	0
PM NO BUILD Queue				0	95	175	1	1	0	0	48	100
PM BUILD Queue				0	95	175	1	1	0	0	48	100

AM
PM
 Cycle Length: 120 130

NOTE: Queue lengths are in feet.

It is usually acceptable to divide the calculated right turn queue length by 2 to account for right turns on red and right turn overlaps.

Intersection #5 - Osuna Rd. / Jefferson St.

The results of the 2009 implementation year analysis of the signalized intersection of Osuna Rd. / Jefferson St. are summarized in the following table:

Osuna Rd. / Jefferson St.	2009 No Build		2009 BUILD w/Park	
	A.M.	P.M.	A.M.	P.M.
Existing Geometry	C - 33.5	<i>F - 91.0</i>	D - 40.2	<i>F - 106</i>
Exist. Geom. - ADD WB Thru Lane				<i>F - 101</i>
Exist. Geom. - ADD WB Thru, SB RT Lane				<i>E - 75.8</i>
Exist. Geom. - ADD EB.WB Thru, SB RT Lane				<i>D - 50.8</i>

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

Analysis of BUILD Condition for Vista del Norte Commercial Center Plan with NO Park:

Osuna Rd. / Jefferson St.	2009 BUILD - NO P ark	
	A.M.	P.M.
Existing Geometry	D - 40.8	<i>F - 109</i>
Exist. Geom. - ADD WB Thru Lane		<i>F - 91.4</i>
Exist. Geom. - ADD WB Thru, SB RT Lane		<i>E - 77.1</i>
Exist. Geom. - ADD EB.WB Thru, SB RT Lane		<i>D - 51.7</i>

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

Existing Geometry (Osuna Rd. / Jefferson St.)

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

The intersection of Osuna Rd. / Jefferson St. is operating beyond capacity during the projected PM Peak Hour NO BUILD Conditions. Mitigation of the capacity shortfall at the intersection of Osuna Rd. / Jefferson St. consists of construction of a fourth eastbound thru lane on Osuna Rd., a third westbound thru lane on Osuna Rd., and a southbound right turn lane on Jefferson St. It is questionable whether or not sufficient right-of-way exists to construct this level of improvements. The City of Albuquerque should consider a minimum geometry similar to the one proposed for mitigation if at all possible as part of the Osuna widening project to provide capacity at the intersection in the future.

The trips generated by the proposed Vista del Norte commercial development comprises only about 5.1% or less of the overall 2009 projected BUILD traffic volumes at the intersection of Osuna Rd. / Jefferson St.

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

Queueing Analysis Summary Sheet

Project:
Intersection:

Vista del Norte Commercial Development (Osuna Rd. / Vista del Norte)
Osuna Rd. / Jefferson St.

2009											
Approach			Left Turns			Thru Movements			Right Turns		
Eastbound			# Lanes	Vol.	Length	# Lanes	Vol.	Length	# Lanes	Vol.	Length
<i>Existing Lane Length</i>			2	236	190	3	1,081	Cont	0	154	0
AM NO BUILD Queue			2	307	250	3	1,405	625	0	200	275
AM BUILD Queue			2	324	250	3	1,468	650	0	202	275
<i>Existing Lane Length</i>			2	248	190	3	1,487	Cont	0	81	0
PM NO BUILD Queue			2	322	275	3	1,933	900	0	105	175
PM BUILD Queue			2	357	300	3	2,063	>1,000	0	109	175
Westbound			# Lanes	Vol.	Length	# Lanes	Vol.	Length	# Lanes	Vol.	Length
<i>Existing Lane Length</i>			3	182	190	2	921	Cont	1	262	900
AM NO BUILD Queue			3	209	175	2	1,059	675	1	301	375
AM BUILD Queue			3	209	175	2	1,133	725	1	301	375
<i>Existing Lane Length</i>			3	88	190	2	1,016	Cont	1	201	900
PM NO BUILD Queue			3	101	125	2	1,168	775	1	231	325
PM BUILD Queue			3	101	125	2	1,291	850	1	231	325
Northbound			# Lanes	Vol.	Length	# Lanes	Vol.	Length	# Lanes	Vol.	Length
<i>Existing Lane Length</i>			1	122	150	2	227	Cont	1	42	150
AM NO BUILD Queue			1	134	200	2	250	200	1	46	100
AM BUILD Queue			1	136	200	2	250	200	1	46	100
<i>Existing Lane Length</i>			1	291	150	2	557	Cont	1	264	150
PM NO BUILD Queue			1	320	425	2	613	450	1	290	400
PM BUILD Queue			1	324	450	2	613	450	1	290	400
Southbound			# Lanes	Vol.	Length	# Lanes	Vol.	Length	# Lanes	Vol.	Length
<i>Existing Lane Length</i>			1	197	175	2	374	Cont	0	160	0
AM NO BUILD Queue			1	217	300	2	411	300	0	176	250
AM BUILD Queue			1	217	300	2	411	300	0	196	275
<i>Existing Lane Length</i>			1	335	175	2	342	Cont	0	303	0
PM NO BUILD Queue			1	369	500	2	376	300	0	333	450
PM BUILD Queue			1	369	500	2	376	300	0	366	475

AM
PM
 Cycle Length: 120 130

NOTE: Queue lengths are in feet.

It is usually acceptable to divide the calculated right turn queue length by 2 to account for right turns on red and right turn overlaps.

RESULTS OF UNSIGNALIZED INTERSECTION CAPACITY ANALYSES

IMPLEMENTATION YEAR (2009)

Intersection #7 - Vista del Norte Dr. / Las Lomitas Dr

The results of the analysis of the unsignalized intersection of Vista del Norte Dr. / Las Lomitas Dr. are summarized in the following table:

	2009 NO BUILD		2009 BUILD w/Park	
	AM	AM	AM	PM
VdN / Las Lomitas Dr.				
Minor Street (Las Lomitas)				
SB Left	B - 12	B - 12	B - 12	B - 12
SB Right	B - 12	B - 12	B - 12	B - 12
Major Street (Vista del Norte Dr.)				
EB Left	A - 8	A - 8	A - 8	A - 8

The analysis of the NO Park plan for this intersection showed no significant difference in levels-of-service / delays. (See Pages A-153a and A-153b).

This analysis indicates that the intersection of Vista del Norte Dr. / Las Lomitas Dr. will operate at satisfactory levels-of-service for all conditions analyzed in this study.

Intersection #8 - El Pueblo Rd. / Las Lomitas Dr

The results of the analysis of the unsignalized intersection of El Pueblo Rd. / Las Lomitas Dr. are summarized in the following table:

	2009 NO BUILD		2009 BUILD w/Park	
	AM	PM	AM	PM
El Pueblo Rd. / Las Lomitas Dr.				
Minor Street (Las Lomitas)				
NB Left	F - 51	D - 31	F - 51	D - 31
NB Right	C - 16	A - 10	C - 16	A - 10
Major Street (El Pueblo Rd.)				
WB Left	B - 11	A - 8	B - 11	A - 8

The analysis of the NO Park plan for this intersection showed no significant difference in levels-of-service / delays. (See Pages A-154 and A-155).

This analysis indicates that the intersection of El Pueblo Rd. / Las Lomitas Dr. will operate at satisfactory levels-of-service for the PM Peak Hour period and less-than acceptable levels-of-service for the AM Peak Hour period analyzed in this study. This study demonstrates that the capacity issue at El Pueblo Rd. / Las Lomitas Dr. is caused by the background traffic and is not impacted by the implementation of the Vista del Norte Commercial development.

Intersection #9 - Osuna Rd. / Driveway "A"

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

	2009 BUILD w/Park	
	AM	PM
Osuna Rd. / Driveway "A"		
Minor Street (Driveway "A")		
SB Left	E - 44	F - *
SB Right	B - 12	F - 63
Major Street (Osuna Rd.)		
EB Left	B - 11	E - 47

The analysis of Driveway "A" under the NO Park Plan scenario yields the following results:

	NO Park Plan	2009 BUILD - NO Park
	AM	PM
Osuna Rd. / Driveway "A"		
Minor Street (Driveway "A")		
SB Left	E - 47	F - *
SB Right	B - 12	F - 89
Major Street (Osuna Rd.)		
EB Left	B - 11	F - 60

The fact that there are existing traffic signals to the east and to the west of Driveway "A" on Osuna Rd. will help the driveway function better than what is shown in the above tables. The existing traffic signals to either side of the driveway will create gaps in eastbound and westbound traffic on Osuna Rd., thus allowing traffic to turn onto Osuna in a reasonable manner.

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

<u>Average Delay</u> <u>(secs)</u>	<u>Level-of-Service</u>
≤ 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 Data Analysis Subzones within an irregular boundary around the site based on relative locations of the nearest similar types of commercial uses; Growth rate of background traffic volumes was established from historical data from 2000 through 2004; 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 capacity shortfalls noted, especially at the intersections of Osuna Rd. / 2nd St., Osuna Rd. / Edith Blvd. and Osuna Rd. / Jefferson St. that should be resolved when the City constructs the Osuna Rd. widening project in 2009 or 2010 to implement a third eastbound and a third westbound thru lane on Osuna Rd. from Edith Blvd. to Jefferson St.

Analysis of a two scenarios of the proposed 2007 plan were conducted for this site. Both plans yield similar offsite volumes and result in the same recommended mitigation measures.

In summary, the proposed 2007 development plan for the Vista del Norte Commercial Development facility at the northeast corner of Osuna Rd. / Vista del Norte will present no significant adverse impact to the adjacent transportation system provided that the following recommendations are followed:

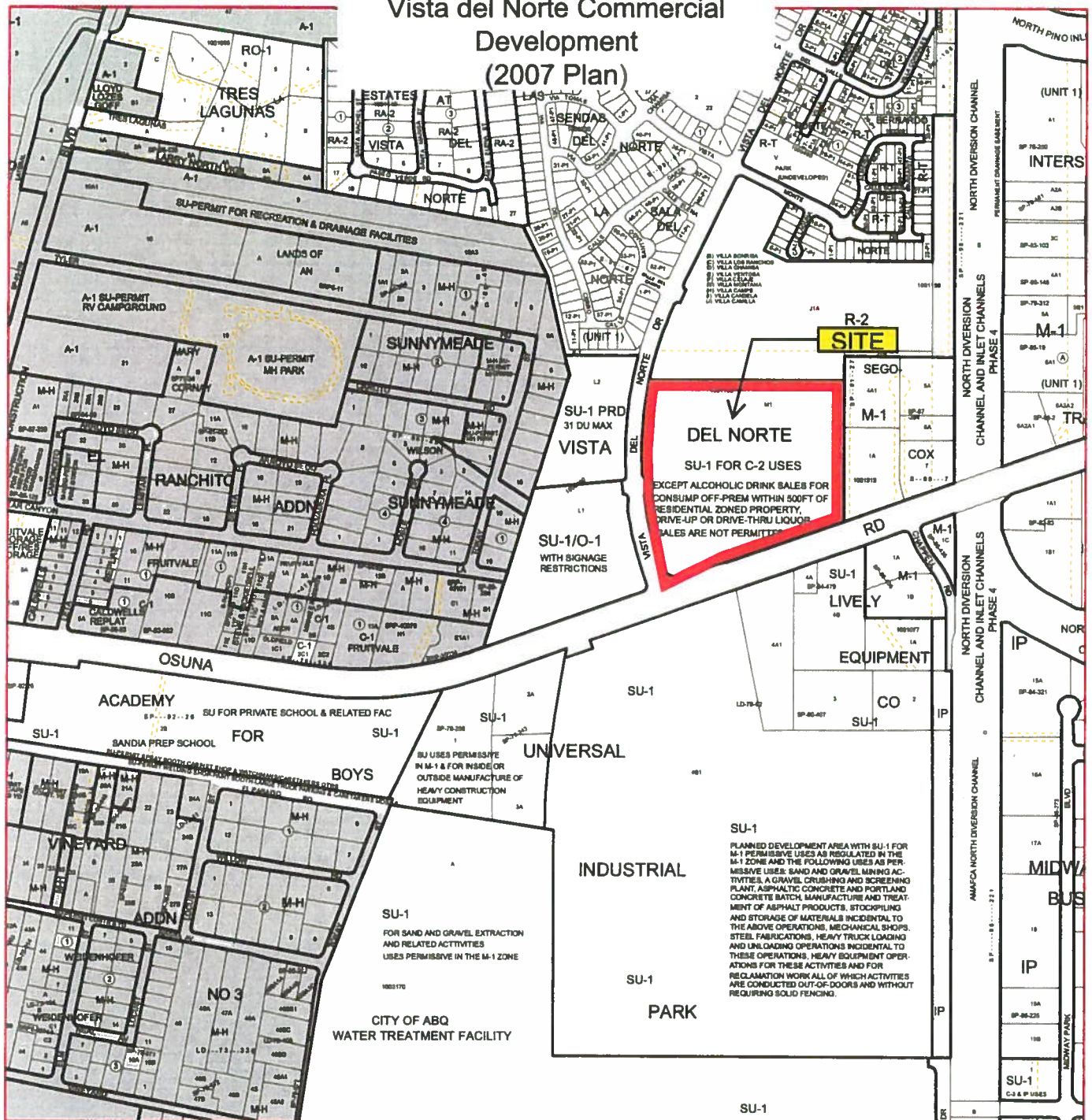
RECOMMENDATIONS

FROM IMPLEMENTATION YEAR (2009) ANALYSIS

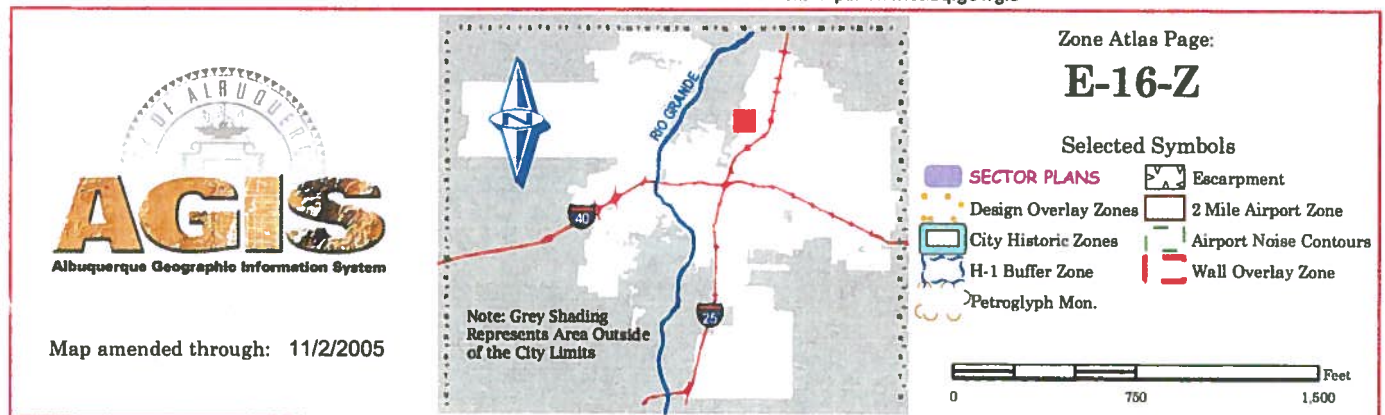
- Design and construction of the proposed development should insure that adequate sight distances are maintained to the extent possible at all proposed driveways and intersections, and at existing intersections contingent to this site.
- **Osuna Rd. / 2nd St.** – Construct a new northbound thru lane on 2nd St. through Osuna Rd. (See discussion on Page 9). The trips generated by the proposed Vista del Norte commercial development comprises only about 7% or less of the overall 2009 projected BUILD traffic volumes at the intersection of Osuna Rd. / 2nd St.
- **Osuna Rd. / Edith Blvd.** – Construct a new eastbound thru lane on Osuna Rd. at Edith Blvd. (See discussion on Page 11). The trips generated by the proposed Vista del Norte commercial development comprises only about 10% or less of the overall 2009 projected BUILD traffic volumes at the intersection of Osuna Rd. / Edith Blvd.
- **Osuna Rd. / Jefferson St.** – Construct a fourth eastbound thru lane on Osuna Rd., a third westbound thru lane on Osuna Rd., and a southbound right turn lane on Jefferson St. (See discussion on Page 17). The trips generated by the proposed Vista del Norte commercial development comprises only about 5.1% or less of the overall 2009 projected BUILD traffic volumes at the intersection of Osuna Rd. / Edith Blvd.
- **Driveway “A”** – Driveway “A” is recommended to be a full access unsignalized driveway on Osuna Rd. located approximately 425 feet east of Vista del Norte Dr. (centerline to centerline).
 - The existing eastbound left turn lane into Driveway “A” is 150 feet long. This study recommends that the eastbound left turn lane length be increased to 250 feet plus transition.
 - A westbound right turn lane is warranted at Driveway “A” on Osuna Rd. The length of the westbound right turn lane should be 150 feet plus a 150'-300' reverse curve radius transition.
 - Driveway “A” should be constructed with two exiting lanes (one for left turn and one for right turns) and one entering lane.
- **Driveway “B”** – Driveway “B” is recommended to be a full access unsignalized driveway on Vista del Norte Dr. located approximately 620 feet north of Osuna Rd. (centerline to centerline).
 - Driveway “B” should be aligned with the existing driveway to Desert Springs Church on the west side of Vista del Norte Dr.
 - A southbound left turn lane is recommended on Osuna Rd. at Driveway “B”. The existing southbound left turn lane on Vista del Norte Dr. is sufficiently long to serve Driveway “B”.
 - Driveway “B” should be constructed with two exiting lanes (one for left turns and one for thru / right turns) and one entering lane.
- **Driveway “C”** – This study recommends that Driveway “C” be permitted as a full access driveway on Osuna Rd. at the east end of the project to align with the existing median cut in Osuna Rd. approximately 950 feet east of Vista del Norte (centerline to centerline).
 - An eastbound left turn lane is warranted at Driveway “C”. The eastbound left turn lane should be constructed to a minimum length of 200 feet plus transition.

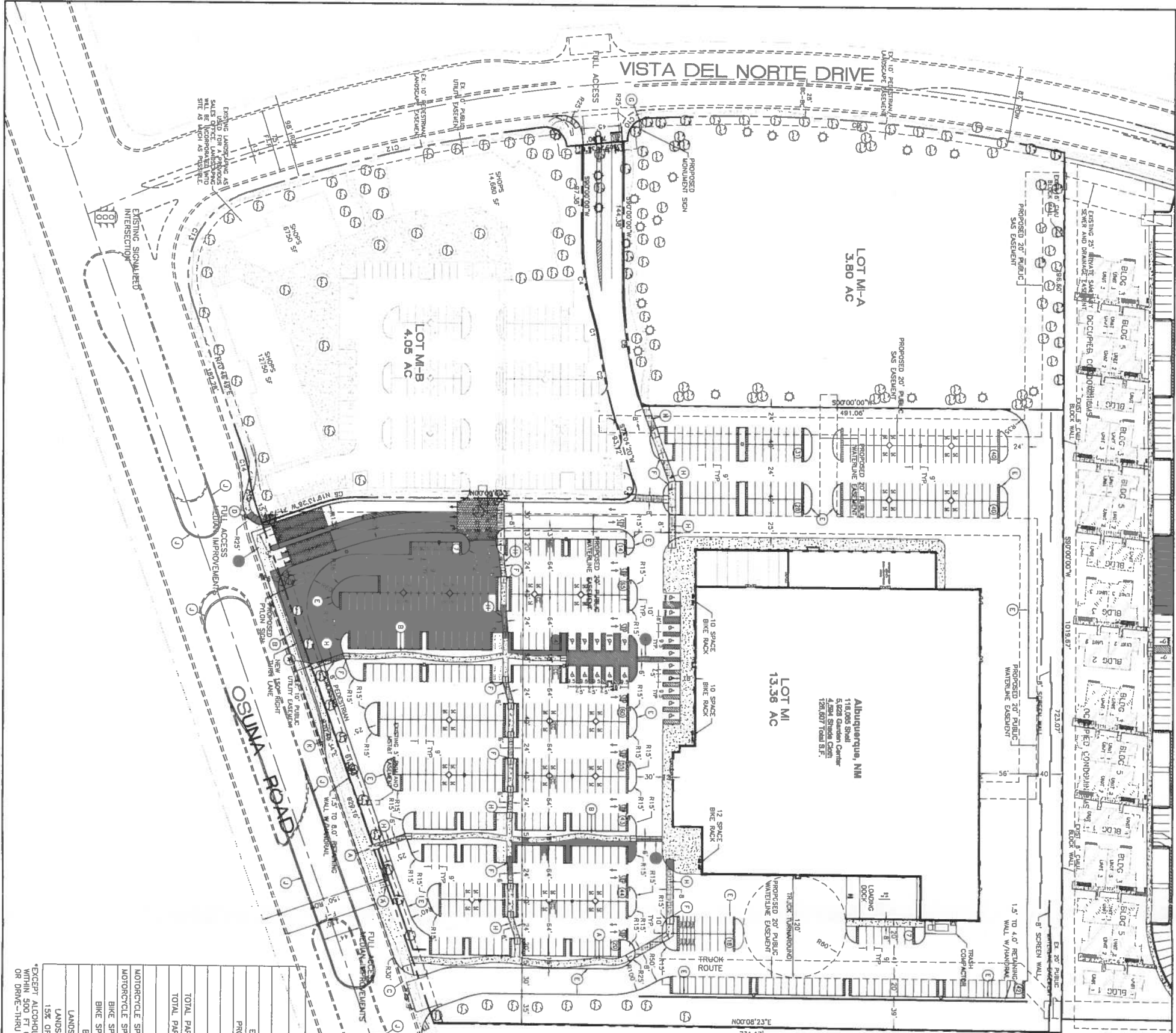
APPENDIX

Vista del Norte Commercial Development (2007 Plan)



For more current information and more details visit: <http://www.cabq.gov/gis>





- NOTES:**
1. COMMON STORM DRAINAGE, PEDESTRIAN, AND VEHICULAR ACCESS ACROSS NEW TRACTS IS GRANTED BY THIS SITE PLAN AND WILL BE GRANTED ON THE RE-PLAN.
 2. APPROVAL OF THIS PLAN DOES NOT CONSTITUTE OR IMPLY EXEMPTION FROM WATER WASTE PROVISIONS OF THE WATER CONSERVATION LANDSCAPING AND WATER WASTE ORNAMENTAL WATER WASTE MANAGEMENT IS THE SOLE RESPONSIBILITY OF THE PROPERTY OWNER.
 3. LANDSCAPE MAINTENANCE SHALL BE THE RESPONSIBILITY OF THE OWNER.
 4. ROOF EQUIPMENT SHALL BE BELOW PARAPET HEIGHT AND SCREENED FROM VIEW FROM THE PROPERTY LINES OF THIS SITE. ALL GROUND MOUNTED EQUIPMENT SHALL BE SCREENED BY SCREEN WALLS WITH TOP OF EQUIPMENT BELOW TOP OF SCREEN WALL.
 5. LIGHT FIXTURES SHALL BE A MAXIMUM OF 30' HIGH WITH FULL CUT OFF SHIELDS ON FIXTURES SO THAT NO FUGITIVE LIGHT SHALL ESCAPE BEYOND THE PROPERTY LINES. THE LIGHT FIXTURES SHALL BE FULLY SHIELDED WITH HORIZONTAL LAMPS. LIGHT POLES WITHIN 100' OF RESIDENTIAL ZONING SHALL BE LIMITED TO 16' HIGH.
 6. THERE SHALL BE NO BACKUP, PLASTIC, OR VINYL AWNINGS OR ILLUMINATED PLASTIC BANDING ON SIGNAGE.
 7. NO FREESTANDING CELL TOWERS OR ANTENNA SHALL BE PERMITTED. ANY WIRELESS COMMUNICATIONS FACILITIES SHALL BE INTEGRATED INTO THE BUILDING ARCHITECTURE.
 8. SETBACKS: THERE SHALL BE A FRONT AND A CORNER SIDE YARD SETBACK OF NOT LESS THAN FIVE FEET AND A SETBACK OF 11 FEET FROM JUNCTION OF A DRIVEWAY OR ALLEY AND A PUBLIC SIDEWALK OR PLANNED PUBLIC SIDEWALK LOCATION. THE CLEAR SIGHT TRIANGLE SHALL NOT BE INFRINGED UPON.
 9. BUILDINGS CANNOT EXCEED THE HEIGHTS AS SPECIFIED IN THE C2 ZONE OF THE COMPREHENSIVE CITY ZONING CODE.
 10. FIREARMS SALES ARE EXCLUDED FROM THIS SITE.
 11. OUTDOOR STORAGE IS NOT ALLOWED, EXCEPT AS SHOWN.
- KEYED NOTE:**
- (A) 6" SW PER COA STD DWG #2430
 - (B) 6" PEDESTRIAN ACCESS (MATERIAL TO BE CONCRETE)
 - (C) 6" VALLEY GUTTER PER COA STD DWG #2420
 - (D) HC RAMP PER COA STD DWG #2441
 - (E) 6" HEADER CURB
 - (F) UN-DIRECTIONAL HC RAMP PER COA STD DWG #2441
 - (G) INSTALL 1" - MONUMENT SIGN
 - (H) 6" WIDE RASSED CONCRETE CROSSWALK PER DETAIL SHEET 9
 - (I) MEDIAN CURB & GUTTER PER COA STD DWG #2415B
 - (K) 8" STD CURB & GUTTER PER COA STD DWG #2415A
- INDEX TO DRAWINGS**
1. SITE PLAN FOR SUBDIVISION
 2. PREVIOUSLY APPROVED SITE PLAN FOR SUBDIVISION
 3. (FOR REFERENCE ONLY)
 4. SITE PLAN FOR BUILDING PERMIT
 5. LANDSCAPE PLAN
 6. GRADING AND DRAINAGE PLAN
 7. MASTER UTILITY PLAN
 8. SIGN ELEVATIONS
 9. SIGN DETAILS

LEGEND

- EXISTING CURB & GUTTER
- PROPOSED CURB & GUTTER
- BOUNDARY LINE
- EXISTING BOUNDARY LINE
- EASEMENT
- STRIPING
- PROPOSED BUILDING
- EXISTING SIDEWALK
- PROPOSED SIDEWALK
- PROPOSED CROSSWALK (PATTERN CONCRETE)
- PROPOSED BIKEWAY
- PROPOSED SCREEN WALL
- PROPOSED RETAINING WALL
- PROPOSED PARKING LOT LIGHTING
- PROPOSED CART CORRAL

LEGAL DESCRIPTION
TRACT M1 OF VISTA DEL NORTE

PROJECT NUMBER: _____

APPLICATION NUMBER: _____

This plan is submitted with the specific Site Development Plan required by the Environmental Planning Commission (EPC), and the findings and conditions in the Official Notification of Decision are satisfied.

Is an Infrastructure List required? () Yes () No If Yes, then a set of approved DBC plans with a work order is required for any construction within the public right-of-way or for construction of public improvements.

DRB SITE DEVELOPMENT PLAN SIGNOFF APPROVAL:

Signature	Date
Traffic Engineer, Transportation Division	
Water Utility Development	
Parks & Recreation Department	
City Engineer	
Environmental Health Department (conditional)	
Solid Waste Management	
DNR Chairperson, Planning Department	
Environmental Health, if necessary	

PROJECT INFORMATION

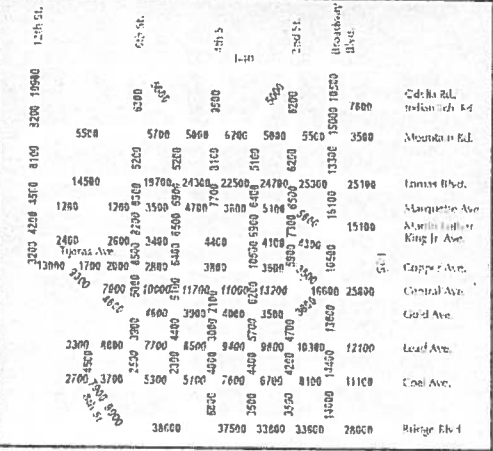
OWNER'S	DATE
WAL-MART SUPERCENTER 4450-00	2-27-07
OSUNA • VISTA DEL NORTE	
SITE PLAN FOR BUILDING PERMIT	2551-SPE.dwg
SHEET 1	

DESIGNER'S
RONALD R. BOHANNAN
P.E. #7868

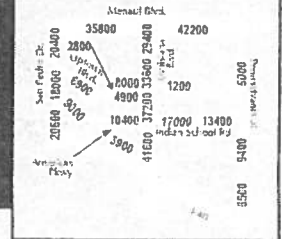
TERIA WEST, LLC
8509 JEFFERSON NE
ALBUQUERQUE, NEW MEXICO 87113
(505) 858-3100

3 OF 9

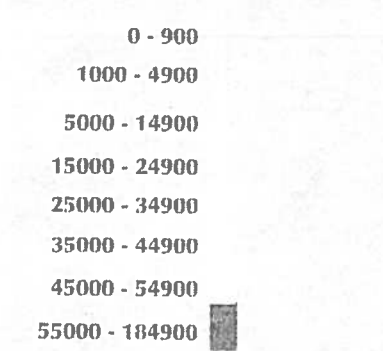
Inset for Downtown



Inset for Uptown



Average Weekday Traffic Flows

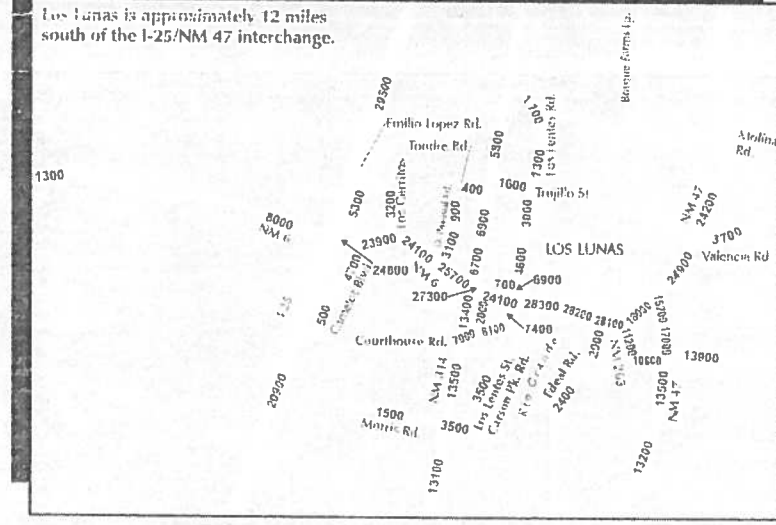


Standard Data Link Volume is based on traffic count data accepted by the NM Department of Transportation Traffic Monitoring System (TMS) as standard in accordance with the New Mexico State Traffic Monitoring Standards (NMSTMS).

Non-Standard Data 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.



Inset for Los Lunas, Valencia County



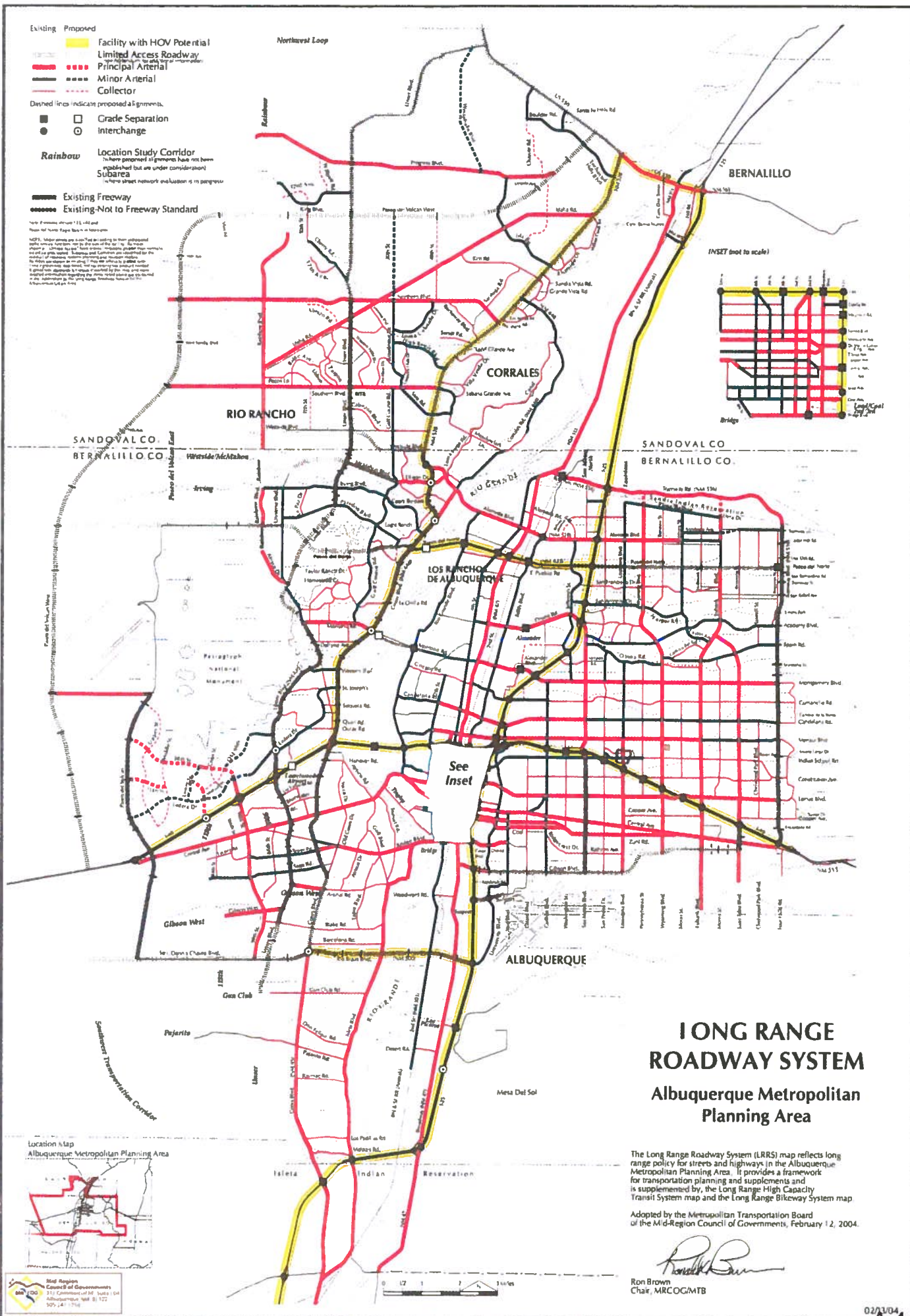
2005 Traffic Flows for the Greater Albuquerque Area

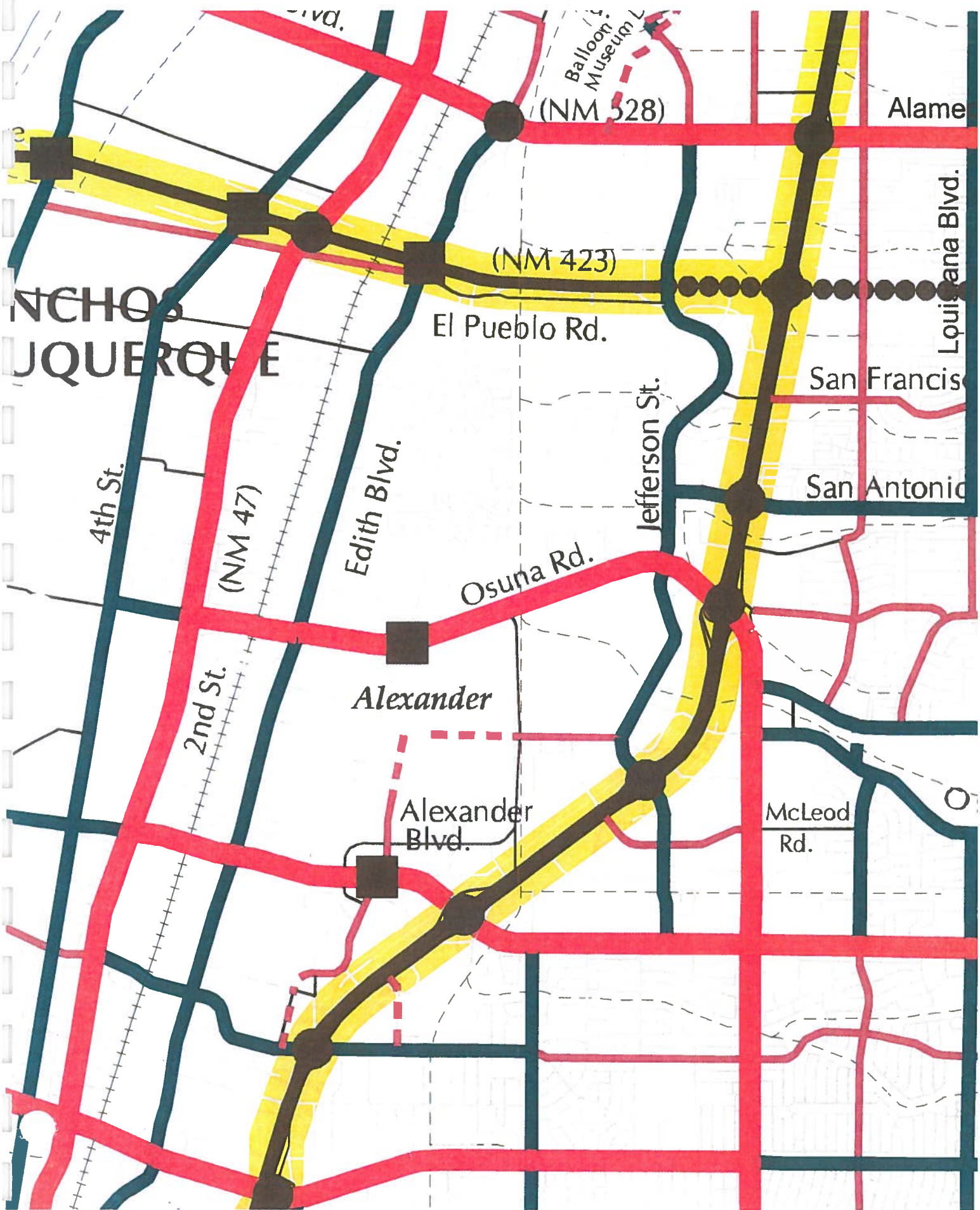
Map prepared by the Mid-Region Council of Governments in cooperation with the New Mexico Department of Transportation, the local governments in the Albuquerque Metropolitan Planning Area, and the U.S. Department of Transportation, Federal Highway Administration.

- 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
- Where proposed alignments have not been established but are under consideration
 - Subarea
 - Where street network evaluation is in progress

- Existing Freeway
- Existing-Not to Freeway Standard

Notes: Major streets are shown as they exist in the proposed long range roadway system. Minor streets are shown as they exist in the proposed long range roadway system. The proposed long range roadway system is shown in red. The proposed long range roadway system is shown in red. The proposed long range roadway system is shown in red.





Vista del Norte Commercial Development (2007 Plan)
With Park
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				
Free-Standing Discount Superstore (813)	156.00	7,586	146	141	295	307
Shopping Center (820)	34.18	3,380	50	32	148	161
City Park (411)	4.00	6	-	-	-	-
Subtotal		10,972	196	173	443	468
Pass-by Trips		30%			(133)	(140)
Net New Trips to System		10,972	196	173	310	328

Vista del Norte Commercial Development (2007 Plan) *Trip Generation Data*

USE (ITE CODE)	24 HOUR TWO-WAY VOLUME		A.M. PEAK HOUR		P.M. PEAK HOUR	
	GROSS	ENTER	EXIT	ENTER	EXIT	ENTER
Units						
156.00						
1,000 S.F.						
Free-Standing Discount Superstore (813)						
	7,586	146	141	295	307	

$$T = 74.12 (X) + -3976.88$$

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)

$$T = 1.84 (X) + 0$$

51% Enter, 49% Exit

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

$$T = 4.23 (X) + -57.47$$

49% Enter, 51% Exit

Comments:
Tract No.

Based on ITE Trip Generation Manual - 7th Edition

Vista del Norte Commercial Development (2007 Plan) *Trip Generation Data*

USE (ITE CODE)	24 HOUR TWO-WAY VOLUME	A. M. PEAK HOUR		P. M. PEAK HOUR	
		ENTER	EXIT	ENTER	EXIT
Units					
		34.18	50	32	148
		3,380			161
Shopping Center (820)					

Shopping Center (820)

$$\text{Ln}(T) = \begin{matrix} 0.65 & \text{Ln}(X) + & 5.83 \\ 50\% & \text{Enter,} & 50\% \text{ Exit} \end{matrix}$$

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

$$\text{Ln}(T) = \begin{matrix} 0.6 & \text{Ln}(X) + & 2.29 \\ 61\% & \text{Enter,} & 39\% \text{ Exit} \end{matrix}$$

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

$$\text{Ln}(T) = \begin{matrix} 0.66 & \text{Ln}(X) + & 3.403 \\ 48\% & \text{Enter,} & 52\% \text{ Exit} \end{matrix}$$

Comments:
Tract No.

Based on ITE Trip Generation Manual - 7th Edition

Vista del Norte Commercial Development (2007 Plan) *Trip Generation Data*

USE (ITE CODE)	24 HOUR TWO-WAY VOLUME		A.M. PEAK HOUR		P.M. PEAK HOUR	
	GROSS	ENTER	EXIT	ENTER	EXIT	EXIT
Units						
4.00						
Acres						
6						
-						
-						

City Park (411)

$$T = \frac{1.59 (X) + 0}{50\% \text{ Enter, } 50\% \text{ Exit}}$$

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

$$T = \frac{0.16 (X) + 0}{50\% \text{ Enter, } 50\% \text{ Exit}}$$

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

$$T = \frac{0.16 (X) + 0}{50\% \text{ Enter, } 50\% \text{ Exit}}$$

Comments:
Tract No.

Based on ITE Trip Generation Manual - 7th Edition

USE (ITE CODE)	DESCRIPTION	24 HR VOL		A. M. PEAK HR.		P. M. PEAK HR.	
		GROSS		ENTER	EXIT	ENTER	EXIT
Summary Sheet							
		Units					
	Free-Standing Discount Superstore (813)	156.00		146	141	295	307
	Shopping Center (820)	68.36		76	49	234	254
	Subtotal			12,889	222	190	529
	Pass-by Trips	30%				(159)	(168)
	Net New Trips to System			12,889	222	190	393

Vista del Norte Commercial Development (2007 Plan)
Trip Generation Data

USE (ITE CODE)	24 HOUR TWO-WAY VOLUME		A. M. PEAK HOUR		P. M. PEAK HOUR	
	GROSS	ENTER	EXIT	ENTER	EXIT	ENTER
Free-Standing Discount Superstore (813)	156.00	7,586	146	141	295	307
Units						
1,000 S.F.						

ITE Trip Generation Equations:

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

$$T = 74.12 (X) + 50\% \text{ Enter, } -3976.88 \text{ 50\% Exit}$$

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

$$T = 1.84 (X) + 51\% \text{ Enter, } 0 \text{ 49\% Exit}$$

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

$$T = 4.23 (X) + 49\% \text{ Enter, } -57.47 \text{ 51\% Exit}$$

Comments:
 Tract No.

Based on ITE Trip Generation Manual - 7th Edition

Vista del Norte Commercial Development (2007 Plan)
Trip Generation Data

USE (ITE CODE)	24 HOUR TWO-WAY VOLUME	A. M. PEAK HOUR		P. M. PEAK HOUR	
		ENTER	EXIT	ENTER	EXIT
Shopping Center (820)					
		Units			
		68.36			
		5,303	76	234	254
		1,000 S.F.			

ITE Trip Generation Equations:

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

$$\ln(T) = \begin{matrix} 0.65 & \ln(X) + & 5.83 \\ 50\% & \text{Enter,} & 50\% \text{ Exit} \end{matrix}$$

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

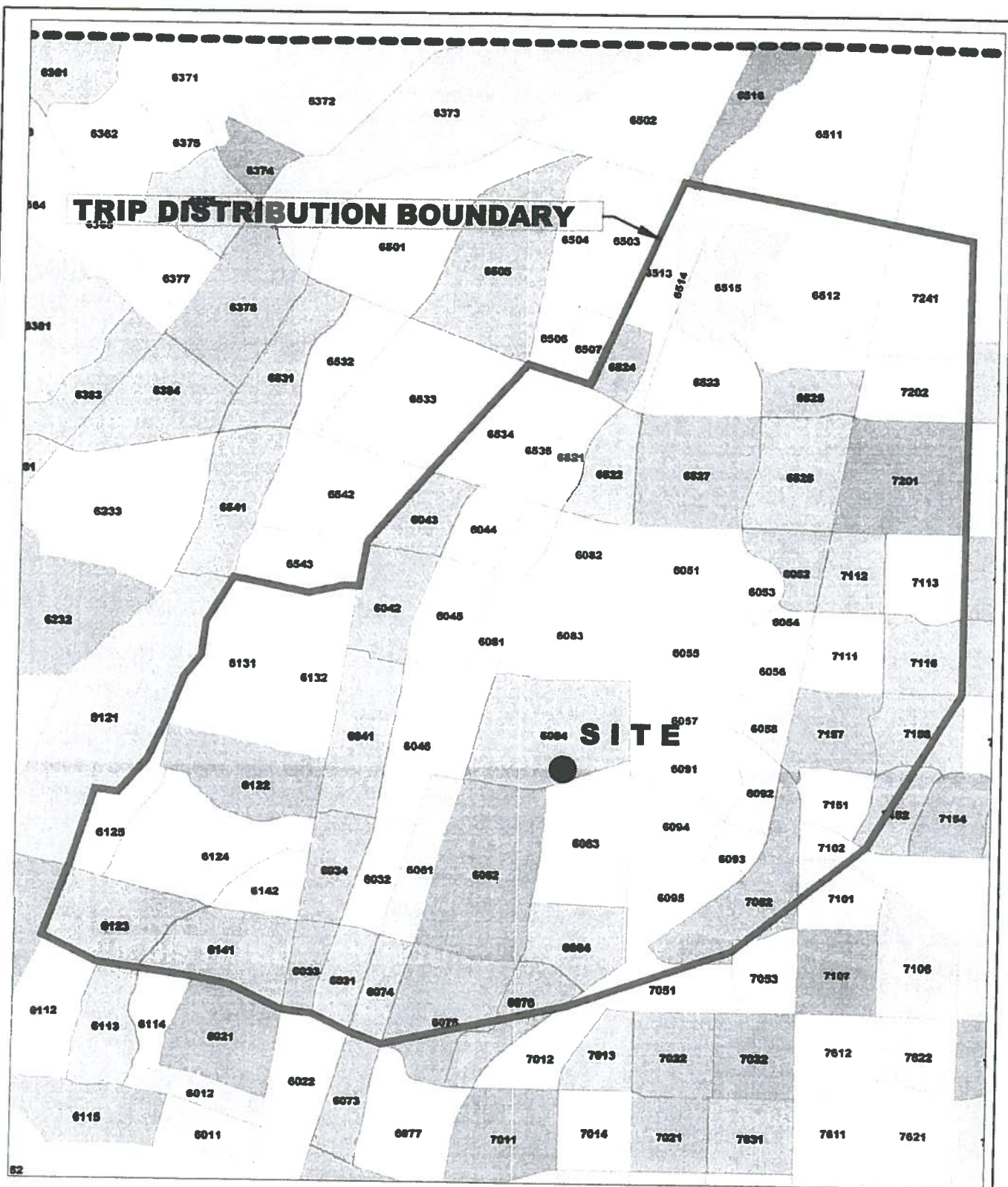
$$\ln(T) = \begin{matrix} 0.6 & \ln(X) + & 2.29 \\ 61\% & \text{Enter,} & 39\% \text{ Exit} \end{matrix}$$

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

$$\ln(T) = \begin{matrix} 0.66 & \ln(X) + & 3.403 \\ 48\% & \text{Enter,} & 52\% \text{ Exit} \end{matrix}$$

Comments:
Tract No.

Based on ITE Trip Generation Manual - 7th Edition



DATA ANALYSIS SUBZONE (DASZ) MAP

Vista del Norte Commercial Development (Osuna / Vista del Norte)

Trip Distribution Table
Vista del Norte Commercial Development (Osuna Rd. / Vista del Norte)

Data Analysis Subzone Population Data for determination of Local Trip Distribution for Proposed Retail Commercial Trips
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)

DASZ #	% Sub Area in Study	2000 Population	2025 Population	Interpolated Population for the Year 2008	Population in Study	Population / Distance	Percent Population	4th St. South (4S)			4th St. North (4N)			2nd St. North (2N)			Edith Blvd. North (EN)			El Pueblo West (EPW)		
								% Utilizing	% Population Utilizing	Population	% Utilizing	% Population Utilizing	Population	% Utilizing	% Population Utilizing	Population	% Utilizing	% Population Utilizing	Population	% Utilizing	% Population Utilizing	Population
6062	100%	1359	1526	1,412	1,412	1,412	4.45%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
6063	100%	0	2	1	1	1	0.00%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
6064	100%	0	0	0	0	0	0.00%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
6074	100%	53	48	51	51	51	0.16%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
6075	70%	99	97	98	69	69	0.22%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
6076	50%	3	3	3	2	2	0.01%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
6081	100%	280	467	340	340	340	1.07%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
6082	100%	57	58	57	57	57	0.18%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
6083	100%	322	2404	988	988	988	3.11%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
6084	100%	565	2145	1,071	1,071	1,071	3.37%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
6091	100%	0	0	0	0	0	0.00%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
6092	100%	0	0	0	0	0	0.00%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
6093	100%	0	0	0	0	0	0.00%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
6094	100%	0	2	1	1	1	0.00%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
6095	100%	0	0	0	0	0	0.00%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
6122	100%	868	851	863	863	863	2.72%	100%	2.72%	863	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
6123	100%	657	766	692	692	692	2.18%	60%	1.31%	415	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
6124	100%	727	766	749	749	749	2.36%	100%	2.36%	749	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
6125	100%	79	167	107	107	107	0.34%	70%	0.24%	75	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
6131	100%	483	591	518	518	518	1.63%	0%	0.00%	0	100%	1.63%	518	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
6132	100%	716	711	714	714	714	2.25%	0%	0.00%	0	100%	2.25%	714	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
6141	100%	1983	2029	1,998	1,998	1,998	6.29%	60%	3.77%	1,199	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
6142	100%	565	545	559	559	559	1.76%	70%	1.23%	391	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
6512	100%	3	379	123	123	123	0.39%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
6513	100%	161	211	177	177	177	0.56%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
6514	100%	101	207	135	135	135	0.43%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
6515	100%	0	0	0	0	0	0.00%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
6521	100%	187	208	194	194	194	0.61%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
6522	100%	0	0	0	0	0	0.00%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
6523	100%	602	633	612	612	612	1.93%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
6524	100%	260	253	258	258	258	0.81%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
6525	100%	387	453	408	408	408	1.28%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
6526	100%	1330	1263	1,309	1,309	1,309	4.12%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
6527	100%	0	2	1	1	1	0.00%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
6534	100%	349	365	354	354	354	1.11%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
6535	100%	333	435	366	366	366	1.15%	0%	0.00%	0	20%	0.22%	71	80%	0.89%	283	0%	0.00%	0	0%	0.00%	0
7051	20%	2944	2761	2,885	577	577	1.82%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	366	0%	0.00%	0	0%	0.00%	0
7052	100%	6	6	6	6	6	0.02%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
7101	30%	2152	2020	2,110	633	633	1.99%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
7102	100%	494	463	484	484	484	1.52%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
7111	100%	1176	1184	1,179	1,179	1,179	3.71%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
7112	100%	5	10	7	7	7	0.02%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
7113	100%	893	1145	974	974	974	3.07%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
7116	100%	1275	1372	1,306	1,306	1,306	4.11%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
7151	100%	1029	964	1,008	1,008	1,008	3.17%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
7152	50%	1418	1324	1,388	694	694	2.19%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
7157	100%	736	1232	895	895	895	2.82%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
7156	70%	1525	1415	1,490	1,043	1,043	3.28%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
7201	100%	1826	2475	2,034	2,034	2,034	6.40%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
7202	100%	106	214	141	141	141	0.44%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
7241	100%	0	647	207	207	207	0.65%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
		36,717	31,761	31,761	31,761	31,761	100.00%	3,899	12.28%	0	0%	0.00%	1,736	5.47%	3,940	12.41%	1,036	3.26%	97	0.30%	0.00%	0

Trip Distribution Table
Vista del Norte Commercial Development (Osuna Rd. / Vista del Norte)

Data Analysis Subzone Population Data for determination of Local Trip Distribution for Proposed Retail Commercial Trips
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)

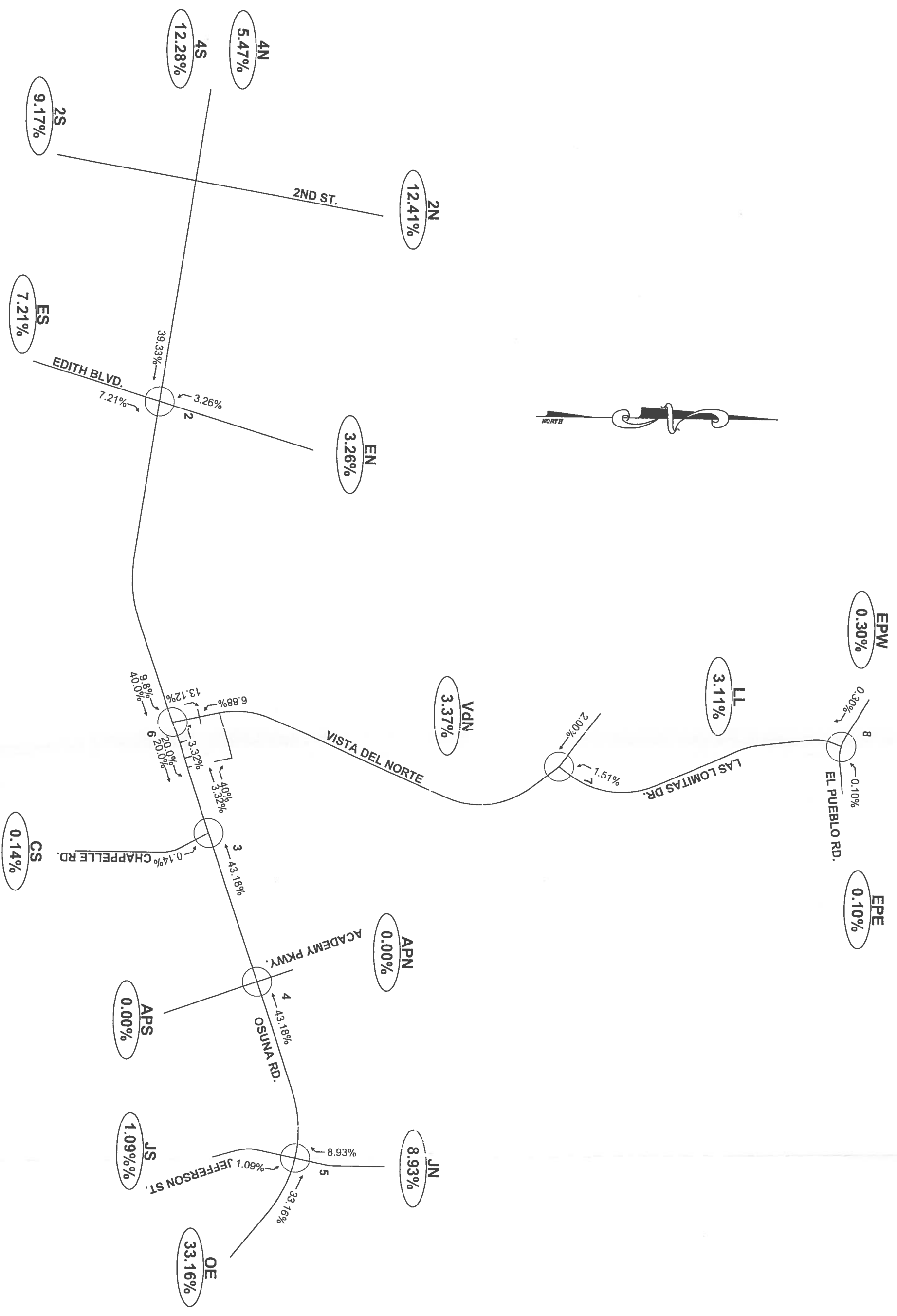
										(EPE)			(LL)			(VDN)			(JN)			(OE)		
										El Pueblo East			Los Lomas North			Vista del Norte North			Jefferson St. North			Osuna Rd. East		
DASZ #	% Sub Area In Study	2000 Population	2025 Population	Interpolated Population for the Year 2008	Population in Study	Population / Distance	Percent Population	% Utilizing	% Population Utilizing	Population	% Utilizing	% Population Utilizing	Population	% Utilizing	% Population Utilizing	Population	% Utilizing	% Population Utilizing	Population	% Utilizing	% Population Utilizing	Population	% Utilizing	% Population Utilizing
6062	100%	1359	1526	1,412	1,412	1,412	4.45%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
6063	100%	0	2	1	1	1	0.00%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
6064	100%	0	0	0	0	0	0.00%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
6074	100%	53	48	51	51	51	0.16%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
6075	70%	99	97	98	69	69	0.22%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
6076	50%	3	3	3	2	2	0.01%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
6081	100%	280	467	340	340	340	1.07%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
6082	100%	57	58	57	57	57	0.18%	50%	0.09%	29	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
6083	100%	322	2404	988	988	988	3.11%	0%	0.00%	988	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
6084	100%	565	2145	1,071	1,071	1,071	3.37%	0%	0.00%	0	100%	3.11%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
6091	100%	0	0	0	0	0	0.00%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
6092	100%	0	0	0	0	0	0.00%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
6093	100%	0	0	0	0	0	0.00%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
6094	100%	0	0	0	0	0	0.00%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
6095	100%	0	2	1	1	1	0.00%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
6122	100%	868	851	863	863	863	2.72%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
6123	100%	657	766	692	692	692	2.18%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
6124	100%	727	796	749	749	749	2.36%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
6125	100%	79	167	107	107	107	0.34%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
6131	100%	483	591	518	518	518	1.63%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
6132	100%	716	711	714	714	714	2.25%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
6141	100%	1983	2029	1,998	1,998	1,998	6.29%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
6142	100%	565	545	559	559	559	1.76%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
6512	100%	3	379	123	123	123	0.39%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
6513	100%	161	211	177	177	177	0.56%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
6514	100%	101	207	135	135	135	0.43%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
6515	100%	0	0	0	0	0	0.00%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
6521	100%	187	208	194	194	194	0.61%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
6522	100%	0	0	0	0	0	0.00%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
6523	100%	602	633	612	612	612	1.93%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
6524	100%	260	253	258	258	258	0.81%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
6525	100%	387	453	408	408	408	1.28%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
6526	100%	1330	1263	1,309	1,309	1,309	4.12%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
6527	100%	0	2	1	1	1	0.00%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
6534	100%	349	365	354	354	354	1.11%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
6535	100%	333	435	366	366	366	1.15%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
7051	20%	2944	2761	2,885	577	577	1.82%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
7052	100%	6	6	6	6	6	0.02%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
7101	30%	2152	2020	2,110	633	633	1.99%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
7102	100%	494	463	484	484	484	1.52%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
7111	100%	1176	1184	1,179	1,179	1,179	3.71%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
7112	100%	5	10	7	7	7	0.02%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
7113	100%	893	1145	974	974	974	3.07%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
7116	100%	1275	1372	1,306	1,306	1,306	4.11%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
7151	100%	1029	964	1,008	1,008	1,008	3.17%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
7152	50%	1418	1324	1,388	694	694	2.19%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
7157	100%	736	1332	895	895	895	2.82%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
7156	70%	1525	1415	1,490	1,043	1,043	3.28%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
7201	100%	1826	2475	2,034	2,034	2,034	6.40%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
7202	100%	106	214	141	141	141	0.44%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
7241	100%	0	647	207	207	207	0.65%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
										31	988	1,071	2,838	60%	0.39%	124	10.533	33.16%	83	60%	0.39%	124	10.533	33.16%
										0.10%	3.11%	3.37%	8.93%	40%	0.26%	85	33.16%	33.16%	56	60%	0.27%	85	33.16%	33.16%

Trip Distribution Table
Vista del Norte Commercial Development (Osuna Rd. / Vista del Norte)

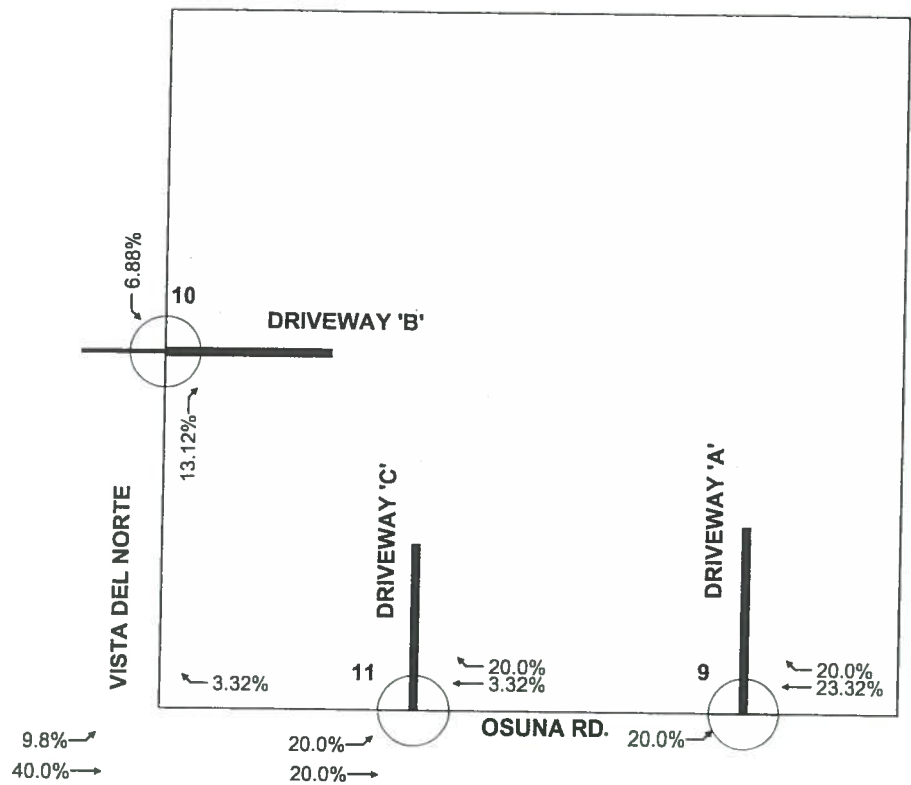
Data Analysis Subzone Population Data for determination of Local Trip Distribution for Proposed Retail Commercial Trips

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)

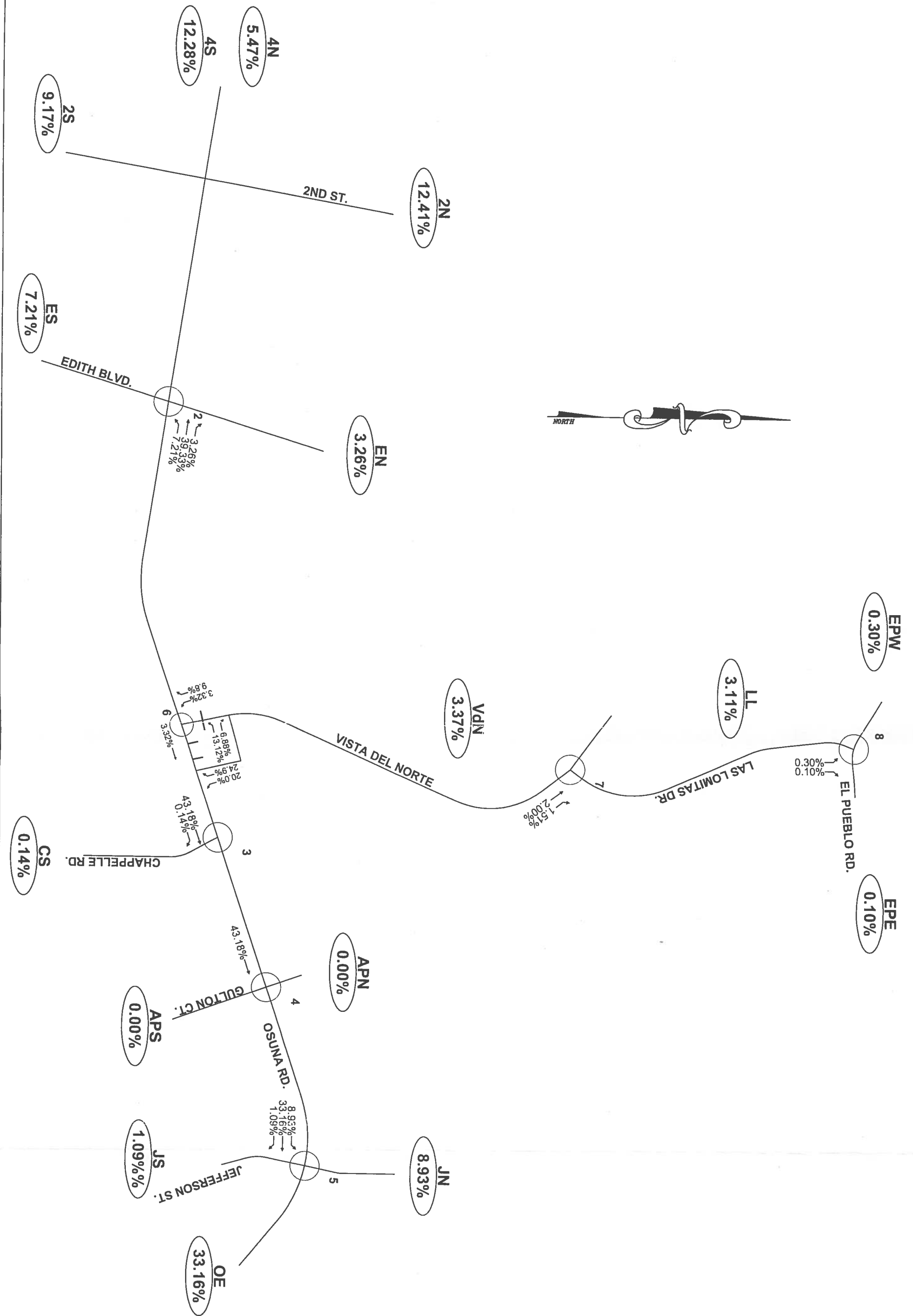
DASZ #	% Sub Area in Study	2000 Population	2025 Population	Interpolated Population for the Year 2008	Population in Study	Population / Distance	Percent Population	Jefferson St. South (JS)			Chappelle Rd. South (CS)			Edith Blvd. South (ES)			(2S)	
								% Utilizing	% Population Utilizing	Population	% Utilizing	% Population Utilizing	Population	% Utilizing	% Population Utilizing	Population	% Utilizing	% Population Utilizing
6062	100%	1359	1526	1,412	1,412	1,412	4.45%	0%	0.00%	0	0%	0.00%	0	100%	4.45%	1,412	0%	0.00%
6063	100%	0	2	1	1	1	0.00%	0%	0.00%	0	100%	0.00%	1	0%	0.00%	0	0%	0.00%
6064	100%	0	0	0	0	0	0.00%	0%	0.00%	0	100%	0.00%	0	0%	0.00%	0	0%	0.00%
6074	100%	53	48	51	51	51	0.16%	0%	0.00%	0	0%	0.00%	0	100%	0.16%	51	0%	0.00%
6075	70%	99	97	98	69	69	0.22%	0%	0.00%	0	60%	0.13%	41	100%	0.09%	28	0%	0.00%
6076	50%	3	3	3	2	2	0.01%	0%	0.00%	0	90%	0.01%	2	10%	0.00%	0	0%	0.00%
6081	100%	280	467	340	340	340	1.07%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
6082	100%	57	58	57	57	57	0.18%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
6083	100%	322	2404	988	988	988	3.11%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
6084	100%	565	2145	1,071	1,071	1,071	3.37%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
6091	100%	0	0	0	0	0	0.00%	100%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
6092	100%	0	0	0	0	0	0.00%	100%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
6093	100%	0	0	0	0	0	0.00%	100%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
6094	100%	0	2	1	1	1	0.00%	100%	0.00%	1	50%	0.00%	1	0%	0.00%	0	0%	0.00%
6095	100%	0	0	0	0	0	0.00%	50%	0.00%	0	50%	0.00%	0	0%	0.00%	0	0%	0.00%
6122	100%	868	851	863	863	863	2.72%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
6123	100%	657	766	692	692	692	2.18%	0%	0.00%	0	0%	0.00%	0	10%	0.22%	69	30%	0.65%
6124	100%	727	796	749	749	749	2.36%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
6125	100%	79	107	107	107	107	0.34%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	30%	0.10%
6131	100%	483	591	518	518	518	1.63%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
6132	100%	716	711	714	714	714	2.25%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
6141	100%	1983	2029	1,998	1,998	1,998	6.29%	0%	0.00%	0	0%	0.00%	0	10%	0.63%	200	30%	1.89%
6142	100%	565	545	559	559	559	1.76%	0%	0.00%	0	0%	0.00%	0	10%	0.18%	56	20%	0.35%
6512	100%	3	379	123	123	123	0.39%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
6513	100%	161	211	177	177	177	0.56%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
6514	100%	101	207	135	135	135	0.43%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
6515	100%	0	0	0	0	0	0.00%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
6521	100%	187	208	194	194	194	0.61%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
6522	100%	0	0	0	0	0	0.00%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
6523	100%	602	633	612	612	612	1.93%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
6524	100%	260	253	258	258	258	0.81%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
6525	100%	387	453	408	408	408	1.28%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
6526	100%	1330	1263	1,309	1,309	1,309	4.12%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
6527	100%	0	2	1	1	1	0.00%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
6534	100%	349	365	354	354	354	1.11%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
6535	100%	333	435	366	366	366	1.15%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
7051	20%	2944	2761	2,885	577	577	1.82%	60%	1.09%	346	0%	0.00%	0	0%	0.00%	0	0%	0.00%
7052	100%	6	6	6	6	6	0.02%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
7101	30%	2152	2020	2,110	633	633	1.99%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
7102	100%	494	463	484	484	484	1.52%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
7111	100%	1176	1184	1,179	1,179	1,179	3.71%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
7112	100%	5	10	7	7	7	0.02%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
7113	100%	893	1145	974	974	974	3.07%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
7116	100%	1275	1372	1,306	1,306	1,306	4.11%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
7151	100%	1029	964	1,008	1,008	1,008	3.17%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
7152	50%	1418	1324	1,388	694	694	2.18%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
7157	100%	736	1232	895	895	895	2.82%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
7156	70%	1525	1415	1,490	1,043	1,043	3.28%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
7201	100%	1826	2475	2,034	2,034	2,034	6.40%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
7202	100%	106	214	141	141	141	0.44%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
7241	100%	0	647	207	207	207	0.65%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0	0%	0.00%
		36,717	31,761	31,761	100.00%	347	1.09%	45	0.14%	2,291	7.21%	2,911	9.17%					



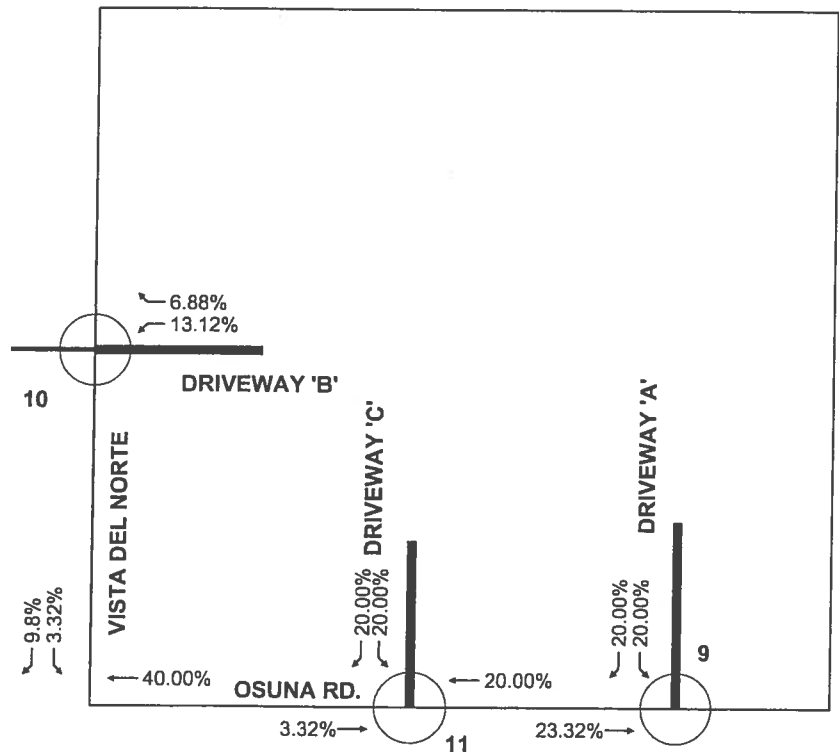
VISTA DEL NORTE COMMERCIAL CENTER
NORTHEAST CORNER OF OSUNA RD. / VISTA DEL NORTE
TRIP ASSIGNMENTS (% ENTERING)



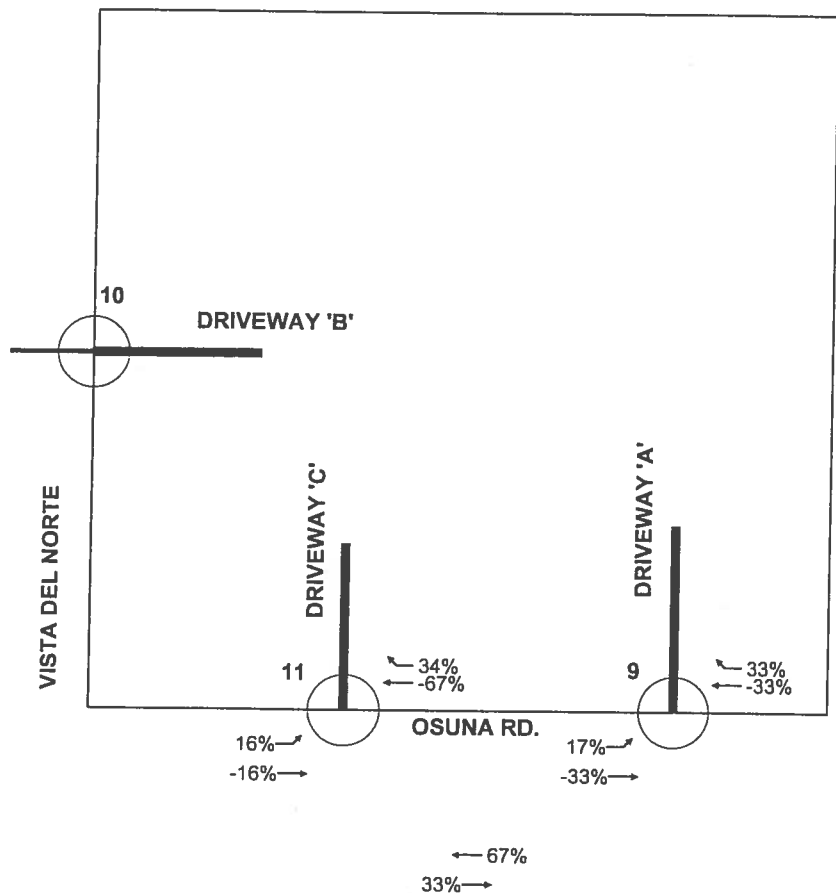
**VISTA DEL NORTE COMMERCIAL CENTER
NORTHEAST CORNER OF OSUNA RD. / VISTA DEL NORTE
DRIVEWAY TRIP ASSIGNMENTS (% ENTERING)**



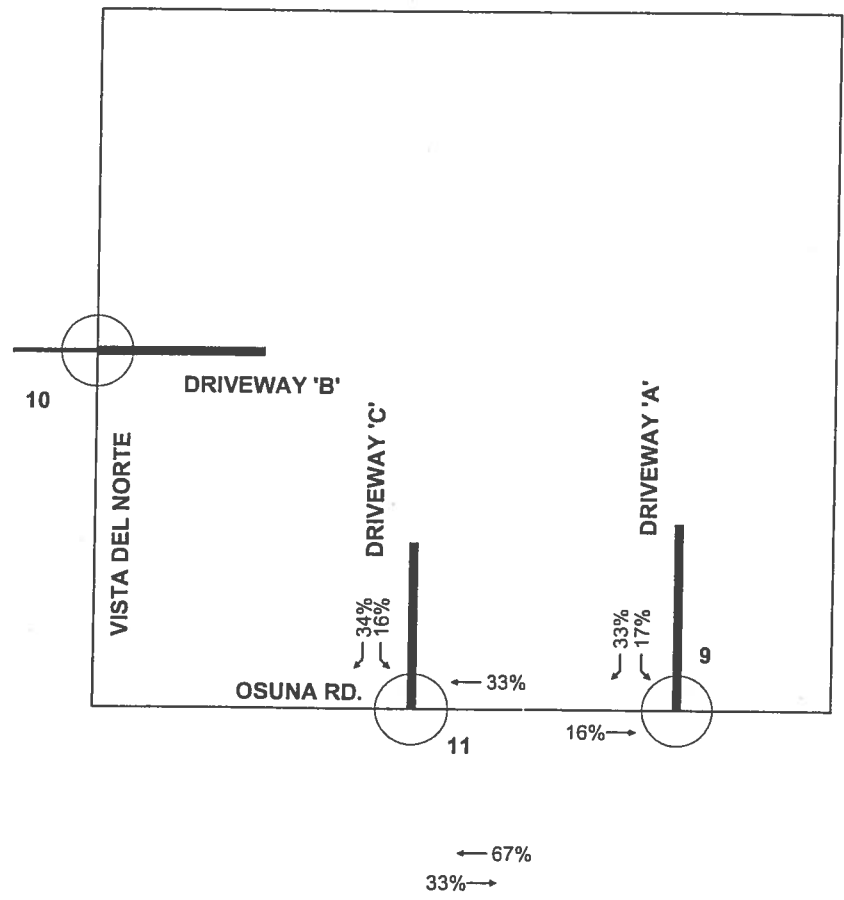
**VISTA DEL NORTE COMMERCIAL CENTER
NORTHEAST CORNER OF OSUNA RD. / VISTA DEL NORTE
TRIP ASSIGNMENTS (% EXITING)**



**VISTA DEL NORTE COMMERCIAL CENTER
NORTHEAST CORNER OF OSUNA RD. / VISTA DEL NORTE
DRIVEWAY TRIP ASSIGNMENTS (% EXITING)**



**VISTA DEL NORTE COMMERCIAL CENTER
NORTHEAST CORNER OF OSUNA RD. / VISTA DEL NORTE
PASS-BY DRIVEWAY TRIP ASSIGNMENTS (% ENTERING)**

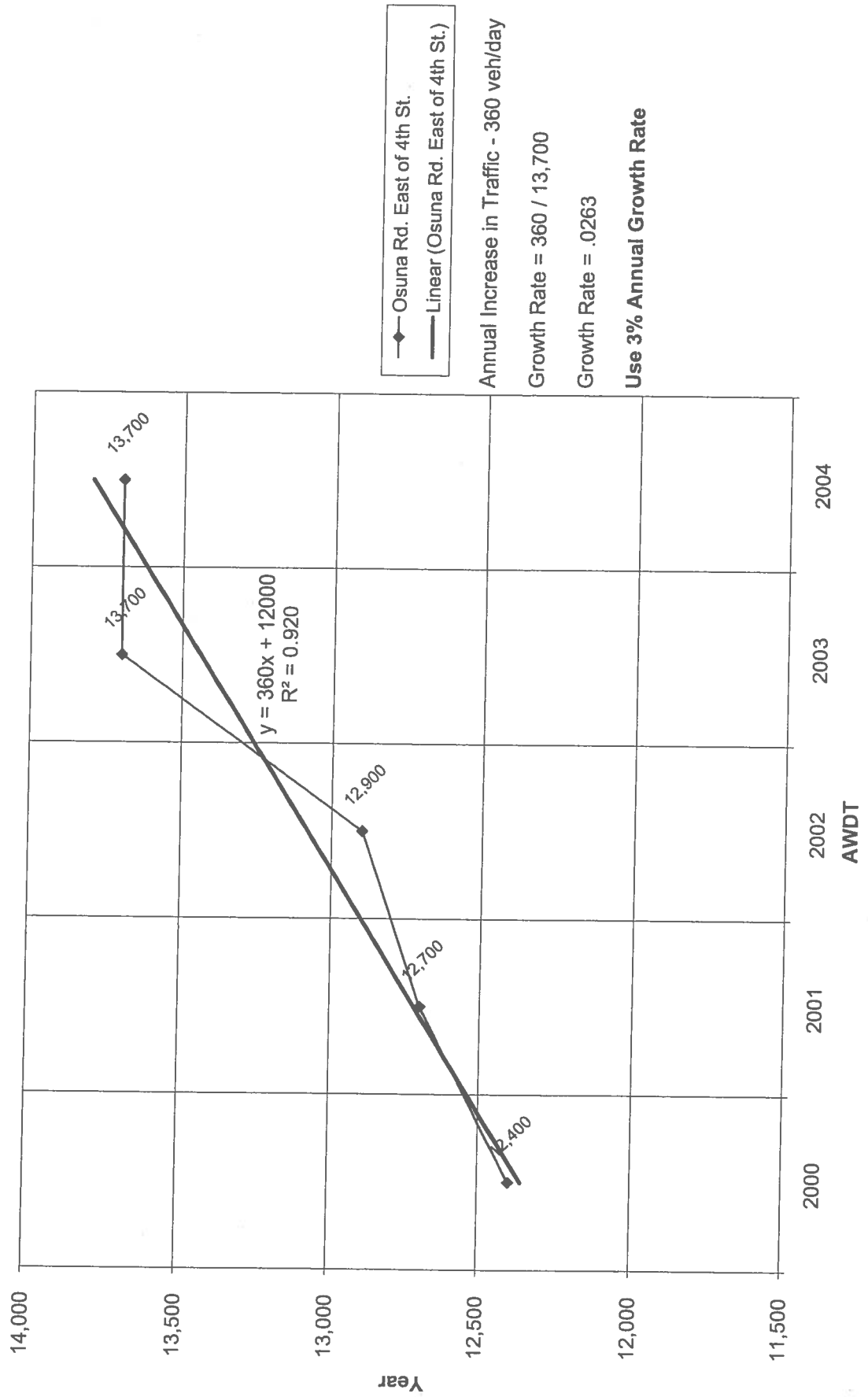


**VISTA DEL NORTE COMMERCIAL CENTER
NORTHEAST CORNER OF OSUNA RD. / VISTA DEL NORTE
PASS-BY DRIVEWAY TRIP ASSIGNMENTS (% EXITING)**

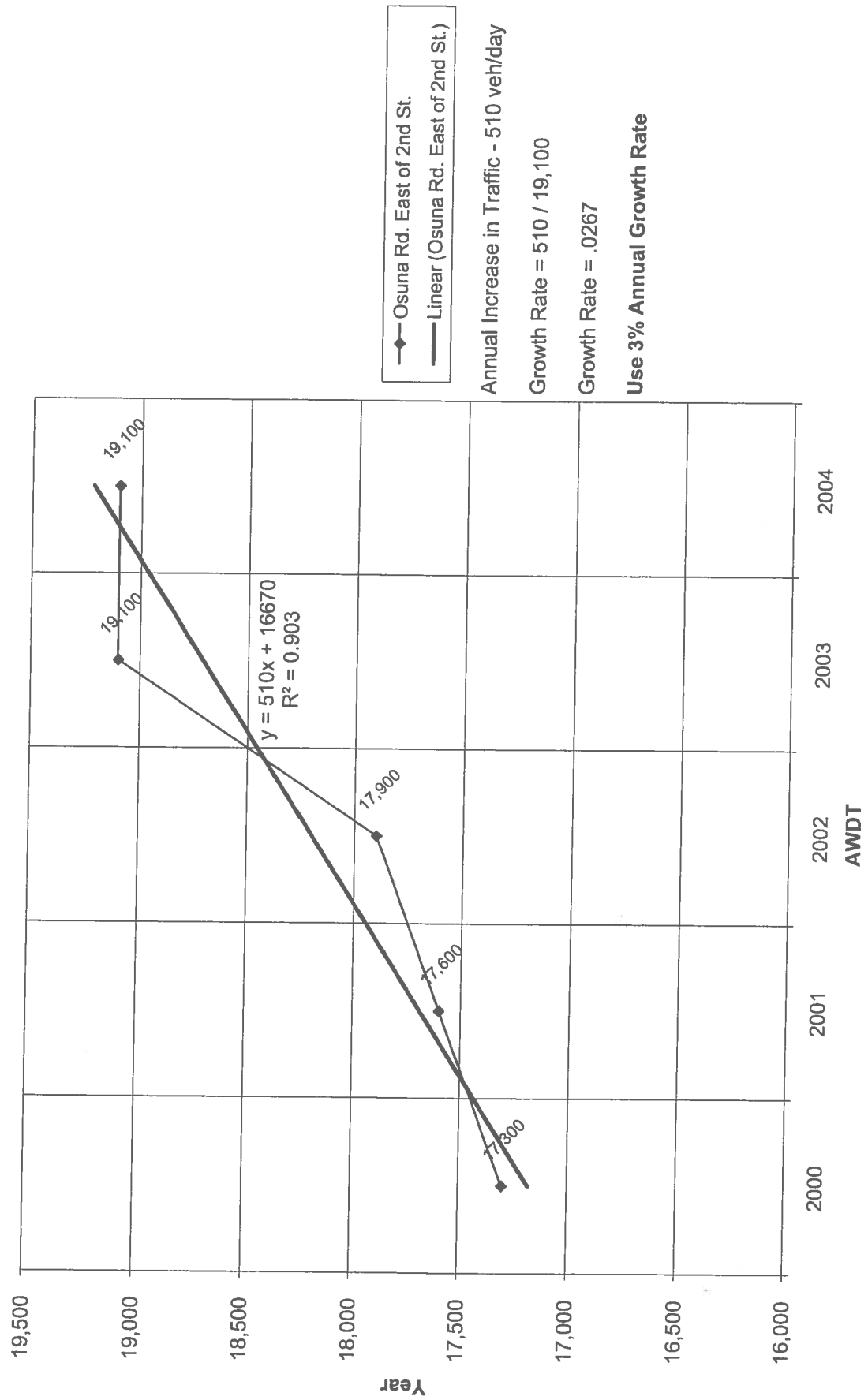
Growth Data for Vista del Norte Commercial Development

	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
Osuna Rd. East of Chappel Dr.	22,700	28,700	29,300	29,700	32,300
Osuna Rd. East of Jefferson St.	30,100	31,000	31,900	32,300	33,400
Jefferson St. North of Osuna Rd.	19,600	21,800	22,200	22,600	15,300
Jefferson St. South of Osuna Rd.	15,600	16,100	15,000	15,200	15,700
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

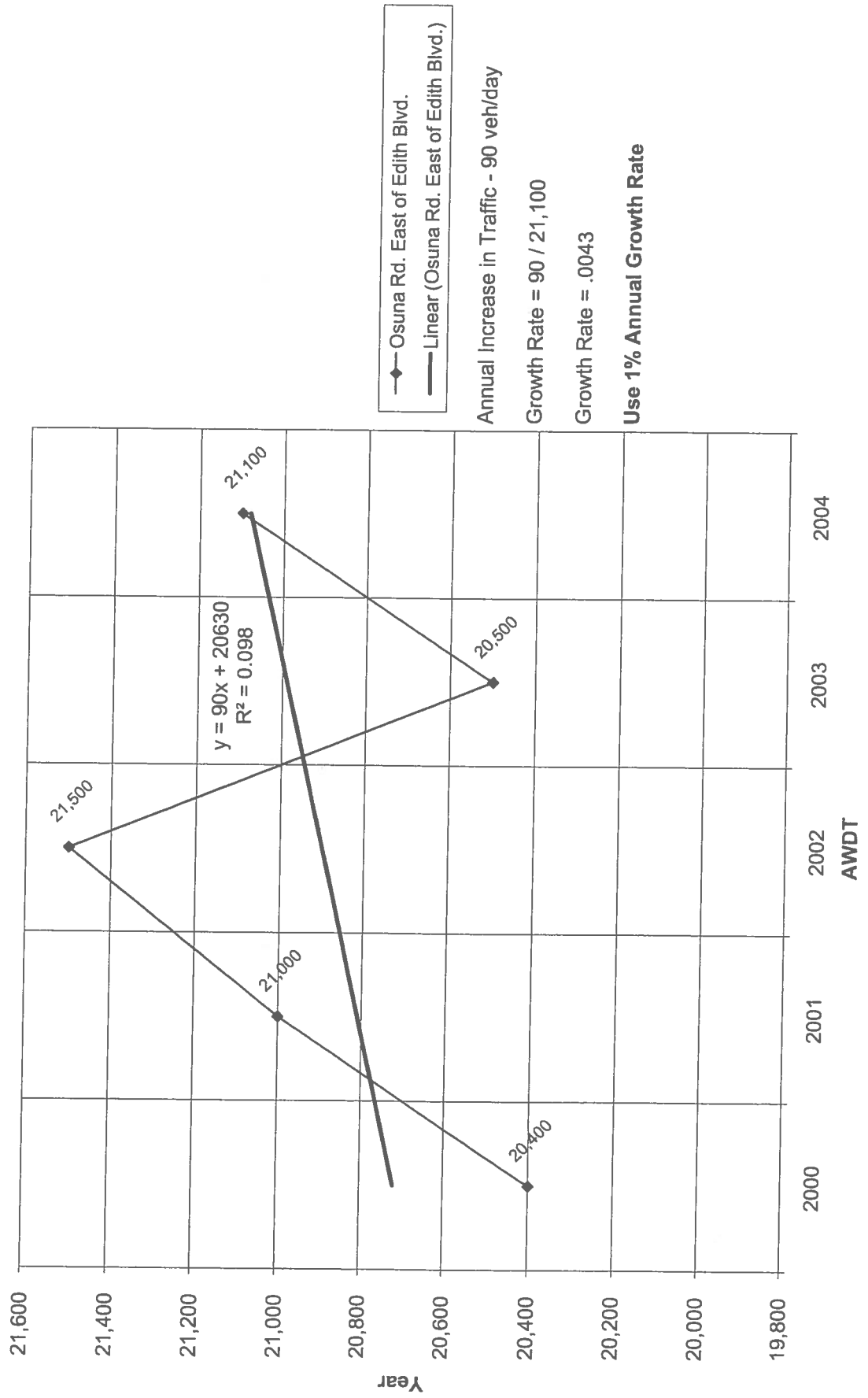
Annual Growth Rate Graph - Osuna Rd. East of 4th St.



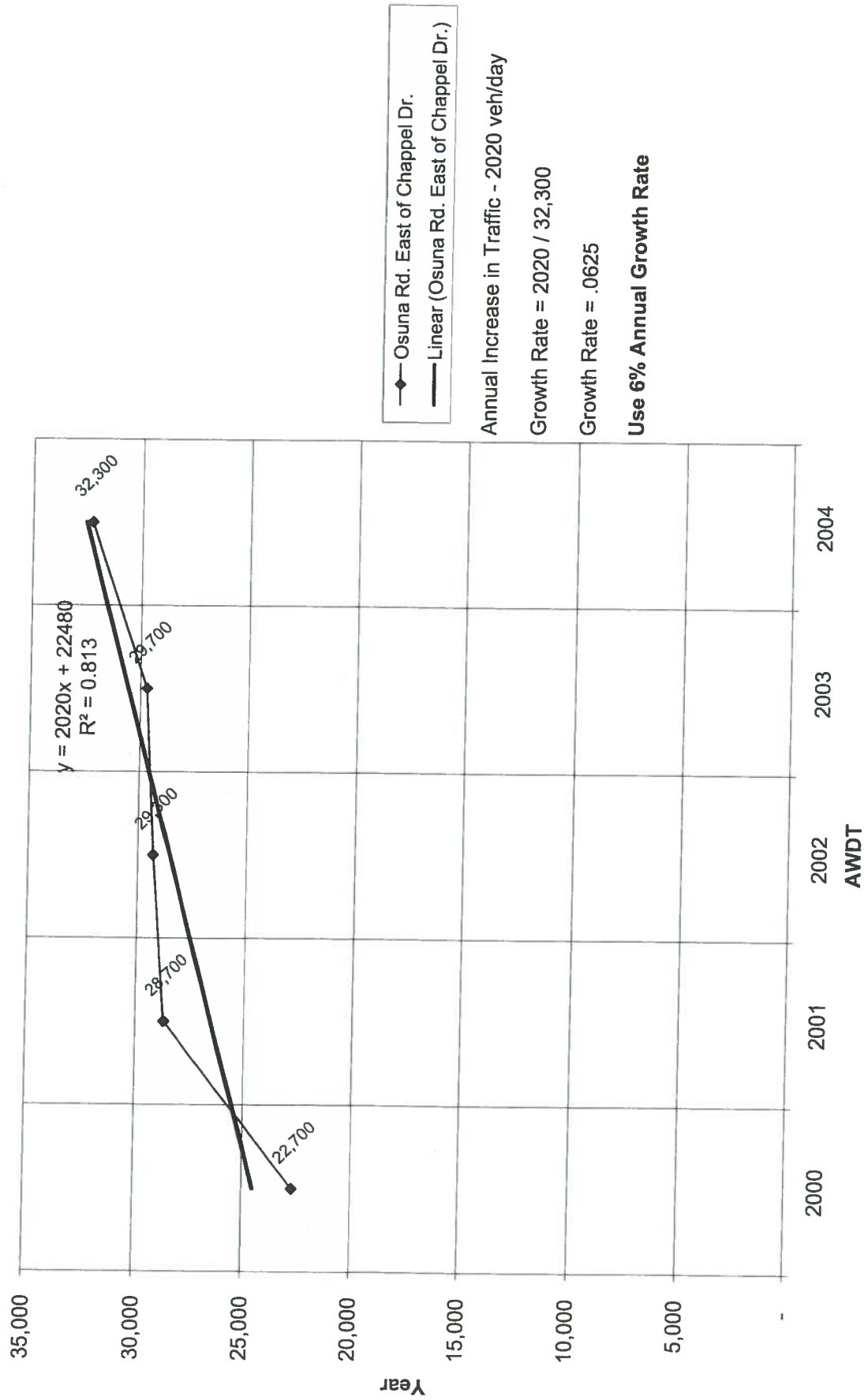
Annual Growth Rate Graph - Osuna Rd. East of 2nd St.



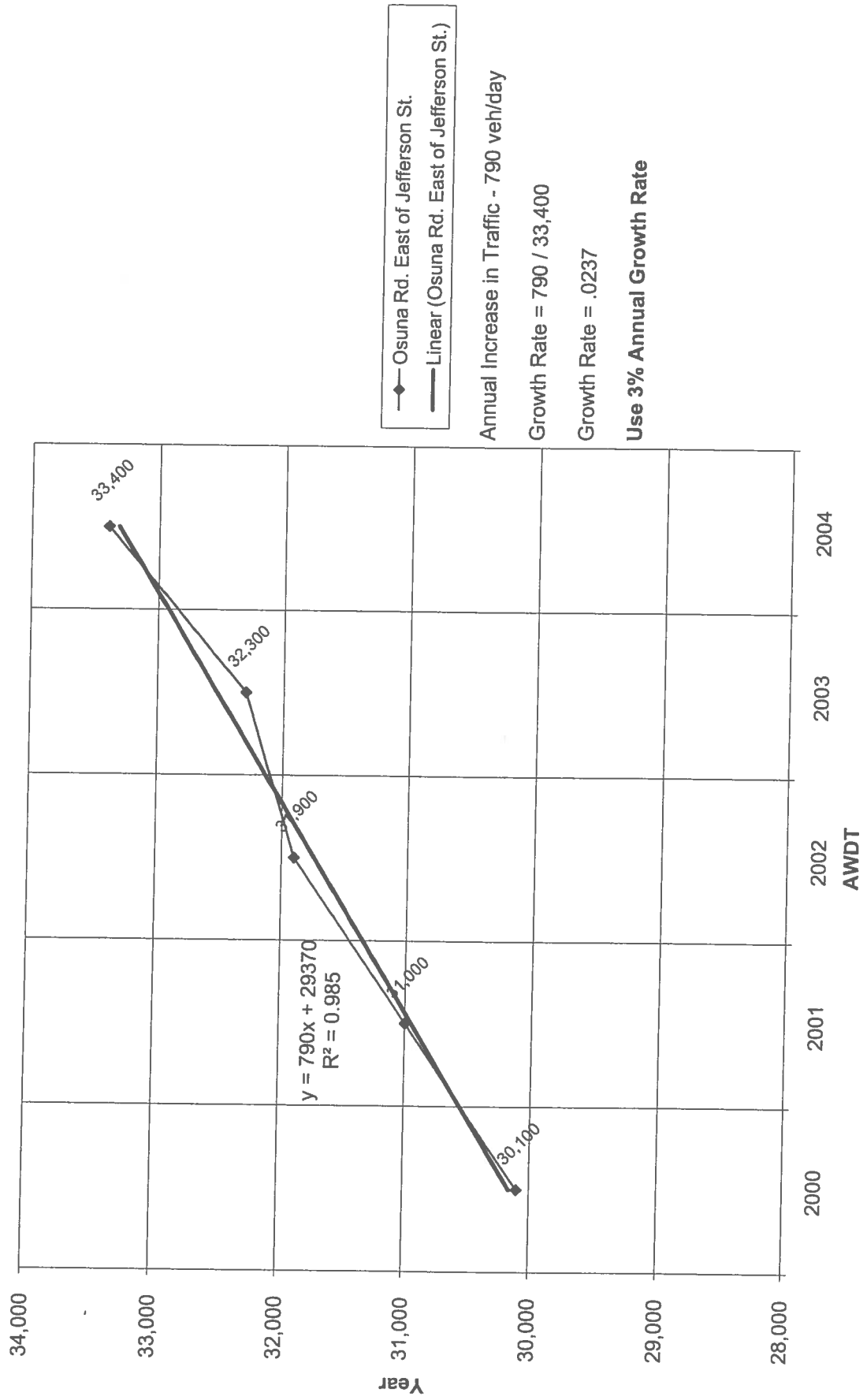
Annual Growth Rate Graph - Osuna Rd. East of Edith Blvd.



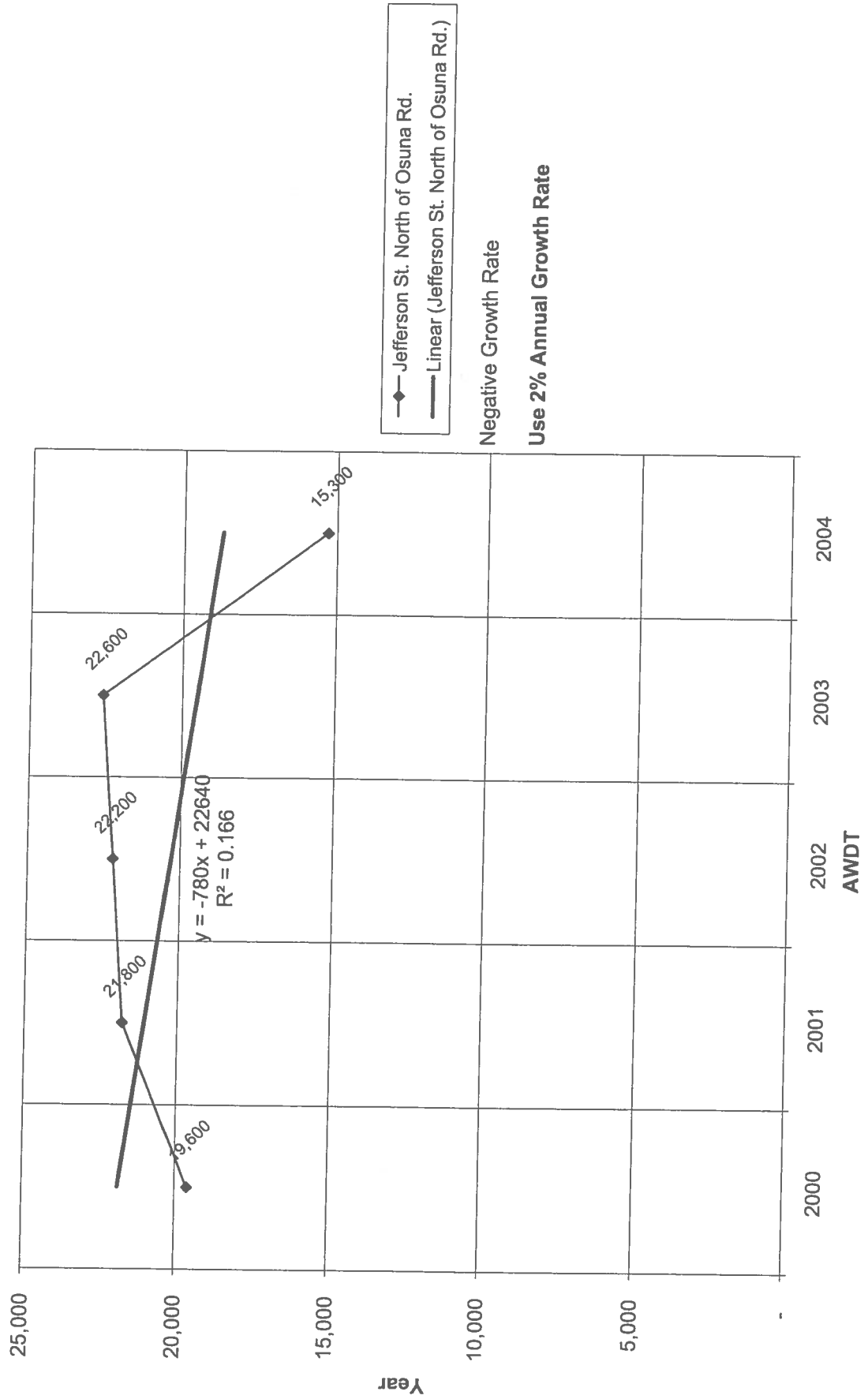
Annual Growth Rate Graph - Osuna Rd. East of Chappel Dr.



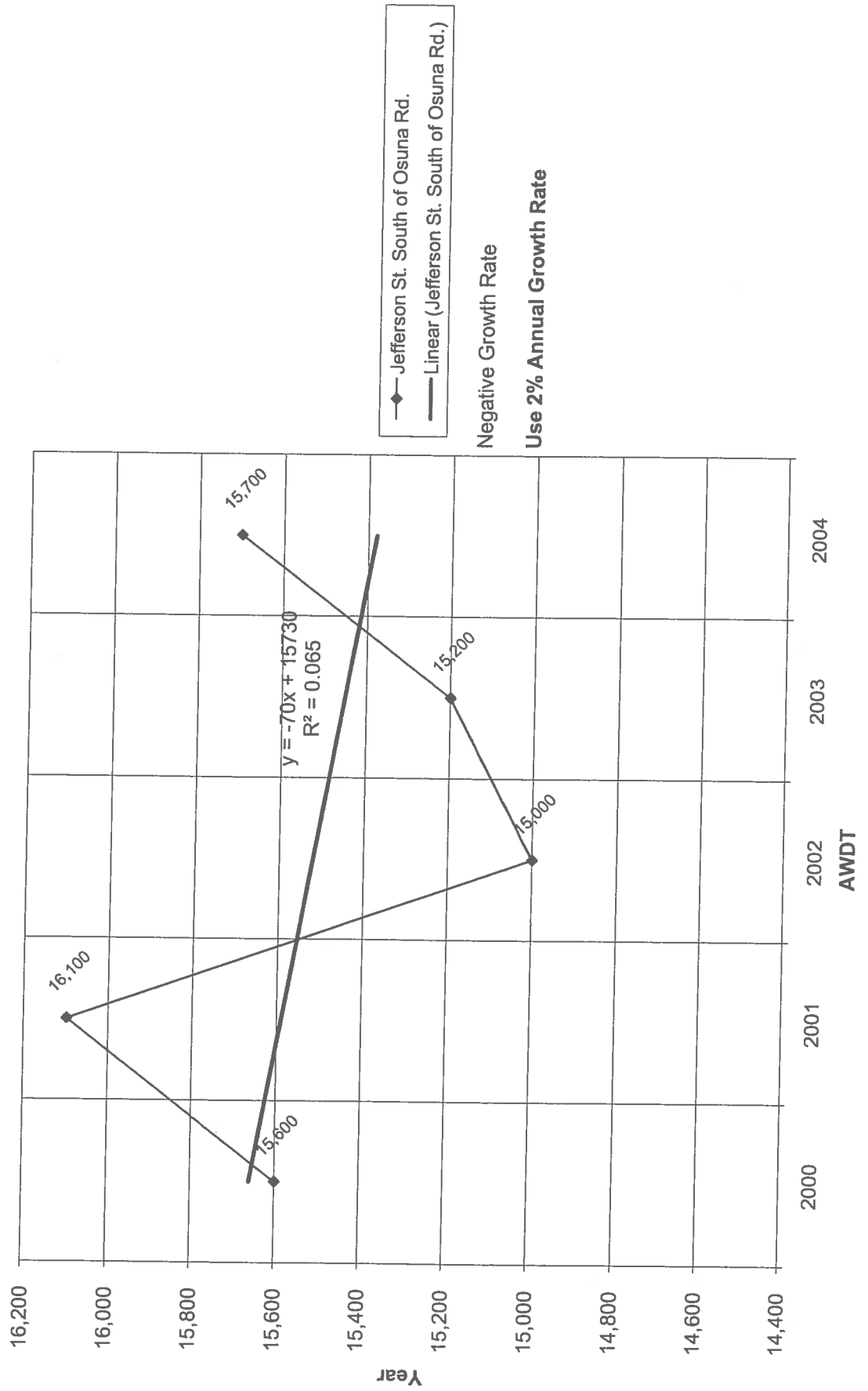
Annual Growth Rate Graph - Osuna Rd. East of Jefferson St.



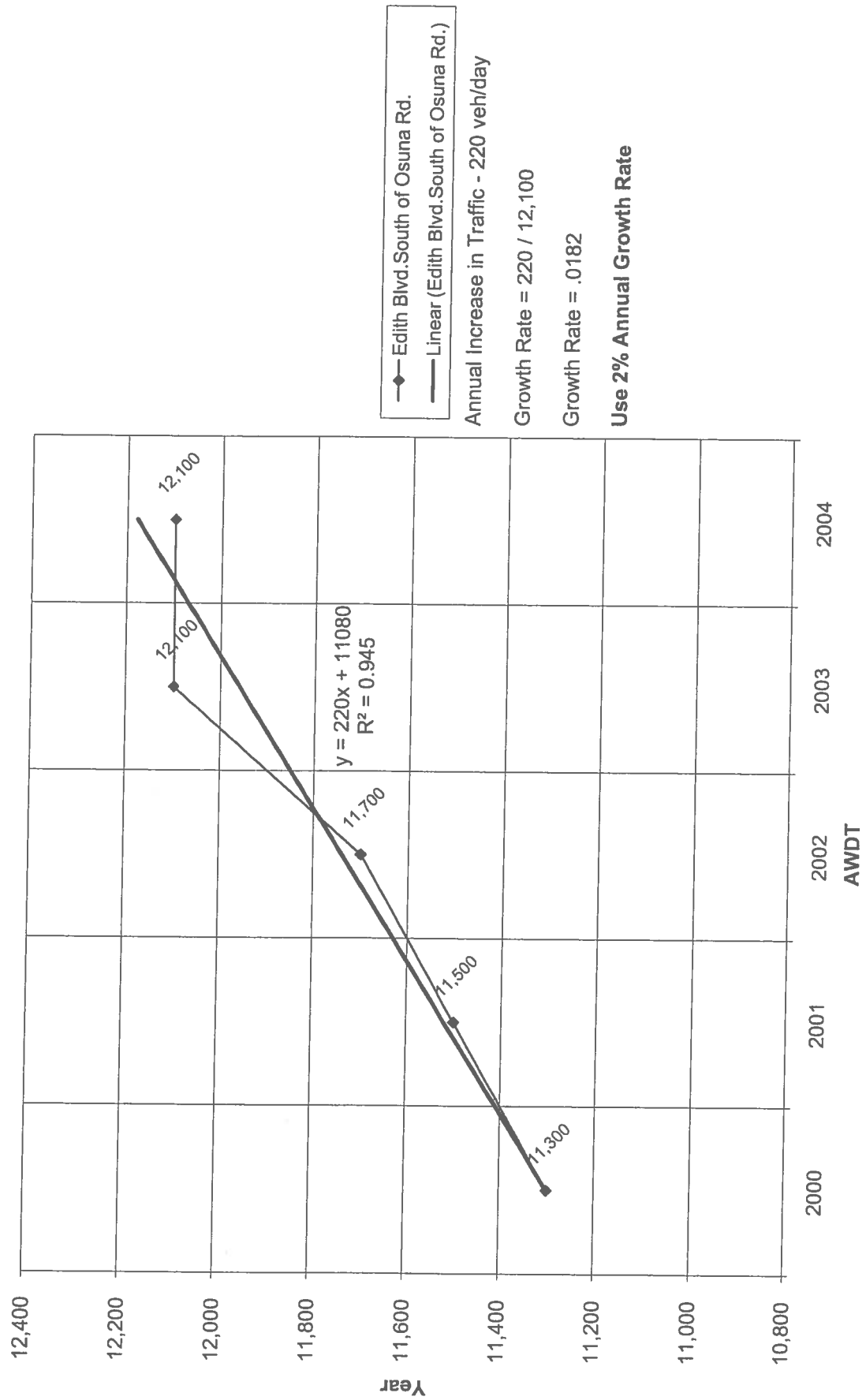
Annual Growth Rate Graph - Jefferson St. North of Osuna Rd.



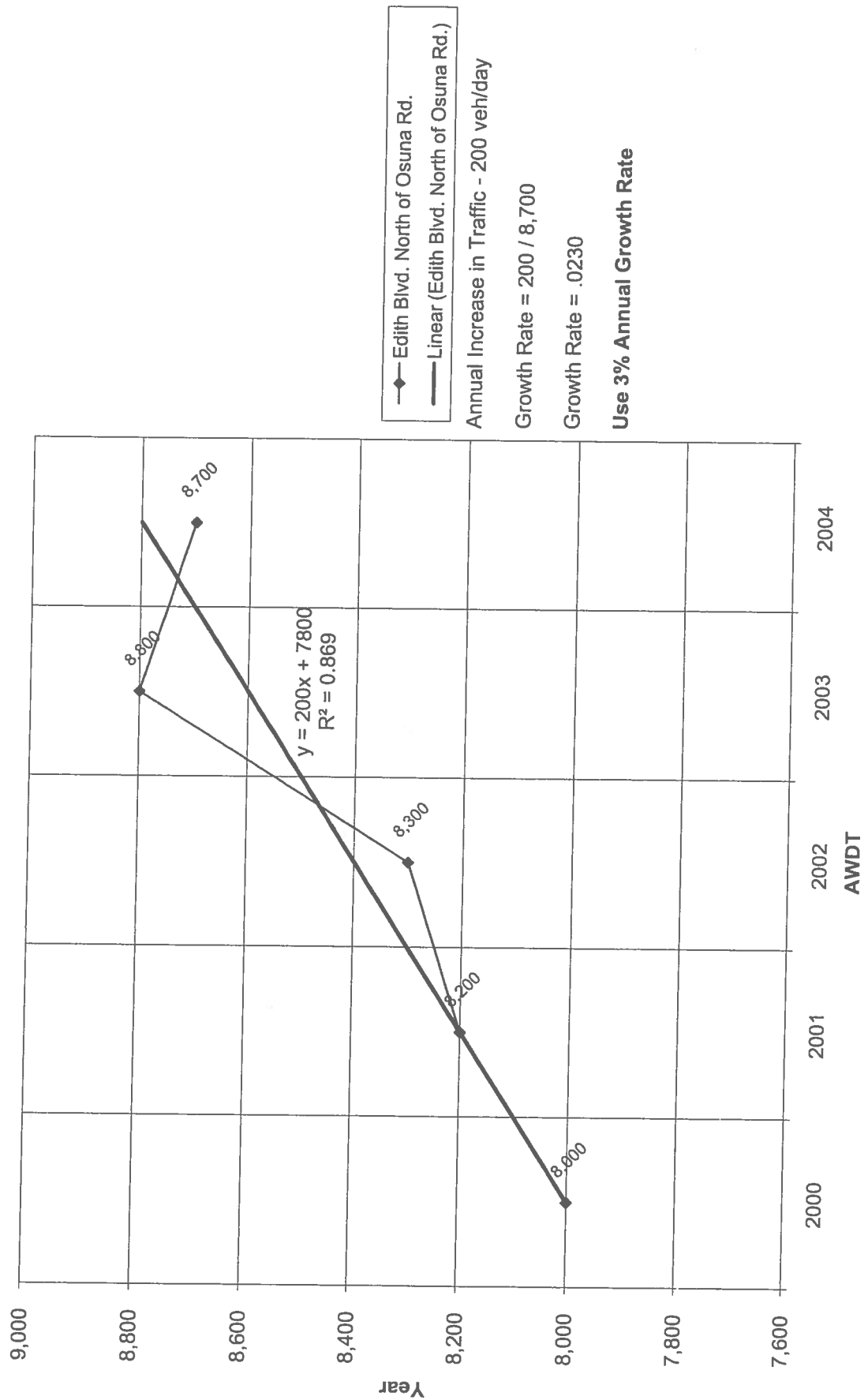
Annual Growth Rate Graph - Jefferson St. South of Osuna Rd.



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



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



Vista del Norte Commercial Development (Osuna Rd. / Vista del Norte)

Projected Turning Movements SUMMARY PROPOSED DEVELOPMENT (2009) - 100% Development

2007 Plan - with Park

INTERSECTION: Summary

Osuna Rd. / 2nd St.

- (1)
5.0% Truck
Existing (2007)
2009 (NO BUILD - A.M.)
2009 (BUILD - A.M.)

0.92			0.72			0.84			0.91			PHF
Eastbound (Osuna Rd.)			Westbound (Osuna Rd.)			Northbound (2nd St.)			Southbound (2nd St.)			
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
68	394	59	108	194	194	39	584	245	395	1,168	36	
72	417	62	114	205	205	40	586	254	410	1,214	37	
72	452	62	130	236	226	40	586	272	434	1,214	37	

- Existing (2007)
2009 (NO BUILD - P.M.)
2009 (BUILD - P.M.)

0.93			0.96			0.94			0.89			PHF
Eastbound (Osuna Rd.)			Westbound (Osuna Rd.)			Northbound (2nd St.)			Southbound (2nd St.)			
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
92	181	72	264	477	637	69	902	163	291	792	79	
97	192	76	279	505	674	72	937	170	302	823	82	
97	247	76	309	563	715	72	937	198	340	823	82	

Osuna Rd. / Edith Blvd.

- (2)
5.0% Truck
Existing (2007)
2009 (NO BUILD - A.M.)
2009 (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	868	239	155	368	65	150	223	148	174	368	25	
30	917	252	158	375	67	156	231	153	184	389	27	
30	994	252	170	443	73	156	231	167	190	389	27	

- Existing (2007)
2009 (NO BUILD - P.M.)
2009 (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	457	123	158	990	155	289	454	158	107	288	55	
50	483	130	161	1,010	158	300	472	162	113	305	58	
50	605	130	185	1,139	169	300	472	184	123	305	58	

Osuna Rd. / Chappel Dr.

- (3)
5.0% Truck
Existing (2007)
2009 (NO BUILD - A.M.)
2009 (BUILD - A.M.)

0.81			0.80			0.72			0.70			PHF
Eastbound (Osuna Rd.)			Westbound (Osuna Rd.)			Northbound (Chappel Dr.)			Southbound (Chappel Dr.)			
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
27	1,584	296	124	959	45	74	6	101	6	1	5	
30	1,745	326	137	1,057	49	80	6	110	6	1	5	
30	1,820	326	137	1,142	49	80	6	110	6	1	5	

- Existing (2007)
2009 (NO BUILD - P.M.)
2009 (BUILD - P.M.)

0.92			0.86			0.79			0.89			PHF
Eastbound (Osuna Rd.)			Westbound (Osuna Rd.)			Northbound (Chappel Dr.)			Southbound (Chappel Dr.)			
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4	956	72	111	1,687	6	240	2	174	55	23	28	
4	1,053	79	122	1,859	7	261	3	189	60	25	30	
4	1,195	79	122	1,993	7	261	3	189	60	25	30	

Osuna Rd. / Academy Parkway

- (4)
5.0% Truck
Existing (2007)
2009 (NO BUILD - A.M.)
2009 (BUILD - A.M.)

0.93			0.84			0.80			0.86			PHF
Eastbound (Osuna Rd.)			Westbound (Osuna Rd.)			Northbound (Academy Parkway)			Southbound (Academy Parkway)			
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
57	1,381	4	41	896	94	6	0	24	55	0	18	
64	1,538	5	46	997	105	7	0	26	60	0	20	
64	1,613	5	46	1,082	105	7	0	26	60	0	20	

- Existing (2007)
2009 (NO BUILD - P.M.)
2009 (BUILD - P.M.)

0.89			0.93			0.87			0.90			PHF
Eastbound (Osuna Rd.)			Westbound (Osuna Rd.)			Northbound (Academy Parkway)			Southbound (Academy Parkway)			
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
8	1,161	0	31	1,531	22	25	0	59	87	1	44	
9	1,292	0	34	1,704	25	28	0	64	95	1	48	
9	1,434	0	34	1,838	25	28	0	64	95	1	48	

Vista del Norte Commercial Development (Osuna Rd. / Vista del Norte)

Projected Turning Movements SUMMARY
PROPOSED DEVELOPMENT (2009) - 100% Development

2007 Plan - with Park

INTERSECTION: Summary

Osuna Rd. / Driveway "A"

(9)

5.0% Truck
 Existing (2007)
 2009 (NO BUILD - A.M.)
 2009 (BUILD - A.M.)

0.85			0.85			0.85			0.85			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	
0	1,959	0	0	773	0	0	0	0	0	0	0	0
0	2,181	0	0	860	0	0	0	0	0	0	0	0
39	2,221	0	0	906	39	0	0	0	35	0	35	

Existing (2007)

2009 (NO BUILD - P.M.)
 2009 (BUILD - P.M.)

0.85			0.85			0.85			0.85			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	
0	971	0	0	2,003	0	0	0	0	0	0	0	0
0	1,081	0	0	2,230	0	0	0	0	0	0	0	0
80	1,139	0	0	2,265	101	0	0	0	86	0	107	

Driveway "B" / Vista del Norte

(10)

5.0% Truck
 Existing (2007)
 2009 (NO BUILD - A.M.)
 2009 (BUILD - A.M.)

0.85			0.85			0.85			0.85			PHF
Eastbound (Driveway "B")			Westbound (Driveway "B")			Northbound (Vista del Norte)			Southbound (Vista del Norte)			
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
5	0	11	0	0	0	11	118	0	0	799	5	
11	0	37	0	0	0	27	129	0	0	875	11	
11	0	37	23	0	12	27	129	26	13	875	11	

Existing (2007)

2009 (NO BUILD - P.M.)
 2009 (BUILD - P.M.)

0.85			0.85			0.85			0.85			PHF
Eastbound (Driveway "B")			Westbound (Driveway "B")			Northbound (Vista del Norte)			Southbound (Vista del Norte)			
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
5	0	11	0	0	0	11	644	0	0	212	5	
11	0	27	0	0	0	37	705	0	0	232	11	
11	0	27	43	0	6	37	705	41	21	232	11	

Osuna Rd. / Driveway "C"

(11)

5.0% Truck
 Existing (2007)
 2009 (NO BUILD - A.M.)
 2009 (BUILD - A.M.)

0.85			0.85			0.85			0.85			PHF
Eastbound (Osuna Rd.)			Westbound (Osuna Rd.)			Northbound (Driveway "C")			Southbound (Driveway "C")			
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
0	1,959	0	0	773	0	0	0	0	0	0	0	0
0	2,181	0	0	860	0	0	0	0	0	0	0	0
39	2,226	0	0	902	39	0	0	0	35	0	35	

Existing (2007)

2009 (NO BUILD - P.M.)
 2009 (BUILD - P.M.)

0.85			0.85			0.85			0.85			PHF
Eastbound (Osuna Rd.)			Westbound (Osuna Rd.)			Northbound (Driveway "C")			Southbound (Driveway "C")			
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
0	971	0	0	2,003	0	0	0	0	0	0	0	0
0	1,081	0	0	2,230	0	0	0	0	0	0	0	0
82	1,136	0	0	2,268	100	0	0	0	87	0	106	

Vista del Norte Commercial Development (Osuna Rd. / Vista del Norte)
Projected Turning Movements Worksheet
Osuna Rd. / 2nd St.

2007 Plan - with Park

INTERSECTION : E-W Street: Osuna Rd.

(1)

N-S Street: 2nd St.

Year of Existing Counts 2006

Implementation Year 2009

Growth Rates

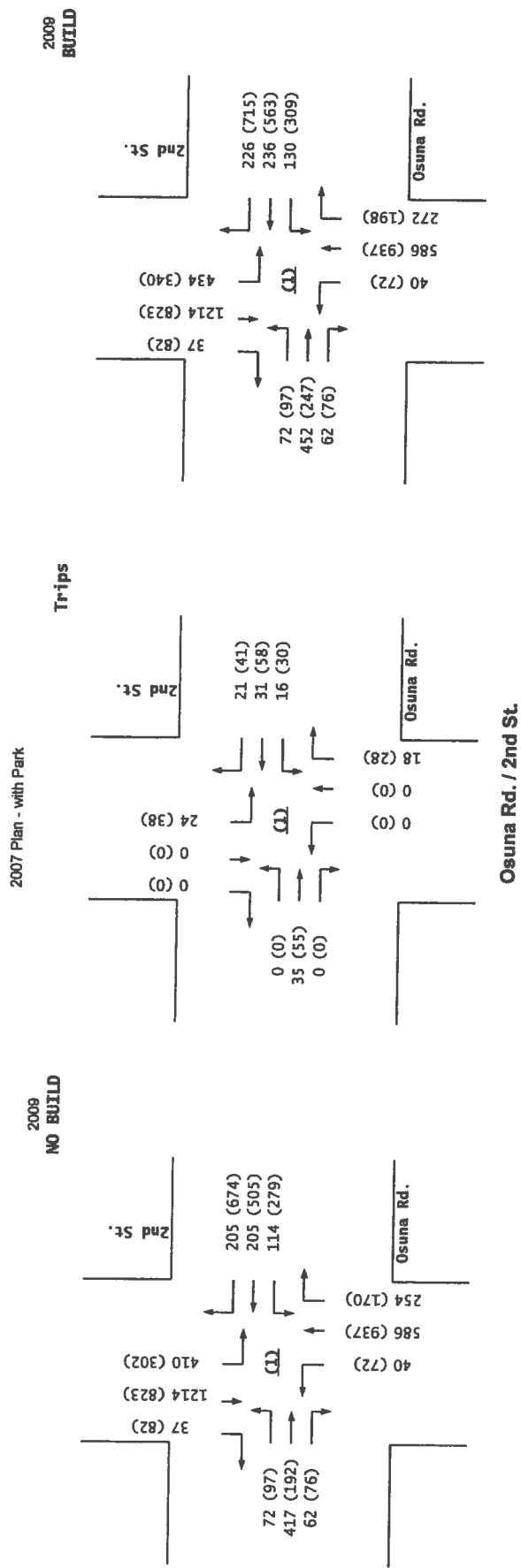
	3.00%			3.00%			2.00%			2.00%		
	Eastbound (Osuna Rd.)			Westbound (Osuna Rd.)			Northbound (2nd St.)			Southbound (2nd St.)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	66	383	57	105	188	188	38	553	240	387	1,145	35
Background Traffic Growth	6	34	5	9	17	17	2	33	14	23	69	2
Subtotal (NO BUILD - A.M.)	72	417	62	114	205	205	40	586	254	410	1,214	37
Percent Commercial Trips Generated(Entering)	0.00%	17.75%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	9.17%	12.41%	0.00%	0.00%
Percent Commercial Trips Generated(Exiting)	0.00%	0.00%	0.00%	9.17%	17.75%	12.41%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Total Trips Generated	0	35	0	16	31	21	0	0	18	24	0	0
Total AM Peak Hour BUILD Volumes	72	452	62	130	236	226	40	586	272	434	1,214	37

	3.00%			3.00%			2.00%			2.00%		
	Eastbound (Osuna Rd.)			Westbound (Osuna Rd.)			Northbound (2nd St.)			Southbound (2nd St.)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	89	176	70	256	463	618	68	884	160	285	778	77
Background Traffic Growth	8	16	6	23	42	56	4	53	10	17	47	5
Subtotal (NO BUILD - P.M.)	97	192	76	279	505	674	72	937	170	302	823	82
Percent Commercial Trips Generated(Entering)	0.00%	17.75%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	9.17%	12.41%	0.00%	0.00%
Percent Commercial Trips Generated(Exiting)	0.00%	0.00%	0.00%	9.17%	17.75%	12.41%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Total Trips Generated	0	55	0	30	58	41	0	0	28	38	0	0
Total PM Peak Hour BUILD Volumes	97	247	76	309	563	715	72	937	198	340	823	82

Number of Commercial Trips Generated

Entering	196	173	A.M.	100% Commercial Development
Exiting	310	328	P.M.	

	Eastbound (Osuna Rd.)			Westbound (Osuna Rd.)			Northbound (2nd St.)			Southbound (2nd St.)		
2007 AM Peak Hr. Volumes	68	394	59	108	194	194	39	564	245	395	1,168	36
2007 PM Peak Hr. Volumes	92	181	72	264	477	637	69	902	163	291	792	79



Vista del Norte Commercial Development (Osuna Rd. / Vista del Norte)

Projected Turning Movements Worksheet

Osuna Rd. / Edith Blvd.

2007 Plan - with Park

INTERSECTION:

E-W Street: Osuna Rd.

(2)

N-S Street: Edith Blvd.

Year of Existing Counts

2005

Implementation Year

2009

Growth Rates

Existing Volumes

Background Traffic Growth

Subtotal (NO BUILD - A.M.)

Percent Commercial Trips Generated(Entering)

Percent Commercial Trips Generated(Exiting)

Total Trips Generated

Total AM Peak Hour BUILD Volumes

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
27	819	225	152	361	64	144	214	142	164	347	24
3	98	27	6	14	3	12	17	11	20	42	3
30	917	252	158	375	67	156	231	153	184	389	27
0.00%	39.33%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	7.21%	3.26%	0.00%	0.00%
0.00%	0.00%	0.00%	7.21%	39.33%	3.26%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
0	77	0	12	68	6	0	0	14	6	0	0
30	994	252	170	443	73	156	231	167	190	389	27

Existing Volumes

Background Traffic Growth

Subtotal (NO BUILD - P.M.)

Percent Commercial Trips Generated(Entering)

Percent Commercial Trips Generated(Exiting)

Total Trips Generated

Total PM Peak Hour BUILD Volumes

Eastbound (Osuna Rd.)			Westbound (Osuna Rd.)			Northbound (Edith Blvd.)			Southbound (Edith Blvd.)		
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
45	431	116	155	971	152	278	437	150	101	272	52
5	52	14	6	39	6	22	35	12	12	33	6
50	483	130	161	1,010	158	300	472	162	113	305	58
0.00%	39.33%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	7.21%	3.26%	0.00%	0.00%
0.00%	0.00%	0.00%	7.21%	39.33%	3.26%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
0	122	0	24	129	11	0	0	22	10	0	0
50	605	130	185	1,139	169	300	472	184	123	305	58

Number of Commercial Trips Generated

Entering Exiting

196 173 A.M.

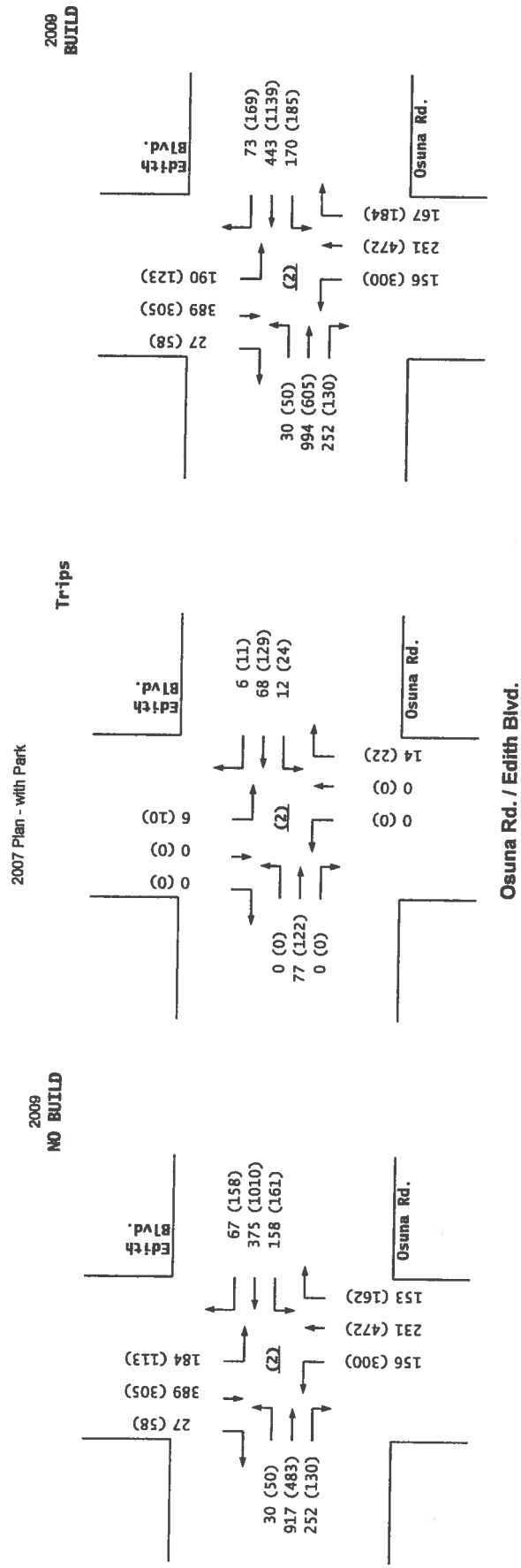
100% Commercial Development

310 328 P.M.

2007 AM Peak Hr. Volumes

2007 PM Peak Hr. Volumes

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	868	239	155	368	65	150	223	148	174	368	25
48	457	123	158	990	155	289	454	156	107	288	55



Vista del Norte Commercial Development (Osuna Rd. / Vista del Norte)

Projected Turning Movements Worksheet

Osuna Rd. / Chappel Dr.

2007 Plan - with Park

INTERSECTION :

E-W Street: Osuna Rd.

(3)

N-S Street: Chappel Dr.

Year of Existing Counts

2004

Implementation Year

2009

Growth Rates

Existing Volumes

Background Traffic Growth

Subtotal (NO BUILD - A.M.)

Percent Commercial Trips Generated(Entering)

Percent Commercial Trips Generated(Exiting)

Total Trips Generated

Total AM Peak Hour BUILD Volumes

6.00%			6.00%			5.00%			5.00%		
Eastbound (Osuna Rd.)			Westbound (Osuna Rd.)			Northbound (Chappel Dr.)			Southbound (Chappel Dr.)		
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
23	1,342	251	105	813	38	64	5	88	5	1	4
7	403	75	32	244	11	16	1	22	1	0	1
30	1,745	326	137	1,057	49	80	6	110	6	1	5
0.00%	0.00%	0.00%	0.00%	43.18%	0.00%	0.14%	0.00%	0.00%	0.00%	0.00%	0.00%
0.00%	43.18%	0.14%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
0	75	0	0	85	0	0	0	0	0	0	0
30	1,820	326	137	1,142	49	80	6	110	6	1	5

Existing Volumes

Background Traffic Growth

Subtotal (NO BUILD - P.M.)

Percent Commercial Trips Generated(Entering)

Percent Commercial Trips Generated(Exiting)

Total Trips Generated

Total PM Peak Hour BUILD Volumes

Eastbound (Osuna Rd.)			Westbound (Osuna Rd.)			Northbound (Chappel Dr.)			Southbound (Chappel Dr.)		
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
3	810	61	94	1,430	5	209	2	151	48	20	24
1	243	18	28	429	2	52	1	38	12	5	6
4	1,053	79	122	1,859	7	261	3	189	60	25	30
0.00%	0.00%	0.00%	0.00%	43.18%	0.00%	0.14%	0.00%	0.00%	0.00%	0.00%	0.00%
0.00%	43.18%	0.14%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
0	142	0	0	134	0	0	0	0	0	0	0
4	1,195	79	122	1,993	7	261	3	189	60	25	30

Number of Commercial Trips Generated

Entering Exiting

196 173 A.M.

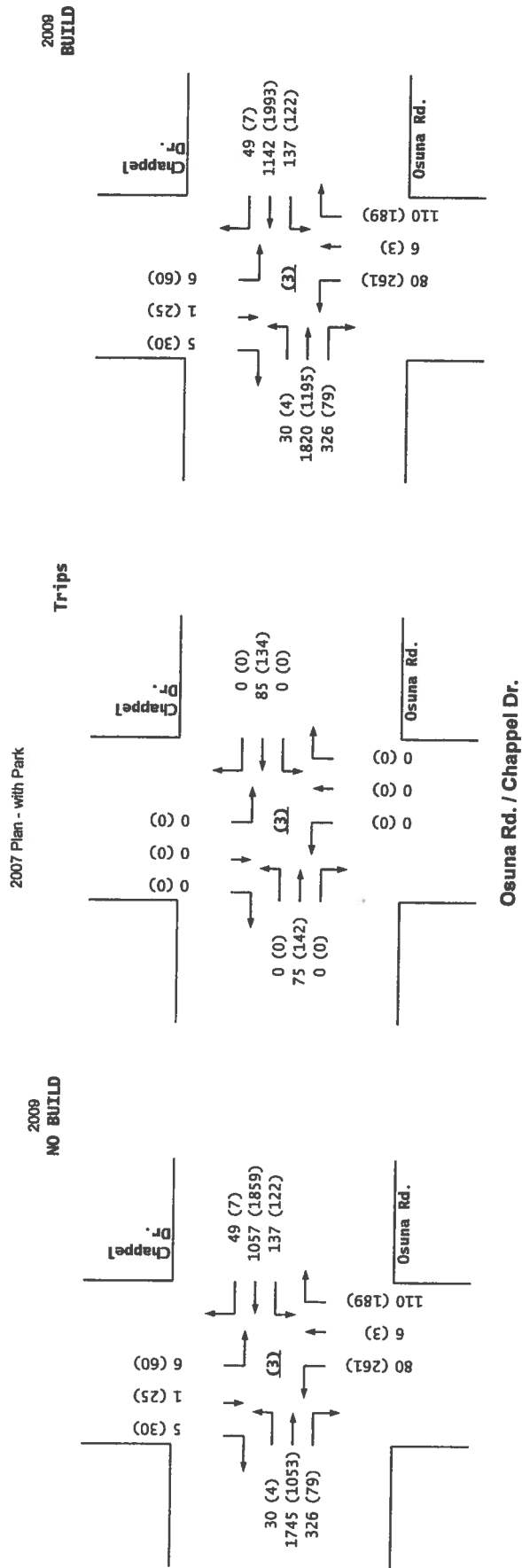
100% Commercial Development

310 328 P.M.

2007 AM Peak Hr. Volumes

2007 PM Peak Hr. Volumes

Eastbound (Osuna Rd.)			Westbound (Osuna Rd.)			Northbound (Chappel Dr.)			Southbound (Chappel Dr.)		
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
27	1584	296	124	959	45	74	6	101	6	1	5
4	956	72	111	1,687	6	240	2	174	55	23	28



Vista del Norte Commercial Development (Osuna Rd. / Vista del Norte)
Projected Turning Movements Worksheet
Osuna Rd. / Academy Parkway

2007 Plan - with Park

INTERSECTION:

E-W Street: Osuna Rd.
 N-S Street: Academy Parkway

(4)

Year of Existing Counts
 Implementation Year

2006
 2009

Growth Rates

Existing Volumes

Background Traffic Growth

Subtotal (NO BUILD - A.M.)

Percent Commercial Trips Generated(Entering)

Percent Commercial Trips Generated(Exiting)

Total Trips Generated

Total AM Peak Hour BUILD Volumes

6.00%			6.00%			5.00%			5.00%		
Eastbound (Osuna Rd.)			Westbound (Osuna Rd.)			Northbound (Academy Parkway)			Southbound (Academy Parkway)		
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
54	1,303	4	39	845	89	8	0	23	52	0	17
10	235	1	7	152	16	1	0	3	8	0	3
64	1,538	5	46	997	105	7	0	26	60	0	20
0.00%	0.00%	0.00%	0.00%	43.18%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
0.00%	43.18%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
0	75	0	0	85	0	0	0	0	0	0	0
64	1,613	5	46	1,082	105	7	0	26	60	0	20

Existing Volumes

Background Traffic Growth

Subtotal (NO BUILD - P.M.)

Percent Commercial Trips Generated(Entering)

Percent Commercial Trips Generated(Exiting)

Total Trips Generated

Total PM Peak Hour BUILD Volumes

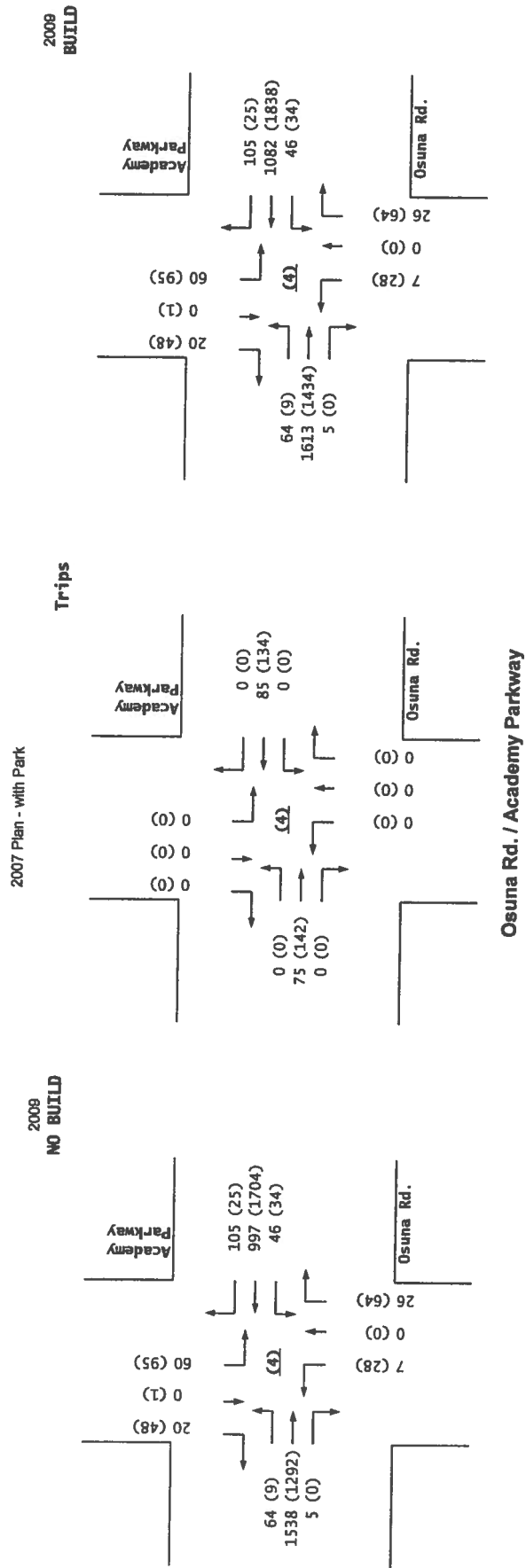
6.00%			6.00%			5.00%			5.00%		
Eastbound (Osuna Rd.)			Westbound (Osuna Rd.)			Northbound (Academy Parkway)			Southbound (Academy Parkway)		
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
8	1,095	0	29	1,444	21	24	0	56	83	1	42
1	197	0	5	260	4	4	0	8	12	0	6
9	1,292	0	34	1,704	25	28	0	64	95	1	48
0.00%	0.00%	0.00%	0.00%	43.18%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
0.00%	43.18%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
0	142	0	0	134	0	0	0	0	0	0	0
9	1,434	0	34	1,838	25	28	0	64	95	1	48

Number of Commercial Trips Generated

Entering	196	173	A.M.	100% Commercial Development
Exiting	310	328	P.M.	

2007 AM Peak Hr. Volumes
 2007 PM Peak Hr. Volumes

Eastbound (Osuna Rd.)			Westbound (Osuna Rd.)			Northbound (Academy Parkway)			Southbound (Academy Parkway)		
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
57	1,381	4	41	896	94	8	0	24	55	0	18
8	1,161	0	31	1,531	22	25	0	59	87	1	44



Vista del Norte Commercial Development (Osuna Rd. / Vista del Norte)
Projected Turning Movements Worksheet
Osuna Rd. / Jefferson St.

2007 Plan - with Park

INTERSECTION :

E-W Street: **Osuna Rd.**
 N-S Street: **Jefferson St.**

(5)

Year of Existing Counts
 Implementation Year

2004

2009

Growth Rates

Existing Volumes

Background Traffic Growth

Subtotal (NO BUILD - A.M.)

Percent Commercial Trips Generated(Entering)

Percent Commercial Trips Generated(Exiting)

Total Trips Generated

Total AM Peak Hour BUILD Volumes

6.00%			3.00%			2.00%			2.00%		
Eastbound (Osuna Rd.)			Westbound (Osuna Rd.)			Northbound (Jefferson St.)			Southbound (Jefferson St.)		
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
236	1,081	154	182	921	262	122	227	42	197	374	180
71	324	46	27	138	39	12	23	4	20	37	18
307	1,405	200	209	1,059	301	134	250	46	217	411	176
0.00%	0.00%	0.00%	0.00%	33.16%	0.00%	1.09%	0.00%	0.00%	0.00%	0.00%	8.93%
8.93%	33.16%	1.09%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
15	57	2	0	65	0	2	0	0	0	0	18
322	1,462	202	209	1,124	301	136	250	46	217	411	194

Existing Volumes

Background Traffic Growth

Subtotal (NO BUILD - P.M.)

Percent Commercial Trips Generated(Entering)

Percent Commercial Trips Generated(Exiting)

Total Trips Generated

Total PM Peak Hour BUILD Volumes

6.00%			3.00%			2.00%			2.00%		
Eastbound (Osuna Rd.)			Westbound (Osuna Rd.)			Northbound (Jefferson St.)			Southbound (Jefferson St.)		
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
248	1,487	81	88	1,018	201	291	557	264	335	342	303
74	446	24	13	152	30	29	56	26	34	34	30
322	1,933	105	101	1,168	231	320	613	290	369	376	333
0.00%	0.00%	0.00%	0.00%	33.16%	0.00%	1.09%	0.00%	0.00%	0.00%	0.00%	8.93%
8.93%	33.16%	1.09%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
29	109	4	0	103	0	3	0	0	0	0	28
351	2,042	109	101	1,271	231	323	613	290	369	376	361

Number of Commercial Trips Generated

Entering Existing

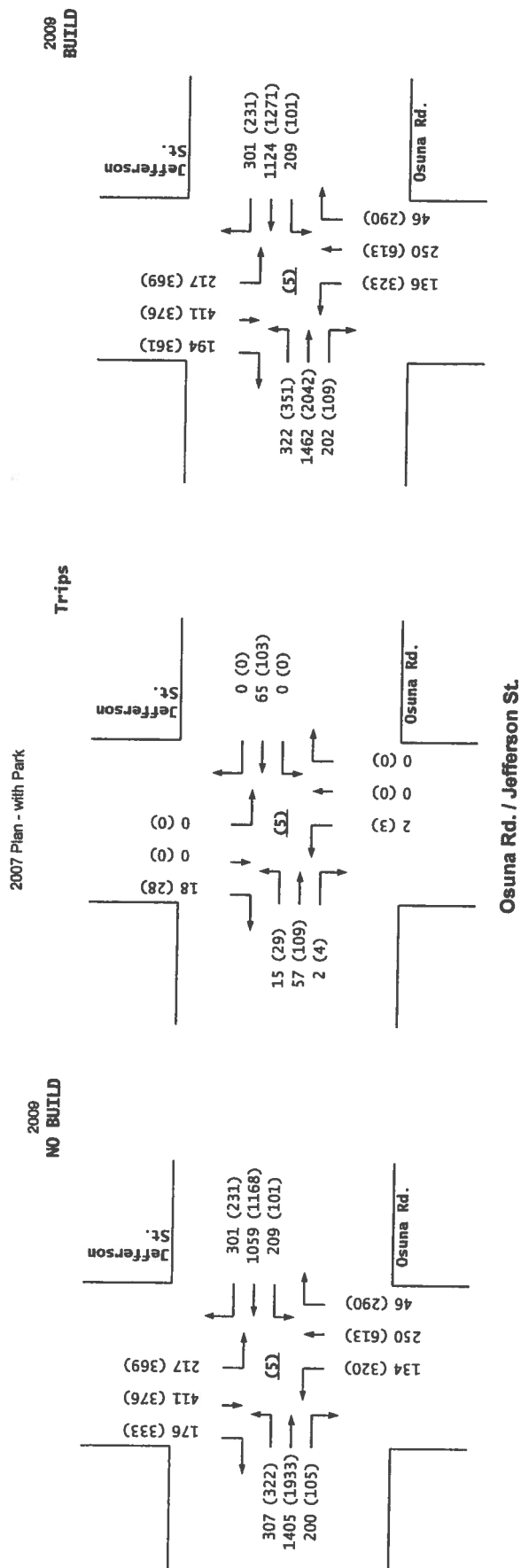
198 173 A.M.
 310 328 P.M.

100% Commercial Development

2007 AM Peak Hr. Volumes

2007 PM Peak Hr. Volumes

Eastbound (Osuna Rd.)			Westbound (Osuna Rd.)			Northbound (Jefferson St.)			Southbound (Jefferson St.)		
278	1,276	182	198	1,004	286	129	241	45	209	396	170
293	1,755	98	96	1,107	219	308	590	280	355	383	321



Vista del Norte Commercial Development (Osuna Rd. / Vista del Norte)

Projected Turning Movements Worksheet

Osuna Rd. / Vista del Norte

2007 Plan - with Park

INTERSECTION:

E-W Street: Osuna Rd.
N-S Street: Vista del Norte

(6)

Year of Existing Counts

2006

Implementation Year

2009

Growth Rates

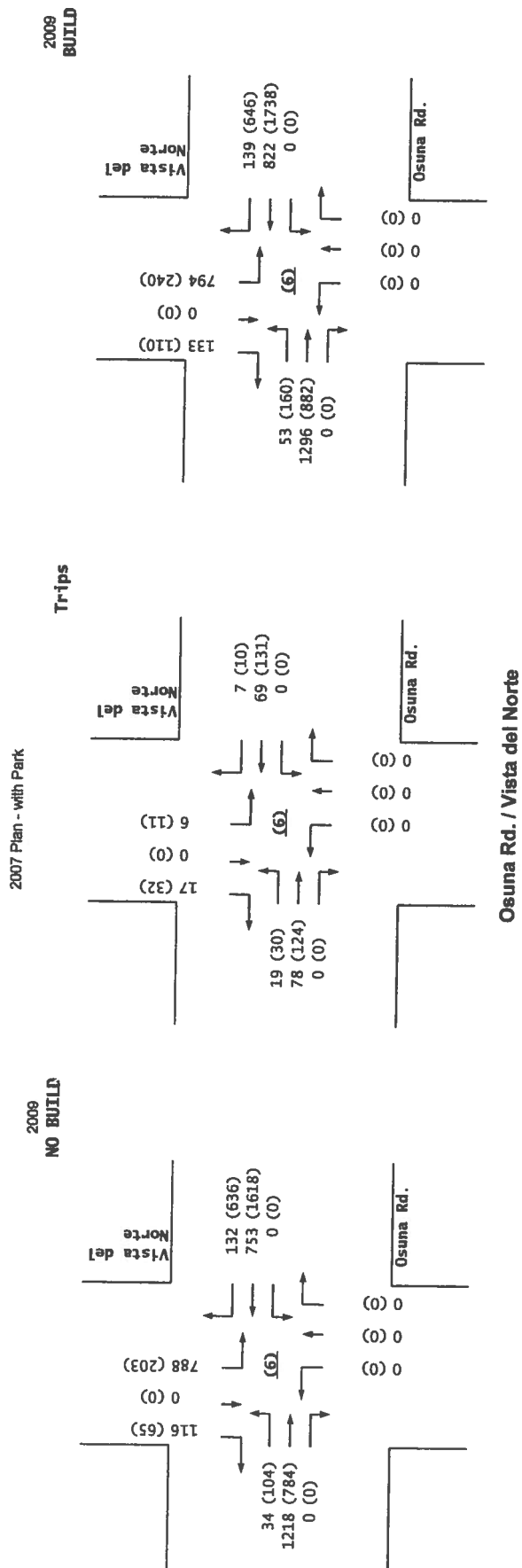
	1.00%			6.00%			5.00%			5.00%		
	Eastbound (Osuna Rd.)			Westbound (Osuna Rd.)			Northbound (Vista del Norte)			Southbound (Vista del Norte)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	21	1,183	0	0	638	91	0	0	0	665	0	96
Background Traffic Growth	1	35	0	0	115	16	0	0	0	100	0	14
Subtotal	22	1,218	0	0	753	107	0	0	0	765	0	110
Las Lomitas Industrial Park Trips	7	0	0	0	0	15	0	0	0	3	0	1
Agave Subdivision Trips (31 Lots)	5	0	0	0	0	10	0	0	0	20	0	5
Subtotal (NO BUILD - A.M.)	34	1,218	0	0	753	132	0	0	0	788	0	116
Percent Commercial Trips Generated(Entering)	9.80%	40.00%	0.00%	0.00%	0.00%	3.32%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Percent Commercial Trips Generated(Exiting)	0.00%	0.00%	0.00%	0.00%	40.00%	0.00%	0.00%	0.00%	0.00%	3.32%	0.00%	9.80%
Total Trips Generated	19	78	0	0	69	7	0	0	0	6	0	17
Total AM Peak Hour BUILD Volumes	53	1,296	0	0	822	139	0	0	0	794	0	133

	Eastbound (Osuna Rd.)			Westbound (Osuna Rd.)			Northbound (Vista del Norte)			Southbound (Vista del Norte)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	94	781	0	0	1,371	519	0	0	0	155	0	47
Background Traffic Growth	3	23	0	0	247	93	0	0	0	23	0	7
Subtotal	97	784	0	0	1,618	612	0	0	0	178	0	54
Las Lomitas Industrial Park Trips	2	0	0	0	0	4	0	0	0	15	0	6
Agave Subdivision Trips (31 Lots)	5	0	0	0	0	20	0	0	0	10	0	5
Subtotal (NO BUILD - P.M.)	104	784	0	0	1,618	636	0	0	0	203	0	65
Percent Commercial Trips Generated(Entering)	9.80%	40.00%	0.00%	0.00%	0.00%	3.32%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Percent Commercial Trips Generated(Exiting)	0.00%	0.00%	0.00%	0.00%	40.00%	0.00%	0.00%	0.00%	0.00%	3.32%	0.00%	9.80%
Total Trips Generated	30	124	0	0	131	10	0	0	0	11	0	32
Subtotal PM Pk Hr. BUILD Volumes	134	908	0	0	1,749	646	0	0	0	214	0	97
Pass-by Trip Adjustments	26	-26	0	0	-11	0	0	0	0	26	0	13
Total PM Peak Hour BUILD Volumes	160	882	0	0	1,738	646	0	0	0	240	0	110

Number of Commercial Trips Generated

Entering	196	173	A.M.	100% Commercial Development
Exiting	310	328	P.M.	

	Eastbound (Osuna Rd.)			Westbound (Osuna Rd.)			Northbound (Vista del Norte)			Southbound (Vista del Norte)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
2007 AM Peak Hr. Volumes	21	1195	0	0	676	96	0	0	0	698	0	101
2007 PM Peak Hr. Volumes	95	769	0	0	1,453	550	0	0	0	163	0	49



Vista del Norte Commercial Development (Osuna Rd. / Vista del Norte)
Projected Turning Movements Worksheet
Vista del Norte / Las Lomitas

2007 Plan - with Park

INTERSECTION : E-W Street: Vista del Norte
 N-S Street: Las Lomitas
 Year of Existing Counts: 2006
 Implementation Year: 2009

(7)

	5.00%			5.00%			5.00%			5.00%		
	Eastbound (Vista del Norte)			Westbound (Vista del Norte)			Northbound (Las Lomitas)			Southbound (Las Lomitas)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	32	84	0	0	15	62	0	0	0	160	0	13
Background Traffic Growth	5	13	0	0	2	9	0	0	0	24	0	2
Subtotal	37	97	0	0	17	71	0	0	0	184	0	15
Las Lomitas Industrial Park Trips	0	0	0	0	0	22	0	0	0	5	0	0
Subtotal (NO BUILD - A.M.)	37	97	0	0	17	93	0	0	0	189	0	15
Percent Commercial Trips Generated(Entering)	0.00%	2.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.51%	0.00%	0.00%
Percent Commercial Trips Generated(Exiting)	0.00%	0.00%	0.00%	0.00%	2.00%	1.51%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Total Trips Generated	0	4	0	0	3	3	0	0	0	3	0	0
Total AM Peak Hour BUILD Volumes	37	101	0	0	20	96	0	0	0	192	0	15

	Eastbound (Vista del Norte)			Westbound (Vista del Norte)			Northbound (Las Lomitas)			Southbound (Las Lomitas)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	15	32	0	0	91	180	0	0	0	84	0	51
Background Traffic Growth	2	5	0	0	14	27	0	0	0	13	0	8
Subtotal	17	37	0	0	105	207	0	0	0	97	0	59
Las Lomitas Industrial Park Trips	0	0	0	0	0	6	0	0	0	21	0	0
Subtotal (NO BUILD - P.M.)	17	37	0	0	105	213	0	0	0	118	0	59
Percent Commercial Trips Generated(Entering)	0.00%	2.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.51%	0.00%	0.00%
Percent Commercial Trips Generated(Exiting)	0.00%	0.00%	0.00%	0.00%	2.00%	1.51%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Total Trips Generated	0	6	0	0	7	5	0	0	0	5	0	0
Total PM Peak Hour BUILD Volumes	17	43	0	0	112	218	0	0	0	123	0	59

Number of Commercial Trips Generated

Entering	196	173	A.M.	100% Commercial Development
Exiting	310	328	P.M.	

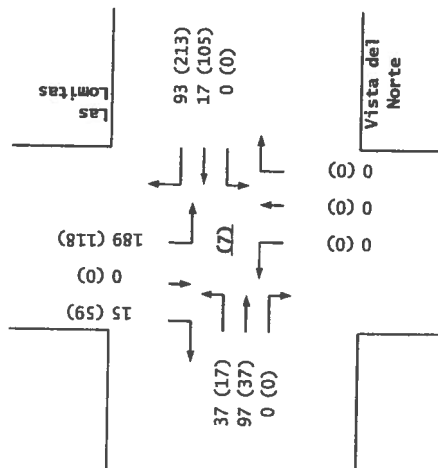
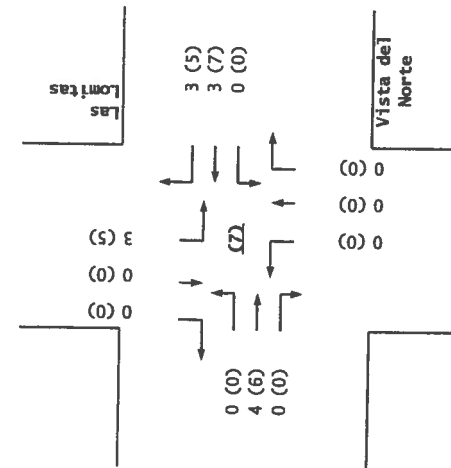
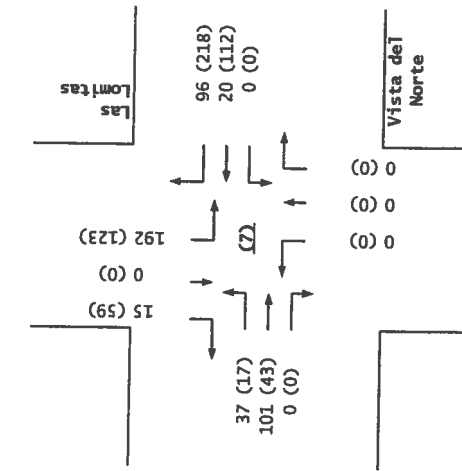
	Eastbound (Vista del Norte)			Westbound (Vista del Norte)			Northbound (Las Lomitas)			Southbound (Las Lomitas)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
2007 AM Peak Hr. Volumes	34	88	0	0	16	65	0	0	0	168	0	14
2007 PM Peak Hr. Volumes	16	34	0	0	96	189	0	0	0	88	0	54

2007 Plan - with Park

2009
BUILD

Trips

2009
NO BUILD



Vista del Norte / Las Lomitas

Vista del Norte Commercial Development (Osuna Rd. / Vista del Norte)

Projected Turning Movements Worksheet

El Pueblo Rd. / Las Lomitas Dr.

2007 Plan - with Park

INTERSECTION:

E-W Street: El Pueblo Rd.
N-S Street: Las Lomitas Dr.

(8)

Year of Existing Counts

2006

Implementation Year

2009

Growth Rates

	5.00%			5.00%			5.00%			5.00%		
	Eastbound (El Pueblo Rd.)			Westbound (El Pueblo Rd.)			Northbound (Las Lomitas Dr.)			Southbound (Las Lomitas Dr.)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	0	377	119	17	77	0	73	0	86	0	0	0
Background Traffic Growth	0	57	18	3	12	0	11	0	13	0	0	0
Subtotal	0	434	137	20	89	0	84	0	99	0	0	0
Vista del Norte Industrial Park Trips	0	82	0	0	17	0	0	0	1	0	0	0
Las Lomitas Industrial Park Trips	0	0	95	140	0	0	20	0	29	0	0	0
Subtotal (NO BUILD - A.M.)	0	516	232	160	106	0	104	0	129	0	0	0
Percent Commercial Trips Generated(Entering)	0.00%	0.00%	0.30%	0.10%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Percent Commercial Trips Generated(Exiting)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.30%	0.00%	0.10%	0.00%	0.00%	0.00%
Total Trips Generated	0	0	1	0	0	0	1	0	0	0	0	0
Total AM Peak Hour BUILD Volumes	0	516	233	160	106	0	105	0	129	0	0	0

	Eastbound (El Pueblo Rd.)			Westbound (El Pueblo Rd.)			Northbound (Las Lomitas Dr.)			Southbound (Las Lomitas Dr.)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	0	64	85	74	141	0	163	0	45	0	0	0
Background Traffic Growth	0	10	13	11	21	0	24	0	7	0	0	0
Subtotal	0	74	98	85	162	0	187	0	52	0	0	0
Vista del Norte Industrial Park Trips	0	22	0	2	81	0	0	0	0	0	0	0
Las Lomitas Industrial Park Trips	0	0	25	36	0	0	93	0	136	0	0	0
Subtotal (NO BUILD - P.M.)	0	96	123	123	243	0	280	0	188	0	0	0
Percent Commercial Trips Generated(Entering)	0.00%	0.00%	0.30%	0.10%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Percent Commercial Trips Generated(Exiting)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.30%	0.00%	0.10%	0.00%	0.00%	0.00%
Total Trips Generated	0	0	1	0	0	0	1	0	0	0	0	0
Total PM Peak Hour BUILD Volumes	0	96	124	123	243	0	281	0	188	0	0	0

Number of Commercial Trips Generated

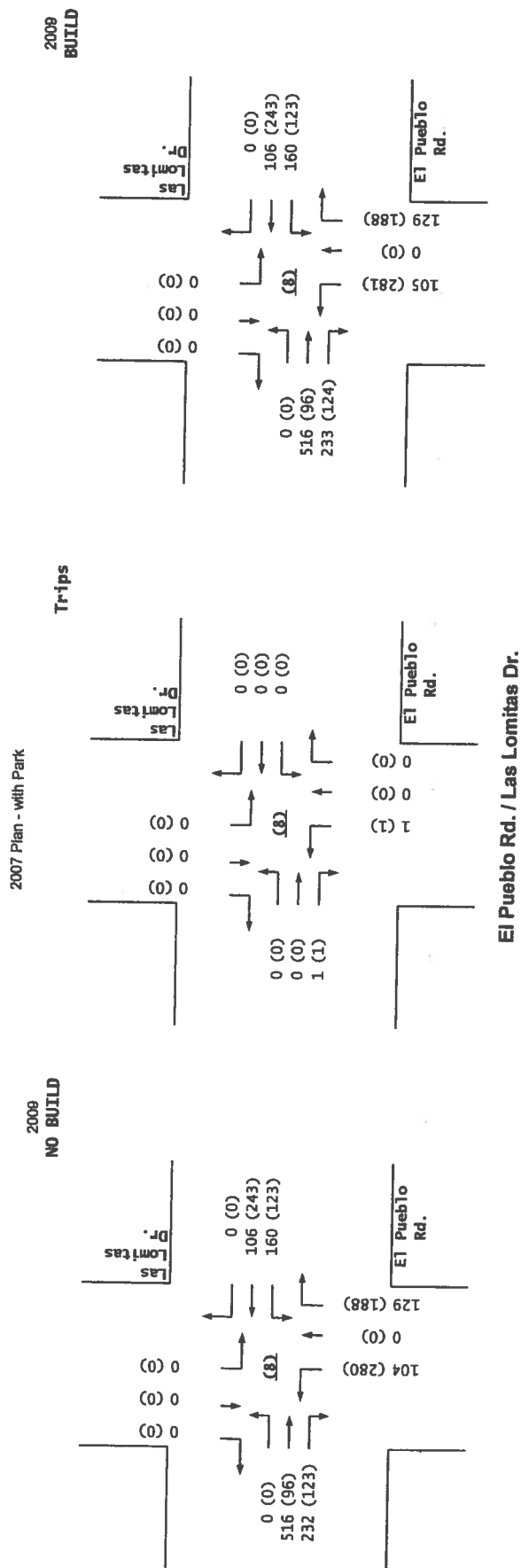
Entering Exiting

196 173 A.M.

100% Commercial Development

310 328 P.M.

	Eastbound (El Pueblo Rd.)			Westbound (El Pueblo Rd.)			Northbound (Las Lomitas Dr.)			Southbound (Las Lomitas Dr.)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
2007 AM Peak Hr. Volumes	0	396	125	18	81	0	77	0	90	0	0	0
2007 PM Peak Hr. Volumes	0	67	89	78	148	0	171	0	47	0	0	0



Vista del Norte Commercial Development (Osuna Rd. / Vista del Norte)
Projected Turning Movements Worksheet
Osuna Rd. / Driveway "A"

2007 Plan - with Park

INTERSECTION:

E-W Street: Osuna Rd.
 N-S Street: Driveway "A"

(9)

Year of Existing Counts
 Implementation Year

2006
 2009

Growth Rates

Existing Volumes

Background Traffic Growth

Subtotal (NO BUILD - A.M.)

Percent Commercial Trips Generated(Entering)

Percent Commercial Trips Generated(Exiting)

Total Trips Generated

Total AM Peak Hour BUILD Volumes

6.00%			6.00%			5.00%			5.00%		
Eastbound (Osuna Rd.)			Westbound (Osuna Rd.)			Northbound (Driveway "A")			Southbound (Driveway "A")		
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
0	1,848	0	0	729	0	0	0	0	0	0	0
0	333	0	0	131	0	0	0	0	0	0	0
0	2,181	0	0	860	0	0	0	0	0	0	0
20.00%	0.00%	0.00%	0.00%	23.32%	20.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
0.00%	23.32%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	20.00%	0.00%	20.00%
39	40	0	0	46	39	0	0	0	35	0	35
39	2,221	0	0	906	39	0	0	0	35	0	35

Existing Volumes

Background Traffic Growth

Subtotal (NO BUILD - P.M.)

Percent Commercial Trips Generated(Entering)

Percent Commercial Trips Generated(Exiting)

Total Trips Generated

Subtotal PM Pk Hr. BUILD Volumes

Pass-by Trip Adjustments

Total PM Peak Hour BUILD Volumes

Eastbound (Osuna Rd.)			Westbound (Osuna Rd.)			Northbound (Driveway "A")			Southbound (Driveway "A")		
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
0	916	0	0	1,890	0	0	0	0	0	0	0
0	165	0	0	340	0	0	0	0	0	0	0
0	1,081	0	0	2,230	0	0	0	0	0	0	0
20.00%	0.00%	0.00%	0.00%	23.32%	20.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
0.00%	23.32%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	20.00%	0.00%	20.00%
62	76	0	0	72	62	0	0	0	66	0	66
62	1,157	0	0	2,302	62	0	0	0	66	0	66
18	-18	0	0	-37	39	0	0	0	20	0	41
80	1,139	0	0	2,265	101	0	0	0	86	0	107

Number of Commercial Trips Generated

Entering Exiting

196 173 A.M.
 310 328 P.M.

100% Commercial Development

AM Pass-by Trips

Percent Entering

Volume Entering

Percent Exiting

Volume Exiting

Net AM Passby Trips

Eastbound (Osuna Rd.)			Westbound (Osuna Rd.)			Northbound (Driveway "A")			Southbound (Driveway "A")		
0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
0	0	0	0	0	0	0	0	0	0	0	0
0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
0	0	0	0	0	0	0	0	0	0	0	0

PM Pass-by Trips

Percent Entering

Volume Entering

Percent Exiting

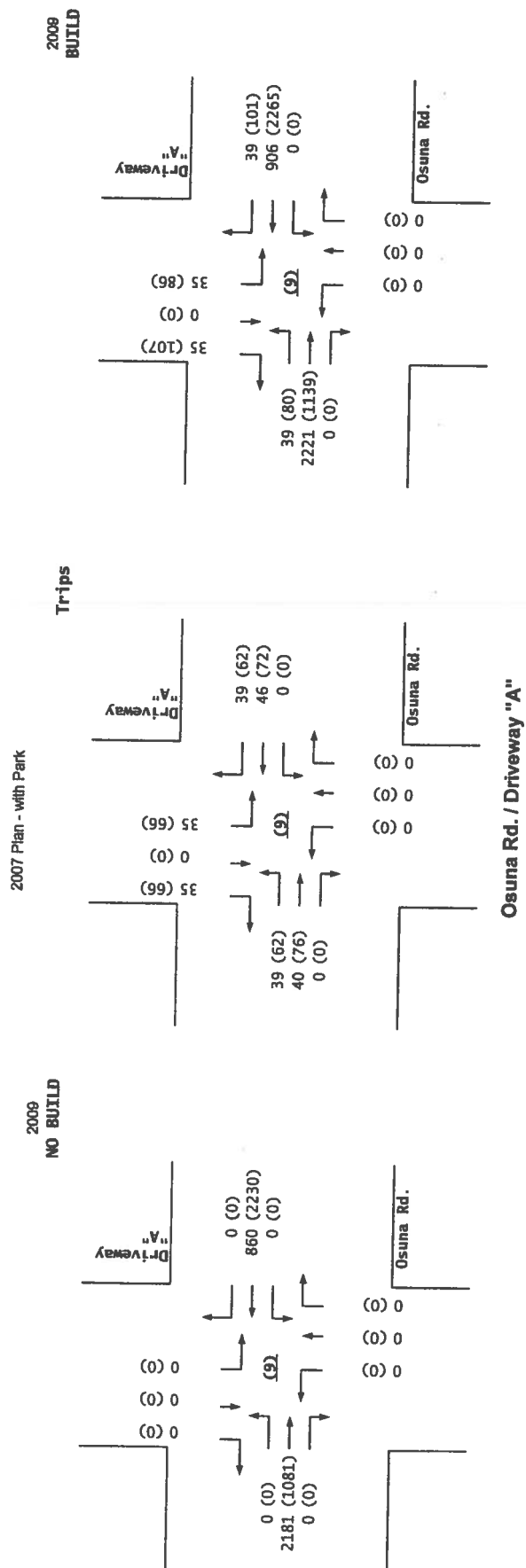
Volume Exiting

Net PM Passby Trips

Eastbound (Osuna Rd.)			Westbound (Osuna Rd.)			Northbound (Driveway "A")			Southbound (Driveway "A")		
15.00%	-16.00%	0.00%	0.00%	-67.00%	34.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
18	-18	0	0	-77	39	0	0	0	0	0	0
0.00%	0.00%	0.00%	0.00%	33.00%	0.00%	0.00%	0.00%	0.00%	16.00%	0.00%	34.00%
0	0	0	0	40	0	0	0	0	20	0	41
18	-18	0	0	-37	39	0	0	0	20	0	41

Pass-by Trips

0 0 AM
 115 122 PM



Vista del Norte Commercial Development (Osuna Rd. / Vista del Norte)

Projected Turning Movements Worksheet

Driveway "B" / Vista del Norte

2007 Plan - with Park

(10)

INTERSECTION:

E-W Street: Driveway "B"
N-S Street: Vista del Norte

Year of Existing Counts

2006

Implementation Year

2009

Growth Rates

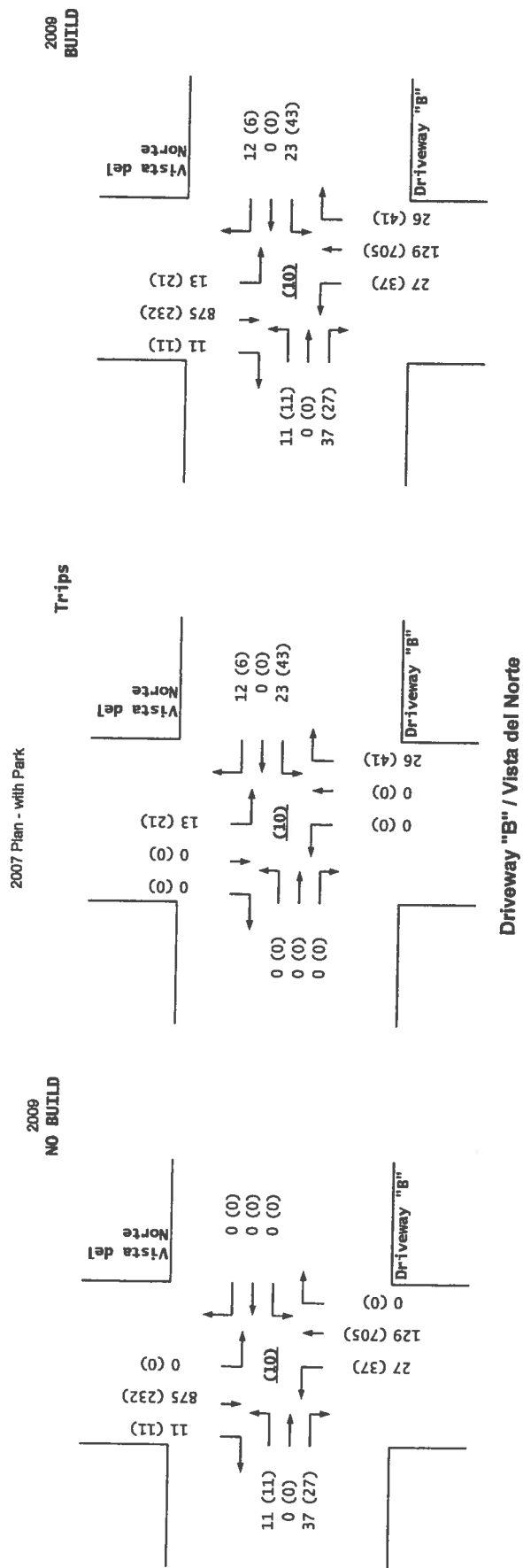
	5.00%			5.00%			5.00%			5.00%		
	Eastbound (Driveway "B")			Westbound (Driveway "B")			Northbound (Vista del Norte)			Southbound (Vista del Norte)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	5	0	10	0	0	0	10	112	0	0	761	5
Background Traffic Growth	1	0	2	0	0	0	2	17	0	0	114	1
Subtotal	6	0	12	0	0	0	12	129	0	0	875	6
Vista del Norte Industrial Park Trips	0	0	0	0	0	0	0	0	0	0	0	0
Agave Subdivision Trips (31 Lots)	5	0	25	0	0	0	15	0	0	0	0	5
Subtotal (NO BUILD - A.M.)	11	0	37	0	0	0	27	129	0	0	875	11
Percent Commercial Trips Generated(Entering)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	13.12%	6.88%	0.00%	0.00%
Percent Commercial Trips Generated(Exiting)	0.00%	0.00%	0.00%	13.12%	0.00%	6.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Total Trips Generated	0	0	0	23	0	12	0	0	26	13	0	0
Total AM Peak Hour BUILD Volumes	11	0	37	23	0	12	27	129	26	13	875	11

	Eastbound (Driveway "B")			Westbound (Driveway "B")			Northbound (Vista del Norte)			Southbound (Vista del Norte)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	5	0	10	0	0	0	10	613	0	0	202	5
Background Traffic Growth	1	0	2	0	0	0	2	92	0	0	30	1
Subtotal	6	0	12	0	0	0	12	705	0	0	232	6
Vista del Norte Industrial Park Trips	0	0	0	0	0	0	0	0	0	0	0	0
Agave Subdivision Trips (31 Lots)	5	0	15	0	0	0	25	0	0	0	0	5
Subtotal (NO BUILD - P.M.)	11	0	27	0	0	0	37	705	0	0	232	11
Percent Commercial Trips Generated(Entering)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	13.12%	6.88%	0.00%	0.00%
Percent Commercial Trips Generated(Exiting)	0.00%	0.00%	0.00%	13.12%	0.00%	1.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Total Trips Generated	0	0	0	43	0	6	0	0	41	21	0	0
Subtotal PM Pk Hr. BUILD Volumes	11	0	27	43	0	6	37	705	41	21	232	11
Pass-by Trip Adjustments	0	0	0	0	0	0	0	0	0	0	0	0
Total PM Peak Hour BUILD Volumes	11	0	27	43	0	6	37	705	41	21	232	11

Number of Commercial Trips Generated

Entering	196	173	A.M.	100% Commercial Development
Exiting	310	328	P.M.	

	Eastbound (Driveway "B")			Westbound (Driveway "B")			Northbound (Vista del Norte)			Southbound (Vista del Norte)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
2007 AM Peak Hr. Volumes	5	0	11	0	0	0	11	118	0	0	799	5
2007 PM Peak Hr. Volumes	5	0	11	0	0	0	11	644	0	0	212	5



Vista del Norte Commercial Development (Osuna Rd. / Vista del Norte)
Projected Turning Movements Worksheet
Osuna Rd. / Driveway "C"

2007 Plan - with Park

(11)

INTERSECTION:

E-W Street: Osuna Rd.
 N-S Street: Driveway "C"

Year of Existing Counts 2006
 Implementation Year 2009

Growth Rates

	6.00%			6.00%			5.00%			5.00%		
	Eastbound (Osuna Rd.)			Westbound (Osuna Rd.)			Northbound (Driveway "C")			Southbound (Driveway "C")		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	0	1,848	0	0	729	0	0	0	0	0	0	0
Background Traffic Growth	0	333	0	0	131	0	0	0	0	0	0	0
Subtotal (NO BUILD - A.M.)	0	2,181	0	0	860	0	0	0	0	0	0	0
Percent Commercial Trips Generated(Entering)	20.00%	20.00%	0.00%	0.00%	3.32%	20.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Percent Commercial Trips Generated(Exiting)	0.00%	3.32%	0.00%	0.00%	20.00%	0.00%	0.00%	0.00%	0.00%	20.00%	0.00%	20.00%
Total Trips Generated	39	45	0	0	42	39	0	0	0	35	0	35
Total AM Peak Hour BUILD Volumes	39	2,226	0	0	902	39	0	0	0	35	0	35

	Eastbound (Osuna Rd.)			Westbound (Osuna Rd.)			Northbound (Driveway "C")			Southbound (Driveway "C")		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	0	916	0	0	1,890	0	0	0	0	0	0	0
Background Traffic Growth	0	165	0	0	340	0	0	0	0	0	0	0
Subtotal (NO BUILD - P.M.)	0	1,081	0	0	2,230	0	0	0	0	0	0	0
Percent Commercial Trips Generated(Entering)	20.00%	20.00%	0.00%	0.00%	3.32%	20.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Percent Commercial Trips Generated(Exiting)	0.00%	3.32%	0.00%	0.00%	20.00%	0.00%	0.00%	0.00%	0.00%	20.00%	0.00%	20.00%
Total Trips Generated	62	73	0	0	76	62	0	0	0	66	0	66
Subtotal PM Pk Hr. BUILD Volumes	62	1,154	0	0	2,306	62	0	0	0	66	0	66
Pass-by Trip Adjustments	20	-18	0	0	-38	38	0	0	0	21	0	40
Total PM Peak Hour BUILD Volumes	82	1,136	0	0	2,268	100	0	0	0	87	0	106

Number of Commercial Trips Generated

Entering	196	173	A.M.	100% Commercial Development
Exiting	310	328	P.M.	

	Eastbound (Osuna Rd.)			Westbound (Osuna Rd.)			Northbound (Driveway "C")			Southbound (Driveway "C")		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
2007 AM Peak Hr. Volumes	0	1959	0	0	773	0	0	0	0	0	0	0
2007 PM Peak Hr. Volumes	0	971	0	0	2,003	0	0	0	0	0	0	0

	Eastbound (Osuna Rd.)			Westbound (Osuna Rd.)			Northbound (Driveway "C")			Southbound (Driveway "C")		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
AM Pass-by Trips	0	0	0	0	0	0	0	0	0	0	0	0
Percent Entering	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Volume Entering	0	0	0	0	0	0	0	0	0	0	0	0
Percent Exiting	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Volume Exiting	0	0	0	0	0	0	0	0	0	0	0	0
Net AM Passby Trips	0	0	0	0	0	0	0	0	0	0	0	0

	Eastbound (Osuna Rd.)			Westbound (Osuna Rd.)			Northbound (Driveway "C")			Southbound (Driveway "C")		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
PM Pass-by Trips	20	-38	0	0	-38	38	0	0	0	0	0	0
Percent Entering	17.00%	-33.00%	0.00%	0.00%	-33.00%	33.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Volume Entering	20	-38	0	0	-38	38	0	0	0	0	0	0
Percent Exiting	0.00%	16.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	17.00%	0.00%	33.00%
Volume Exiting	0	20	0	0	0	0	0	0	0	21	0	40
Net PM Passby Trips	20	-18	0	0	-38	38	0	0	0	21	0	40

Pass-by Trips

0	0	AM
116	122	PM

Vista del Norte Commercial Development (Osuna Rd. / Vista del Norte)

Projected Turning Movements SUMMARY PROPOSED DEVELOPMENT (2009) - 100% Development 2007 Plan - NO Park

INTERSECTION: Summary

Osuna Rd. / 2nd St.

- (1)
5.0% Truck
Existing (2007)
2009 (NO BUILD - A.M.)
2009 (BUILD - A.M.)

0.92			0.72			0.84			0.91			PHF
Eastbound (Osuna Rd.)			Westbound (Osuna Rd.)			Northbound (2nd St.)			Southbound (2nd St.)			
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
68	394	59	108	194	194	39	564	245	395	1,168	36	
72	417	62	114	205	205	40	586	254	410	1,214	37	
72	456	62	131	239	229	40	586	274	438	1,214	37	

- Existing (2007)
2009 (NO BUILD - P.M.)
2009 (BUILD - P.M.)

0.93			0.96			0.94			0.89			PHF
Eastbound (Osuna Rd.)			Westbound (Osuna Rd.)			Northbound (2nd St.)			Southbound (2nd St.)			
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
92	181	72	264	477	637	69	902	163	291	792	79	
97	192	76	279	505	674	72	937	170	302	823	82	
97	258	76	315	575	723	72	937	204	348	823	82	

Osuna Rd. / Edith Blvd.

- (2)
5.0% Truck
Existing (2007)
2009 (NO BUILD - A.M.)
2009 (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	868	239	155	368	65	150	223	148	174	368	25	
30	917	252	158	375	67	156	231	153	184	389	27	
30	1,004	252	172	450	73	156	231	169	191	389	27	

- Existing (2007)
2009 (NO BUILD - P.M.)
2009 (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	457	123	158	990	155	289	454	156	107	288	55	
50	483	130	161	1,010	158	300	472	162	113	305	58	
50	629	130	189	1,165	171	300	472	189	125	305	58	

Osuna Rd. / Chappel Dr.

- (3)
5.0% Truck
Existing (2007)
2009 (NO BUILD - A.M.)
2009 (BUILD - A.M.)

0.81			0.80			0.72			0.70			PHF
Eastbound (Osuna Rd.)			Westbound (Osuna Rd.)			Northbound (Chappel Dr.)			Southbound (Chappel Dr.)			
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
27	1,584	296	124	959	45	74	6	101	6	1	5	
30	1,745	326	137	1,057	49	80	6	110	6	1	5	
30	1,827	326	137	1,153	49	80	6	110	6	1	5	

- Existing (2007)
2009 (NO BUILD - P.M.)
2009 (BUILD - P.M.)

0.92			0.86			0.79			0.89			PHF
Eastbound (Osuna Rd.)			Westbound (Osuna Rd.)			Northbound (Chappel Dr.)			Southbound (Chappel Dr.)			
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
4	956	72	111	1,687	6	240	2	174	55	23	28	
4	1,053	79	122	1,859	7	261	3	189	60	25	30	
4	1,223	80	122	2,019	7	262	3	189	60	25	30	

Osuna Rd. / Academy Parkway

- (4)
5.0% Truck
Existing (2007)
2009 (NO BUILD - A.M.)
2009 (BUILD - A.M.)

0.93			0.84			0.80			0.86			PHF
Eastbound (Osuna Rd.)			Westbound (Osuna Rd.)			Northbound (Academy Parkway)			Southbound (Academy Parkway)			
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
57	1,381	4	41	896	94	6	0	24	55	0	18	
64	1,538	5	46	997	105	7	0	26	60	0	20	
64	1,620	5	46	1,093	105	7	0	26	60	0	20	

- Existing (2007)
2009 (NO BUILD - P.M.)
2009 (BUILD - P.M.)

0.89			0.93			0.87			0.90			PHF
Eastbound (Osuna Rd.)			Westbound (Osuna Rd.)			Northbound (Academy Parkway)			Southbound (Academy Parkway)			
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
8	1,161	0	31	1,531	22	25	0	59	87	1	44	
9	1,292	0	34	1,704	25	28	0	64	95	1	48	
9	1,462	0	34	1,864	25	28	0	64	95	1	48	

Vista del Norte Commercial Development (Osuna Rd. / Vista del Norte)

Projected Turning Movements SUMMARY PROPOSED DEVELOPMENT (2009) - 100% Development

2007 Plan - NO Park

INTERSECTION: Summary

Osuna Rd. / Jefferson St.

(5)

5.0% Truck
Existing (2007)
2009 (NO BUILD - A.M.)
2009 (BUILD - A.M.)

0.88			0.88			0.91			0.87			PHF
Eastbound (Osuna Rd.)			Westbound (Osuna Rd.)			Northbound (Jefferson St.)			Southbound (Jefferson St.)			
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
278	1,276	182	198	1,004	286	129	241	45	209	396	170	
307	1,405	200	209	1,059	301	134	250	46	217	411	176	
324	1,468	202	209	1,133	301	136	250	46	217	411	196	

Existing (2007)
2009 (NO BUILD - P.M.)
2009 (BUILD - P.M.)

0.94			0.91			0.90			0.80			PHF
Eastbound (Osuna Rd.)			Westbound (Osuna Rd.)			Northbound (Jefferson St.)			Southbound (Jefferson St.)			
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
293	1,755	96	96	1,107	219	308	590	280	355	363	321	
322	1,933	105	101	1,168	231	320	613	290	369	376	333	
357	2,063	109	101	1,291	231	324	613	290	369	376	366	

Osuna Rd. / Vista del Norte

(6)

5.0% Truck
Existing (2007)
2009 (NO BUILD - A.M.)
2009 (BUILD - A.M.)

0.87			0.73			0.90			0.80			PHF
Eastbound (Osuna Rd.)			Westbound (Osuna Rd.)			Northbound (Vista del Norte)			Southbound (Vista del Norte)			
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
21	1,195	0	0	676	96	0	0	0	698	0	101	
34	1,218	0	0	753	132	0	0	0	788	0	116	
56	1,307	0	0	829	139	0	0	0	794	0	135	

Existing (2007)
2009 (NO BUILD - P.M.)
2009 (BUILD - P.M.)

0.89			0.92			0.90			0.86			PHF
Eastbound (Osuna Rd.)			Westbound (Osuna Rd.)			Northbound (Vista del Norte)			Southbound (Vista del Norte)			
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
95	769	0	0	1,453	550	0	0	0	163	0	49	
104	784	0	0	1,618	636	0	0	0	203	0	65	
166	906	0	0	1,764	648	0	0	0	242	0	117	

Vista del Norte / Las Lomitas

(7)

2.0% Truck
Existing (2007)
2009 (NO BUILD - A.M.)
2009 (BUILD - A.M.)

0.80			0.80			0.85			0.90			PHF
Eastbound (Vista del Norte)			Westbound (Vista del Norte)			Northbound (Las Lomitas)			Southbound (Las Lomitas)			
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
34	88	0	0	16	65	0	0	0	168	0	14	
37	97	0	0	17	93	0	0	0	189	0	15	
37	101	0	0	21	96	0	0	0	192	0	15	

Existing (2007)
2009 (NO BUILD - P.M.)
2009 (BUILD - P.M.)

0.80			0.80			0.85			0.90			PHF
Eastbound (Vista del Norte)			Westbound (Vista del Norte)			Northbound (Las Lomitas)			Southbound (Las Lomitas)			
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
16	34	0	0	96	189	0	0	0	88	0	54	
17	37	0	0	105	213	0	0	0	118	0	59	
17	44	0	0	113	219	0	0	0	124	0	59	

El Pueblo Rd. / Las Lomitas Dr.

(8)

5.0% Truck
Existing (2007)
2009 (NO BUILD - A.M.)
2009 (BUILD - A.M.)

0.90			0.90			0.80			0.80			PHF
Eastbound (El Pueblo Rd.)			Westbound (El Pueblo Rd.)			Northbound (Las Lomitas Dr.)			Southbound (Las Lomitas Dr.)			
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
0	396	125	18	81	0	77	0	90	0	0	0	
0	516	232	160	106	0	104	0	129	0	0	0	
0	516	233	160	106	0	105	0	129	0	0	0	

Existing (2007)
2009 (NO BUILD - P.M.)
2009 (BUILD - P.M.)

0.90			0.90			0.80			0.80			PHF
Eastbound (El Pueblo Rd.)			Westbound (El Pueblo Rd.)			Northbound (Las Lomitas Dr.)			Southbound (Las Lomitas Dr.)			
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
0	67	89	78	148	0	171	0	47	0	0	0	
0	96	123	123	243	0	280	0	188	0	0	0	
0	96	124	123	243	0	281	0	188	0	0	0	

Vista del Norte Commercial Development (Osuna Rd. / Vista del Norte)

Projected Turning Movements SUMMARY

PROPOSED DEVELOPMENT (2009) - 100% Development

2007 Plan - NO Park

INTERSECTION: Summary

Osuna Rd. / Driveway "A"

(9)

5.0% Truck

Existing (2007)

2009 (NO BUILD - A.M.)

2009 (BUILD - A.M.)

0.85			0.85			0.85			0.85			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	
0	1,959	0	0	773	0	0	0	0	0	0	0	0
0	2,181	0	0	860	0	0	0	0	0	0	0	0
44	2,225	0	0	912	44	0	0	0	38	0	38	

Existing (2007)

2009 (NO BUILD - P.M.)

2009 (BUILD - P.M.)

0.85			0.85			0.85			0.85			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	
0	971	0	0	2,003	0	0	0	0	0	0	0	0
0	1,081	0	0	2,230	0	0	0	0	0	0	0	0
96	1,151	0	0	2,271	122	0	0	0	103	0	130	

Driveway "B" / Vista del Norte

(10)

5.0% Truck

Existing (2007)

2009 (NO BUILD - A.M.)

2009 (BUILD - A.M.)

0.85			0.85			0.85			0.85			PHF
Eastbound (Driveway "B")			Westbound (Driveway "B")			Northbound (Vista del Norte)			Southbound (Vista del Norte)			
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
5	0	11	0	0	0	11	118	0	0	799	5	
11	0	37	0	0	0	27	129	0	0	875	11	
11	0	37	25	0	13	27	129	29	15	875	11	

Existing (2007)

2009 (NO BUILD - P.M.)

2009 (BUILD - P.M.)

0.85			0.85			0.85			0.85			PHF
Eastbound (Driveway "B")			Westbound (Driveway "B")			Northbound (Vista del Norte)			Southbound (Vista del Norte)			
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
5	0	11	0	0	0	11	644	0	0	212	5	
11	0	27	0	0	0	37	705	0	0	232	11	
11	0	27	52	0	7	37	705	49	25	232	11	

Osuna Rd. / Driveway "C"

(11)

5.0% Truck

Existing (2007)

2009 (NO BUILD - A.M.)

2009 (BUILD - A.M.)

0.85			0.85			0.85			0.85			PHF
Eastbound (Osuna Rd.)			Westbound (Osuna Rd.)			Northbound (Driveway "C")			Southbound (Driveway "C")			
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
0	1,959	0	0	773	0	0	0	0	0	0	0	0
0	2,181	0	0	860	0	0	0	0	0	0	0	0
44	2,231	0	0	905	44	0	0	0	38	0	38	

Existing (2007)

2009 (NO BUILD - P.M.)

2009 (BUILD - P.M.)

0.85			0.85			0.85			0.85			PHF
Eastbound (Osuna Rd.)			Westbound (Osuna Rd.)			Northbound (Driveway "C")			Southbound (Driveway "C")			
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
0	971	0	0	2,003	0	0	0	0	0	0	0	0
0	1,081	0	0	2,230	0	0	0	0	0	0	0	0
96	1,146	0	0	2,275	120	0	0	0	104	0	128	

Vista del Norte Commercial Development (Osuna Rd. / Vista del Norte)

Projected Turning Movements Worksheet

Osuna Rd. / 2nd St.

2007 Plan - NO Park

INTERSECTION:

E-W Street: Osuna Rd.

(1)

N-S Street: 2nd St.

Year of Existing Counts

2006

Implementation Year

2009

Growth Rates

Existing Volumes

Background Traffic Growth

Subtotal (NO BUILD - A.M.)

Percent Commercial Trips Generated(Entering)

Percent Commercial Trips Generated(Exiting)

Total Trips Generated

Total AM Peak Hour BUILD Volumes

3.00%			3.00%			2.00%			2.00%		
Eastbound (Osuna Rd.)			Westbound (Osuna Rd.)			Northbound (2nd St.)			Southbound (2nd St.)		
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
66	383	57	105	188	188	38	553	240	387	1,145	35
6	34	5	9	17	17	2	33	14	23	69	2
72	417	62	114	205	205	40	586	254	410	1,214	37
0.00%	17.75%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	9.17%	12.41%	0.00%	0.00%
0.00%	0.00%	0.00%	9.17%	17.75%	12.41%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
0	39	0	17	34	24	0	0	20	28	0	0
72	456	62	131	239	229	40	586	274	438	1,214	37

Existing Volumes

Background Traffic Growth

Subtotal (NO BUILD - P.M.)

Percent Commercial Trips Generated(Entering)

Percent Commercial Trips Generated(Exiting)

Total Trips Generated

Total PM Peak Hour BUILD Volumes

Eastbound (Osuna Rd.)			Westbound (Osuna Rd.)			Northbound (2nd St.)			Southbound (2nd St.)		
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
89	176	70	256	463	618	68	884	160	285	776	77
8	16	6	23	42	56	4	53	10	17	47	5
97	192	76	279	505	674	72	937	170	302	823	82
0.00%	17.75%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	9.17%	12.41%	0.00%	0.00%
0.00%	0.00%	0.00%	9.17%	17.75%	12.41%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
0	66	0	36	70	49	0	0	34	46	0	0
97	258	76	315	575	723	72	937	204	348	823	82

Number of Commercial Trips Generated

Entering Exiting

222 190 A.M.
370 393 P.M.

100% Commercial Development

2007 AM Peak Hr. Volumes

2007 PM Peak Hr. Volumes

Eastbound (Osuna Rd.)			Westbound (Osuna Rd.)			Northbound (2nd St.)			Southbound (2nd St.)		
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
68	394	59	108	194	194	39	564	245	395	1,168	36
92	181	72	264	477	637	69	902	163	291	792	79

Vista del Norte Commercial Development (Osuna Rd. / Vista del Norte)
Projected Turning Movements Worksheet
Osuna Rd. / Chappel Dr.

2007 Plan - NO Park

INTERSECTION:E-W Street: **Osuna Rd.**

(3)

N-S Street: **Chappel Dr.**

Year of Existing Counts

2004

Implementation Year

2009

Growth Rates

Existing Volumes

Background Traffic Growth

Subtotal (NO BUILD - A.M.)

Percent Commercial Trips Generated(Entering)

Percent Commercial Trips Generated(Exiting)

Total Trips Generated

Total AM Peak Hour BUILD Volumes

6.00%			6.00%			5.00%			5.00%		
Eastbound (Osuna Rd.)			Westbound (Osuna Rd.)			Northbound (Chappel Dr.)			Southbound (Chappel Dr.)		
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
23	1,342	251	105	813	38	64	5	88	5	1	4
7	403	75	32	244	11	16	1	22	1	0	1
30	1,745	326	137	1,057	49	80	6	110	6	1	5
0.00%	0.00%	0.00%	0.00%	43.18%	0.00%	0.14%	0.00%	0.00%	0.00%	0.00%	0.00%
0.00%	43.18%	0.14%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
0	82	0	0	96	0	0	0	0	0	0	0
30	1,827	326	137	1,153	49	80	6	110	6	1	5

Existing Volumes

Background Traffic Growth

Subtotal (NO BUILD - P.M.)

Percent Commercial Trips Generated(Entering)

Percent Commercial Trips Generated(Exiting)

Total Trips Generated

Total PM Peak Hour BUILD Volumes

Eastbound (Osuna Rd.)			Westbound (Osuna Rd.)			Northbound (Chappel Dr.)			Southbound (Chappel Dr.)		
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
3	810	61	94	1,430	5	209	2	151	48	20	24
1	243	18	28	429	2	52	1	38	12	5	6
4	1,053	79	122	1,859	7	261	3	189	60	25	30
0.00%	0.00%	0.00%	0.00%	43.18%	0.00%	0.14%	0.00%	0.00%	0.00%	0.00%	0.00%
0.00%	43.18%	0.14%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
0	170	1	0	160	0	1	0	0	0	0	0
4	1,223	80	122	2,019	7	262	3	189	60	25	30

Number of Commercial Trips Generated

Entering

222

190

A.M.

100% Commercial Development

370

393

P.M.

2007 AM Peak Hr. Volumes

2007 PM Peak Hr. Volumes

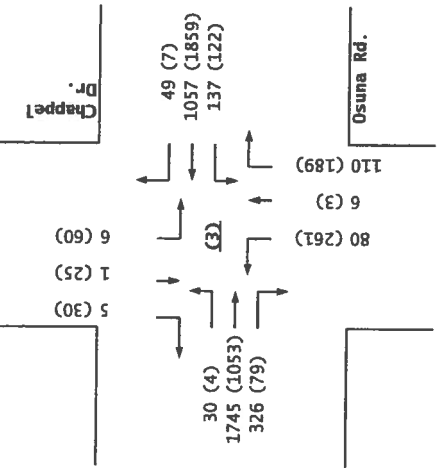
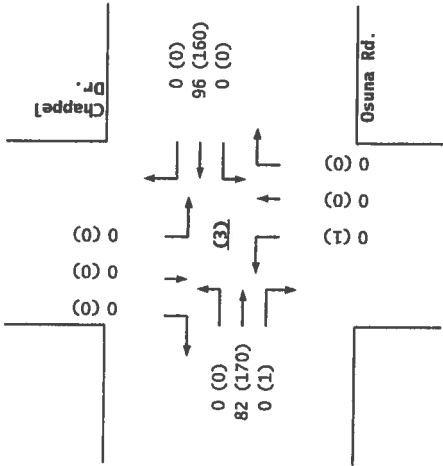
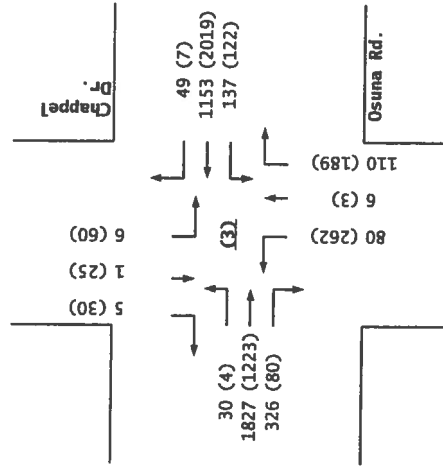
Eastbound (Osuna Rd.)			Westbound (Osuna Rd.)			Northbound (Chappel Dr.)			Southbound (Chappel Dr.)		
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
27	1584	296	124	959	45	74	6	101	6	1	5
4	956	72	111	1,687	6	240	2	174	55	23	28

2008
BUILD

Trips

2007 Plan - NO Park

2008
NO BUILD



Osuna Rd. / Chappel Dr.

Vista del Norte Commercial Development (Osuna Rd. / Vista del Norte)
Projected Turning Movements Worksheet
Osuna Rd. / Academy Parkway

2007 Plan - NO Park

INTERSECTION:

E-W Street: **Osuna Rd.**

(4)

N-S Street: **Academy Parkway**

Year of Existing Counts

2006

Implementation Year

2009

Growth Rates

Existing Volumes

Background Traffic Growth

Subtotal (NO BUILD - A.M.)

Percent Commercial Trips Generated(Entering)

Percent Commercial Trips Generated(Exiting)

Total Trips Generated

Total AM Peak Hour BUILD Volumes

6.00%			6.00%			5.00%			5.00%		
Eastbound (Osuna Rd.)			Westbound (Osuna Rd.)			Northbound (Academy Parkway)			Southbound (Academy Parkway)		
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
54	1,303	4	39	845	89	8	0	23	52	0	17
10	235	1	7	152	16	1	0	3	8	0	3
64	1,538	5	46	997	105	7	0	26	60	0	20
0.00%	0.00%	0.00%	0.00%	43.18%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
0.00%	43.18%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
0	82	0	0	96	0	0	0	0	0	0	0
64	1,620	5	46	1,093	105	7	0	26	60	0	20

Existing Volumes

Background Traffic Growth

Subtotal (NO BUILD - P.M.)

Percent Commercial Trips Generated(Entering)

Percent Commercial Trips Generated(Exiting)

Total Trips Generated

Total PM Peak Hour BUILD Volumes

6.00%			6.00%			5.00%			5.00%		
Eastbound (Osuna Rd.)			Westbound (Osuna Rd.)			Northbound (Academy Parkway)			Southbound (Academy Parkway)		
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
8	1,095	0	29	1,444	21	24	0	56	83	1	42
1	197	0	5	260	4	4	0	8	12	0	6
9	1,292	0	34	1,704	25	28	0	64	95	1	48
0.00%	0.00%	0.00%	0.00%	43.18%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
0.00%	43.18%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
0	170	0	0	160	0	0	0	0	0	0	0
9	1,462	0	34	1,864	25	28	0	64	95	1	48

Number of Commercial Trips Generated

Entering Exiting

222 190 A.M.

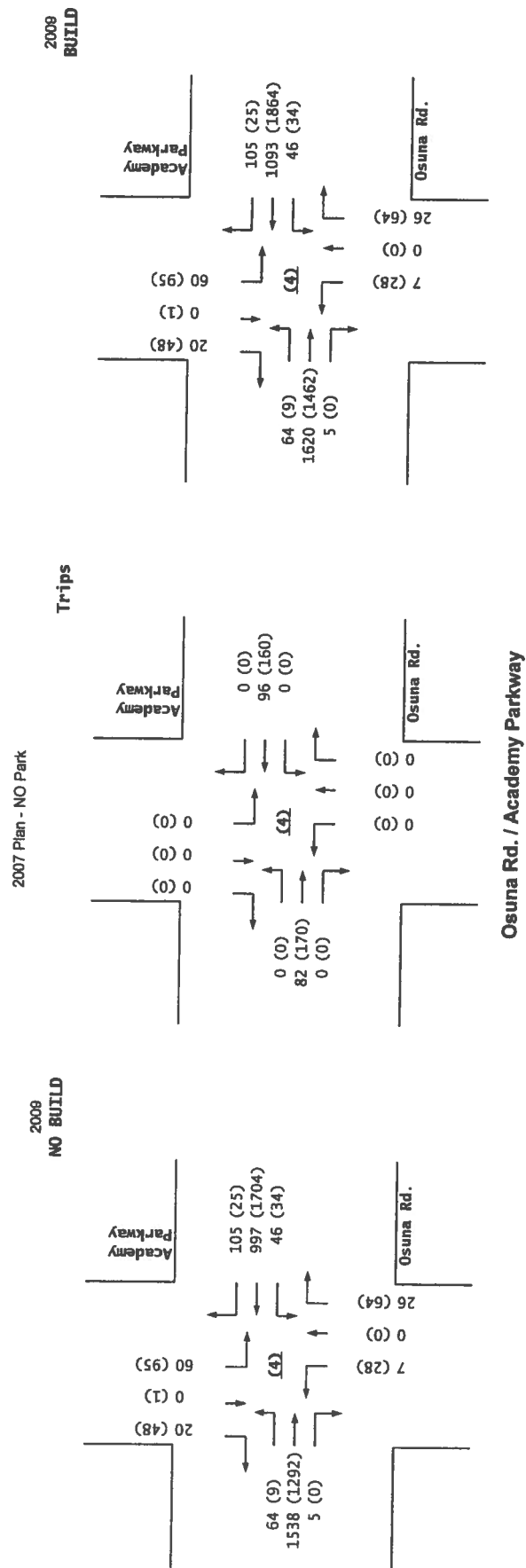
100% Commercial Development

370 393 P.M.

2007 AM Peak Hr. Volumes

2007 PM Peak Hr. Volumes

Eastbound (Osuna Rd.)			Westbound (Osuna Rd.)			Northbound (Academy Parkway)			Southbound (Academy Parkway)		
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
57	1,381	4	41	896	94	6	0	24	55	0	18
8	1,161	0	31	1,531	22	25	0	59	87	1	44



Vista del Norte Commercial Development (Osuna Rd. / Vista del Norte)
Projected Turning Movements Worksheet
Osuna Rd. / Jefferson St.

2007 Plan - NO Park

INTERSECTION: E-W Street: **Osuna Rd.**
 N-S Street: **Jefferson St.**
 Year of Existing Counts: **2004**
 Implementation Year: **2009**

Growth Rates

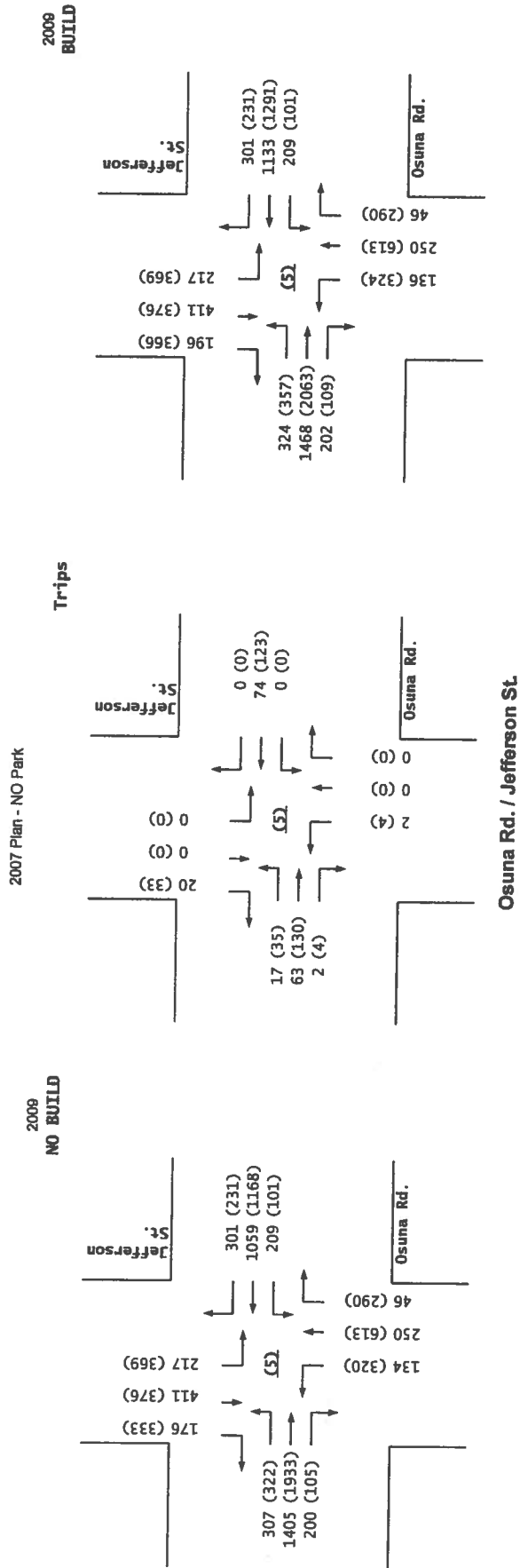
	6.00%			3.00%			2.00%			2.00%		
	Eastbound (Osuna Rd.)			Westbound (Osuna Rd.)			Northbound (Jefferson St.)			Southbound (Jefferson St.)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	238	1,081	154	182	921	262	122	227	42	197	374	160
Background Traffic Growth	71	324	46	27	138	39	12	23	4	20	37	16
Subtotal (NO BUILD - A.M.)	307	1,405	200	209	1,059	301	134	250	46	217	411	176
Percent Commercial Trips Generated(Entering)	0.00%	0.00%	0.00%	0.00%	33.16%	0.00%	1.09%	0.00%	0.00%	0.00%	0.00%	8.93%
Percent Commercial Trips Generated(Exiting)	8.93%	33.16%	1.09%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Total Trips Generated	17	63	2	0	74	0	2	0	0	0	0	20
Total AM Peak Hour BUILD Volumes	324	1,468	202	209	1,133	301	136	250	46	217	411	196

	Eastbound (Osuna Rd.)			Westbound (Osuna Rd.)			Northbound (Jefferson St.)			Southbound (Jefferson St.)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	248	1,487	81	88	1,016	201	291	557	264	335	342	303
Background Traffic Growth	74	446	24	13	152	30	29	56	26	34	34	30
Subtotal (NO BUILD - P.M.)	322	1,933	105	101	1,168	231	320	613	290	369	376	333
Percent Commercial Trips Generated(Entering)	0.00%	0.00%	0.00%	0.00%	33.16%	0.00%	1.09%	0.00%	0.00%	0.00%	0.00%	8.93%
Percent Commercial Trips Generated(Exiting)	8.93%	33.16%	1.09%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Total Trips Generated	35	130	4	0	123	0	4	0	0	0	0	33
Total PM Peak Hour BUILD Volumes	357	2,063	109	101	1,291	231	324	613	290	369	376	366

Number of Commercial Trips Generated

Entering	222	190	A.M.	100% Commercial Development
Exiting	370	393	P.M.	

	Eastbound (Osuna Rd.)			Westbound (Osuna Rd.)			Northbound (Jefferson St.)			Southbound (Jefferson St.)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
2007 AM Peak Hr. Volumes	278	1276	182	198	1,004	286	129	241	45	209	396	170
2007 PM Peak Hr. Volumes	293	1,755	96	96	1,107	219	308	590	280	355	363	321



Vista del Norte Commercial Development (Osuna Rd. / Vista del Norte)
Projected Turning Movements Worksheet
Osuna Rd. / Vista del Norte

2007 Plan - NO Park

INTERSECTION:E-W Street: **Osuna Rd.**

(6)

N-S Street: **Vista del Norte**

Year of Existing Counts

2006

Implementation Year

2009

Growth Rates

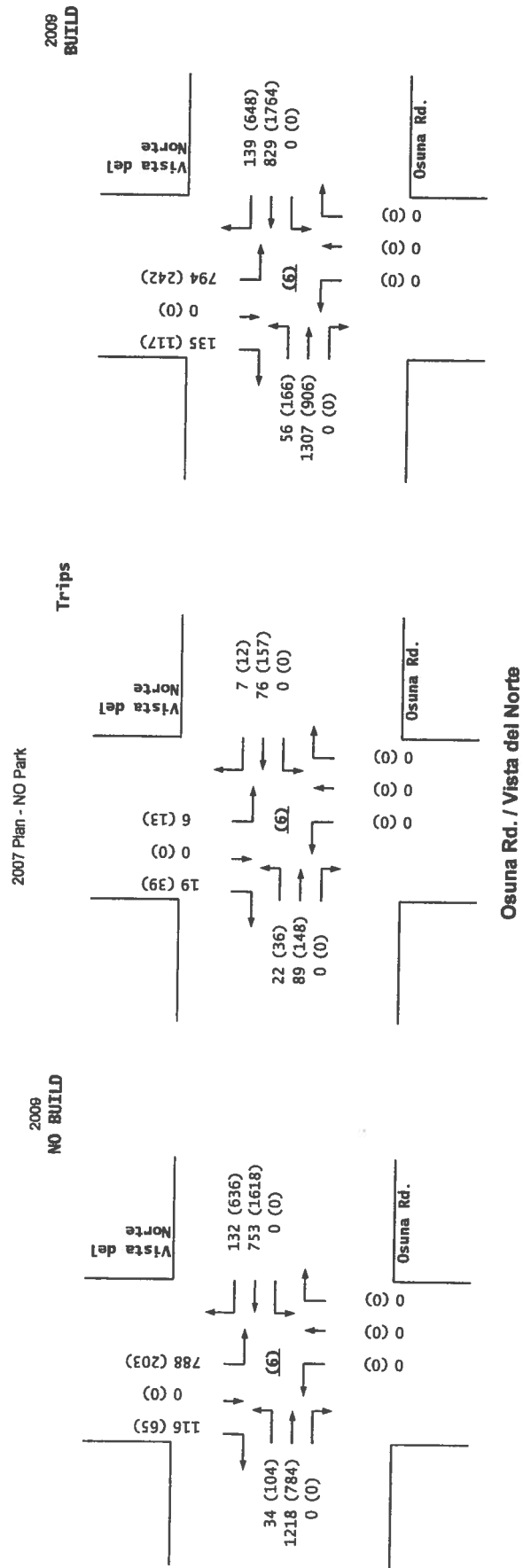
	1.00%			6.00%			5.00%			5.00%		
	Eastbound (Osuna Rd.)			Westbound (Osuna Rd.)			Northbound (Vista del Norte)			Southbound (Vista del Norte)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	21	1,183	0	0	638	91	0	0	0	665	0	96
Background Traffic Growth	1	35	0	0	115	16	0	0	0	100	0	14
Subtotal	22	1,218	0	0	753	107	0	0	0	765	0	110
Las Lomitas Industrial Park Trips	7	0	0	0	0	15	0	0	0	3	0	1
Agave Subdivision Trips (31 Lots)	5	0	0	0	0	10	0	0	0	20	0	5
Subtotal (NO BUILD - A.M.)	34	1,218	0	0	753	132	0	0	0	788	0	116
Percent Commercial Trips Generated(Entering)	9.80%	40.00%	0.00%	0.00%	0.00%	3.32%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Percent Commercial Trips Generated(Exiting)	0.00%	0.00%	0.00%	0.00%	40.00%	0.00%	0.00%	0.00%	0.00%	3.32%	0.00%	9.80%
Total Trips Generated	22	89	0	0	76	7	0	0	0	6	0	19
Total AM Peak Hour BUILD Volumes	56	1,307	0	0	829	139	0	0	0	794	0	135

	Eastbound (Osuna Rd.)			Westbound (Osuna Rd.)			Northbound (Vista del Norte)			Southbound (Vista del Norte)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	94	761	0	0	1,371	519	0	0	0	155	0	47
Background Traffic Growth	3	23	0	0	247	93	0	0	0	23	0	7
Subtotal	97	784	0	0	1,618	612	0	0	0	178	0	54
Las Lomitas Industrial Park Trips	2	0	0	0	0	4	0	0	0	15	0	6
Agave Subdivision Trips (31 Lots)	5	0	0	0	0	20	0	0	0	10	0	5
Subtotal (NO BUILD - P.M.)	104	784	0	0	1,618	636	0	0	0	203	0	65
Percent Commercial Trips Generated(Entering)	9.80%	40.00%	0.00%	0.00%	0.00%	3.32%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Percent Commercial Trips Generated(Exiting)	0.00%	0.00%	0.00%	0.00%	40.00%	0.00%	0.00%	0.00%	0.00%	3.32%	0.00%	9.80%
Total Trips Generated	36	148	0	0	157	12	0	0	0	13	0	39
Subtotal PM Pk Hr. BUILD Volumes	140	932	0	0	1,775	648	0	0	0	216	0	104
Pass-by Trip Adjustments	26	-26	0	0	-11	0	0	0	0	26	0	13
Total PM Peak Hour BUILD Volumes	166	906	0	0	1,764	648	0	0	0	242	0	117

Number of Commercial Trips Generated

Entering	222	190	A.M.	100% Commercial Development
Exiting	370	393	P.M.	

	Eastbound (Osuna Rd.)			Westbound (Osuna Rd.)			Northbound (Vista del Norte)			Southbound (Vista del Norte)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
2007 AM Peak Hr. Volumes	21	1195	0	0	676	96	0	0	0	698	0	101
2007 PM Peak Hr. Volumes	95	769	0	0	1,453	550	0	0	0	163	0	49



Vista del Norte Commercial Development (Osuna Rd. / Vista del Norte)
Projected Turning Movements Worksheet
Vista del Norte / Las Lomitas
2007 Plan - NO Park

INTERSECTION:E-W Street: **Vista del Norte**

(7)

N-S Street: **Las Lomitas**

Year of Existing Counts

2006

Implementation Year

2009

Growth Rates

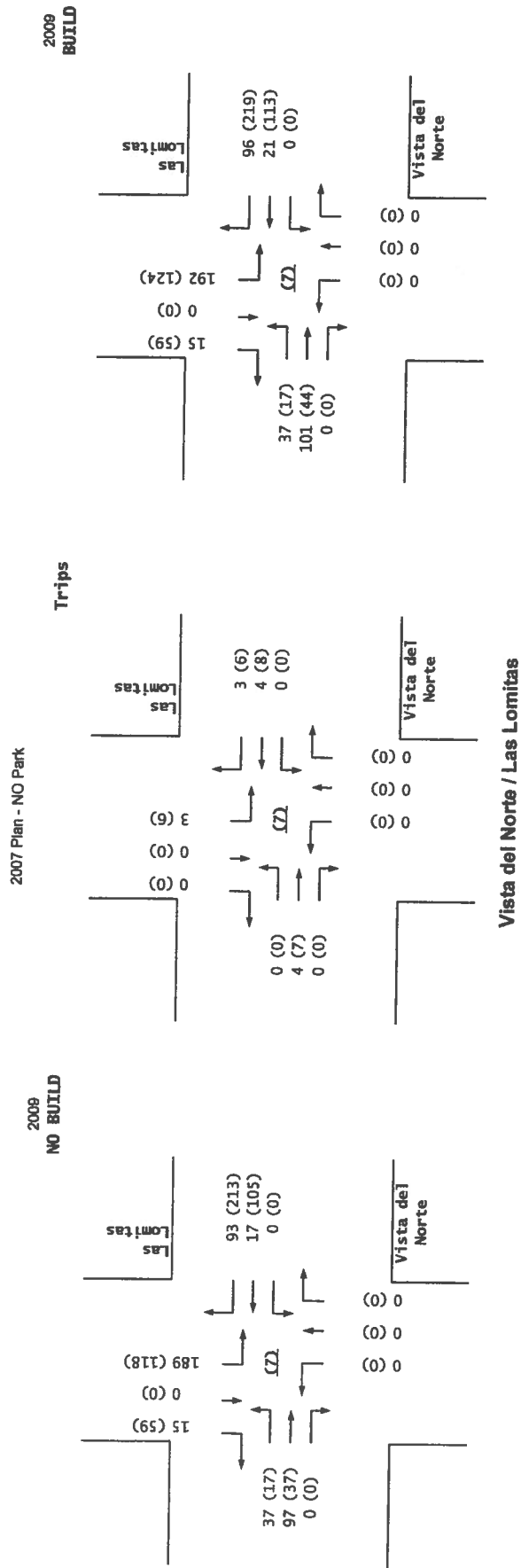
	5.00%			5.00%			5.00%			5.00%		
	Eastbound (Vista del Norte)			Westbound (Vista del Norte)			Northbound (Las Lomitas)			Southbound (Las Lomitas)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	32	84	0	0	15	62	0	0	0	180	0	13
Background Traffic Growth	5	13	0	0	2	9	0	0	0	24	0	2
Subtotal	37	97	0	0	17	71	0	0	0	184	0	15
Las Lomitas Industrial Park Trips	0	0	0	0	0	22	0	0	0	5	0	0
Subtotal (NO BUILD - A.M.)	37	97	0	0	17	93	0	0	0	189	0	15
Percent Commercial Trips Generated(Entering)	0.00%	2.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.51%	0.00%	0.00%
Percent Commercial Trips Generated(Exiting)	0.00%	0.00%	0.00%	0.00%	2.00%	1.51%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Total Trips Generated	0	4	0	0	4	3	0	0	0	3	0	0
Total AM Peak Hour BUILD Volumes	37	101	0	0	21	96	0	0	0	192	0	15

	Eastbound (Vista del Norte)			Westbound (Vista del Norte)			Northbound (Las Lomitas)			Southbound (Las Lomitas)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	15	32	0	0	91	180	0	0	0	84	0	51
Background Traffic Growth	2	5	0	0	14	27	0	0	0	13	0	8
Subtotal	17	37	0	0	105	207	0	0	0	97	0	59
Las Lomitas Industrial Park Trips	0	0	0	0	0	6	0	0	0	21	0	0
Subtotal (NO BUILD - P.M.)	17	37	0	0	105	213	0	0	0	118	0	59
Percent Commercial Trips Generated(Entering)	0.00%	2.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	1.51%	0.00%	0.00%
Percent Commercial Trips Generated(Exiting)	0.00%	0.00%	0.00%	0.00%	2.00%	1.51%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Total Trips Generated	0	7	0	0	8	6	0	0	0	6	0	0
Total PM Peak Hour BUILD Volumes	17	44	0	0	113	219	0	0	0	124	0	59

Number of Commercial Trips Generated

Entering	222	190	A.M.	100% Commercial Development
Exiting	370	393	P.M.	

	Eastbound (Vista del Norte)			Westbound (Vista del Norte)			Northbound (Las Lomitas)			Southbound (Las Lomitas)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
2007 AM Peak Hr. Volumes	34	88	0	0	16	65	0	0	0	168	0	14
2007 PM Peak Hr. Volumes	16	34	0	0	96	189	0	0	0	88	0	54



Vista del Norte Commercial Development (Osuna Rd. / Vista del Norte)

Projected Turning Movements Worksheet

El Pueblo Rd. / Las Lomitas Dr.

2007 Plan - NO Park

INTERSECTION:

E-W Street: El Pueblo Rd.

(8)

N-S Street: Las Lomitas Dr.

Year of Existing Counts

2006

Implementation Year

2009

Growth Rates

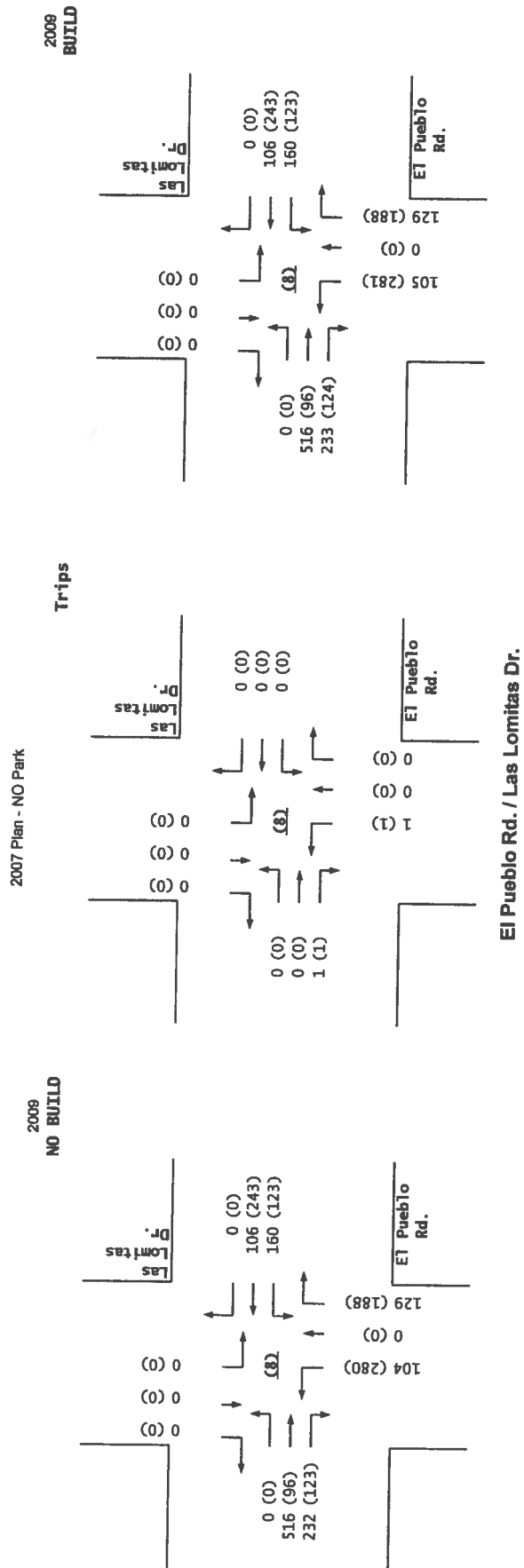
	5.00%			5.00%			5.00%			5.00%		
	Eastbound (El Pueblo Rd.)			Westbound (El Pueblo Rd.)			Northbound (Las Lomitas Dr.)			Southbound (Las Lomitas Dr.)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	0	377	119	17	77	0	73	0	86	0	0	0
Background Traffic Growth	0	57	18	3	12	0	11	0	13	0	0	0
Subtotal	0	434	137	20	89	0	84	0	99	0	0	0
Vista del Norte Industrial Park Trips	0	82	0	0	17	0	0	0	1	0	0	0
Las Lomitas Industrial Park Trips	0	0	95	140	0	0	20	0	29	0	0	0
Subtotal (NO BUILD - A.M.)	0	516	232	160	106	0	104	0	129	0	0	0
Percent Commercial Trips Generated(Entering)	0.00%	0.00%	0.30%	0.10%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Percent Commercial Trips Generated(Exiting)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.30%	0.00%	0.10%	0.00%	0.00%	0.00%
Total Trips Generated	0	0	1	0	0	0	1	0	0	0	0	0
Total AM Peak Hour BUILD Volumes	0	516	233	160	106	0	105	0	129	0	0	0

	Eastbound (El Pueblo Rd.)			Westbound (El Pueblo Rd.)			Northbound (Las Lomitas Dr.)			Southbound (Las Lomitas Dr.)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	0	64	85	74	141	0	163	0	45	0	0	0
Background Traffic Growth	0	10	13	11	21	0	24	0	7	0	0	0
Subtotal	0	74	98	85	162	0	187	0	52	0	0	0
Vista del Norte Industrial Park Trips	0	22	0	2	81	0	0	0	0	0	0	0
Las Lomitas Industrial Park Trips	0	0	25	36	0	0	93	0	136	0	0	0
Subtotal (NO BUILD - P.M.)	0	96	123	123	243	0	280	0	188	0	0	0
Percent Commercial Trips Generated(Entering)	0.00%	0.00%	0.30%	0.10%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Percent Commercial Trips Generated(Exiting)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.30%	0.00%	0.10%	0.00%	0.00%	0.00%
Total Trips Generated	0	0	1	0	0	0	1	0	0	0	0	0
Total PM Peak Hour BUILD Volumes	0	96	124	123	243	0	281	0	188	0	0	0

Number of Commercial Trips Generated

Entering	222	190	A.M.	100% Commercial Development
Exiting	370	393	P.M.	

	Eastbound (El Pueblo Rd.)			Westbound (El Pueblo Rd.)			Northbound (Las Lomitas Dr.)			Southbound (Las Lomitas Dr.)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
2007 AM Peak Hr. Volumes	0	396	125	18	81	0	77	0	90	0	0	0
2007 PM Peak Hr. Volumes	0	87	89	78	148	0	171	0	47	0	0	0



Vista del Norte Commercial Development (Osuna Rd. / Vista del Norte)

Projected Turning Movements Worksheet

Osuna Rd. / Driveway "A"

2007 Plan - NO Park

INTERSECTION:

E-W Street: Osuna Rd.
N-S Street: Driveway "A"

(9)

Year of Existing Counts 2006
Implementation Year 2009

Growth Rates

	6.00%			6.00%			5.00%			5.00%		
	Eastbound (Osuna Rd.)			Westbound (Osuna Rd.)			Northbound (Driveway "A")			Southbound (Driveway "A")		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	0	1,848	0	0	729	0	0	0	0	0	0	0
Background Traffic Growth	0	333	0	0	131	0	0	0	0	0	0	0
Subtotal (NO BUILD - A.M.)	0	2,181	0	0	860	0	0	0	0	0	0	0
Percent Commercial Trips Generated(Entering)	20.00%	0.00%	0.00%	0.00%	23.32%	20.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Percent Commercial Trips Generated(Exiting)	0.00%	23.32%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	20.00%	0.00%	20.00%
Total Trips Generated	44	44	0	0	52	44	0	0	0	38	0	38
Total AM Peak Hour BUILD Volumes	44	2,225	0	0	912	44	0	0	0	38	0	38

	6.00%			6.00%			5.00%			5.00%		
	Eastbound (Osuna Rd.)			Westbound (Osuna Rd.)			Northbound (Driveway "A")			Southbound (Driveway "A")		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	0	916	0	0	1,890	0	0	0	0	0	0	0
Background Traffic Growth	0	165	0	0	340	0	0	0	0	0	0	0
Subtotal (NO BUILD - P.M.)	0	1,081	0	0	2,230	0	0	0	0	0	0	0
Percent Commercial Trips Generated(Entering)	20.00%	0.00%	0.00%	0.00%	23.32%	20.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Percent Commercial Trips Generated(Exiting)	0.00%	23.32%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	20.00%	0.00%	20.00%
Total Trips Generated	74	92	0	0	86	74	0	0	0	79	0	79
Subtotal PM Pk Hr. BUILD Volumes	74	1,173	0	0	2,316	74	0	0	0	79	0	79
Pass-by Trip Adjustments	22	-22	0	0	-45	48	0	0	0	24	0	51
Total PM Peak Hour BUILD Volumes	96	1,151	0	0	2,271	122	0	0	0	103	0	130

Number of Commercial Trips Generated
 Entering 222 190 A.M.
 370 393 P.M. 100% Commercial Development

AM Pass-by Trips
 Percent Entering
 Volume Entering
 Percent Exiting
 Volume Exiting
 Net AM Passby Trips

	Eastbound (Osuna Rd.)			Westbound (Osuna Rd.)			Northbound (Driveway "A")			Southbound (Driveway "A")		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Percent Entering	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Volume Entering	0	0	0	0	0	0	0	0	0	0	0	0
Percent Exiting	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Volume Exiting	0	0	0	0	0	0	0	0	0	0	0	0
Net AM Passby Trips	0	0	0	0	0	0	0	0	0	0	0	0

PM Pass-by Trips
 Percent Entering
 Volume Entering
 Percent Exiting
 Volume Exiting
 Net PM Passby Trips

	Eastbound (Osuna Rd.)			Westbound (Osuna Rd.)			Northbound (Driveway "A")			Southbound (Driveway "A")		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Percent Entering	16.00%	-16.00%	0.00%	0.00%	-67.00%	34.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Volume Entering	22	-22	0	0	-94	48	0	0	0	0	0	0
Percent Exiting	0.00%	0.00%	0.00%	0.00%	33.00%	0.00%	0.00%	0.00%	0.00%	16.00%	0.00%	14.00%
Volume Exiting	0	0	0	0	49	0	0	0	0	24	0	51
Net PM Passby Trips	22	-22	0	0	-45	48	0	0	0	24	0	51

Pass-by Trips
 0 0 AM
 140 149 PM

Vista del Norte Commercial Development (Osuna Rd. / Vista del Norte)

Projected Turning Movements Worksheet

Driveway "B" / Vista del Norte

2007 Plan - NO Park

(10)

INTERSECTION:

E-W Street: Driveway "B"

N-S Street: Vista del Norte

Year of Existing Counts

2006

Implementation Year

2009

Growth Rates

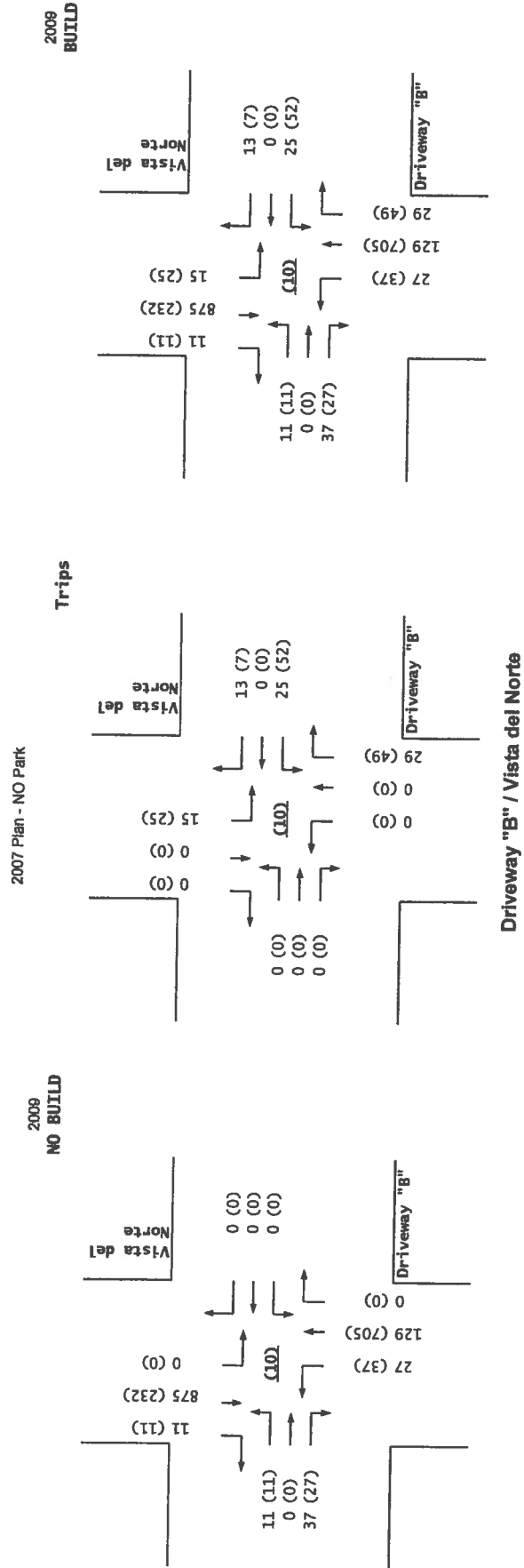
	5.00%			5.00%			5.00%			5.00%		
	Eastbound (Driveway "B")			Westbound (Driveway "B")			Northbound (Vista del Norte)			Southbound (Vista del Norte)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	5	0	10	0	0	0	10	112	0	0	761	5
Background Traffic Growth	1	0	2	0	0	0	2	17	0	0	114	1
Subtotal	6	0	12	0	0	0	12	129	0	0	875	6
Vista del Norte Industrial Park Trips	0	0	0	0	0	0	0	0	0	0	0	0
Agave Subdivision Trips (31 Lots)	5	0	25	0	0	0	15	0	0	0	0	5
Subtotal (NO BUILD - A.M.)	11	0	37	0	0	0	27	129	0	0	875	11
Percent Commercial Trips Generated(Entering)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	13.12%	6.88%	0.00%	0.00%
Percent Commercial Trips Generated(Exiting)	0.00%	0.00%	0.00%	13.12%	0.00%	6.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Total Trips Generated	0	0	0	25	0	13	0	0	29	15	0	0
Total AM Peak Hour BUILD Volumes	11	0	37	25	0	13	27	129	29	15	875	11

	Eastbound (Driveway "B")			Westbound (Driveway "B")			Northbound (Vista del Norte)			Southbound (Vista del Norte)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	5	0	10	0	0	0	10	613	0	0	202	5
Background Traffic Growth	1	0	2	0	0	0	2	92	0	0	30	1
Subtotal	6	0	12	0	0	0	12	705	0	0	232	6
Vista del Norte Industrial Park Trips	0	0	0	0	0	0	0	0	0	0	0	0
Agave Subdivision Trips (31 Lots)	5	0	15	0	0	0	25	0	0	0	0	5
Subtotal (NO BUILD - P.M.)	11	0	27	0	0	0	37	705	0	0	232	11
Percent Commercial Trips Generated(Entering)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	13.12%	6.88%	0.00%	0.00%
Percent Commercial Trips Generated(Exiting)	0.00%	0.00%	0.00%	13.12%	0.00%	1.88%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Total Trips Generated	0	0	0	52	0	7	0	0	49	25	0	0
Subtotal PM Pk Hr. BUILD Volumes	11	0	27	52	0	7	37	705	49	25	232	11
Pass-by Trip Adjustments	0	0	0	0	0	0	0	0	0	0	0	0
Total PM Peak Hour BUILD Volumes	11	0	27	52	0	7	37	705	49	25	232	11

Number of Commercial Trips Generated

Entering	222	190	A.M.	100% Commercial Development
Exiting	370	393	P.M.	

	Eastbound (Driveway "B")			Westbound (Driveway "B")			Northbound (Vista del Norte)			Southbound (Vista del Norte)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
2007 AM Peak Hr. Volumes	5	0	11	0	0	0	11	118	0	0	799	5
2007 PM Peak Hr. Volumes	5	0	11	0	0	0	11	644	0	0	212	5



Vista del Norte Commercial Development (Osuna Rd. / Vista del Norte)
Projected Turning Movements Worksheet
Osuna Rd. / Driveway "C"

2007 Plan - NO Park

(11)

INTERSECTION:

E-W Street: **Osuna Rd.**
 N-S Street: **Driveway "C"**

Year of Existing Counts
 Implementation Year

2006
 2009

Growth Rates

	6.00%			6.00%			5.00%			5.00%		
	Eastbound (Osuna Rd.)			Westbound (Osuna Rd.)			Northbound (Driveway "C")			Southbound (Driveway "C")		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	0	1,848	0	0	729	0	0	0	0	0	0	0
Background Traffic Growth	0	333	0	0	131	0	0	0	0	0	0	0
Subtotal (NO BUILD - A.M.)	0	2,181	0	0	860	0	0	0	0	0	0	0
Percent Commercial Trips Generated(Entering)	20.00%	20.00%	0.00%	0.00%	3.32%	20.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Percent Commercial Trips Generated(Exiting)	0.00%	3.32%	0.00%	0.00%	20.00%	0.00%	0.00%	0.00%	0.00%	20.00%	0.00%	20.00%
Total Trips Generated	44	50	0	0	45	44	0	0	0	38	0	38
Total AM Peak Hour BUILD Volumes	44	2,231	0	0	905	44	0	0	0	38	0	38

Existing Volumes
 Background Traffic Growth
Subtotal (NO BUILD - P.M.)
 Percent Commercial Trips Generated(Entering)
 Percent Commercial Trips Generated(Exiting)
 Total Trips Generated
Subtotal PM Pk Hr. BUILD Volumes
 Pass-by Trip Adjustments
Total PM Peak Hour BUILD Volumes

	Eastbound (Osuna Rd.)			Westbound (Osuna Rd.)			Northbound (Driveway "C")			Southbound (Driveway "C")		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	0	916	0	0	1,890	0	0	0	0	0	0	0
Background Traffic Growth	0	165	0	0	340	0	0	0	0	0	0	0
Subtotal (NO BUILD - P.M.)	0	1,081	0	0	2,230	0	0	0	0	0	0	0
Percent Commercial Trips Generated(Entering)	20.00%	20.00%	0.00%	0.00%	3.32%	20.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Percent Commercial Trips Generated(Exiting)	0.00%	3.32%	0.00%	0.00%	20.00%	0.00%	0.00%	0.00%	0.00%	20.00%	0.00%	20.00%
Total Trips Generated	74	87	0	0	91	74	0	0	0	79	0	79
Subtotal PM Pk Hr. BUILD Volumes	74	1,168	0	0	2,321	74	0	0	0	79	0	79
Pass-by Trip Adjustments	24	-22	0	0	-46	46	0	0	0	25	0	49
Total PM Peak Hour BUILD Volumes	98	1,146	0	0	2,275	120	0	0	0	104	0	128

Number of Commercial Trips Generated
 Entering 222 190 A.M.
 370 393 P.M. 100% Commercial Development

	Eastbound (Osuna Rd.)			Westbound (Osuna Rd.)			Northbound (Driveway "C")			Southbound (Driveway "C")		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
2007 AM Peak Hr. Volumes	0	1959	0	0	773	0	0	0	0	0	0	0
2007 PM Peak Hr. Volumes	0	971	0	0	2,003	0	0	0	0	0	0	0

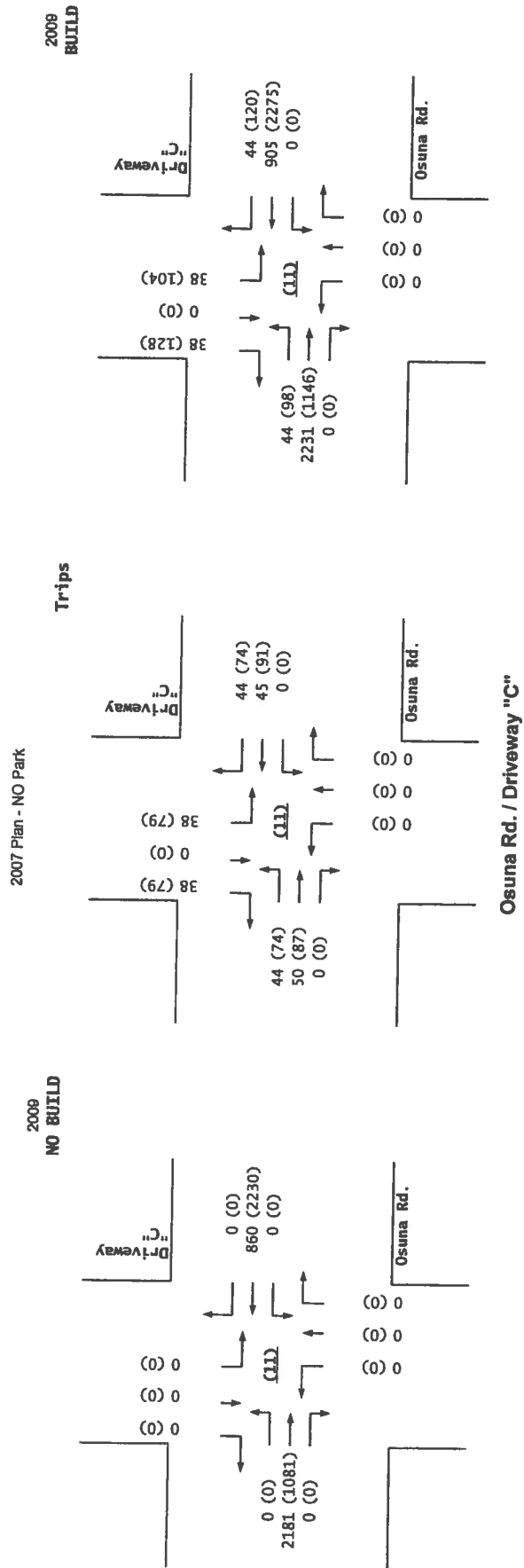
AM Pass-by Trips
 Percent Entering
 Volume Entering
 Percent Exiting
 Volume Exiting
Net AM Passby Trips

	Eastbound (Osuna Rd.)			Westbound (Osuna Rd.)			Northbound (Driveway "C")			Southbound (Driveway "C")		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Percent Entering	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Volume Entering	0	0	0	0	0	0	0	0	0	0	0	0
Percent Exiting	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Volume Exiting	0	0	0	0	0	0	0	0	0	0	0	0
Net AM Passby Trips	0	0	0	0	0	0	0	0	0	0	0	0

PM Pass-by Trips
 Percent Entering
 Volume Entering
 Percent Exiting
 Volume Exiting
Net PM Passby Trips

	Eastbound (Osuna Rd.)			Westbound (Osuna Rd.)			Northbound (Driveway "C")			Southbound (Driveway "C")		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Percent Entering	17.00%	-33.00%	0.00%	0.00%	-33.00%	33.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Volume Entering	24	-46	0	0	-46	46	0	0	0	0	0	0
Percent Exiting	0.00%	16.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	17.00%	0.00%	33.00%
Volume Exiting	0	24	0	0	0	0	0	0	0	25	0	49
Net PM Passby Trips	24	-22	0	0	-46	46	0	0	0	25	0	49

Pass-by Trips
 0 0 AM
 140 149 PM



2009 NO BUILD VOLUMES

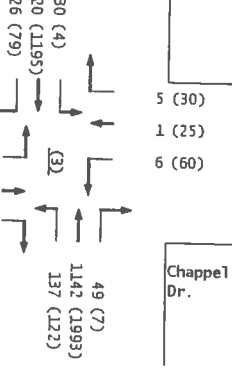
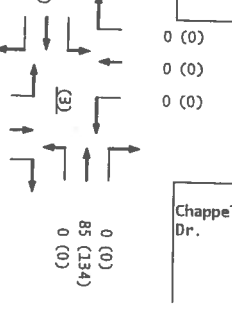
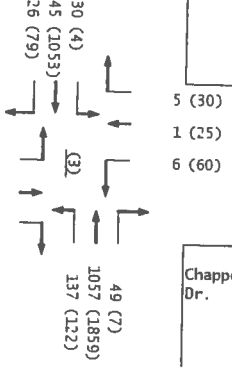
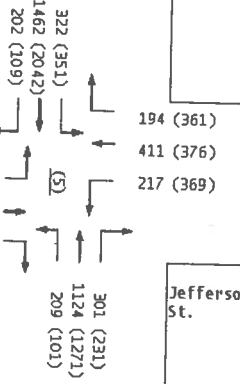
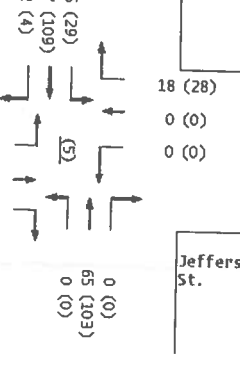
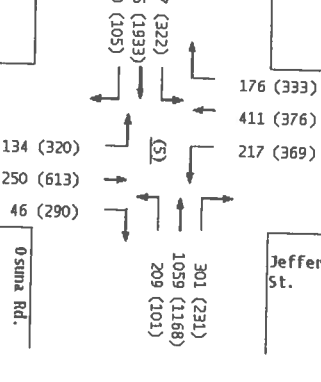
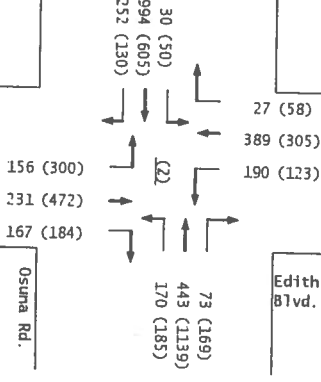
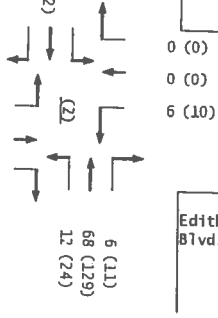
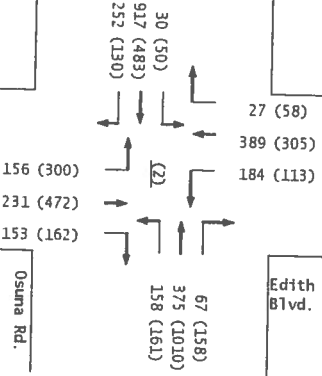
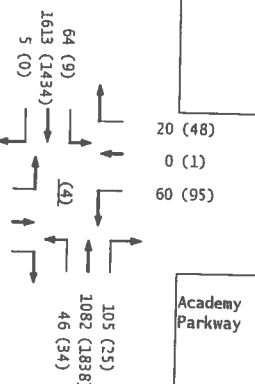
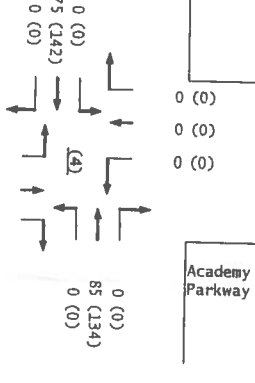
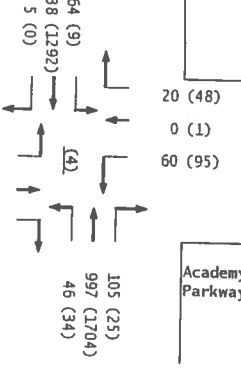
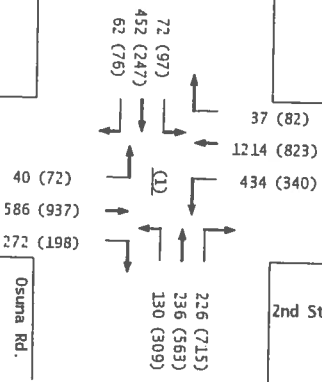
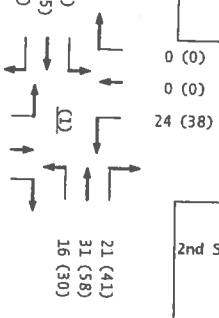
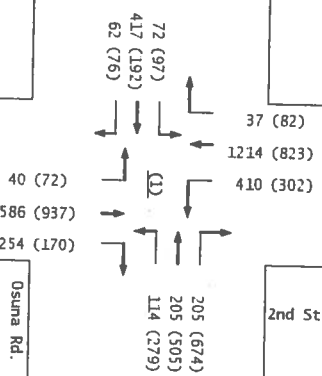
TRIPS GENERATED VOLUMES

2009 BUILD VOLUMES

2009 NO BUILD VOLUMES

TRIPS GENERATED VOLUMES

2009 BUILD VOLUMES



2ND ST.

EDITH BLVD.

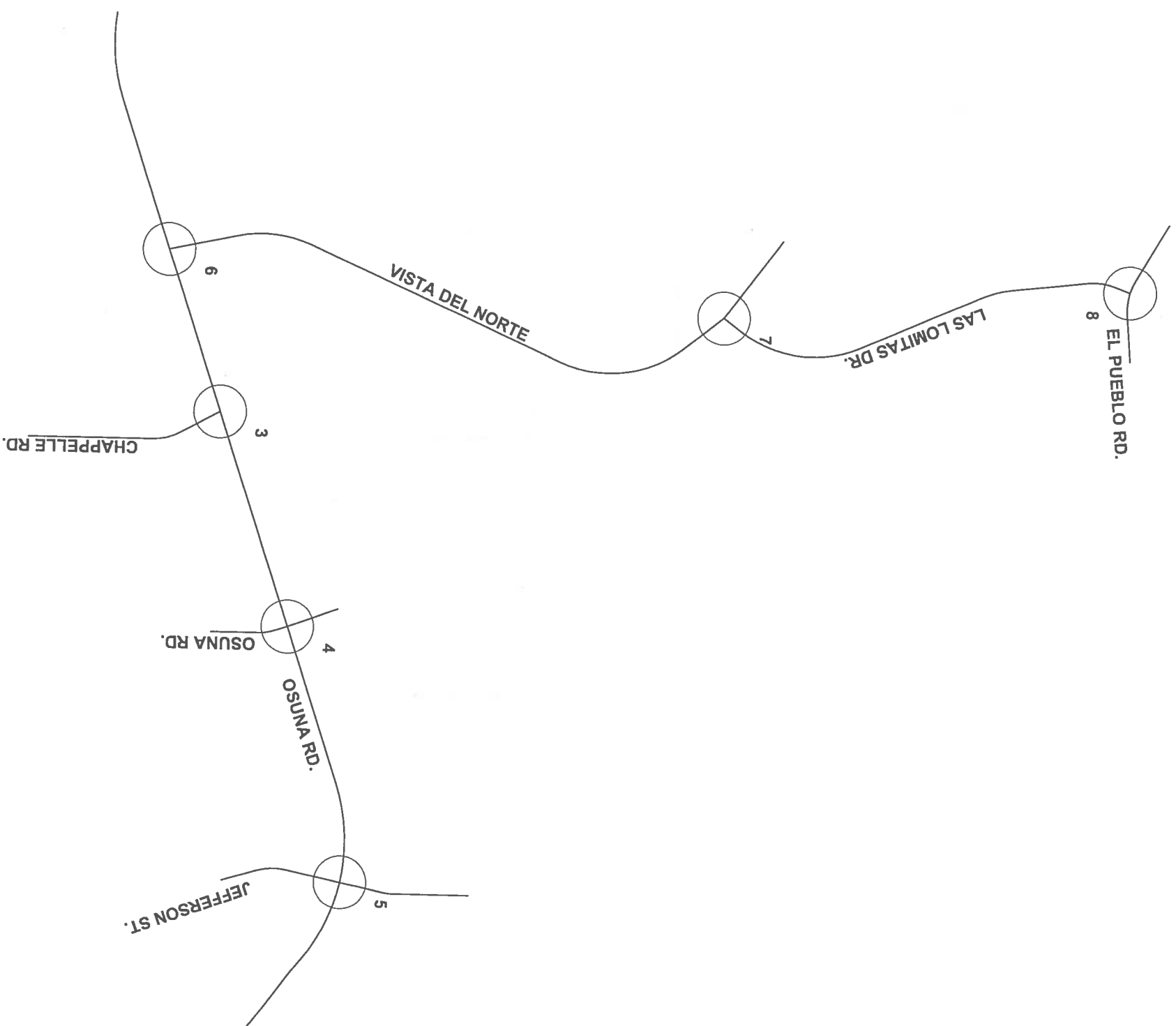
VISTA DEL NORTE

CHAPPELLE RD.

OSUNA RD.

JEFFERSON ST.

Vista del Norte Commercial Development
Osuna Rd. / Vista del Norte Dr.
2009 Volumes Map (2007 Plan w/Park)



2009 NO BUILD VOLUMES

TRIPS GENERATED VOLUMES

2009 BUILD VOLUMES

2009 NO BUILD VOLUMES	TRIPS GENERATED VOLUMES	2009 BUILD VOLUMES
Vista del Norte 116 (65) 0 (0) 788 (203) Osuna Rd. 0 (0) 0 (0) 0 (0) Las Lomitas 15 (59) 0 (0) 189 (118) El Pueblo Rd. 104 (280) 0 (0) 129 (188)	Vista del Norte 17 (32) 0 (0) 6 (11) Osuna Rd. 0 (0) 0 (0) 0 (0) Las Lomitas 0 (0) 0 (0) 3 (5) El Pueblo Rd. 1 (1) 0 (0) 0 (0)	Vista del Norte 133 (110) 0 (0) 794 (240) Osuna Rd. 0 (0) 0 (0) 0 (0) Las Lomitas 15 (59) 0 (0) 192 (123) El Pueblo Rd. 105 (281) 0 (0) 129 (188)

Vista del Norte Commercial Development
Osuna Rd. / Vista del Norte Dr.
2009 Volumes Map (2007 Plan w/Park)

**2009 NO BUILD
VOLUMES**

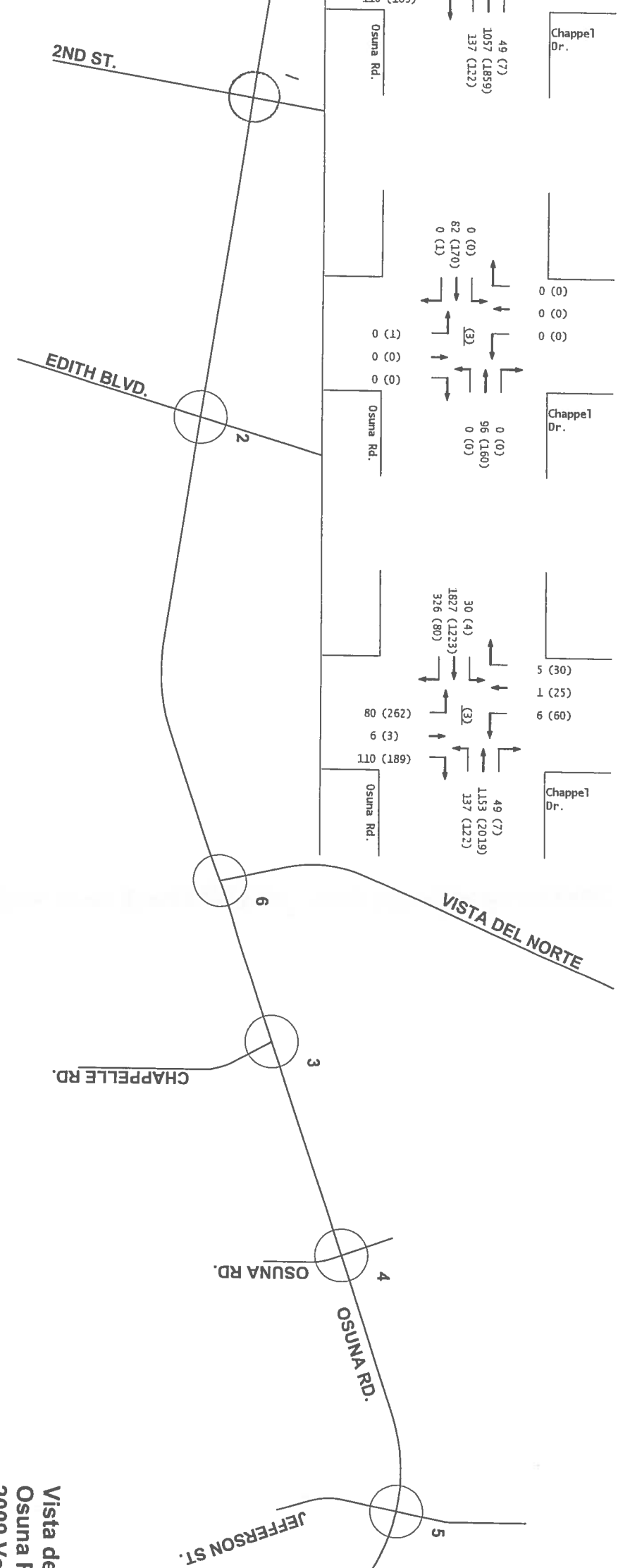
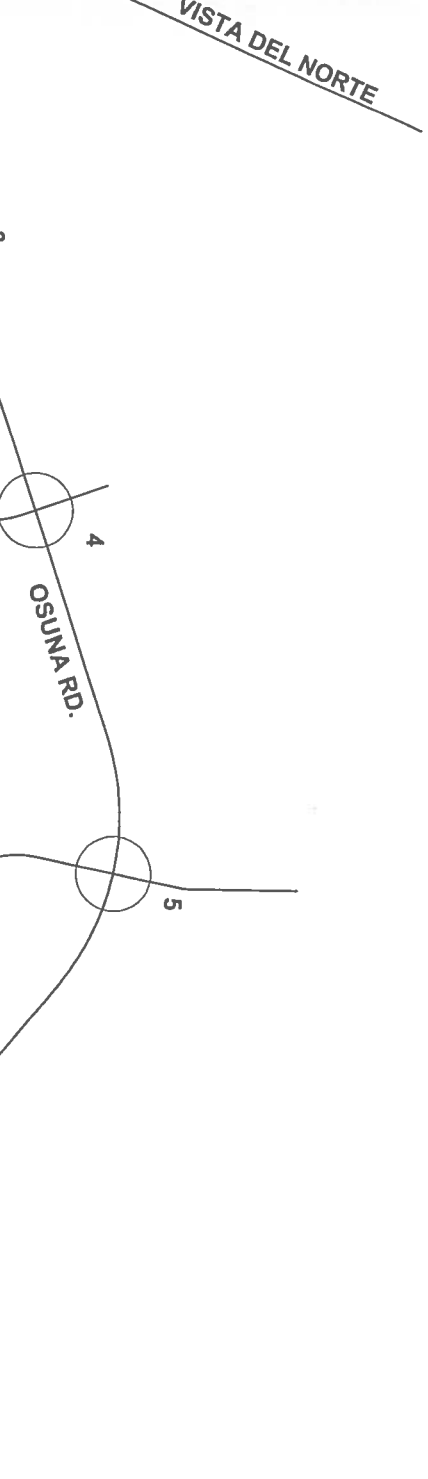
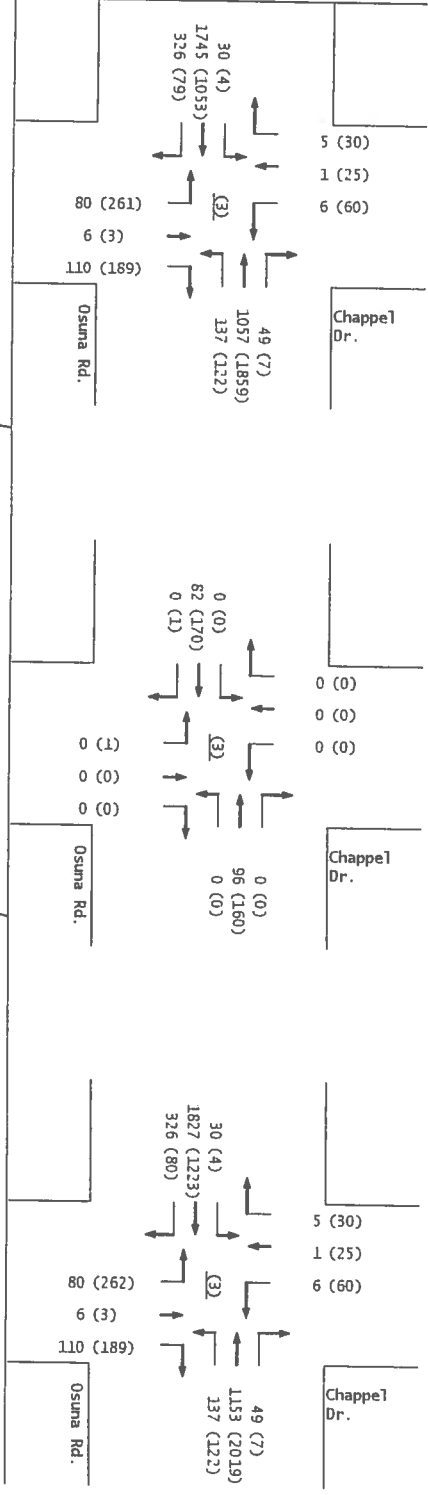
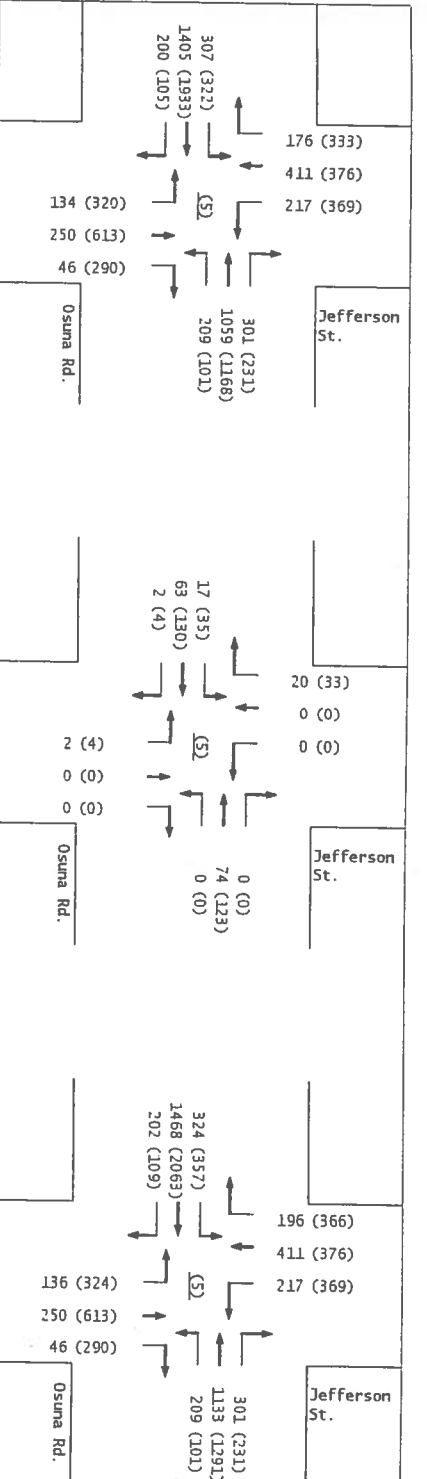
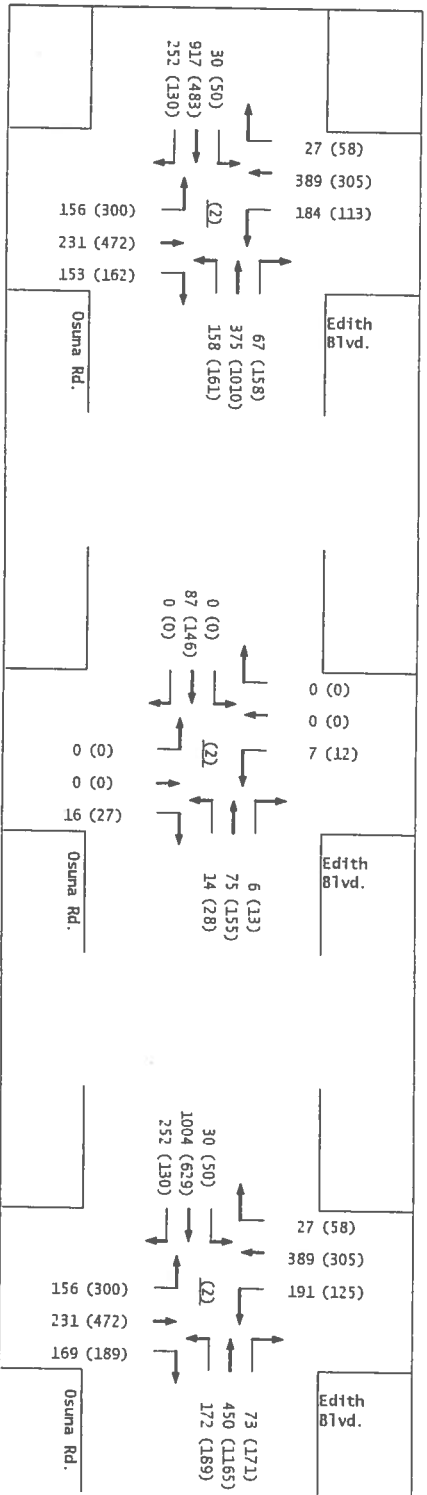
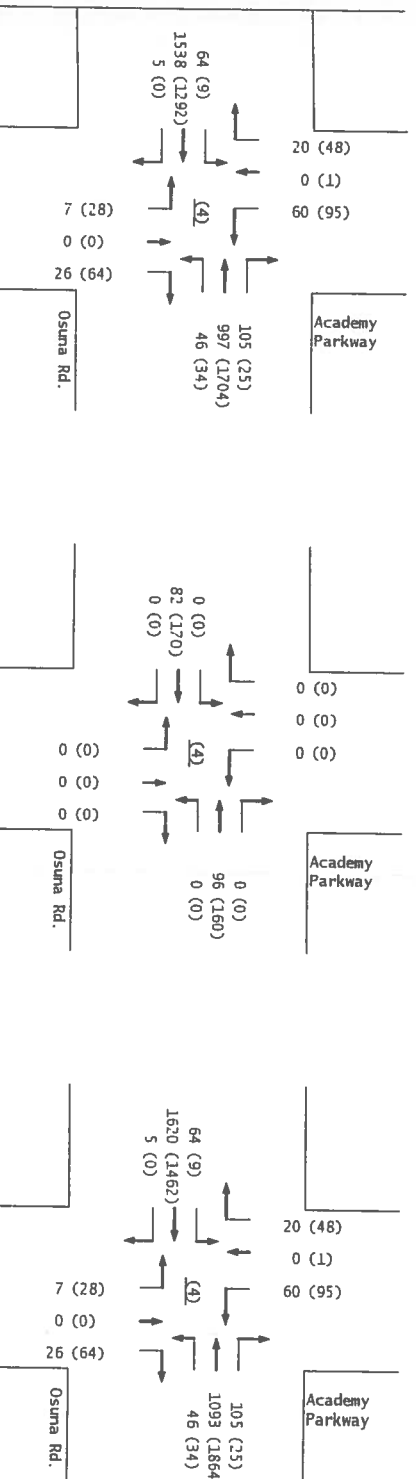
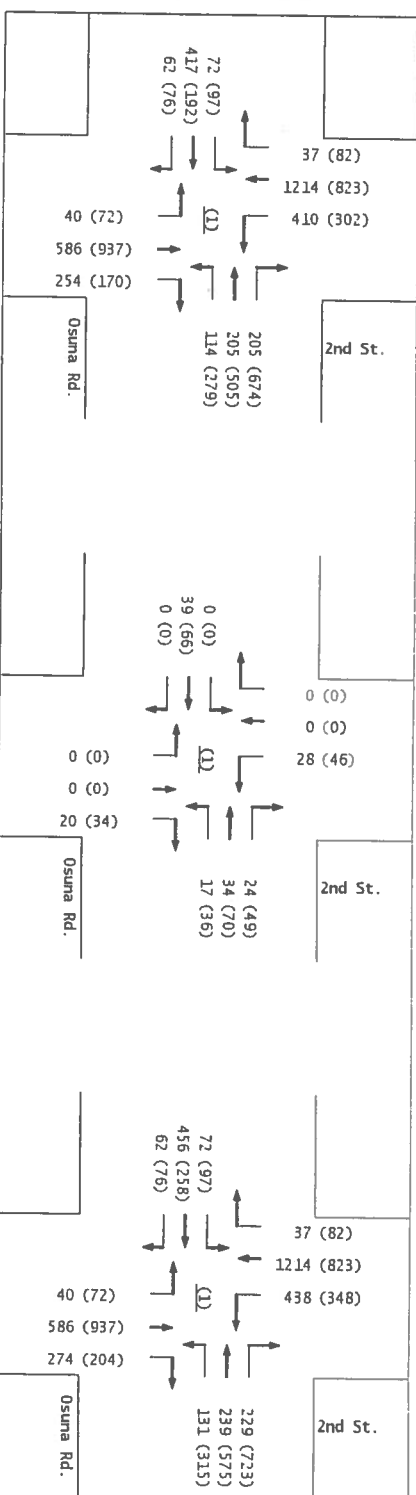
**TRIPS GENERATED
VOLUMES**

**2009 BUILD
VOLUMES**

**2009 NO BUILD
VOLUMES**

**TRIPS GENERATED
VOLUMES**

**2009 BUILD
VOLUMES**



Vista del Norte Commercial Development
Osuna Rd. / Vista del Norte Dr.
2009 Volumes Map (2007 Plan - NO Park)

**2009 NO BUILD
VOLUMES**

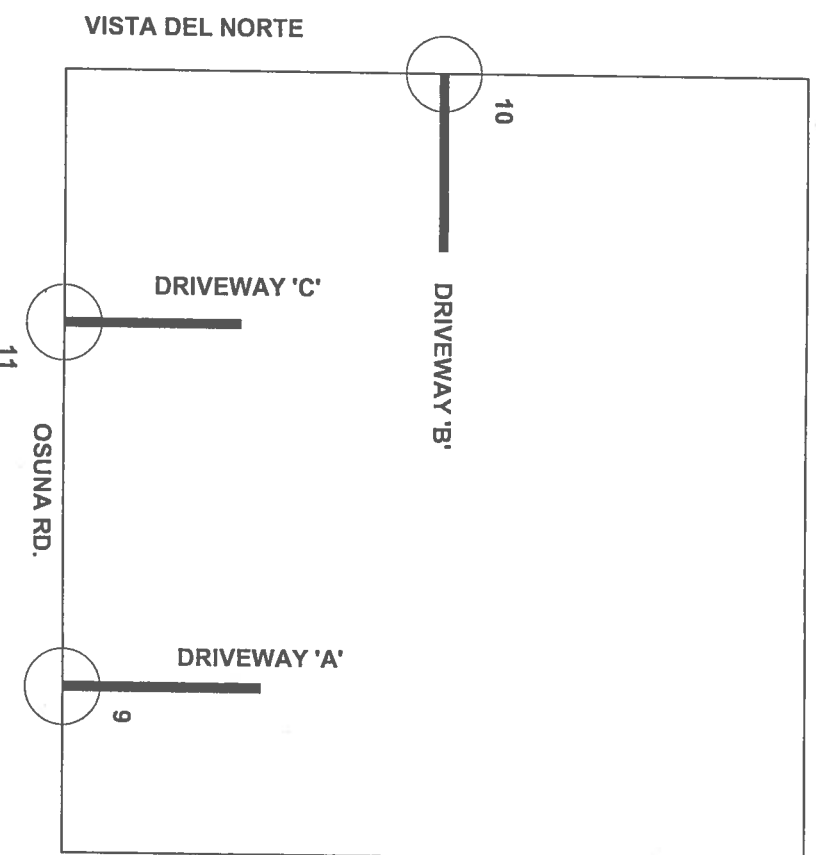
**TRIPS GENERATED
VOLUMES**

**2009 BUILD
VOLUMES**

0 (0) 0 (0) 0 (0) Driveway "A" 0 (0) 0 (0) 0 (0) Osuna Rd.	38 (79) 0 (0) 38 (79) Driveway "A" 44 (74) 44 (92) 0 (0) Osuna Rd.	38 (130) 0 (0) 38 (103) Driveway "A" 44 (96) 44 (92) 0 (0) Osuna Rd.
--	--	--

11 (11) 875 (232) 0 (0) Vista del Norte 11 (11) 0 (0) 0 (0) 0 (0) 37 (27) Driveway "B" 27 (37) 129 (705) 0 (0)	0 (0) 0 (0) 15 (25) Vista del Norte 0 (0) 0 (0) 13 (7) 0 (0) 0 (0) 25 (52) 0 (0) Driveway "B" 0 (0) 0 (0) 29 (49)	11 (11) 875 (232) 15 (25) Vista del Norte 11 (11) 0 (0) 13 (7) 0 (0) 0 (0) 25 (52) 37 (27) Driveway "B" 27 (37) 129 (705) 29 (49)
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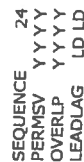
0 (0) 0 (0) 0 (0) Driveway "C" 0 (0) 0 (0) 0 (0) Osuna Rd.	38 (79) 0 (0) 38 (79) Driveway "C" 44 (74) 45 (91) 0 (0) Osuna Rd.	38 (128) 0 (0) 38 (104) Driveway "C" 44 (98) 44 (91) 0 (0) Osuna Rd.
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Vista del Norte Commercial Development
Osuna Rd. / Vista del Norte Dr.
2009 Volumes Map (2007 Plan - NO Park)

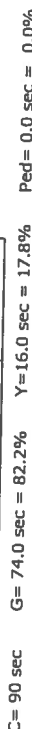
**Analysis of
2009 NO BUILD Conditions**

Intersection # 1 -



Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Phase 6
G= 21.8" Y+R= 4.0"	G= 29.1" Y+R= 4.0"	G= 5.0" Y+R= 4.0"	G= 18.1" Y+R= 4.0"	G= 0.0" Y+R= 0.0"	G= 0.0" Y+R= 0.0"

Intersection Averages for Int # 1 -
V/C 0.717 (Chtical V/C 0.9)



3 Approach

3 Approach

3 Approach

Approach

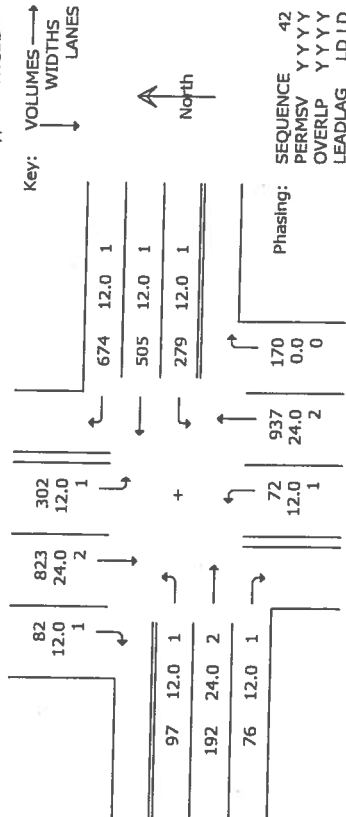
33.5										C
RT	12/1	0.147	0.201	177	302	67	0.217	30.4	C	68 ft
TH	24/2	0.203	0.201	443	691	453	0.656	35.4	C+	269 ft
LT	12/1	0.023	0.056	134	187	78	0.398	25.5	C+	78 ft

SIGNAL2000/TEAPAC[Ver 2.70.28] - HCM Input Worksheet

Intersection # 1 -

Area Location Type: NONCBD

Key: VOLUMES →
WIDTHS
LANES



Phasing:

SEQUENCE	42
PERMSV	Y Y Y Y
OVERLP	Y Y Y Y
LEADLAG	ID ID

	SB		WB		NB		EB	
	RT	TH	RT	TH	RT	TH	RT	TH
Heavy vol, %HV	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
PK-hr fact, PHF	.89	.89	.96	.96	.94	.94	.93	.93
Pretimed or Act	A	A	A	A	A	A	A	A
Strup lost, 11	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Ext eif grn, e	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
Ped vol, vped	0		0		0		0	
Bike vol, vblc	0		0		0		0	
Parking locatns	NO		NO		NO		NO	
Park mnvrs, Nlm	0		0		0		0	
Bus stops, NB	0		0		0		0	
Grade, %G	.0		.0		.0		.0	

Sq 42
LD/LD $C = 100''$

Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Phase 6
					
$G = 16.6''$ $Y+R = 4.0''$	$G = 34.4''$ $Y+R = 4.0''$	$G = 5.0''$ $Y+R = 4.0''$	$G = 28.1''$ $Y+R = 4.0''$	$G = 0.0''$ $Y+R = 0.0''$	$G = 0.0''$ $Y+R = 0.0''$

SIGNAL2000/TEAPAC[Ver 2.70.28] - Capacity Analysis Summary

Intersection Averages for Int # 1 -

V/C 0.795 (Critical V/C 0.916)

Level of Service D+

Sq 42 LD/LD	Phase 1	Phase 2	Phase 3	Phase 4

C=100 sec	G= 84.0 sec = 84.0%	Y=16.0 sec = 16.0%	Ped= 0.0 sec = 0.0%
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Lane Group	Width/ Lanes	g/c Reqd' Used	Service Rate @C (vph) @E	Adj Volume	HCM Delay	L S	Queue Model 1
------------	-----------------	-------------------	-----------------------------	---------------	--------------	--------	------------------

SB Approach

RT	12/1	0.195	398	529	92	0.174	23.1	86 ft
TH	24/2	0.332	978	1184	925	0.781	32.9	572 ft
LT	12/1	0.211	0.166	274	357	0.950	64.1	*E+ 500 ft

NB Approach

[illegible]

WB Approach

	RT	TH	LT	28.3	C
	12/1	12/1	12/1	823	886
	0.510	0.366	0.371	0.576	0.792
	12/1	12/1	12/1	537	526
	0.048	0.050	0.050	0.784	0.735
				295	291
				34.0	34.0
				34.0	34.0
				709 ft	609 ft
				C+	C+
					346 ft
					346 ft

EB Approach

		34.7 C							
RT	12/1	0.486	660	748	82	0.110	14.0	B+	60 ft
TH	24/2	0.132	0.281	695	957	206	0.213	27.6	C
LT	12/1	0.356	0.281	70	113	104	0.813	64.5*	154 ft

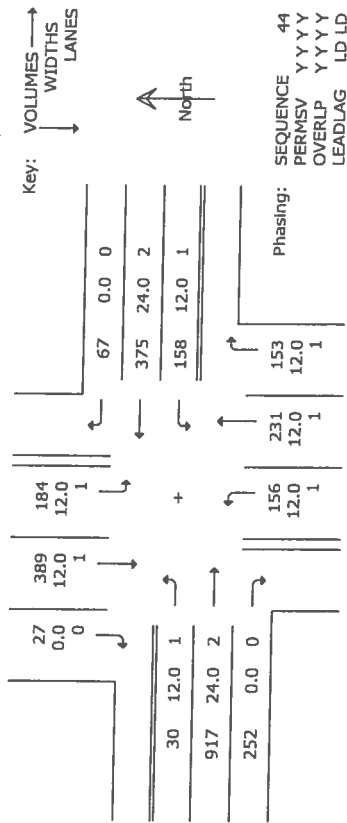
Vista del Norte Commercial Development (Osuna / VdN)
Analysis of Osuna Rd. / Edith Blvd. - [2_09ANX]
2009 AM Peak Hour NO BUILD Conditions

03/31/07
17:24:58

SIGNAL2000/TEAPAC[Ver 2.70.28] - HCM Input Worksheet

Intersection # 1 -

Area Location Type: NONCBD



	SB		WB		RT		LT		RT		LT		RT		LT		RT		LT		RT		LT	
Heavy veh, %HV	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Pk-hr fact, PHF	.90	.90	.90	.80	.80	.80	.80	.81	.81	.81	.81	.81	.81	.81	.81	.81	.81	.81	.81	.81	.81	.81	.81	.81
Pretimed or Act	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
Strup 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	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	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	3	3	3	3	3	3	3	3	3	3	3	3
Ped vol, vpnd	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bike vol, vbic	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Parking locatns	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Park mnvrs, Nm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bus stops, NB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grade, %G	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0

	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Phase 6
Sq 44 LD/LD						
North						
C= 90"						
G= 7.0"						
Y+R= 4.0"						
G= 25.0"						
Y+R= 4.0"						
G= 7.2"						
Y+R= 4.0"						
G= 34.8"						
Y+R= 4.0"						
G= 0.0"						
Y+R= 0.0"						
G= 0.0"						
Y+R= 0.0"						

Vista del Norte Commercial Development (Osuna / VdN)
Analysis of Osuna Rd. / Edith Blvd. - [2_09ANX]
2009 AM Peak Hour NO BUILD Conditions

03/31/07
17:24:58

SIGNAL2000/TEAPAC[Ver 2.70.28] - Capacity Analysis Summary

Intersection Averages for Int # 1 -

V/C 0.782 (Critical V/C 0.979)

Level of Service D+

Control Delay 43.0

	Phase 1	Phase 2	Phase 3	Phase 4
Sq 44 LD/LD				
North				
G/C=0.078				
G= 7.0"				
Y+R= 4.0"				
Off= 0.0%				
G/C=0.277				
G= 25.0"				
Y+R= 4.0"				
Off=12.2%				
G/C=0.080				
G= 7.2"				
Y+R= 4.0"				
Off=44.4%				
G/C=0.387				
G= 34.8"				
Y+R= 4.0"				
Off=56.8%				

C= 90 sec G= 74.0 sec = 82.2% Y=16.0 sec = 17.8% Ped= 0.0 sec = 0.0%

Lane Group	Width/ Lanes	Reqd	g/C Used	Service Rate @C (vph) @E	Adj Volume	v/c	HCM Delay	L	Queue Model 1
SB Approach									
RT+TH LT	12/1	0.325	0.277	364	462	0.930	55.8	*E+	600 ft
	12/1	0.048	0.078	261	204	0.616	23.2	C+	204 ft
NB Approach									
RT TH LT	12/1	0.208	0.401	524	189	0.306	18.7	B	154 ft
	12/1	0.237	0.277	369	285	0.568	29.4	C	291 ft
	12/1	0.098	0.078	161	193	0.902	57.7	*E+	266 ft
WB Approach									
RT+TH LT	24/2	0.230	0.387	1178	553	0.424	20.4	C+	251 ft
	12/1	0.099	0.080	169	197	0.908	57.6	*E+	268 ft
EB Approach									
RT+TH LT	24/2	0.422	0.387	1165	1299	1.006	54.1	*D	945 ft
	12/1	0.000	0.080	335	33	0.085	11.7	B+	21 ft

03/27/07
23:28:56

SIGNAL2000/TEAPACVer 2.70.28] - Capacity Analysis Summary

Area Location Type: NONCBD
Key: VOLUMES →



Lane Group	Width/ Lanes	g/C Reqd	Used	Service Rate @C (vph) @E	Adj Volume	v/c	HCM Delay	L S	Queue Model 1
C = 90 sec G = 74.0 sec = 82.2% Y = 16.0 sec = 17.8% Ped = 0.0 sec = 0.0%									

C= 90 sec G= 74.0 sec = 82.2% Y=16.0 sec = 17.8% Ped= 0.0 sec = 0.0%

C= 90 sec G= 74.0 sec = 82.2% Y=16.0 sec = 17.8%

Ped= 0.0 sec = 0.0%

RT+TH		12/1		0.314		0.343		491		606		432		0.713		29.7		C		446 ft	
LT		12/1		0.055		0.122		243		298		135		0.453		17.1		B		109 ft	
26.7 C+																					

37.3 D+

RT	12/1	0.206	0.444	598	683	186	0.272	16.1	B	141 ft
TH	12/1	0.362	0.343	505	621	543	0.874	40.9	*D+	634 ft
LT	12/1	0.133	0.122	327	377	345	0.915	43.	*D+	441 ft

40.9 D+

		40.9						D+		
RT+TH	24/2	0.414	0.401	1235	1354	1284	0.948	40.0	*D+	842 ft
LT	12/1	0.067	0.056	160	206	177	0.839	47.2	*D	225 ft

31.9 C

[illegible]

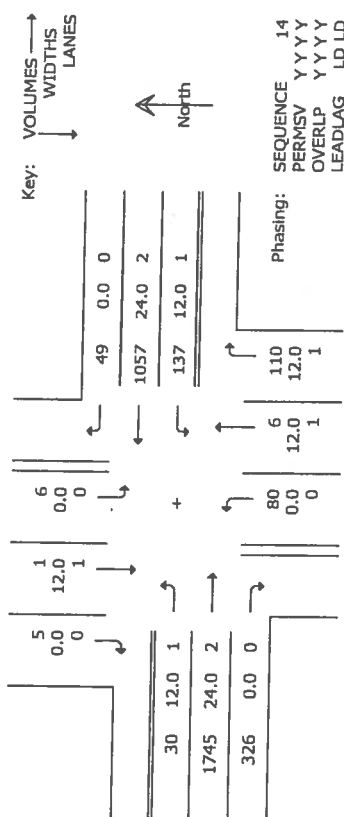
Vista del Norte Commercial Development (Osuna / VdN)
Analysis of Osuna Rd. / Chappel Dr. - [3P_09ANX]
2009 AM Peak Hour NO BUILD Conditions

02/01/07
14:04:46

SIGNAL 2000/TEAPAC[Ver 2.70.28] - 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	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Pk-hr fact, PHF	.70	.70	.70	.80	.80	.80	.72	.72	.72	.81	.81	.81
Pretimed or Act	A	A	A	A	A	A	A	A	A	A	A	A
Strup 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	0	0	0	0	0	0	0	0
Bike vol, vbic	0	0	0	0	0	0	0	0	0	0	0	0
Parking locatns	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Park mnvrs, Nm	0	0	0	0	0	0	0	0	0	0	0	0
Bus stops, NB	0	0	0	0	0	0	0	0	0	0	0	0
Grade, %G	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0

	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Phase 6
Sq 14 LD/LD						
North						
C=100"						
G= 11.4"						
Y+R= 4.0"						
G= 69.5"						
Y+R= 4.0"						
G= 0.0"						
Y+R= 0.0"						
G= 0.0"						
Y+R= 0.0"						

Vista del Norte Commercial Development (Osuna / VdN)
Analysis of Osuna Rd. / Chappel Dr. - [3P_09ANX]
2009 AM Peak Hour NO BUILD Conditions

02/01/07
14:04:46

SIGNAL 2000/TEAPAC[Ver 2.70.28] - Capacity Analysis Summary

Intersection Averages for Int # 1 -

V/C 0.883 (Critical V/C 1.048)

Control Delay 46.0

Level of Service D

Sq 14 LD/LD	Phase 1	Phase 2	Phase 3
	G/C=0.114 G= 11.4" Y+R= 4.0" Off= 0.0%	G/C=0.072 G= 7.2" Y+R= 4.0" Off=15.4%	G/C=0.695 G= 69.5" Y+R= 4.0" Off=26.5%

C=100 sec G= 88.0 sec = 88.0% Y=12.0 sec = 12.0% Ped= 0.0 sec = 0.0%

Lane Group	Width/ Lanes	Reqd	g/C Used	Service Rate @C (vph) @E	Adj Volume	v/c	HCM Delay	L	Queue Model 1
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SB Approach

RT+TH+LT	12/1	0.170	0.114	1	144	17	0.103	40.0	D+
								40.0	D+

NB Approach

RT	12/1	0.217	0.225	175	339	153	0.441	34.2	C
TH+LT	12/1	0.214	0.114	1	129	119	0.793	67.8	*E
								176	177

WB Approach

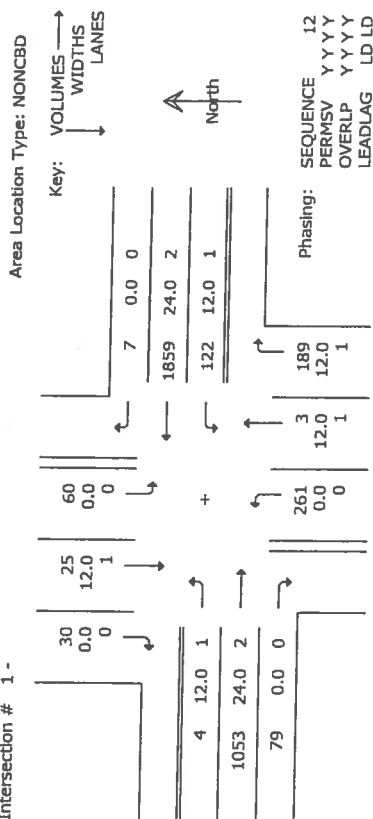
RT+TH	24/2	0.442	0.695	2377	2377	1382	0.581	8.2	A
LT	12/1	0.131	0.072	117	182	171	0.872	67.7	*E
								480	196

EB Approach

RT+TH	24/2	0.747	0.695	2336	2336	2556	1.094	65.2	*E+2136
LT	12/1	0.000	0.072	272	311	37	0.119	4.5	A
								12	12

SIGNAL2000/TEAPAC[Ver 2.70.28] - HCM Input Worksheet

Intersection # 1 -



	SB			WB			NB			EB		
	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT
Heavy veh, %HV	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Pk-hr fact, PHF	.89	.89	.89	.86	.86	.86	.79	.79	.79	.92	.92	.92
Pretimed or Act	A	A	A	A	A	A	A	A	A	A	A	A
Strup 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 eif 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, vpnd	0	0	0	0	0	0	0	0	0	0	0	0
Bike vol, vbic	0	0	0	0	0	0	0	0	0	0	0	0
Parking locatns	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Park mnvrs, Nm	0	0	0	0	0	0	0	0	0	0	0	0
Bus stops, NB	0	0	0	0	0	0	0	0	0	0	0	0
Grade, %G	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0

Sq 12 LD/LD	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Phase 6
C = 90"	G = 28.3" Y+R = 4.0"	G = 5.0" Y+R = 4.0"	G = 44.7" Y+R = 4.0"	G = 0.0" Y+R = 0.0"	G = 0.0" Y+R = 0.0"	G = 0.0" Y+R = 0.0"

SIGNAL2000/TEAPAC[Ver 2.70.28] - Capacity Analysis Summary

Intersection Averages for Int # 1 -

V/C 0.879 (Critical V/C 1.007)

Level of Service D+

Control Delay 40.8

Sq 12 LD/LD	Phase 1	Phase 2	Phase 3
	G/C=0.315 G = 28.3" Y+R = 4.0" Off = 0.0%	G/C=0.056 G = 5.0" Y+R = 4.0" Off=35.9%	G/C=0.496 G = 44.7" Y+R = 4.0" Off=45.9%

C = 90 sec G = 78.0 sec = 86.7% Y=12.0 sec = 13.3% Ped = 0.0 sec = 0.0%

Lane Group	Width/Lanes	Reqd	g/C	Used	Service Rate @C (vph)	Adj Volume	v/c	HCM Delay	L	Queue Model
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SB Approach

RT+TH+LT	12/1	0.217	0.315	237	327	129	0.394	24.9	C+	124 ft
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NB Approach

RT	12/1	0.238	0.415	547	638	239	0.375	18.6	B	197 ft
TH+LT	12/1	0.365	0.315	269	366	334	0.913	56.1	*E+	441 ft

WB Approach

RT+TH	24/2	0.632	0.596	2030	2053	2170	1.057	55.1	*E+	1608 ft
LT	12/1	0.042	0.056	164	203	142	0.700	23.7	*C+	136 ft

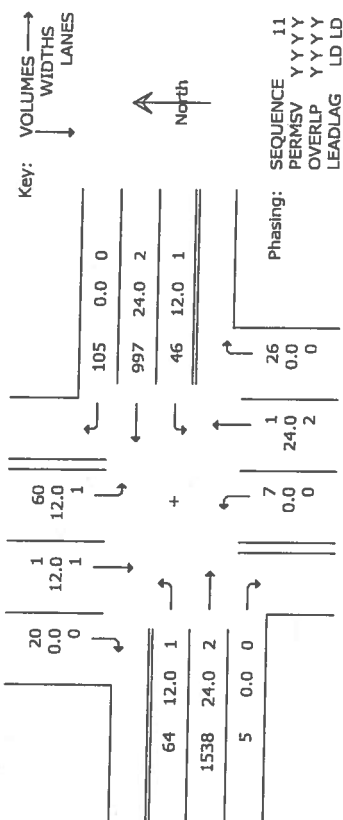
EB Approach

RT+TH	24/2	0.397	0.496	1621	1692	1231	0.728	19.5	B	590 ft
LT	12/1	0.124	0.496	53	70	4	0.050	12.0	B+	3 ft

SIGNAL2000/TEAPAC[Ver 2.70.28] - 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	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Pk-hr fact, PHF	.86	.86	.86	.84	.84	.84	.80	.80	.80	.93	.93	.93
Pretimed or Act	A	A	A	A	A	A	A	A	A	A	A	A
Strup 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 grm, 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	0	0	0	0	0	0	0	0
Bike vol, vbic	0	0	0	0	0	0	0	0	0	0	0	0
Parking locatns	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Park mnvrs, Nm	0	0	0	0	0	0	0	0	0	0	0	0
Bus stops, NB	0	0	0	0	0	0	0	0	0	0	0	0
Grade, %G	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0

Sq 11 LD/LD	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Phase 6
	G= 7.3" Y+R= 4.0"	G= 74.7" Y+R= 4.0"	G= 0.0" Y+R= 0.0"	G= 0.0" Y+R= 0.0"	G= 0.0" Y+R= 0.0"	G= 0.0" Y+R= 0.0"

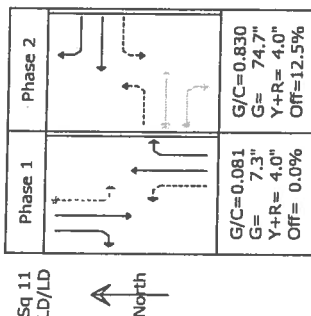
C= 90"

SIGNAL2000/TEAPAC[Ver 2.70.28] - Capacity Analysis Summary

Intersection Averages for Int # 1 -
V/C 0.515 (Critical V/C 0.587)

Level of Service A

Control Delay 4.4



C= 90 sec G= 82.0 sec = 91.1% Y= 8.0 sec = 8.9% Ped= 0.0 sec = 0.0%

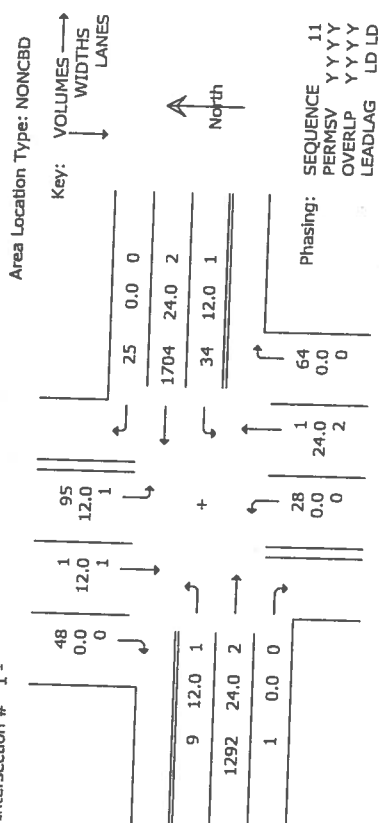
Lane Group	Width/ Lanes	Reqd	g/C	Used	Service Rate @C (vph) @E	Adj Volume	v/c	HCM Delay	L	Queue Model 1
SB Approach										
RT+TH	12/1	0.128	0.081	0.081	1	107	24	0.192	39.4	D+
LT	12/1	0.154	0.081	0.081	1	89	70	0.654	53.6	*D
NB Approach										
RT+TH+LT	24/2	0.127	0.081	0.081	1	205	42	0.189	39.0	D+
WB Approach										
RT+TH	24/2	0.419	0.830	0.830	2820	1312	0.465	2.2	A	A
LT	12/1	0.384	0.830	0.830	166	192	0.286	2.5	A	A
EB Approach										
RT+TH	24/2	0.502	0.830	0.830	2859	1659	0.580	2.8	*A	A
LT	12/1	0.322	0.830	0.830	266	293	0.235	2.0	A	A

Vista del Norte Commercial Development (Osuna / VdN)
Analysis of Osuna Rd. / Academy Parkway. - [4P_09PNX]
2009 PM Peak Hour NO BUILD Conditions

02/01/07
14:12:10

SIGNAL2000/TEAPAC[Ver 2.70.28] - HCM Input Worksheet

Intersection # 1 -



	SB			WB			NB			EB		
	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT
Heavy veh, %HV	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Pk-hr fact, PHF	.86	.86	.86	.84	.84	.84	.80	.80	.80	.93	.93	.93
Pretimed or Act	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost, t1	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 gm, 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	0	0	0	0	0	0	0	0
Bike vol, vbic	0	0	0	0	0	0	0	0	0	0	0	0
Parking locatns	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Park mnvrs, Nm	0	0	0	0	0	0	0	0	0	0	0	0
Bus stops, NB	0	0	0	0	0	0	0	0	0	0	0	0
Grade, %G	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0

Sq 11 LD/LD	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Phase 6
	G= 11.1" Y+R= 4.0"	G= 70.9" Y+R= 4.0"	G= 0.0" Y+R= 0.0"	G= 0.0" Y+R= 0.0"	G= 0.0" Y+R= 0.0"	G= 0.0" Y+R= 0.0"

C= 90°

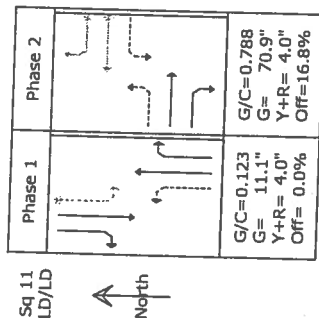
Vista del Norte Commercial Development (Osuna / VdN)
Analysis of Osuna Rd. / Academy Parkway. - [4P_09PNX]
2009 PM Peak Hour NO BUILD Conditions

02/01/07
14:12:10

SIGNAL2000/TEAPAC[Ver 2.70.28] - Capacity Analysis Summary

Intersection Averages for Int # 1 -
V/C 0.641 (Critical V/C 0.756)

Control Delay 8.1 Level of Service A



C= 90 sec G= 82.0 sec = 91.1% Y= 8.0 sec = 8.9% Ped= 0.0 sec = 0.0%

Lane Group	Width/ Lanes	g/c Reqd	g/c Used	Service Rate @C (vph) @E	Adj Volume	V/c	HCM Delay	L S	Queue Model 1
------------	-----------------	-------------	-------------	-----------------------------	---------------	-----	--------------	--------	------------------

SB Approach

RT+TH LT	12/1 12/1	0.142 0.180	0.123 0.123	13 9	173 135	57 110	0.300 0.724	36.8 53.6	D+ *D
									47.9 D

NB Approach

RT+TH+LT	24/2	0.143	0.123	25	317	116	0.355	36.8	D+
									70 ft

WB Approach

RT+TH LT	24/2 12/1	0.605 0.230	0.788 0.788	2708 213	2708 242	2059 40	0.760 0.165	6.4 2.7	*A A
									683 ft 14 ft

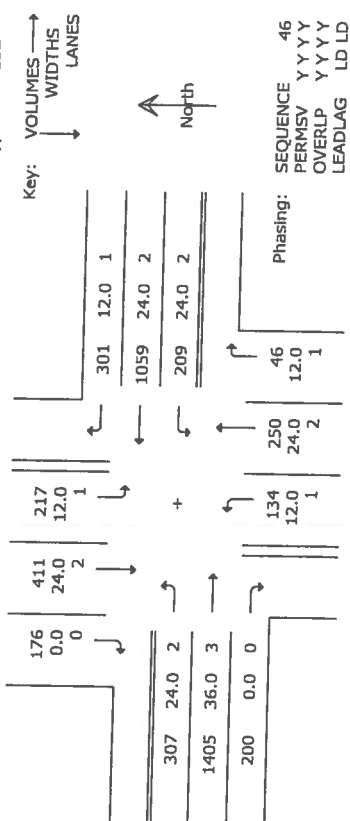
EB Approach

RT+TH LT	24/2 12/1	0.433 0.134	0.788 0.788	2714 69	2714 85	1390 10	0.512 0.110	3.6 2.8	A A
									319 ft 4 ft

SIGNAL2000/TEAPAC[Ver 2.70.28] - 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	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Pk-hr fact, PHF	.87	.87	.87	.88	.88	.88	.91	.91	.91	.88	.88	.88
Predimed or Act	A	A	A	A	A	A	A	A	A	A	A	A
Startup 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 gm, 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	0	0	0	0	0	0	0	0
Bike vol, vbic	0	0	0	0	0	0	0	0	0	0	0	0
Parking locatns	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Park mnvrs, Nm	0	0	0	0	0	0	0	0	0	0	0	0
Bus stops, NB	0	0	0	0	0	0	0	0	0	0	0	0
Grade, %G	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0

	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Phase 6
Sq 46 LD/LD						
C= 90"	G= 5.0" Y+R= 4.0"	G= 21.9" Y+R= 4.0"	G= 9.0" Y+R= 4.0"	G= -1.0" Y+R= 4.0"	G= 35.1" Y+R= 4.0"	G= 0.0" Y+R= 0.0"

SIGNAL2000/TEAPAC[Ver 2.70.28] - Capacity Analysis Summary

Intersection Averages for Int # 1 -

V/C 0.798 (Critical V/C 0.869)

Control Delay 33.5 Level of Service C

	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5
Sq 46 LD/LD					
	G/C=0.056 G= 5.0" Y+R= 4.0" Off= 0.0%	G/C=0.243 G= 21.9" Y+R= 4.0" Off=10.0%	G/C=0.100 G= 9.0" Y+R= 4.0" Off=38.8%	G/C= -0.011 G= -1.0" Y+R= 4.0" Off=53.2%	G/C=0.390 G= 35.1" Y+R= 4.0" Off=56.6%

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	Reqd g/C	Used g/C	Service Rate @C (Vph) @E	Adj Volume	v/c	HCM Delay	L	Queue Model 1
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SB Approach

	RT+TH LT	24/2 12/1	0.265 0.057	0.243 0.056	591 247	801 330	674 249	0.841 0.755	40.5 35.7	*D+ 431 283
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NB Approach

	RT TH LT	12/1 24/2 12/1	0.140 0.162 0.070	0.388 0.243 0.056	498 623 125	596 839 168	51 275 147	0.086 0.328 0.835	17.5 28.2 52.4	B 142 C 193
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WB Approach

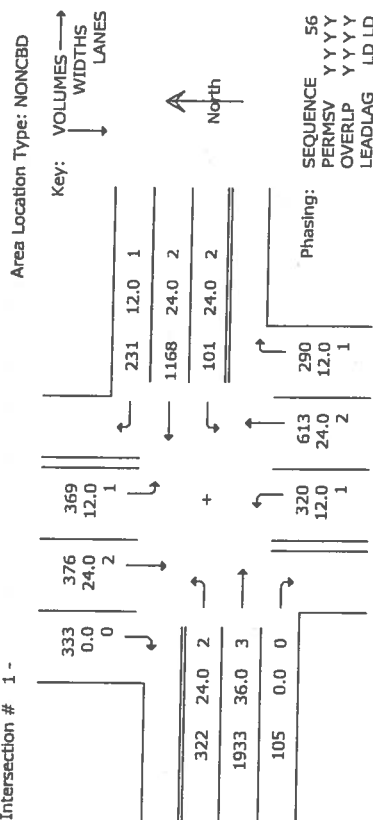
	RT TH LT	12/1 24/2 12/1	0.299 0.386 0.158	0.490 0.390 0.100	679 1218 1	753 1343 322	342 1203 238	0.454 0.896 0.715	15.5 33.9 46.4	B 266 *C 735 *D 157
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EB Approach

	RT+TH LT	36/3 24/2	0.403 0.182	0.423 0.133	1939 93	2048 443	1824 349	0.891 0.784	29.4 46.7	C 761 *D 231
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SIGNAL2000/TEAPAC[Ver 2.70.28] - HCM Input Worksheet

Intersection # 1 -



	SB		WB		NB		EB	
	RT	LT	RT	LT	RT	LT	RT	LT
Heavy veh, %HV	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Pk-hr fact, PHF	.80	.80	.91	.91	.90	.90	.94	.94
Pretimed or Act	A	A	A	A	A	A	A	A
Strup lost, l1	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
Arrival typ, AT	3	3	3	3	3	3	3	3
Ped vol, vped	0	0	0	0	0	0	0	0
Bike vol, vbic	0	0	0	0	0	0	0	0
Parking locatns	NO	NO	NO	NO	NO	NO	NO	NO
Park mnvrs, Nm	0	0	0	0	0	0	0	0
Bus stops, NB	0	0	0	0	0	0	0	0
Grade, %G	.0	.0	.0	.0	.0	.0	.0	.0

	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Phase 6
Sq 56 LD/LD						
North						
C=130"	G= 24.2" Y+R= 4.0"	G= 3.5" Y+R= 4.0"	G= 25.2" Y+R= 4.0"	G= 5.0" Y+R= 4.0"	G= 3.9" Y+R= 4.0"	G= 44.2" Y+R= 4.0"

SIGNAL2000/TEAPAC[Ver 2.70.28] - Capacity Analysis Summary

Intersection Averages for Int # 1 -

V/C 1.024 (Critical V/C 1.071)

Control Delay 91.0

Level of Service F

	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Phase 6
Sq 56 LD/LD						
North						
G/C=0.186 G= 24.2" Y+R= 4.0" Off= 0.0%	G/C=0.027 G= 3.5" Y+R= 4.0" Off=21.7%	G/C=0.194 G= 25.2" Y+R= 4.0" Off=27.5%	G/C=0.038 G= 5.0" Y+R= 4.0" Off=49.9%	G/C=0.030 G= 3.9" Y+R= 4.0" Off=56.8%	G/C=0.340 G= 44.2" Y+R= 4.0" Off=62.9%	

C=130 sec G=106.0 sec = 81.5% Y=24.0 sec = 18.5% Ped= 0.0 sec = 0.0%

Lane Group	Width/ Lanes	Reqd	g/C Used	Service Rate @C (vph) @E	Adj Volume	v/c	HCM Delay	L	Queue Model 1
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SB Approach

RT+TH LT	24/2 12/1	0.392 0.324	0.251 0.244	1 332	804 475	1.101 0.971	111.5 71.8	*F *E	994 ft 835 ft
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NB Approach

RT TH LT	12/1 24/2 12/1	0.362 0.349 0.257	0.263 0.194 0.186	1 1 244	386 649 370	0.797 1.021 0.947	55.4 92.7 70.4	E+ F *E	521 ft 722 ft 650 ft
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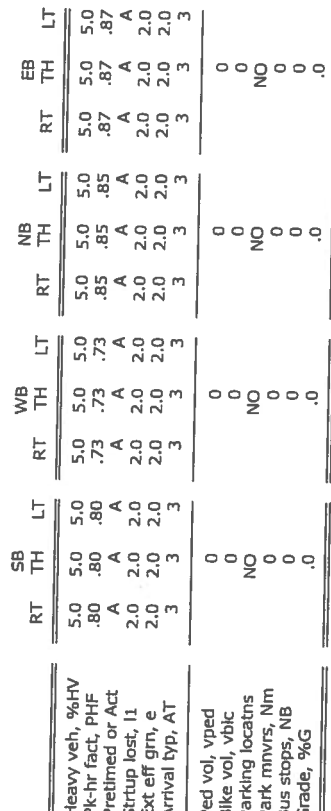
WB Approach

RT TH LT	12/1 24/2 24/2	0.337 0.451 0.279	0.615 0.340 0.038	865 623 1	946 1172 93	0.268 1.096 0.867	11.7 99.3 104.7	B+ F *F	201 ft 1368 ft 123 ft
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EB Approach

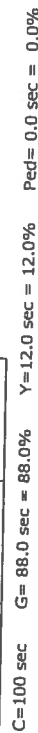
RT+TH LT	36/3 24/2	0.493 0.307	0.401 0.099	1472 292	1962 292	1.105 1.033	94.4 116.8	*F *F	1605 ft 396 ft
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Intersection # 1 -



$G = 40.9''$ $Y+R = 4.0''$	$G = 5.0''$ $Y+R = 4.0''$	$G = 42.1''$ $Y+R = 4.0''$	$G \approx 0.0''$ $Y+R = 0.0''$	$G = 0.0''$ $Y+R = 0.0''$	$G = 0.0''$ $Y+R = 0.0''$
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Intersection Averages for Int # 1 -



SB Approach

WB Approach

EB Approach

CHAPTER 17 - TWSC - UNSIGNALIZED INTERSECTIONS WORKSHEET

Analysis Summary

General Information

Analyst tob
 Agency or Company Terry O. Brown, P.E.
 Analysis Period/Year AM 2009
 Comment 2009 AM Peak Hour NO BUILD Conditions

Site Information

Jurisdiction/Date CoA 3/28/2007
 Major Street Vista del Norte Dr.
 Minor Street Las Lomitas Dr.

Input Data

Lane Configuration	EB			WB			NB			SB		
Lane 1 (curb)	T			TR						LR		
Lane 2	L											
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)	37	97			17	93				189		15
PHF	0.90	0.90			0.90	0.90				0.90		0.90
Percent of heavy vehicles, HV	3	3			3	3				3		3
Flow rate	41	108			19	103				210		17
Flare storage (# of vehs)												
Median storage (# of vehs)												
Signal upstream of Movement 2												
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	227	721	0.315	1	12.3	B	12.3 B
	2								
	3								
EB	①		41	1459	0.028	0	7.5	A	
WB	④								

HICAP™ 2.0.0.1
 ©Catalina Engineering, Inc.

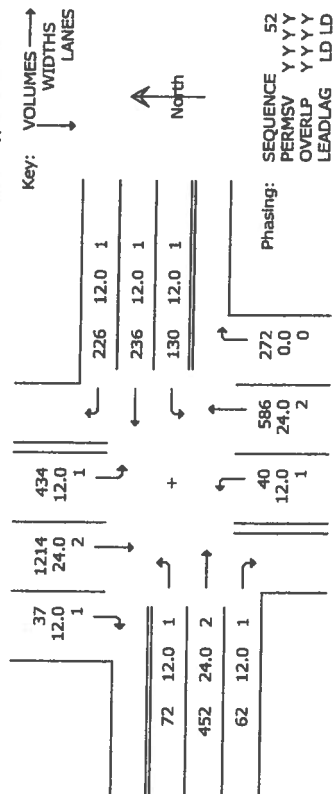
7 - 2008 AM BUILD
 1 of 1

**Analysis of
2009 BUILD Conditions
2007 Plan w/Park**

SIGNAL2000/TEAPAC[Ver 2.71.07] - 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	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Pk-hr fact, PHF	.91	.91	.91	.72	.72	.72	.84	.84	.84	.92	.92	.92
Predimed or Act	A	A	A	A	A	A	A	A	A	A	A	A
Startup 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 gm, 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	0	0	0	0	0	0	0	0
Bike vol, vbic	0	0	0	0	0	0	0	0	0	0	0	0
Parking locatns	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Park minvrs, Nm	0	0	0	0	0	0	0	0	0	0	0	0
Bus stops, NB	0	0	0	0	0	0	0	0	0	0	0	0
Grade, %G	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0

Sq 52 LD/LD	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Phase 6
	G= 5.0" Y+R= 4.0"	G= 13.6" Y+R= 4.0"	G= 29.3" Y+R= 4.0"	G= 7.3" Y+R= 4.0"	G= 14.9" Y+R= 4.0"	G= 0.0" Y+R= 0.0"

C= 90"

SIGNAL2000/TEAPAC[Ver 2.71.07] - Capacity Analysis Summary

Intersection Averages for Int # 1 -

V/C 0.768 (Critical V/C 0.955)

Control Delay 34.0

Level of Service C

Sq 52 LD/LD	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5
	G/C=0.056 G= 5.0" Y+R= 4.0" Off= 0.0%	G/C=0.151 G= 13.6" Y+R= 4.0" Off=10.0%	G/C=0.325 G= 29.3" Y+R= 4.0" Off=29.5%	G/C=0.081 G= 7.3" Y+R= 4.0" Off=66.5%	G/C=0.166 G= 14.9" Y+R= 4.0" Off=79.0%

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	Reqd	g/C	Used	Service Rate @C (vph) @E	Adj Volume	v/c	HCM Delay	L	Queue Model
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SB Approach

RT	12/1	0.136	0.520	733	800	41	0.051	10.7	B+	25 ft
TH	24/2	0.419	0.520	1732	1792	1334	0.744	18.6	B	634 ft
LT	12/1	0.278	0.251	431	511	477	0.933	49.1	*D	587 ft

NB Approach

RT+TH	24/2	0.355	0.325	908	1067	1022	0.958	48.0	*D	709 ft
LT	12/1	0.000	0.056	146	187	48	0.250	18.7	*B	42 ft

WB Approach

RT	12/1	0.283	0.586	850	901	314	0.349	9.9	A	196 ft
TH	12/1	0.258	0.291	397	527	328	0.622	29.9	C	338 ft
LT	12/1	0.099	0.081	153	212	181	0.826	48.9	*D	233 ft

EB Approach

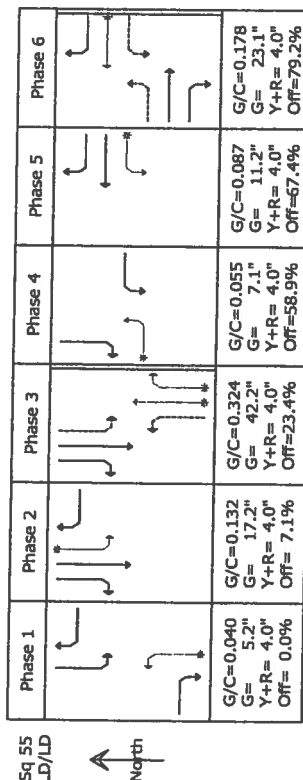
RT	12/1	0.147	0.266	286	409	67	0.164	25.5	C+	62 ft
TH	24/2	0.212	0.166	293	571	491	0.860	49.1	*D	338 ft
LT	12/1	0.174	0.166	67	154	78	0.462	35.9	D+	89 ft

SIGNAL2000/TEAPAC[Ver 2.71.07] - Capacity Analysis Summary

Intersection Averages for Int # 1 -

V/C 0.837 (Critical V/C 1.074)

	V/C 0.837 (Critical V/C 1.074)	Control Delay 65.7	Level of Service E+
Level of Service	E+		



C=130 sec	G=106.0 sec = 81.5%	Y=24.0 sec = 18.5%	Ped= 0.0 sec = 0.0%
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Lane Group	Width/ Lanes	g/C Reqd Used	Service Rate @C (vph) @E	Adj Volume v/c	HCM Delay	L S	Queue Model 1
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B Approach				35.9		D +				
RT	12/1	0.291	0.573	782	881	92	0.104	12.7	8+	73 ft
TH	24/2	0.387	0.487	1463	1679	925	0.551	23.8	C+	548 ft
LT	12/1	0.292	0.203	254	396	382	0.943	71.1	*E	670 ft

B Approach			102.0 F			
RT+TH	24/2	0.443	487	1088	1.110	1320 ft
LT	12/1	0.003	159	240	0.307	*F
					77	28.2

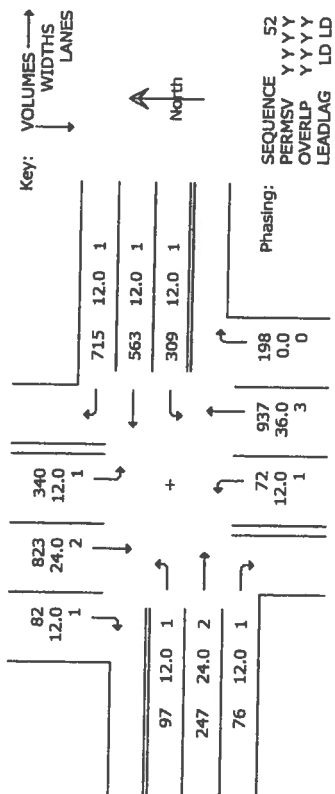
B Approach				67.3 E+						
RT	12/1	0.554	0.529	694	813	745	0.916	43.1	D+	1142 ft
TH	12/1	0.432	0.295	128	524	586	1.099	114.8	*F	1214 ft
LT	12/1	0.181	0.172	303	443	322	0.727	37.1	*D+	473 ft

B Approach			48.1			D				
RT	12/1	0.288	0.249	1	361	82	0.215	39.0	D+	112 ft
TH	24/2	0.296	0.178	1	589	266	0.435	48.1	D	213 ft
LT	12/1	0.135	0.055	1	129	104	0.693	55.2	*E+	178 ft

SIGNAL2000/TEAPAC[Ver 2.71.07] - HCM Input Worksheet

Intersection # 1 -

Area Location Type: NONCBD



	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT
Heavy veh, %HV	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
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
Strup 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 gm, 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	0	0	0	0	0	0	0	0
Bike vol, vbic	0	0	0	0	0	0	0	0	0	0	0	0
Parking locatns	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Park minvrs, Nm	0	0	0	0	0	0	0	0	0	0	0	0
Bus stops, NB	0	0	0	0	0	0	0	0	0	0	0	0
Grade, %G	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0

Sq 52 LD/LD	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Phase 6
C=100"	G= 5.0" Y+R= 4.0"	G= 11.0" Y+R= 4.0"	G= 26.6" Y+R= 4.0"	G= 5.0" Y+R= 4.0"	G= 32.4" Y+R= 4.0"	G= 0.0" Y+R= 0.0"

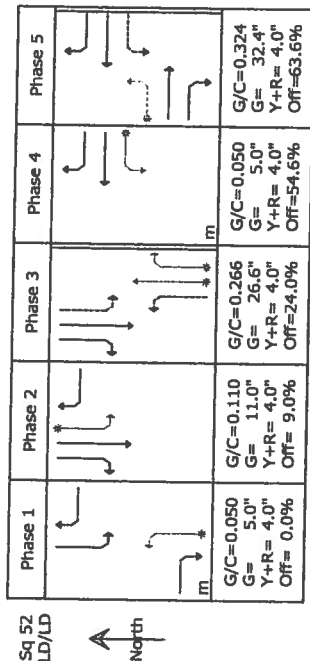
SIGNAL2000/TEAPAC[Ver 2.71.07] - Capacity Analysis Summary

Intersection Averages for Int # 1 -

V/C 0.740 (Critical V/C 0.881)

Control Delay 33.5

Level of Service C



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	Reqd g/C	Used g/C	Service Rate @C (vph) @E	Adj Volume	V/c	HCM Delay	L	Queue Model 1
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SB Approach

RT	TH	LT
12/1	24/2	12/1
0.195	0.332	0.233
0.416	0.416	0.200
531	1286	332
640	1434	416
92	925	382
0.144	0.645	0.918
18.2	24.3	52.5
B	C+	*D
77 ft	495 ft	527 ft

NB Approach

RT+TH	LT
36/3	12/1
0.312	0.007
0.266	0.050
904	151
1277	212
1208	77
0.946	0.350
50.2	25.5
*D	*C+
644 ft	82 ft

WB Approach

RT	TH	LT
12/1	12/1	12/1
0.533	0.393	0.050
0.654	0.414	0.050
964	631	322
1006	749	413
745	586	322
0.741	0.782	0.780
14.6	30.8	35.0
B+	C	*D+
646 ft	556 ft	388 ft

EB Approach

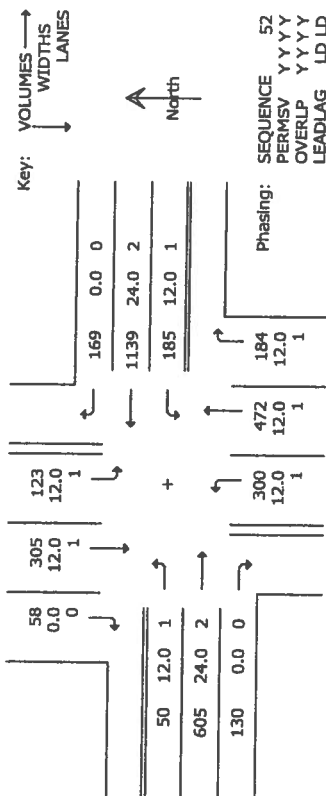
RT	TH	LT
12/1	24/2	12/1
0.192	0.200	0.377
0.414	0.324	0.324
528	891	82
637	1116	124
82	266	104
0.129	0.238	0.759
18.2	24.9	51.9
B	C+	*D
68 ft	135 ft	144 ft

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SIGNAL2000/TEAPAC[Ver 2.71.07] - HCM Input Worksheet

Intersection # 1 -

Area Location Type: NONCBD



	SB	RT	TH	LT	WB	RT	TH	LT	NB	RT	TH	LT	EB	RT	TH	LT
Heavy veh, %HV	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Pk-hr fact, PHF	.84	.84	.84	.84	.91	.91	.91	.87	.87	.87	.87	.87	.87	.87	.87	.87
Pretimed or Act	A	A	A	A	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	2.0	2.0	2.0	2.0
Ext eff grm, 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	2.0	2.0	2.0	2.0
Arrival typ, AT	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Ped vol, vped	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bike vol, vbic	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Parking locatns	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Park minvrs, Nm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bus stops, NB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grade, %G	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0

Sq 52 LD/LD	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Phase 6
North	→	→	→	→	→	→
South	←	←	←	←	←	←
East	→	→	→	→	→	→
West	←	←	←	←	←	←
G= 11.8"	G= 11.8"	G= 11.8"	G= 11.8"	G= 11.8"	G= 11.8"	G= 11.8"
Y+R= 4.0"	Y+R= 4.0"	Y+R= 4.0"	Y+R= 4.0"	Y+R= 4.0"	Y+R= 4.0"	Y+R= 4.0"
C= 90°	C= 90°	C= 90°	C= 90°	C= 90°	C= 90°	C= 90°

SIGNAL2000/TEAPAC[Ver 2.71.07] - Capacity Analysis Summary

Intersection Averages for Int # 1 -

V/C 0.884 (Critical V/C 0.959)

Control Delay 46.2

Level of Service D

Sq 52 LD/LD	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5
North	→	→	→	→	→
South	←	←	←	←	←
East	→	→	→	→	→
West	←	←	←	←	←
G/C=0.131	G/C=0.131	G/C=0.131	G/C=0.131	G/C=0.131	G/C=0.131
G= 11.8"	G= 11.8"	G= 11.8"	G= 11.8"	G= 11.8"	G= 11.8"
Y+R= 4.0"	Y+R= 4.0"	Y+R= 4.0"	Y+R= 4.0"	Y+R= 4.0"	Y+R= 4.0"
Off= 0.0%	Off= 0.0%	Off= 0.0%	Off= 0.0%	Off= 0.0%	Off= 0.0%

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	Req'd	g/C	Used	Service Rate @C (vph) @E	Adj Volume	V/C	HCM Delay	L	S	Queue Model
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SB Approach

RT+TH LT	12/1	12/1	0.314	0.067	0.131	439	561	432	146	0.770	34.2	C	472 ft	123 ft
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NB Approach

RT TH LT	12/1	12/1	0.222	0.362	0.317	603	687	211	543	0.307	16.2	B	162 ft	703 ft
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WB Approach

RT+TH LT	24/2	12/1	0.453	0.103	0.085	1304	1414	1438	203	1.017	54.4	*D	1049 ft	276 ft
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EB Approach

RT+TH LT	24/2	12/1	0.304	0.340	0.289	787	970	844	57	0.870	39.0	D+	535 ft	73 ft
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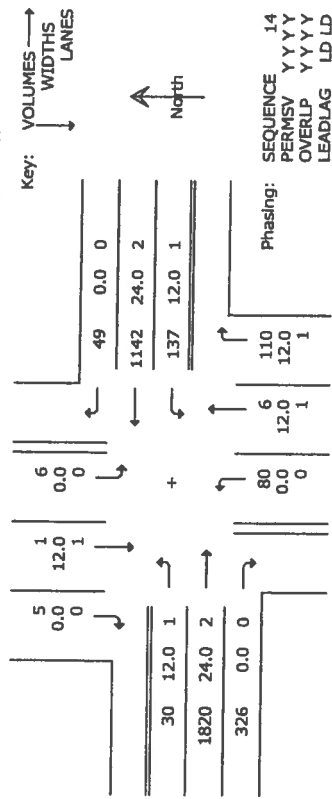
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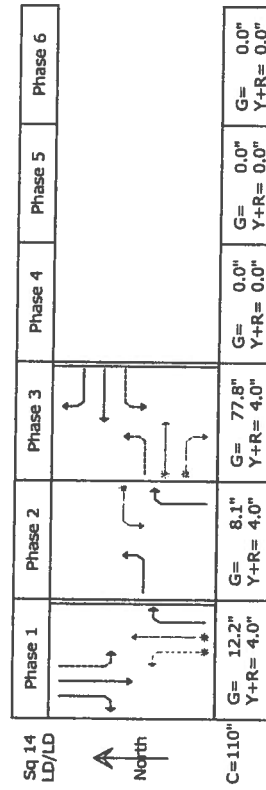
SIGNAL2000/TEAPAC[Ver 2.71.07] - HCM Input Worksheet

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	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Pk-hr fact, PHF	.70	.70	.70	.80	.80	.80	.72	.72	.72	.81	.81	.81
Pretimed or Act	A	A	A	A	A	A	A	A	A	A	A	A
Strup 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 gtm, 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	0	0	0	0	0	0	0	0
Bike vol, vbic	0	0	0	0	0	0	0	0	0	0	0	0
Parking locatns	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Park minvrs, Nm	0	0	0	0	0	0	0	0	0	0	0	0
Bus stops, NB	0	0	0	0	0	0	0	0	0	0	0	0
Grade, %G	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0



Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Phase 6
G= 12.2" Y+R= 4.0"	G= 8.1" Y+R= 4.0"	G= 77.8" Y+R= 4.0"	G= 0.0" Y+R= 0.0"	G= 0.0" Y+R= 0.0"	G= 0.0" Y+R= 0.0"

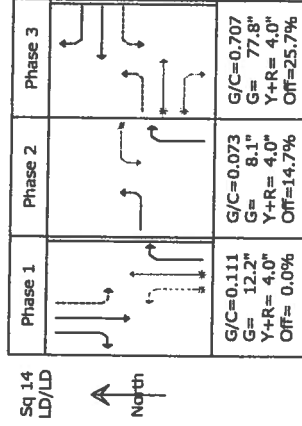
SIGNAL2000/TEAPAC[Ver 2.71.07] - Capacity Analysis Summary

Intersection Averages for Int # 1 -

V/C 0.904 (Critical V/C 1.067)

Control Delay 51.2

Level of Service D



C=110 sec G= 98.0 sec = 89.1% Y=12.0 sec = 10.9% Ped= 0.0 sec = 0.0%

Lane Group	Width/Lanes	Reqd	g/C	Used	Service Rate @C (vph)	Adj Volume	v/c	HCM Delay	L	Queue Model
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SB Approach

RT+TH+LT	12/1	0.208	0.111	1	137	17	0.106	44.3	D+	23 ft
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NB Approach

RT	12/1	0.250	0.220	59	325	153	0.451	38.1	D+	194 ft
TH+LT	12/1	0.247	0.111	1	122	119	0.815	76.5	*E	196 ft

WB Approach

RT+TH	24/2	0.476	0.707	2421	2421	1488	0.615	8.8	A	568 ft
LT	12/1	0.180	0.073	99	174	171	0.891	76.9	*E	221 ft

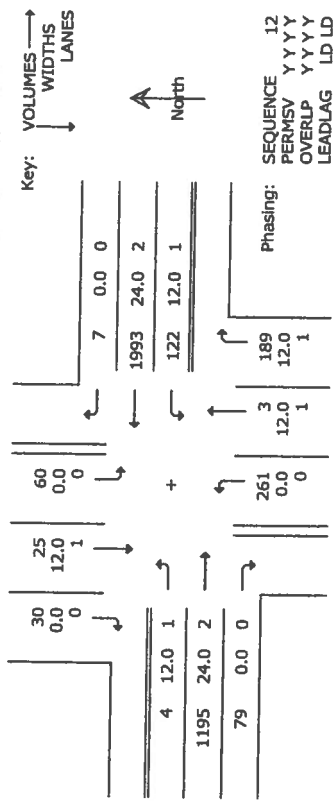
EB Approach

RT+TH	24/2	0.772	0.707	2380	2380	2649	1.113	73.6	*E	2425 ft
LT	12/1	0.000	0.073	246	291	37	0.127	5.2	A	13 ft

SIGNAL2000/TEAPAC[Ver 2.71.07] - HCM Input Worksheet

Intersection # 1 -

Area Location Type: NONCBD



	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT
Heavy veh, %HV	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Pk-hr fact, PHF	.89	.89	.89	.86	.86	.86	.79	.79	.79	.92	.92	.92
Pretimed or Act	A	A	A	A	A	A	A	A	A	A	A	A
Startup 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 gm, 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	0	0	0	0	0	0	0	0
Bike vol, vbic	0	0	0	0	0	0	0	0	0	0	0	0
Parking locals	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Park minvrs, Nm	0	0	0	0	0	0	0	0	0	0	0	0
Bus stops, NB	0	0	0	0	0	0	0	0	0	0	0	0
Grade, %G	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0

Sq 12 LD/LD	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Phase 6
	G= 30.4" Y+R= 4.0"	G= 5.0" Y+R= 4.0"	G= 52.6" Y+R= 4.0"	G= 0.0" Y+R= 0.0"	G= 0.0" Y+R= 0.0"	G= 0.0" Y+R= 0.0"

C=100"

SIGNAL2000/TEAPAC[Ver 2.71.07] - Capacity Analysis Summary

Intersection Averages for Int # 1 -
V/C 0.922 (Critical V/C 1.050)

Control Delay 50.7

Level of Service D

Sq 12 LD/LD	Phase 1	Phase 2	Phase 3
	G/C=0.304 G= 30.4" Y+R= 4.0" Off= 0.0%	G/C=0.050 G= 5.0" Y+R= 4.0" Off=34.4%	G/C=0.526 G= 52.6" Y+R= 4.0" Off=43.4%

North

C=100 sec G= 88.0 sec = 88.0% Y=12.0 sec = 12.0% Ped= 0.0 sec = 0.0%

Lane Group	Width/Lanes	Reqd	g/C	Used	Service Rate @C (vph) @E	Adj Volume	v/c	HCM Delay	L	Queue Model 1
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29.0 C

RT+TH+LT	12/1	0.247	0.304	191	288	129	0.437	29.0	C	141 ft
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NB Approach

RT	TH+LT	12/1	0.259	0.394	489	605	0.395	22.2	C+	225 ft
TH+LT	12/1	0.380	0.304	232	346	334	0.957	71.0	*E	512 ft

WB Approach

RT+TH	LT	24/2	0.675	0.616	2093	2123	1.095	70.2	*E	1961 ft
LT	12/1	0.056	0.050	134	169	142	0.821	42.6	*D+	178 ft

EB Approach

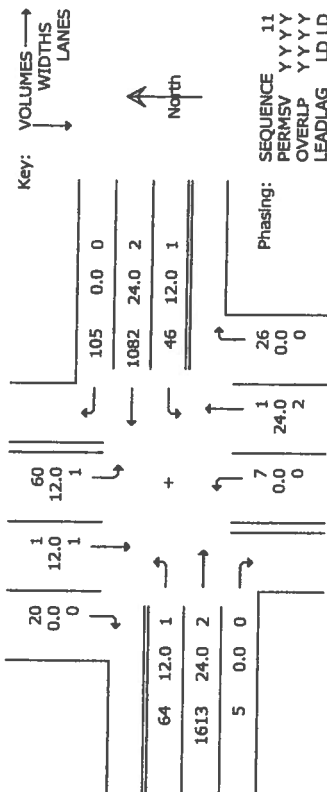
RT+TH	LT	24/2	0.444	0.526	1718	1797	0.771	21.0	C+	736 ft
LT	12/1	0.171	0.526	47	62	4	0.056	11.9	B+	3 ft

21.0 C+

SIGNAL2000/TEAPAC[Ver 2.71.07] - HCM Input Worksheet

Intersection # 1 -

Area Location Type: NONCBD



	SB	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT
Heavy veh, %HV	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Pk-hr fact, PHF	.86	.86	.86	.84	.84	.84	.84	.84	.84	.84	.84	.84	.84	.84	.84	.84	.84	.84
Pretimed or Act	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
Startup 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	2.0	2.0	2.0	2.0	2.0	2.0
Ext eff gmi, 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	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	3	3	3	3	3	3
Ped vol, vped	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bike vol, vbic	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Parking locatns	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Park minvrs, Nm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bus stops, NB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grade, %G	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0

Sq 11 LD/LD	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Phase 6
	G= 8.6" Y+R= 4.0"	G= 83.4" Y+R= 4.0"	G= 0.0" Y+R= 0.0"	G= 0.0" Y+R= 0.0"	G= 0.0" Y+R= 0.0"	G= 0.0" Y+R= 0.0"

C=100"

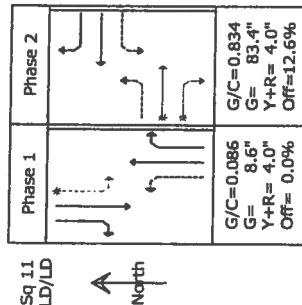
SIGNAL2000/TEAPAC[Ver 2.71.07] - Capacity Analysis Summary

Intersection Averages for Int # 1 -

V/C 0.542 (Critical V/C 0.607)

Control Delay 4.7

Level of Service A



C=100 sec G= 92.0 sec = 92.0% Y= 8.0 sec = 8.0% Ped= 0.0 sec = 0.0%

Lane Group	Width/Lanes	Req'd	g/C	Used	Service Rate @C (vph)	Adj Volume	v/c	HCM Delay	L	Queue Model 1
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SB Approach

RT+TH	12/1	0.172	0.086	1	112	24	0.180	43.1	D+	31 ft
LT	12/1	0.193	0.086	1	94	70	0.614	53.6	*D	99 ft

NB Approach

RT+TH+LT	24/2	0.171	0.086	1	217	42	0.176	42.8	D+	28 ft
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WB Approach

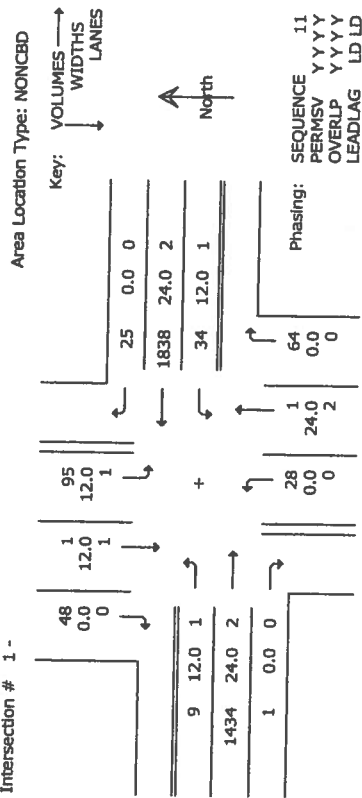
RT+TH	24/2	0.452	0.834	2835	2835	1413	0.498	2.5	A	294 ft
LT	12/1	0.426	0.834	147	173	55	0.318	2.9	A	21 ft

EB Approach

RT+TH	24/2	0.528	0.834	2872	2872	1739	0.606	3.2	*A	420 ft
LT	12/1	0.364	0.834	232	260	69	0.265	2.3	A	24 ft

SIGNAL2000/TEAPAC[Ver 2.71.07] - HCM Input Worksheet

Intersection # 1 -



	SB		WB		NB		EB	
	RT	LT	RT	LT	RT	LT	RT	LT
Heavy veh, %HV	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Pk-hr fact, PHF	.86	.86	.84	.84	.80	.80	.93	.93
Pretimed or Act	A	A	A	A	A	A	A	A
Strup loc, I	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Ext eff gm, e	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
Ped vol, vped	0	0	0	0	0	0	0	0
Bike vol, vbic	0	0	0	0	0	0	0	0
Parking locatns	NO	NO	NO	NO	NO	NO	NO	NO
Park minvrs, Nm	0	0	0	0	0	0	0	0
Bus stops, NB	0	0	0	0	0	0	0	0
Grade, %G	.0	.0	.0	.0	.0	.0	.0	.0

Sq 11 LD/LD	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Phase 6
G= 12.9" Y+R= 4.0"	G= 79.1" Y+R= 4.0"	G= 79.1" Y+R= 4.0"	G= 0.0" Y+R= 0.0"	G= 0.0" Y+R= 0.0"	G= 0.0" Y+R= 0.0"	G= 0.0" Y+R= 0.0"

C=100"

SIGNAL2000/TEAPAC[Ver 2.71.07] - Capacity Analysis Summary

Intersection Averages for Int # 1 -
V/C 0.690 (Critical V/C 0.799)

Level of Service A

Control Delay 9.2

Sq 11 LD/LD	Phase 1	Phase 2
	G/C=0.129 G= 12.9" Y+R= 4.0" Off= 0.0%	G/C=0.791 G= 79.1" Y+R= 4.0" Off=16.9%

North

C=100 sec G= 92.0 sec = 92.0% Y= 8.0 sec = 8.0% Ped= 0.0 sec = 0.0%

Lane Group	Width/ Lanes	Req'd	g/C	Used	Service Rate @C (vph)	Adj Volume	v/c	HCM Delay	L	Queue Model 1
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SB Approach

RT+TH LT	12/1 12/1	0.183 0.214	0.129 0.129	1 1	179 139	57 110	0.286 0.692	40.2 53.8	D+ *D	70 ft 153 ft
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NB Approach

RT+TH+LT	24/2	0.185	0.129	1	328	116	0.338	40.2	D+	76 ft
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WB Approach

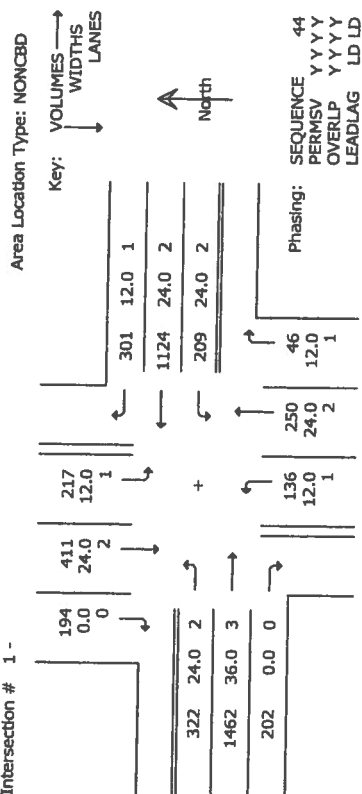
RT+TH LT	24/2 12/1	0.649 0.304	0.791 0.791	2720 170	2720 199	2218 40	0.815 0.201	8.2 3.1	*A A	893 ft 16 ft
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EB Approach

RT+TH LT	24/2 12/1	0.479 0.185	0.791 0.791	2725 53	2725 65	1543 10	0.566 0.139	4.2 3.3	A A	411 ft 4 ft
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SIGNAL2000/TEAPAC[Ver 2.71.07] - HCM Input Worksheet

Intersection # 1 -



	SB	TH	LT	RT	WB	TH	LT	RT	NB	TH	LT	RT	EB	TH	LT
Heavy veh, %HV	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Pk-hr fact, PHF	.87	.87	.87	.88	.88	.88	.91	.91	.91	.91	.91	.88	.88	.88	.88
Predtmed or Act	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
Strup 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	2.0	2.0	2.0
Ext eff gm, 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	2.0	2.0	2.0
Arrival typ, AT	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Ped vol, vped	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bike vol, vbic	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Parking locatns	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Park minvrs, Nm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bus stops, NB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grade, %G	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0

Sq 44 LD/LD	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Phase 6
	G= 5.3" Y+R= 4.0"	G= 21.0" Y+R= 4.0"	G= 11.9" Y+R= 4.0"	G= 35.7" Y+R= 4.0"	G= 0.0" Y+R= 0.0"	G= 0.0" Y+R= 0.0"

C= 90"

SIGNAL2000/TEAPAC[Ver 2.71.07] - Capacity Analysis Summary

Intersection Averages for Int # 1 -

V/C 0.845 (Critical V/C 0.938)

Control Delay 40.2

Level of Service D+

Sq 44 LD/LD	Phase 1	Phase 2	Phase 3	Phase 4
	G/C=0.059 G= 5.3" Y+R= 4.0" Off= 0.0"	G/C=0.234 G= 21.0" Y+R= 4.0" Off=10.3%	G/C=0.133 G= 11.9" Y+R= 4.0" Off=38.1%	G/C=0.397 G= 35.7" Y+R= 4.0" Off=55.9%

C= 90 sec G= 74.0 sec = 82.2% Y=16.0 sec = 17.8% Ped= 0.0 sec = 0.0%

Lane Group	Width/ Lanes	Reqd	g/C	Used	Service Rate @C (vph) @E	Adj Volume	v/c	HCM Delay	L	Queue Model 1
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SB Approach

RT+TH LT	24/2 12/1	0.271 0.063	0.234 0.059	551 241	767 324	695 249	0.906 0.769	47.9 37.2	*D D+	477 ft 288 ft
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NB Approach

RT TH LT	12/1 24/2 12/1	0.140 0.162 0.072	0.411 0.234 0.059	540 582 128	632 805 173	51 275 149	0.081 0.342 0.823	16.2 29.0 50.0	B C *D	38 ft 144 ft 193 ft
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WB Approach

RT TH LT	12/1 24/2 24/2	0.299 0.405 0.158	0.500 0.397 0.133	698 1246 90	769 1368 441	342 1277 238	0.445 0.933 0.537	14.9 37.9 37.7	B+ D+ D+	261 ft 818 ft 143 ft
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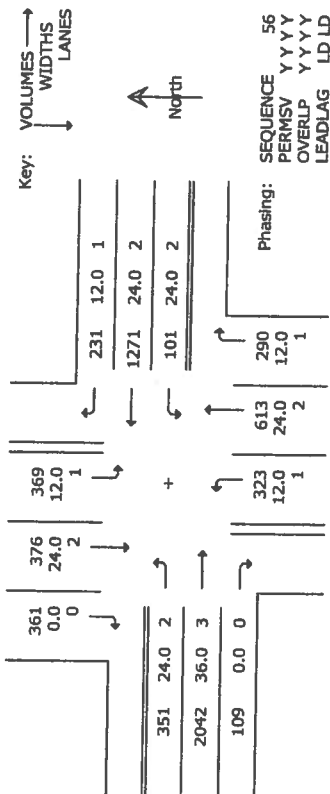
EB Approach

RT+TH LT	36/3 24/2	0.415 0.186	0.397 0.133	1793 90	1921 441	1891 366	0.984 0.826	43.8 50.2	*D+ *D	922 ft 249 ft
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SIGNAL2000/TEAPAC[Ver 2.71.07] - HCM Input Worksheet

Intersection # 1 -

Area Location Type: NONCBD



	RT	TH	LT	WB	RT	TH	LT	NB	RT	TH	LT	EB	RT	TH	LT
Heavy veh, %HV	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Pk-hr fact, PHF	.80	.80	.80	.91	.91	.91	.91	.90	.90	.90	.90	.94	.94	.94	.94
Pretimed or Act	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost, l	2.0	2.0	2.0	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 gm, 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	2.0	2.0	2.0
Arrival typ, AT	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Ped vol, vped	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bike vol, vbic	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Parking locatns	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Park minvrs, Nm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bus stops, NB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grade, %G	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0

Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Phase 6
G= 23.1" Y+R= 4.0"	G= 3.2" Y+R= 4.0"	G= 25.3" Y+R= 4.0"	G= 5.0" Y+R= 4.0"	G= 4.7" Y+R= 4.0"	G= 44.8" Y+R= 4.0"

C=130"

SIGNAL2000/TEAPAC[Ver 2.71.07] - Capacity Analysis Summary

Intersection Averages for Int # 1 -

V/C 1.066 (Critical V/C 1.098)

Control Delay 105.9

Level of Service F

Sq 56 LD/LD	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Phase 6
	G/C=0.177 G= 23.1" Y+R= 4.0" Off= 0.0%	G/C=0.024 G= 3.2" Y+R= 4.0" Off=20.8%	G/C=0.195 G= 25.3" Y+R= 4.0" Off=26.3%	G/C=0.038 G= 5.0" Y+R= 4.0" Off=48.9%	G/C=0.036 G= 4.7" Y+R= 4.0" Off=55.8%	G/C=0.344 G= 44.8" Y+R= 4.0" Off=62.5%

C=130 sec G=106.0 sec = 81.5% Y=24.0 sec = 18.5% Ped= 0.0 sec = 0.0%

Lane Group	Width/ Lanes	Reqd	g/C	Used	Service Rate @C (vph) @E	Adj Volume	v/c	HCM Delay	L	Queue Model 1
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SB Approach

RT+TH LT	24/2 12/1	0.399 0.324	0.250 0.232	1 316	796 454	921 461	1.156 1.011	132.8 84.1	*F *F	1095 ft 887 ft
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NB Approach

RT TH LT	12/1 24/2 12/1	0.362 0.349 0.260	0.264 0.195 0.177	1 1 227	388 653 354	322 681 359	0.793 1.015 0.994	54.9 90.9 84.5	D F *F	519 ft 717 ft 701 ft
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WB Approach

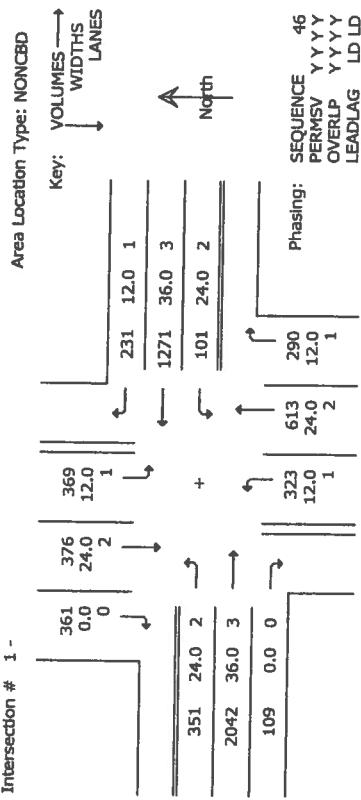
RT TH LT	12/1 24/2 12/1	0.337 0.474 0.279	0.608 0.344 0.038	851 653 1	935 1187 93	254 1397 111	0.272 1.177 0.867	12.1 131.3 104.7	B+ *F *F	204 ft 1627 ft 123 ft
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EB Approach

RT+TH LT	36/3 24/2	0.511 0.311	0.411 0.105	1558 1	2012 312	2288 373	1.137 1.060	106.7 122.7	F *F	1755 ft 439 ft
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SIGNAL2000/TEAPAC[Ver 2.71.07] - HCM Input Worksheet

Intersection # 1 -



	SB			WB			NB			EB		
	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT
Heavy veh, %HV	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Pk-hr fact, PHF	.80	.80	.80	.91	.91	.91	.90	.90	.90	.94	.94	.94
Pretimed or Act	A	A	A	A	A	A	A	A	A	A	A	A
Strup 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 gm, 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	0	0	0	0	0	0	0	0
Bike vol, vbic	0	0	0	0	0	0	0	0	0	0	0	0
Parking locatns	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Park minvrs, Nm	0	0	0	0	0	0	0	0	0	0	0	0
Bus stops, NB	0	0	0	0	0	0	0	0	0	0	0	0
Grade, %G	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0

	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Phase 6
Sq 46 LD/LD						
	G= 28.3" Y+R= 4.0"	G= 30.5" Y+R= 4.0"	G= 5.0" Y+R= 4.0"	G= 4.5" Y+R= 4.0"	G= 41.7" Y+R= 4.0"	G= 0.0" Y+R= 0.0"

C=130"

SIGNAL2000/TEAPAC[Ver 2.71.07] - Capacity Analysis Summary

Intersection Averages for Int # 1 -
V/C 1.019 (Critical V/C 1.244)

Control Delay 100.6 Level of Service F

	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5
Sq 46 LD/LD					
	G/C=0.218 G= 28.3" Y+R= 4.0" Off= 0.0%	G/C=0.235 G= 30.5" Y+R= 4.0" Off=24.9%	G/C=0.038 G= 5.0" Y+R= 4.0" Off=51.4%	G/C=0.035 G= 4.5" Y+R= 4.0" Off=58.3%	G/C=0.321 G= 41.7" Y+R= 4.0" Off=64.9%

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	Reqd g/C	Used g/C	Service Rate @C (vph)	Adj Volume	V/c	HCM Delay	L Queue Model 1
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SB Approach

RT+TH LT	24/2 12/1	0.399 0.325	0.235 0.218	1 293	742 427	1.230 1.070	164.7 102.9	*F *F	1184 ft 950 ft
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NB Approach

RT TH LT	12/1 24/2 12/1	0.362 0.349 0.267	0.304 0.235 0.218	139 1 289	456 804 427	0.690 0.843 0.833	44.1 55.6 48.9	D+ E+ D	477 ft 595 ft 550 ft
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WB Approach

RT TH LT	12/1 36/3 24/2	0.337 0.391 0.279	0.569 0.321 0.038	775 682 1	876 1581 93	0.290 0.884 0.867	14.6 48.2 104.7	B+ D *F	223 ft 830 ft 123 ft
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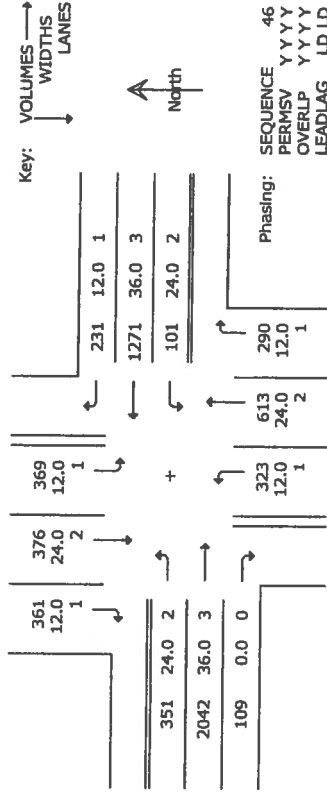
EB Approach

RT+TH LT	36/3 24/2	0.511 0.311	0.386 0.104	1339 1	1888 306	1.212 1.078	140.4 129.0	*F *F	1915 ft 448 ft
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SIGNAL2000/TEAPAC[Ver 2.71.07] - HCM Input Worksheet

Intersection # 1 -

Area Location Type: NONCBD



	SB	RT	TH	LT	WB	RT	TH	LT	NB	RT	TH	LT	EB
Heavy veh, %HV	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Pk-hr fact, PHF	.80	.80	.80	.91	.91	.91	.91	.91	.90	.90	.94	.94	.94
Predetermined Act	A	A	A	A	A	A	A	A	A	A	A	A	A
Strup 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	2.0
Ext eff gm, 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	2.0
Arrival typ, AT	3	3	3	3	3	3	3	3	3	3	3	3	3
Ped vol, vped	0	0	0	0	0	0	0	0	0	0	0	0	0
Bike vol, vbic	0	0	0	0	0	0	0	0	0	0	0	0	0
Parking locatns	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Park minvrs, Nm	0	0	0	0	0	0	0	0	0	0	0	0	0
Bus stops, NB	0	0	0	0	0	0	0	0	0	0	0	0	0
Grade, %G	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0

Sq 46 LD/LD	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Phase 6
G= 31.2"	G= 31.2"	G= 23.0"	G= 5.0"	G= 4.9"	G= 45.9"	G= 0.0"
Y+R= 4.0"	Y+R= 4.0"	Y+R= 4.0"	Y+R= 4.0"	Y+R= 4.0"	Y+R= 4.0"	Y+R= 0.0"

C=130"

SIGNAL2000/TEAPAC[Ver 2.71.07] - Capacity Analysis Summary

Intersection Averages for Int # 1 -

V/C 0.942 (Critical V/C 1.070)

Control Delay 75.8 Level of Service E

Sq 46 LD/LD	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5
G= 31.2"	G= 31.2"	G= 23.0"	G= 5.0"	G= 4.9"	G= 45.9"
Y+R= 4.0"	Y+R= 4.0"	Y+R= 4.0"	Y+R= 4.0"	Y+R= 4.0"	Y+R= 4.0"
Off= 0.0%	Off= 27.1%	Off= 47.8%	Off= 54.8%	Off= 61.6%	Off= 61.6%

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	Reqd	g/C	Used	Service Rate @C (vph)	Adj Volume	v/c	HCM Delay	L	Queue Model 1
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SB Approach

RT	12/1	0.415	0.315	179	475	451	0.932	68.2	E	786 ft
TH	24/2	0.321	0.177	1	586	470	0.772	57.1	E+	415 ft
LT	12/1	0.322	0.240	328	468	461	0.985	75.9	*E	855 ft

NB Approach

RT	12/1	0.362	0.246	1	357	322	0.852	63.6	E+	547 ft
TH	24/2	0.349	0.177	1	586	681	1.118	127.0	*F	807 ft
LT	12/1	0.241	0.240	358	479	359	0.749	35.3	D+	511 ft

WB Approach

RT	12/1	0.337	0.624	881	959	254	0.265	11.2	B+	197 ft
TH	36/3	0.391	0.353	1035	1740	1397	0.803	40.8	D+	763 ft
LT	24/2	0.279	0.038	1	93	111	0.867	104.7	*F	123 ft

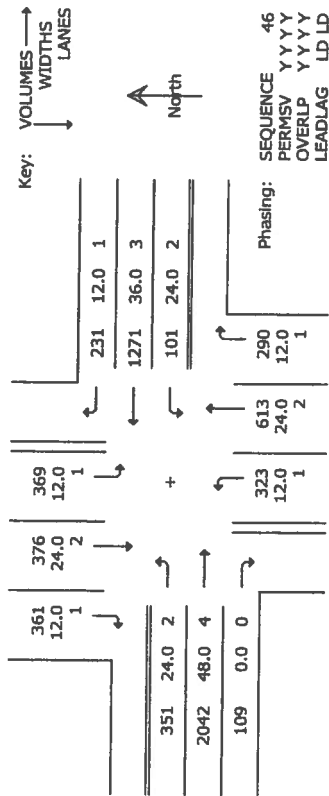
EB Approach

RT+TH	36/3	0.511	0.422	1643	2063	2288	1.109	94.3	*F	1694 ft
LT	24/2	0.311	0.107	1	319	373	1.042	116.9	*F	431 ft

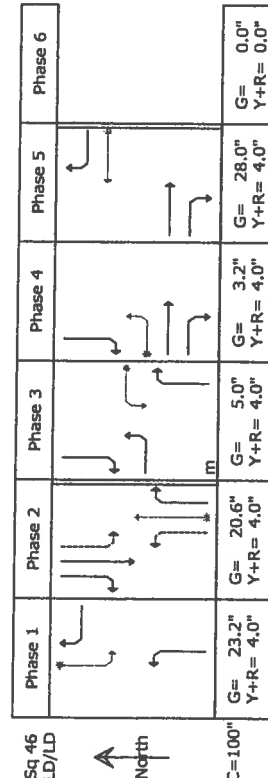
SIGNAL2000/TEAPAC[Ver 2.71.07] - HCM Input Worksheet

Intersection # 1 -

Area Location Type: NONCBD

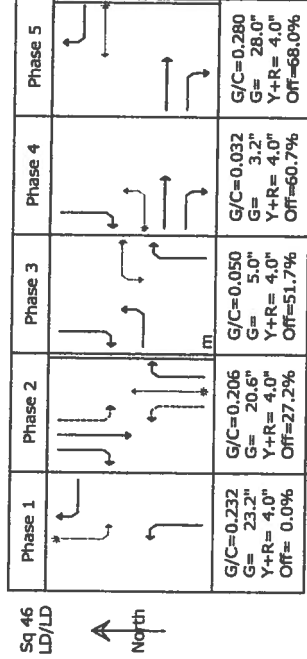


	SB			WB			NB			EB		
	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT
Heavy veh, %HV	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Pk-hr fact, PHF	.80	.80	.80	.91	.91	.91	.90	.90	.90	.94	.94	.94
Pretimed or Act	A	A	A	A	A	A	A	A	A	A	A	A
Strup lost, l1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Ext eff gm, e	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	0	0	0	0	0	0	0	0
Bike vol, vbic	0	0	0	0	0	0	0	0	0	0	0	0
Parking locals	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Park minvrs, Nrm	0	0	0	0	0	0	0	0	0	0	0	0
Bus stops, NB	0	0	0	0	0	0	0	0	0	0	0	0
Grade, %G	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0



SIGNAL2000/TEAPAC[Ver 2.71.07] - Capacity Analysis Summary

Intersection Averages for Int # 1 -
V/C 0.895 (Critical V/C 0.955) Control Delay 50.8 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	Req'd	Used	Service Rate @C (vph) @E	Adj Volume	V/c	HCM Delay	L	Queue Model 1
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SB Approach

RT	12/1	0.373	0.368	443	566	451	0.797	36.1	D+ 539 ft
TH	24/2	0.234	0.206	302	708	470	0.664	38.9	D+ 306 ft
LT	12/1	0.278	0.232	385	470	461	0.981	64.2	*E+ 697 ft

NB Approach

RT	12/1	0.303	0.296	308	455	322	0.708	36.4	D+ 384 ft
TH	24/2	0.278	0.206	302	708	681	0.962	64.0	*E+ 550 ft
LT	12/1	0.189	0.232	435	502	359	0.715	23.4	C+ 386 ft

WB Approach

RT	12/1	0.267	0.552	779	849	254	0.299	12.2	B+ 181 ft
TH	36/3	0.336	0.280	1031	1382	1397	1.011	62.9	*E+ 804 ft
LT	24/2	0.179	0.050	1	143	111	0.665	56.3	*E+ 85 ft

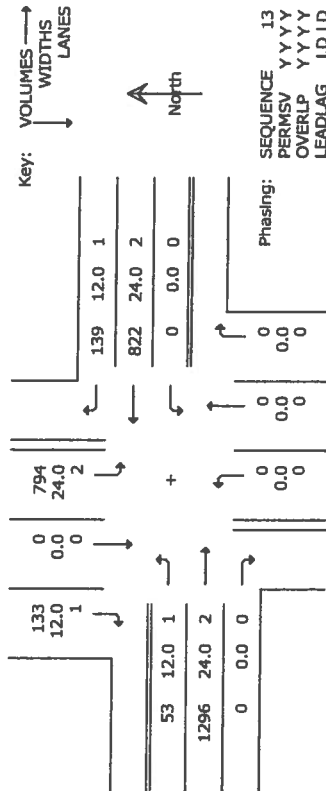
EB Approach

RT+TH	48/4	0.384	0.353	2037	2301	2288	0.994	49.7	D 935 ft
LT	24/2	0.218	0.122	1	397	373	0.912	67.7	*E 303 ft

SIGNAL3000/TEAPAC[Ver 2.71.07] - HCM Input Worksheet

Intersection # 1 -

Area Location Type: NONCBD



	SB		WB		NB		EB	
	RT	LT	RT	LT	RT	LT	RT	LT
Heavy veh, %HV	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Pk-hr fact, PHF	.80	.80	.73	.73	.85	.85	.87	.87
Predimed or Act	A	A	A	A	A	A	A	A
Strup lost, lt	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Ext eff gm, e	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
Red vol, vped	0	0	0	0	0	0	0	0
Bike vol, vbic	0	0	0	0	0	0	0	0
Parking locatns	NO	NO	NO	NO	NO	NO	NO	NO
Park minvrs, Nm	0	0	0	0	0	0	0	0
Bus stops, NB	0	0	0	0	0	0	0	0
Grade, %G	.0	.0	.0	.0	.0	.0	.0	.0

Sq 13 LD/LD	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Phase 6
G= 39.5" Y+R= 4.0"	G= 39.5" Y+R= 4.0"	G= 5.0" Y+R= 4.0"	G= 43.5" Y+R= 4.0"	G= 0.0" Y+R= 0.0"	G= 0.0" Y+R= 0.0"	G= 0.0" Y+R= 0.0"

C=100"

SIGNAL3000/TEAPAC[Ver 2.71.07] - Capacity Analysis Summary

Intersection Averages for Int # 1 -

V/C 0.722 (Critical V/C 0.793)

Control Delay 23.8

Level of Service C+

Sq 13 LD/LD	Phase 1	Phase 2	Phase 3
	G/C=0.395 G= 39.5" Y+R= 4.0" Off= 0.0%	G/C=0.050 G= 5.0" Y+R= 4.0" Off=43.5%	G/C=0.435 G= 43.5" Y+R= 4.0" Off=52.5%

C=100 sec G= 88.0 sec = 88.0% Y=12.0 sec = 12.0% Ped= 0.0 sec = 0.0%

Lane Group	Width/ Lanes	Reqd g/C	Used g/C	Service Rate @C (vph) @E	Adj Volume	v/c	HCM Delay	L Queue Model 1
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SB Approach

RT	LT	12/1 24/2	0.222 0.355	0.485 0.395	657 1159	746 1320	166 992	0.223 0.752	15.0 28.5	B *C	128 570
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26.6 C+

WB Approach

RT	LT	12/1 24/2	0.234 0.378	0.870 0.435	1338 1363	1338 1498	190 1126	0.142 0.752	1.0 25.9	A C+	43 636
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22.3 C+

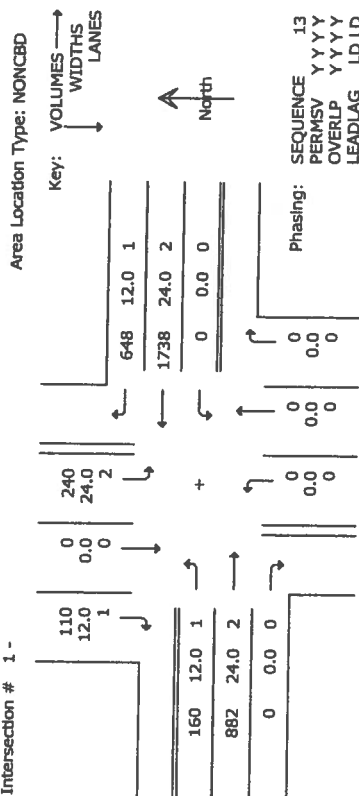
EB Approach

TH	LT	24/2 12/1	0.466 0.009	0.525 0.050	1728 135	1808 173	1490 61	0.824 0.345	23.2 17.3	*C+ *B	837 51
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22.9 C+

SIGNAL2000/TEAPAC[Ver 2.71.07] - HCM Input Worksheet

Intersection # 1 -



	SB		WB		NB		EB	
	RT	LT	RT	LT	RT	LT	RT	LT
Heavy veh, %HV	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Pk-hr fact, PHF	.86	.86	.92	.92	.85	.85	.89	.89
Predimed or Act	A	A	A	A	A	A	A	A
Strup lost, l1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Ext eff gm, e	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
Ped vol, vped	0	0	0	0	0	0	0	0
Bike vol, vbic	0	0	0	0	0	0	0	0
Parking locatns	NO	NO	NO	NO	NO	NO	NO	NO
Park mnvrs, Nm	0	0	0	0	0	0	0	0
Bus stops, NB	0	0	0	0	0	0	0	0
Grade, %G	.0	.0	.0	.0	.0	.0	.0	.0

Sq 13 LD/LD	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Phase 6
C= 90"	G= 11.3" Y+R= 4.0"	G= 8.3" Y+R= 4.0"	G= 58.4" Y+R= 4.0"	G= 0.0" Y+R= 0.0"	G= 0.0" Y+R= 0.0"	G= 0.0" Y+R= 0.0"

SIGNAL2000/TEAPAC[Ver 2.71.07] - Capacity Analysis Summary

Intersection Averages for Int # 1 -
V/C 0.651 (Critical V/C 0.835)

Level of Service B+

Control Delay 13.5

Sq 13 LD/LD	Phase 1	Phase 2	Phase 3
	G/C=0.126 G= 11.3" Y+R= 4.0" Off= 0.0%	G/C=0.092 G= 8.3" Y+R= 4.0" Off=17.0%	G/C=0.649 G= 58.4" Y+R= 4.0" Off=30.7%

C= 90 sec G= 78.0 sec = 86.7% Y=12.0 sec = 13.3% Ped= 0.0 sec = 0.0%

Lane Group	Width/ Lanes	Reqd	g/C	Used	Service Rate @C (vph) @E	Adj Volume	V/c	HCM Delay	L	Queue Model 1
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SB Approach

RT	LT	12/1	24/2	0.173	0.165	0.263	0.126	281	49	404	417	128	279	0.317	0.563	27.1	41.4	C+	D+	124	175
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WB Approach

RT	LT	12/1	24/2	0.504	0.560	0.819	0.649	1260	2235	1260	2235	704	1889	0.559	0.845	3.3	15.5	A	B	297	900
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EB Approach

TH	LT	24/2	12/1	0.334	0.096	0.785	0.092	2705	175	2705	233	991	180	0.366	0.756	3.0	37.3	A	D+	196	143
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CHAPTER 17 - TWSC - UNSIGNALIZED INTERSECTIONS WORKSHEET

Analysis Summary

General Information

Analyst tob
 Agency or Company Terry O. Brown, P.E.
 Analysis Period/Year AM 2009
 Comment 2009 AM Peak Hour BUILD Conditions w/Park

Site Information

Jurisdiction/Date CoA 5/22/2007
 Major Street Osuna Rd.
 Minor Street Driveway "A"

Input Data

Lane Configuration	EB			WB			NB			SB		
Lane 1 (curb)	T			R						R		
Lane 2	T			T						L		
Lane 3	L			T								
Lane 4												
Lane 5												
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)	39	2221			906	39				35		35
PHF	0.85	0.95			0.95	0.85				0.85		0.85
Percent of heavy vehicles, HV	3	3			3	3				3		3
Flow rate	46	2338			954	46				41		41
Flare storage (# of vehs)												
Median storage (# of vehs)										1		
Signal upstream of Movement 2												
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								28.0
	2								
	3								
SB	1	R	41	532	0.077	0	12.3	B	D
	2	L	41	133	0.308	1	43.6	E	
	3								
EB		①	46	682	0.067	0	10.7	B	
WB		④							

CHAPTER 17 - TWSC - UNSIGNALIZED INTERSECTIONS WORKSHEET

Analysis Summary

General Information

Site Information

Analyst <u>tob</u>	Jurisdiction/Date <u>CoA</u> <u>5/22/2007</u>
Agency or Company <u>Terry O. Brown, P.E.</u>	Major Street <u>Osuna Rd.</u>
Analysis Period/Year <u>PM</u> <u>2009</u>	Minor Street <u>Driveway "A"</u>
Comment <u>2009 PM Peak Hour BUILD Conditions w/Park</u>	

Input Data

Lane Configuration	EB			WB			NB			SB		
Lane 1 (curb)	T			R						R		
Lane 2	T			T						L		
Lane 3	L			T								
Lane 4												
Lane 5												
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)	80	1139			2265	101				86		107
PHF	0.85	0.95			0.95	0.85				0.85		0.85
Percent of heavy vehicles, HV	3	3			3	3				3		3
Flow rate	94	1199			2384	119				101		126
Flare storage (# of vehs)												
Median storage (# of vehs)										1		
Signal upstream of Movement 2												
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	R	126	178	0.708	4	63.2	F	442.6 F
	2	L	101	40	2.542	11	915.8	F	
	3								
EB		①	94	176	0.534	3	46.7	E	
WB		④							

CHAPTER 17 - TWSC - UNSIGNALIZED INTERSECTIONS WORKSHEET

Analysis Summary

General Information

Site Information

Analyst tob Jurisdiction/Date CoA 5/22/2007
 Agency or Company Terry O. Brown, P.E. Major Street Vista del Norte
 Analysis Period/Year AM 2009 Minor Street Driveway "B"
 Comment 2009 AM Peak Hour BUILD Conditions w/Park

Input Data

Lane Configuration	NB			SB			WB			EB		
Lane 1 (curb)	R			TR			TR			TR		
Lane 2	T			T			L			L		
Lane 3	T			L								
Lane 4	L											
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)	27	129	26	13	875	11	23	1	12	11	1	37
PHF	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent of heavy vehicles, HV	3	3	3	3	3	3	3	3	3	3	3	3
Flow rate	32	152	31	15	1029	13	27	1	14	13	1	44
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
WB	1	TR	15	788	0.019	0	9.7	A	14.1 B
	2	L	27	337	0.080	0	16.6	C	
	3								
EB	1	TR	45	486	0.093	0	13.2	B	15.7 C
	2	L	13	200	0.065	0	24.3	C	
	3								
NB	①		32	657	0.048	0	10.8	B	
SB	④		15	1383	0.011	0	7.6	A	

CHAPTER 17 - TWSC - UNSIGNALIZED INTERSECTIONS WORKSHEET

Analysis Summary

General Information

Site Information

Analyst <u>tob</u>	Jurisdiction/Date <u>CoA</u> <u>5/22/2007</u>
Agency or Company <u>Terry O. Brown, P.E.</u>	Major Street <u>Vista del Norte</u>
Analysis Period/Year <u>PM</u> <u>2009</u>	Minor Street <u>Driveway "B"</u>
Comment <u>2009 PM Peak Hour BUILD Conditions w/Park</u>	

Input Data

Lane Configuration	NB			SB			WB			EB		
Lane 1 (curb)	R			TR			TR			TR		
Lane 2	T			T			L			L		
Lane 3	T			L								
Lane 4	L											
Lane 5												
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)	37	705	41	21	232	11	43	1	6	11	1	27
PHF	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent of heavy vehicles, HV	3	3	3	3	3	3	3	3	3	3	3	3
Flow rate	44	829	48	25	273	13	51	1	7	13	1	32
Flare storage (# of vehs)												
Median storage (# of vehs)							1			1		
Signal upstream of Movement 2												
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	TR	8	504	0.016	0	12.3	B	23.0 C
	2	L	51	233	0.219	1	24.7	C	
	3								
EB	1	TR	33	809	0.041	0	9.6	A	11.3 B
	2	L	13	352	0.037	0	15.6	C	
	3								
NB	①		44	1266	0.034	0	7.9	A	
SB	④		25	759	0.033	0	9.9	A	

CHAPTER 17 - TWSC - UNSIGNALIZED INTERSECTIONS WORKSHEET

Analysis Summary

General Information

Site Information

Analyst <u>tob</u>	Jurisdiction/Date <u>CoA</u> <u>5/22/2007</u>
Agency or Company <u>Terry O. Brown, P.E.</u>	Major Street <u>Osuna Rd.</u>
Analysis Period/Year <u>AM</u> <u>2009</u>	Minor Street <u>Driveway "C"</u>
Comment <u>2009 AM Peak Hour BUILD Conditions w/Park</u>	

Input Data

Lane Configuration	EB			WB			NB			SB		
Lane 1 (curb)	T			R						R		
Lane 2	T			T						L		
Lane 3	L			T								
Lane 4												
Lane 5												
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)	39	2226			902	39				35		35
PHF	0.85	0.95			0.95	0.85				0.85		0.85
Percent of heavy vehicles, HV	3	3			3	3				3		3
Flow rate	46	2343			949	46				41		41
Flare storage (# of vehs)												
Median storage (# of vehs)										1		
Signal upstream of Movement 2												
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	R	41	533	0.077	0	12.3	B	27.9
	2	L	41	133	0.308	1	43.6	E	
	3								
EB		①	46	685	0.067	0	10.6	B	
WB		④							

CHAPTER 17 - TWSC - UNSIGNALIZED INTERSECTIONS WORKSHEET

Analysis Summary

General Information

Analyst tob
 Agency or Company Terry O. Brown, P.E.
 Analysis Period/Year PM 2009
 Comment 2009 PM Peak Hour BUILD Conditions w/Park

Site Information

Jurisdiction/Date CoA 5/22/2007
 Major Street Osuna Rd.
 Minor Street Driveway "C"

Input Data

Lane Configuration	EB			WB			NB			SB		
Lane 1 (curb)	T			R						R		
Lane 2	T			T						L		
Lane 3	L			T								
Lane 4												
Lane 5												
Movement	EB			WB			NB			SB		
	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)	82	1136			2268	100				87		106
PHF	0.85	0.95			0.95	0.85				0.85		0.85
Percent of heavy vehicles, HV	3	3			3	3				3		3
Flow rate	96	1196			2387	118				102		125
Flare storage (# of vehs)												
Median storage (# of vehs)										1		
Signal upstream of Movement 2												
Length of study period (h)	0.25											

Output Data

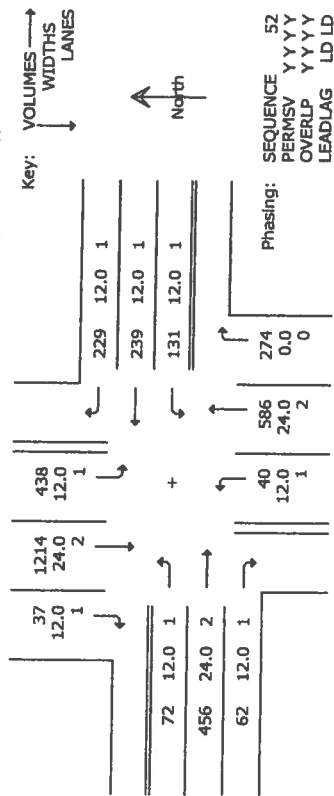
	Lane	Movement	Flow Rate (veh/h)	Capacity (veh/h)	v/c	Queue Length (veh)	Control Delay (s)	LOS	Approach Delay and LOS
NB	1								
	2								
	3								
SB	1	R	125	178	0.704	4	62.8	F	457.8
	2	L	102	39	2.597	11	941.9	F	
	3								
EB	①		96	176	0.549	3	47.9	E	
WB	④								

**Analysis of
2009 BUILD Conditions
2007 Plan – NO Park**

SIGNAL2000/TEAPAC[Ver 2.71.07] - HCM Input Worksheet

Intersection # 1 -

Area Location Type: NONCBD



	SB	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT
Heavy veh, %HV	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Pk-hr fact, PHF	.91	.91	.91	.72	.72	.72	.84	.84	.84	.92	.92	.92
Pretimed or Act	A	A	A	A	A	A	A	A	A	A	A	A
Strup 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 gm, 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	0	0	0	0	0	0	0	0
Bike vol, vbic	0	0	0	0	0	0	0	0	0	0	0	0
Parking locatns	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Park mnvrs, Nm	0	0	0	0	0	0	0	0	0	0	0	0
Bus stops, NB	0	0	0	0	0	0	0	0	0	0	0	0
Grade, %G	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0

Sq 52 LD/LD	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Phase 6
C= 90"	G= 5.0" Y+R= 4.0"	G= 13.7" Y+R= 4.0"	G= 29.1" Y+R= 4.0"	G= 7.3" Y+R= 4.0"	G= 15.0" Y+R= 4.0"	G= 0.0" Y+R= 0.0"

SIGNAL2000/TEAPAC[Ver 2.71.07] - Capacity Analysis Summary

Intersection Averages for Int # 1 -

V/C 0.772 (Critical V/C 0.959)

Control Delay 34.6

Level of Service C

Sq 52 LD/LD	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5
	G/C=0.056 G= 5.0" Y+R= 4.0" Off= 0.0%	G/C=0.152 G= 13.7" Y+R= 4.0" Off=10.0%	G/C=0.323 G= 29.1" Y+R= 4.0" Off=29.6%	G/C=0.081 G= 7.3" Y+R= 4.0" Off=66.4%	G/C=0.166 G= 15.0" Y+R= 4.0" Off=78.9%

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	Reqd	g/C	Used	Service Rate @C (vph) @E	Adj Volume	v/c	HCM Delay	Queue Model 1
---------------	-----------------	------	-----	------	-----------------------------	---------------	-----	--------------	------------------

SB Approach

RT	TH	LT	12/1	24/2	12/1	0.136	0.520	732	799	41	0.051	10.7	25 ft
						0.419	0.520	1731	1791	1334	0.745	18.7	634 ft
						0.281	0.252	433	513	481	0.938	49.9	597 ft

NB Approach

RT+TH	LT	24/2	12/1	0.356	0.323	901	1061	1024	0.965	49.6	*D	719 ft
				0.000	0.056	145	187	48	0.250	18.8	*B	42 ft

WB Approach

RT	TH	LT	12/1	12/1	12/1	0.284	0.260	0.291	0.588	853	904	318	0.352	9.9	A	199 ft
						0.100	0.081	0.081	0.081	153	212	182	0.831	30.1	C	343 ft
														49.6	*D	235 ft

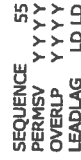
EB Approach

42.0												D		
RT	TH	LT	12/1	24/2	12/1	0.147	0.266	286	409	67	0.164	25.5	C+	62 ft
						0.213	0.166	294	572	496	0.867	49.9	*D	343 ft
						0.174	0.166	67	153	78	0.464	35.9	D+	89 ft

SIGNAL2000/TEAPAC[Ver 2.71.07] - Capacity Analysis Summary

Intersection Averages for Int # 1 -
V/C 0.848 (Critical V/C 1.0)

Key: VOLUMES →
WIDTHS
LANES



C=130 sec G=106.0 sec = 81.5% Y=24.0 sec = 18.5% Ped=0.0 sec = 0.0%

SB Approach37.0 D+

NB Approach

WB Approach

EB Approach

SIGNAL2000/TEAPAC[Ver 2.71.07] - Capacity Analysis Summary

Intersection Averages for Int # 1 -
V/C 0.848 (Critical V/C 1.0)

V/C	0.848	(Critical V/C 1.086)	Control Delay	68.5	Level of Service E

Sq 55
LD/LD

North

C=130 sec	G=106.0 sec = 81.5%	Y=24.0 sec = 18.5%	Ped= 0.0 sec = 0.0%
-----------	---------------------	--------------------	---------------------

Lane Group	Width/ Lanes	g/C Reqd Used	Service Rate @C (vph) @E	Adj Volume	HCM Delay	Queue Model 1
					L	S

RT	12/1	0.291	0.571	778	878	92	12.8	B+	73 ft
TH	24/2	0.387	0.487	1459	1676	925	23.8	C+	549 ft
LT	12/1	0.296	0.205	257	401	391	74.0	*E	700 ft

NB Approach		108.5 F									
RT+TH	24/2	0.445	0.321	461	1077	1214	1.127	1136	*F	1353	†
LT	12/1	0.004	0.040	155	236	77	0.310	28.5	*C	08	6

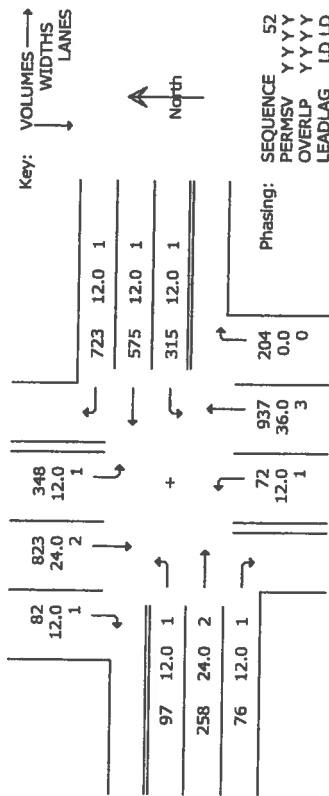
WB Approach			69.5 E							
RT	12/1	0.558	0.533	703	820	753	0.918	43.0	D+	1155 ft
TH	12/1	0.437	0.297	137	529	599	1.115	120.2	*F	1262 ft
LT	12/1	0.185	0.173	302	441	328	0.744	37.9	*D+	486 ft

EB Approach				48.5			D			
RT	12/1	0.288	0.248	1	361	82	0.215	39.1	D+	112 ft
TH	24/2	0.298	0.178	1	590	277	0.452	48.3	D	222 ft
LT	12/1	0.134	0.054	1	127	104	0.703	56.3	*E/D	179 ft

SIGNAL2000/TEAPAC[Ver 2.71.07] - HCM Input Worksheet

Intersection # 1 -

Area Location Type: NONCBD



	SB		WB		NB		EB	
	RT	LT	RT	LT	RT	LT	RT	LT
Heavy veh, %HV	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Pk-hr fact, PHF	.89	.89	.96	.96	.94	.94	.93	.93
Pretimed or Act	A	A	A	A	A	A	A	A
Strip lost, t1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Ext eff gm, e	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
Ped vol, vped	0	0	0	0	0	0	0	0
Bike vol, vbic	NO	NO	NO	NO	NO	NO	NO	NO
Parking locatns	0	0	0	0	0	0	0	0
Park mnvrs, Nm	0	0	0	0	0	0	0	0
Bus stops, NB	0	0	0	0	0	0	0	0
Grade, %G	.0	.0	.0	.0	.0	.0	.0	.0

	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Phase 6
Sq 52 LD/LD						
G=	5.0"	G= 11.0"	G= 26.2"	G= 5.0"	G= 32.7"	G= 0.0"
Y+R=	4.0"	Y+R= 4.0"	Y+R= 4.0"	Y+R= 4.0"	Y+R= 4.0"	Y+R= 0.0"

C=100"

SIGNAL2000/TEAPAC[Ver 2.71.07] - Capacity Analysis Summary

Intersection Averages for Int. # 1 -
V/C 0.751 (Critical V/C 0.891) Control Delay 35.1 Level of Service D+

Sq 52 LD/LD	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5
G/C=0.050 G= 5.0" Y+R= 4.0" Off= 0.0%	G/C=0.110 G= 11.0" Y+R= 4.0" Off= 9.0%	G/C=0.262 G= 26.2" Y+R= 4.0" Off=24.0%	G/C=0.050 G= 5.0" Y+R= 4.0" Off=54.3%	G/C=0.327 G= 32.7" Y+R= 4.0" Off=63.3%	

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	Reqd	g/C	Used	Service Rate @C (vph)	Adj Volume	v/c	HCM Delay	Queue Model
------------	-------------	------	-----	------	-----------------------	------------	-----	-----------	-------------

SB Approach

RT	12/1	0.195	0.413	525	635	92	0.145	18.5	B
TH	24/2	0.332	0.413	1272	1422	925	0.650	24.6	C+
LT	12/1	0.238	0.200	332	416	391	0.940	57.2	*E+

NB Approach

RT+TH	36/3	0.313	0.262	878	1259	1214	0.964	53.9	*D
LT	12/1	0.008	0.050	148	210	77	0.353	25.8	*C+

WB Approach

RT	12/1	0.538	0.658	970	1011	753	0.745	14.5	B+
TH	12/1	0.399	0.417	639	755	599	0.793	31.2	C
LT	12/1	0.053	0.050	321	411	328	0.798	36.5	*D+

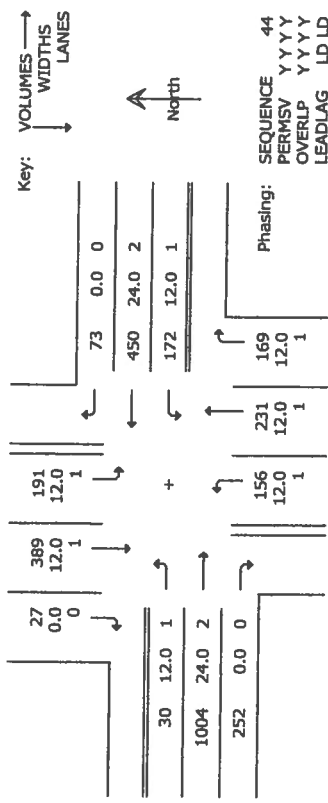
EB Approach

RT	12/1	0.192	0.417	534	642	82	0.128	18.0	B
TH	24/2	0.202	0.327	907	1128	277	0.246	24.7	*E+
LT	12/1	0.390	0.327	79	119	104	0.788	57.0	*E+

SIGNAL2000/TEAPAC[Ver 2.71.07] - HCM Input Worksheet

Intersection # 1 -

Area Location Type: NONCBD



	SB	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT
Heavy veh, %HV	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Pk-hr fact, PHF	.90	.90	.90	.90	.90	.90	.90	.90	.90	.90	.90	.90	.90	.90	.90	.90	.90	.90
Predirtn or Act	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
Strup 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	2.0	2.0	2.0	2.0	2.0	2.0
Ext eff gm, 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	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	3	3	3	3	3	3
Ped vol, vped	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bike vol, vbic	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Parking locatns	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Park minvrs, Nm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bus stops, NB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grade, %G	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0

	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Phase 6
Sq 44 LD/LD	←	←	←	←	←	←
North	↑	↑	↑	↑	↑	↑
C = 90°						
G = 6.6"						
Y+R = 4.0"						
G = 23.8"						
Y+R = 4.0"						
G = 7.7"						
Y+R = 4.0"						
G = 35.8"						
Y+R = 4.0"						
G = 0.0"						
Y+R = 0.0"						
G = 0.0"						
Y+R = 0.0"						

SIGNAL2000/TEAPAC[Ver 2.71.07] - Capacity Analysis Summary

Intersection Averages for Int # 1 -

V/C 0.822 (Critical V/C 1.016)

Control Delay 50.1

Level of Service D

Sq 44 LD/LD	Phase 1	Phase 2	Phase 3	Phase 4
←	←	←	←	←
North	↑	↑	↑	↑
G/C=0.074	G/C=0.265	G/C=0.086	G/C=0.398	
G= 6.6"	G= 23.8"	G= 7.7"	G= 35.8"	
Y+R= 4.0"	Y+R= 4.0"	Y+R= 4.0"	Y+R= 4.0"	
Off= 0.0%	Off=11.8%	Off=42.8%	Off=55.8%	

C = 90 sec G = 74.0 sec = 82.2% Y = 16.0 sec = 17.8% Ped = 0.0 sec = 0.0%

Lane Group	Width/ Lanes	Reqd g/C	Used g/C	Service Rate @C (vph)	Adj Volume	V/c	HCM Delay	L	Queue Model 1
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SB Approach

RT+TH LT	12/1 12/1	0.325 0.060	0.265 0.074	339 238	475 308	462 212	0.973 0.688	66.9 28.4	*E+ C	641 227 ft
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NB Approach

RT TH LT	12/1 12/1 12/1	0.221 0.237 0.099	0.395 0.265 0.074	511 343 153	607 479 203	209 285 193	0.344 0.595 0.932	19.4 30.9 67.4	B C *E+	175 297 280 ft
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WB Approach

RT+TH LT	24/2 12/1	0.255 0.113	0.398 0.086	1221 178	1342 225	653 215	0.487 0.947	20.5 67.9	C+ *E	300 311 ft
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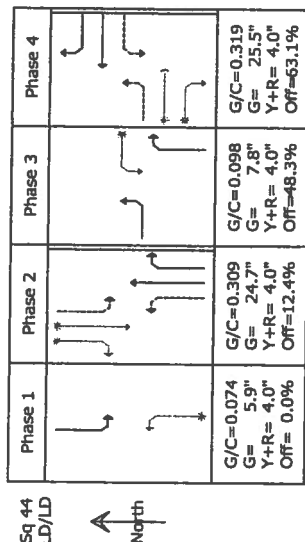
EB Approach

RT+TH LT	24/2 12/1	0.447 0.000	0.398 0.086	1210 318	1330 367	1396 33	1.050 0.090	65.9 11.3	*E+ B+	1079 21 ft
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SIGNAL2000/TEAPAC[Ver 2.71.07] - Capacity Analysis Summary

Intersection Averages for Int # 1 -
V/C 0.746 (Critical V/C 0.9

Level of Service C



C = 80 sec G = 64.0 sec = 80.0% Y = 16.0 sec = 20.0% Ped = 0.0 sec = 0.0%

Lane Group	Width/ Lanes	g/C Reqd	Service Rate @C (vph) @E	Adj Volume	HCM Delay v/c	L S	Queue Model 1
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SB Approach

RT+TH LT	12/1 12/1	0.313 0.025	0.309 0.074	454 308	554 370	462 212	0.834 0.573	36.3 18.2	*D+ B	481 ft 179 ft
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NB Approach

RT	12/1	0.203	0.457	635	703	209	0.297	13.9	B+	141 ft
TH	12/1	0.220	0.309	459	559	285	0.510	23.5	C+	248 ft
LT	12/1	0.077	0.074	190	236	193	0.818	37.1	*D+	211 ft

WB Approach

RT+TH LT	24/2 12/1	0.239 0.100	0.319 0.098	954 211	1076 258	653 215	0.607 0.833	24.0 37.1	C+ *D+	308 ft 235 ft
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EB Approach

RT+TH LT	36/3 12/1	0.320 0.000	0.319 0.098	1394 274	1525 321	1396 33	0.915 0.103	35.2 12.8	*D+ B+	582 ft 21 ft
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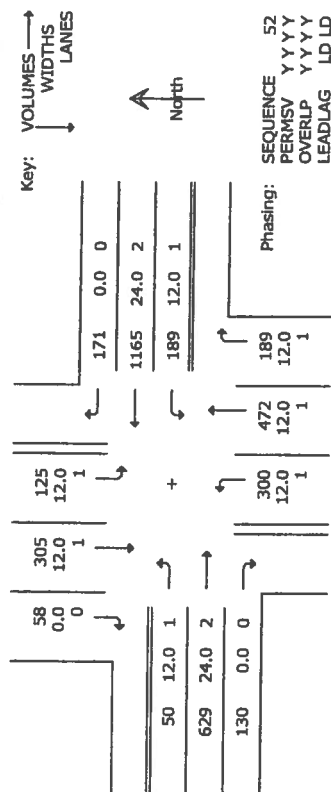
C=80

G= 5.9" Y+R= 4.0"	G= 24.7" Y+R= 4.0"	G= 7.8" Y+R= 4.0"	G= 25.5" Y+R= 4.0"	G= 0.0" Y+R= 0.0"	G= 0.0" Y+R= 0.0"
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SIGNAL2000/TEAPAC[Ver 2.71.07] - HCM Input Worksheet

Intersection # 1 -

Area Location Type: NONCBD



	SB	TH	LT	RT	TH	LT	WB	TH	LT	RT	TH	LT	EB	TH	LT
Heavy veh, %HV	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Pk-hr fact, PHF	.84	.84	.84	.91	.91	.91	.87	.87	.87	.87	.87	.87	.87	.87	.87
Pretimed or Act	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
Strup 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	2.0	2.0	2.0
Ext eff gm, 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	2.0	2.0	2.0
Arrival typ, AT	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Ped vol, vped	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bike vol, vbic	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Parking locatns	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Park minvrs, Nm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bus stops, NB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grade, %G	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0

Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Phase 6
G= 11.7" Y+R= 4.0"	G= -4.0" Y+R= 4.0"	G= 28.2" Y+R= 4.0"	G= 7.7" Y+R= 4.0"	G= 26.4" Y+R= 4.0"	G= 0.0" Y+R= 0.0"

SIGNAL2000/TEAPAC[Ver 2.71.07] - Capacity Analysis Summary

Intersection Averages for Int # 1 -

V/C 0.896 (Critical V/C 0.983)

Control Delay 48.2

Level of Service D

Sq 52 LD/LD	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5
	G/C=0.130 G= 11.7" Y+R= 4.0" Off= 0.0%	G/C= -0.044 G= -4.0" Y+R= 4.0" Off=17.5%	G/C=0.314 G= 28.2" Y+R= 4.0" Off=17.5%	G/C=0.085 G= 7.7" Y+R= 4.0" Off=53.3%	G/C=0.293 G= 26.4" Y+R= 4.0" Off=66.3%

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	Reqd g/c	Used g/c	Service Rate @C (vph) @E	Adj Volume	v/c	HCM Delay	Queue Model 1
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SB Approach

RT+TH LT	12/1 12/1	0.314 0.070	0.314 0.130	432 246	554 304	432 149	0.780 0.490	35.1 18.6	D+ *B	476 127
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NB Approach

RT TH LT	12/1 12/1 12/1	0.225 0.362 0.155	0.444 0.314 0.130	597 444 303	682 568 355	217 543 345	0.318 0.956 0.972	16.5 57.3 58.2	B *E+ *E+	168 714 494
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WB Approach

RT+TH LT	24/2 12/1	0.461 0.106	0.423 0.085	1321 176	1429 227	1468 208	1.027 0.916	57.0 58.3	*E+ *E+	1086 290
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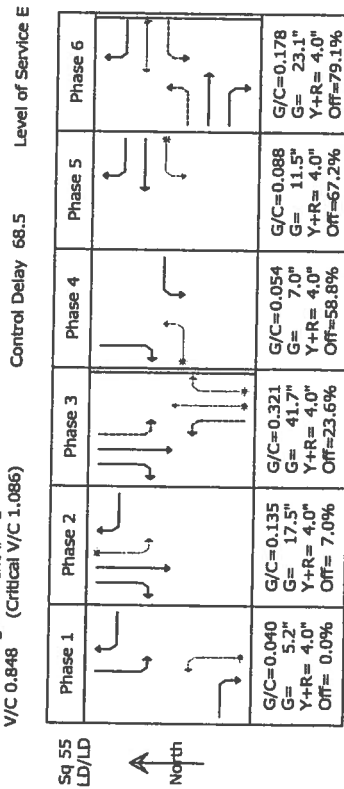
EB Approach

RT+TH LT	24/2 12/1	0.311 0.344	0.293 0.293	803 45	983 67	872 57	0.887 0.712	40.3 54.1	D+ D	561 73
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SIGNAL2000/TEAPAC[Ver 2.71.07] - Capacity Analysis Summary

Intersection Averages for Int # 1 -

Key: 



C=130 sec	G=106.0 sec = 81.5%	Y=24.0 sec = 18.5%	Ped= 0.0 sec = 0.0%
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Lane Group	Width/ Lanes	g/C Reqd	Service Rate @C (vph) @E	Adj Volume	HCM Delay	L S	Queue Model 1
				v/c			

SB Approach

RT	12/1	0.291	0.571	778	878	92	0.105	12.8	8+	73 ft
TH	24/2	0.387	0.487	1459	1676	925	0.552	23.8	C+	549 ft
LT	12/1	0.296	0.205	257	401	391	0.956	74.4*	E	700 ft

NB Approach

RT+TH LT	24/2 12/1	0.445 0.004	0.321 0.040	461 155	1077 236	1214 77	1.127 0.310	113.6 28.5	*F *C	1353 ft 98 ft
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VB Approach

RT	12/1	0.558	703	820	753	0.918	43.0	D+	1155 ft
TH	12/1	0.437	137	529	599	1.115	120.2	*F	1262 ft
LT	12/1	0.185	302	441	328	0.744	37.9	*D+	486 ft

EB Approach

RT	12/1	0.288	1	361	82	0.215	39.1	D+	112 ft
TH	24/2	0.298	1	590	277	0.452	48.3	D	222 ft
LT	12/1	0.134	1	127	104	0.703	56.3	*E+	179 ft

 $C = 130^\circ$

Sq 55 LD/LD	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Phase 6
						G = 5.2" Y+R = 4.0" G = 17.5" Y+R = 4.0" G = 41.7" Y+R = 4.0" G = 7.0" Y+R = 4.0" G = 11.5" Y+R = 4.0" G = 23.1" Y+R = 4.0"

SIGNAL2000/TEAPAC[Ver 2.71.07] - Capacity Analysis Summary
 Intersection Averages for Int # 1 -
 V/C 0.751 (Critical V/C 0.891)

Control Delay 35.1 Level of Service D+

Phase 1	Phase 2	Phase 3	Phase 4	Phase 5
Sq 52 LD/LD				
G/C=0.050 G= 5.0" Y+R= 4.0" Off= 0.0%	G/C=0.110 G= 11.0" Y+R= 4.0" Off= 9.0%	G/C=0.262 G= 26.2" Y+R= 4.0" Off=24.0%	G/C=0.050 G= 5.0" Y+R= 4.0" Off=54.3%	G/C=0.327 G= 32.7" Y+R= 4.0" Off=63.3%

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	Used	Service Rate @C (vph)	Adj Volume	V/c	HCM Delay	L	Queue Model 1
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SB Approach

RT	12/1	0.195	0.413	525	635	92	0.145	18.5	B	77 ft
TH	24/2	0.332	0.413	1272	1422	925	0.650	24.6	C+	498 ft
LT	12/1	0.238	0.200	332	416	391	0.940	57.2	*E+	559 ft

NB Approach

RT+TH	36/3	0.313	0.262	878	1259	1214	0.964	53.9	*D	665 ft
LT	12/1	0.008	0.050	148	210	77	0.353	25.8	*C+	82 ft

WB Approach

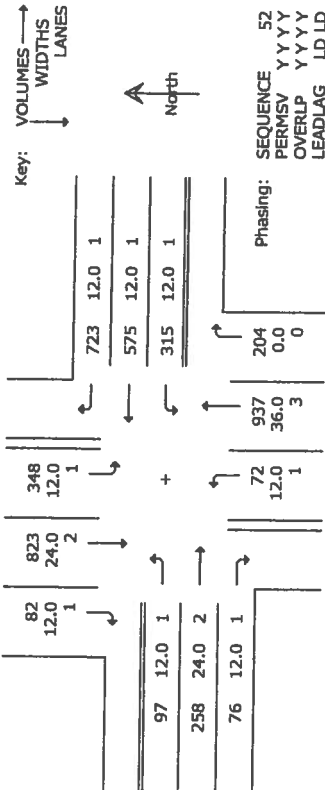
RT	12/1	0.538	0.658	970	1011	753	0.745	14.5	B+	653 ft
TH	12/1	0.399	0.417	639	755	599	0.793	31.2	C	675 ft
LT	12/1	0.053	0.050	321	411	328	0.798	36.5	*D+	401 ft

EB Approach

RT	12/1	0.192	0.417	534	642	82	0.128	18.0	B	68 ft
TH	24/2	0.202	0.327	907	1128	104	0.246	24.7	C+	140 ft
LT	12/1	0.390	0.327	79	119	104	0.788	57.0	*E+	148 ft

SIGNAL2000/TEAPAC[Ver 2.71.07] - HCM Input Worksheet
 Intersection # 1 -

Area Location Type: NONCBLD



	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT
Heavy veh, %HV	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Pk-hr fact, PHF	.89	.89	.89	.96	.96	.96	.94	.94	.94	.93	.93	.93
Predetermined or Act	A	A	A	A	A	A	A	A	A	A	A	A
Strup 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 gm, 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	0	0	0	0	0	0	0	0
Blke vol, vblc	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Parking locations	0	0	0	0	0	0	0	0	0	0	0	0
Park minvrs, Nm	0	0	0	0	0	0	0	0	0	0	0	0
Bus stops, NB	0	0	0	0	0	0	0	0	0	0	0	0
Grade, %G	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0

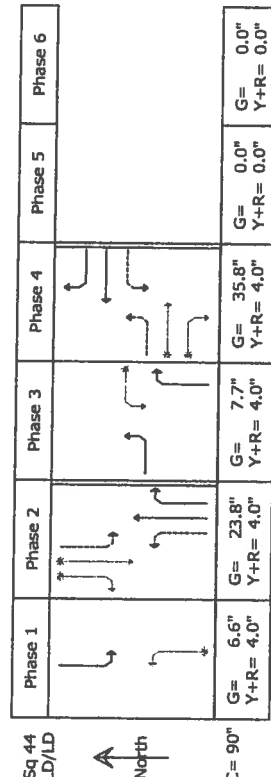
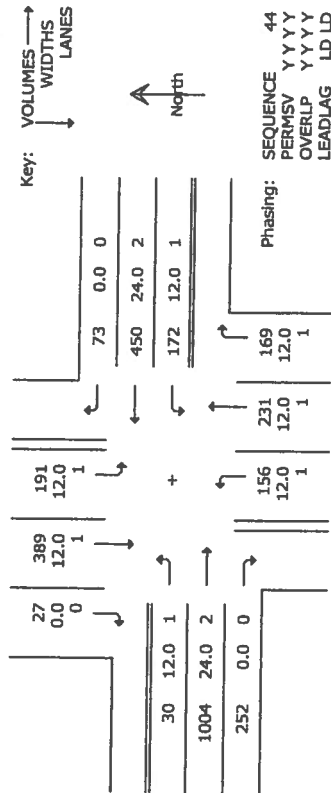
Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Phase 6
Sq 52 LD/LD					
G= 5.0" Y+R= 4.0"	G= 11.0" Y+R= 4.0"	G= 26.2" Y+R= 4.0"	G= 5.0" Y+R= 4.0"	G= 32.7" Y+R= 4.0"	G= 0.0" Y+R= 0.0"

C=100"

SIGNAL2000/TEAPAC[Ver 2.71.07] - HCM Input Worksheet

Intersection # 1 -

Area Location Type: NONCBD



SIGNAL2000/TEAPAC[Ver 2.71.07] - Capacity Analysis Summary

Intersection Averages for Int. # 1 -

V/C 0.822 (Critical V/C 1.016)

Level of Service D

Control Delay 50.1

Phase 1	Phase 2	Phase 3	Phase 4
G/C=0.074 G= 6.6" Y+R= 4.0" Off= 0.0"	G/C=0.265 G= 23.8" Y+R= 4.0" Off=11.8"	G/C=0.086 G= 7.7" Y+R= 4.0" Off=42.8"	G/C=0.398 G= 35.8" Y+R= 4.0" Off=55.8"

C= 90 sec G= 74.0 sec = 82.2% Y=16.0 sec = 17.8% Ped= 0.0 sec = 0.0%

Lane Group	Width/Lanes	Reqd	g/C	Used	Service Rate @C (vph)	Adj Volume	v/c	HCM Delay	L	Queue Model
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SB Approach

RT+TH LT	12/1	0.325	0.265	0.074	339	475	462	0.973	66.9	*E+ 641 ft
LT	12/1	0.060	0.074	238	308	212	0.688	28.4	C	227 ft

NB Approach

RT TH	12/1	0.221	0.395	511	607	209	0.344	19.4	B	175 ft
LT	12/1	0.237	0.265	343	479	285	0.595	30.9	C	297 ft
LT	12/1	0.099	0.074	153	203	193	0.932	67.4	*E+ 280 ft	

WB Approach

RT+TH LT	24/2	0.255	0.398	1221	1342	653	0.487	20.5	C+	300 ft
LT	12/1	0.113	0.086	178	225	215	0.947	67.9	*E	311 ft

EB Approach

RT+TH LT	24/2	0.447	0.398	1210	1330	1396	1.050	65.9	*E+ 1079 ft	
LT	12/1	0.000	0.086	318	367	33	0.090	11.3	B+	21 ft

SIGNAL2000/TEAPAC[Ver 2.71.07] - HCM Input Worksheet

Intersection # 1 -

Area Location Type: NONCBD

Key: VOLUMES →		WIDTHS →		LANES →	
27	0.0	0	0	73	0.0
389	12.0	1	1	450	24.0
191	12.0	1	1	172	12.0
156	12.0	1	1	231	12.0
169	12.0	1	1	450	24.0
252	0.0	0	0	1004	36.0
30	12.0	1	1	172	12.0
1004	36.0	3	3	450	24.0
27	0.0	0	0	73	0.0
389	12.0	1	1	450	24.0
191	12.0	1	1	172	12.0
156	12.0	1	1	231	12.0
169	12.0	1	1	450	24.0
252	0.0	0	0	1004	36.0
30	12.0	1	1	172	12.0
1004	36.0	3	3	450	24.0
27	0.0	0	0	73	0.0
389	12.0	1	1	450	24.0
191	12.0	1	1	172	12.0
156	12.0	1	1	231	12.0
169	12.0	1	1	450	24.0
252	0.0	0	0	1004	36.0
30	12.0	1	1	172	12.0
1004	36.0	3	3	450	24.0
27	0.0	0	0	73	0.0
389	12.0	1	1	450	24.0
191	12.0	1	1	172	12.0
156	12.0	1	1	231	12.0
169	12.0	1	1	450	24.0
252	0.0	0	0	1004	36.0
30	12.0	1	1	172	12.0
1004	36.0	3	3	450	24.0
27	0.0	0	0	73	0.0
389	12.0	1	1	450	24.0
191	12.0	1	1	172	12.0
156	12.0	1	1	231	12.0
169	12.0	1	1	450	24.0
252	0.0	0	0	1004	36.0
30	12.0	1	1	172	12.0
1004	36.0	3	3	450	24.0
27	0.0	0	0	73	0.0
389	12.0	1	1	450	24.0
191	12.0	1	1	172	12.0
156	12.0	1	1	231	12.0
169	12.0	1	1	450	24.0
252	0.0	0	0	1004	36.0
30	12.0	1	1	172	12.0
1004	36.0	3	3	450	24.0
27	0.0	0	0	73	0.0
389	12.0	1	1	450	24.0
191	12.0	1	1	172	12.0
156	12.0	1	1	231	12.0
169	12.0	1	1	450	24.0
252	0.0	0	0	1004	36.0
30	12.0	1	1	172	12.0
1004	36.0	3	3	450	24.0
27	0.0	0	0	73	0.0
389	12.0	1	1	450	24.0
191	12.0	1	1	172	12.0
156	12.0	1	1	231	12.0
169	12.0	1	1	450	24.0
252	0.0	0	0	1004	36.0
30	12.0	1	1	172	12.0
1004	36.0	3	3	450	24.0
27	0.0	0	0	73	0.0
389	12.0	1	1	450	24.0
191	12.0	1	1	172	12.0
156	12.0	1	1	231	12.0
169	12.0	1	1	450	24.0

[illegible]

Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Phase 6
$G = 5.9''$ $Y+R = 4.0''$	$G = 24.7''$ $Y+R = 4.0''$	$G = 7.8''$ $Y+R = 4.0''$	$G = 25.5''$ $Y+R = 4.0''$	$G = 0.0''$ $Y+R = 0.0''$	$G = 0.0''$ $Y+R = 0.0''$

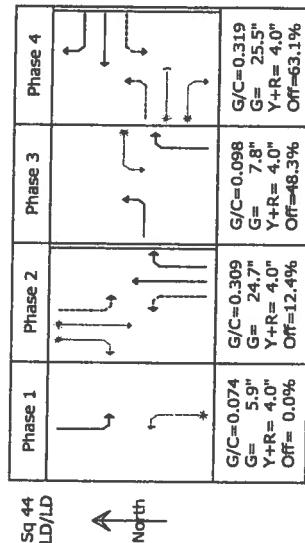
SIGNAL2000/TEAPAC[Ver 2.71.07] - Capacity Analysis Summary

Intersection Averages for Int # 1 -

0.746 (Critical V/C 0.903)

Control Delay 30.2

Level of Service C



C = 80 sec G = 64.0 sec = 80.0% Y = 16.0 sec = 20.0% Ped = 0.0 sec = 0.0%

Lane Group	Width/ Lanes	g/C Reqd Used	Service Rate @C (vph) @E	Adj Volume v/c	HCM Delay	L S	Queue Model 1
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5B Approach

RT+TH LT	12/1 12/1	0.313 0.025	0.309 0.074	454 308	554 370	462 212	0.834 0.573	36.3 18.2	"D+ B	481 ft 179 ft
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IB Approach

RT	12/1	0.203	0.457	635	703	209	13.9	B+	141 ft
TH	12/1	0.220	0.309	459	559	285	23.5	C+	248 ft
LT	12/1	0.077	0.074	190	236	193	37.1	*D+	211 ft

WB Approach

RT+TH LT	24/2 12/1	0.239 0.100	0.319 0.098	954 211	1076 258	653 215	0.607 0.833	24.0 37.1	C+ *D+	308 ft 235 ft
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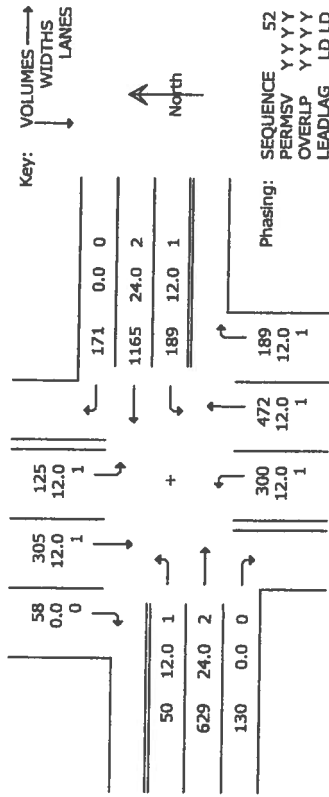
B Approach

[illegible]

SIGNAL2000/TEAPAC[Ver 2.71.07] - 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	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Pk-hr fact, PHF	.84	.84	.84	.91	.91	.91	.87	.87	.87	.87	.87	.87
Predetermined on Act	A	A	A	A	A	A	A	A	A	A	A	A
Strup 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	0	0	0	0	0	0	0	0
Bike vol, vbic	0	0	0	0	0	0	0	0	0	0	0	0
Parking locations	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Park mnvrs, Nlm	0	0	0	0	0	0	0	0	0	0	0	0
Bus stops, NB	0	0	0	0	0	0	0	0	0	0	0	0
Grade, %G	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0

Sq 52 LD/LD	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Phase 6
C = 90"	G = 11.7" Y+R = 4.0"	G = 4.0" Y+R = 4.0"	G = 28.2" Y+R = 4.0"	G = 7.7" Y+R = 4.0"	G = 26.4" Y+R = 4.0"	G = 0.0" Y+R = 0.0"

SIGNAL2000/TEAPAC[Ver 2.71.07] - Capacity Analysis Summary

Intersection Averages for Int. # 1 -

V/C 0.896 (Critical V/C 0.983)

Control Delay 48.2 Level of Service D

Sq 52 LD/LD	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5
	G/C=0.130 G = 11.7" Y+R = 4.0" Off = 0.0%	G/C = -.044 G = -4.0" Y+R = 4.0" Off = 17.5%	G/C=0.314 G = 28.2" Y+R = 4.0" Off = 17.5%	G/C=0.085 G = 7.7" Y+R = 4.0" Off = 53.3%	G/C=0.293 G = 26.4" Y+R = 4.0" Off = 66.3%

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	Reqd g/c	Used g/c	Service Rate @C (vph) @E	Adj Volume	v/c	HCM Delay	Queue Model 1
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SB Approach

RT+TH LT	12/1 12/1	0.314 0.070	0.314 0.130	432 246	554 304	432 149	0.780 0.490	35.1 18.6	D+ *B	476 127
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NB Approach

RT TH LT	12/1 12/1 12/1	0.225 0.362 0.155	0.444 0.314 0.130	597 444 303	682 568 355	217 543 345	0.318 0.956 0.972	16.5 57.3 58.2	B *E+ *E+	168 714 494
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WB Approach

RT+TH LT	24/2 12/1	0.461 0.106	0.423 0.085	1321 176	1429 227	1468 208	1.027 0.916	57.0 58.3	*E+ *E+	1086 290
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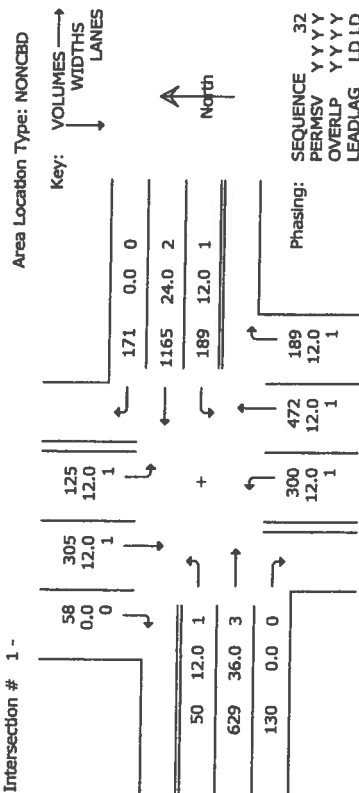
EB Approach

RT+TH LT	24/2 12/1	0.311 0.344	0.293 0.293	803 45	983 67	872 57	0.887 0.712	40.3 54.1	D+ D	561 73
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41.2

SIGNAL2000/TEAPAC[Ver 2.71.07] - HCM Input Worksheet

Intersection # 1 -



	SB		WB		NB		EB	
	RT	LT	RT	LT	RT	LT	RT	LT
Heavy veh, %HV	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
pk-pk fact, PHF	.84	.84	.91	.91	.87	.87	.87	.87
Pretimed or Act	A	A	A	A	A	A	A	A
Startup lost, l1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Ext eff gm, e	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
ped vol, vped	0		0		0		0	
bike vol, vbic	0		0		0		0	
Parking locatns	NO		NO		NO		NO	
Park minvrs, Nm	0		0		0		0	
Bus stops, NB	0		0		0		0	
Trade, %G	.0		.0		.0		.0	

Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Phase 6
$G = 15.2^{\circ}$ $Y+R = 4.0''$	$G = 24.2^{\circ}$ $Y+R = 4.0''$	$G = 5.6^{\circ}$ $Y+R = 4.0''$	$G = 29.0^{\circ}$ $Y+R = 4.0''$	$G = 0.0^{\circ}$ $Y+R = 0.0''$	$G = 0.0^{\circ}$ $Y+R = 0.0''$

SIGNAL2000/TEAPAC[Ver 2.71.07] - Capacity Analysis Summary

Intersection Averages for Int # 1 -

V/C 0.794 (Critical V/C 0.978)

Sq 32 LD/LD	Phase 1	Phase 2	Phase 3	Phase 4
	$G/C=0.169$ $G=15.2"$ $Y+R=4.0"$ $Off=0.0\%$	$G/C=0.269$ $G=24.2"$ $Y+R=4.0"$ $Off=21.3\%$	$G/C=0.063$ $G=5.6"$ $Y+R=4.0"$ $Off=52.7\%$	$G/C=0.322$ $G=29.0"$ $Y+R=4.0"$ $Off=63.4\%$

C = 90 sec G = 74.0 sec = 82.2% Y = 16.0 sec = 17.8% Ped = 0.0 sec = 0.0%

Lane Group	Width/ Lanes	g/C Reqd Used	Service Rate @C (vph) @E	Adj Volume	HCM Delay	Queue Model 1
				v/c	L S	

SB Approach

RT+TH LT	12/1 12/1	0.314 0.275	0.269 0.269	342 144	475 216	432 149	0.909 0.662	53.3 36.4	*D D+	551 ft 171 ft
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IB Approach

RT	12/1	0.225	0.589	856	906	217	0.240	9.0	A	126 ft
TH	12/1	0.362	0.482	794	872	543	0.523	18.6	B	465 ft
LT	12/1	0.195	0.169	305	370	345	0.932	53.3	*D	458 ft

VB Approach

[illegible]

B Approach

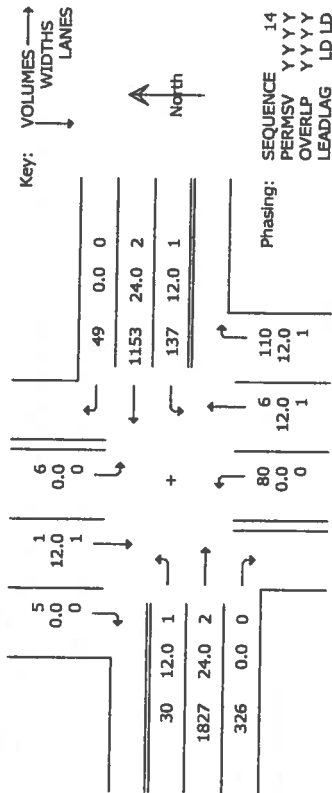
RT+TH LT	36/3 12/1	0.238 0.370	0.322 0.322	1359 46	1546 68	872 57	0.564 0.712	25.8 52.5	C+ D	313 ft 72 ft
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SIGNAL2000/TEAPAC[Ver 2.71.07] - HCM Input Worksheet

Intersection # 1 -

Area Location Type: NONCBD



	RT	TH	LT	WB	TH	LT	RT	TH	LT	NB	TH	LT	RT	TH	LT
Heavy veh, %HV	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
PK-hr fact, PHF	.70	.70	.70	.80	.80	.80	.72	.72	.72	.72	.72	.72	.81	.81	.81
Pretimed or Act	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
Startup 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	2.0	2.0	2.0
Ext eff gm, 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	2.0	2.0	2.0
Arrival typ, AT	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Ped vol, vped	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bike vol, vbic	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Parking locatns	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Park mnvrs, Nm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bus stops, NB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grade, %G	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0

Sq 14 LD/LD	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Phase 6
	G= 12.2" Y+R= 4.0"	G= 8.0" Y+R= 4.0"	G= 77.8" Y+R= 4.0"	G= 0.0" Y+R= 0.0"	G= 0.0" Y+R= 0.0"	G= 0.0" Y+R= 0.0"

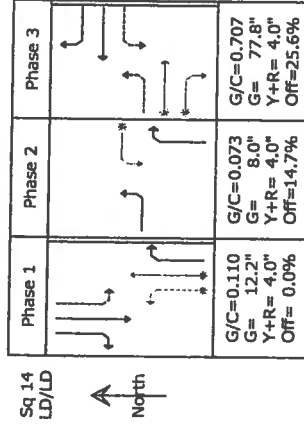
C=110"

SIGNAL2000/TEAPAC[Ver 2.71.07] - Capacity Analysis Summary

Intersection Averages for Int # 1 -
V/C 0.907 (Critical V/C 1.070)

Level of Service D

Control Delay 51.7



C=110 sec G= 98.0 sec = 89.1% Y=12.0 sec = 10.9% Ped= 0.0 sec = 0.0%

Lane Group	Width/ Lanes	Reqd g/c	Used g/c	Service Rate Q/C (vph) @E	Adj Volume	v/c	HCM Delay	L	Queue Model 1
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SB Approach

RT+TH+LT	12/1	0.208	0.110	1	137	17	0.106	44.3	D+
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NB Approach

RT	12/1	0.250	0.220	58	324	153	0.453	38.1	D+
TH+LT	12/1	0.247	0.110	1	122	119	0.815	76.6	*E

WB Approach

RT+TH LT	24/2 12/1	0.479 0.180	0.707 0.073	2422 99	174	1502	0.620 0.891	8.9 76.9	A *E
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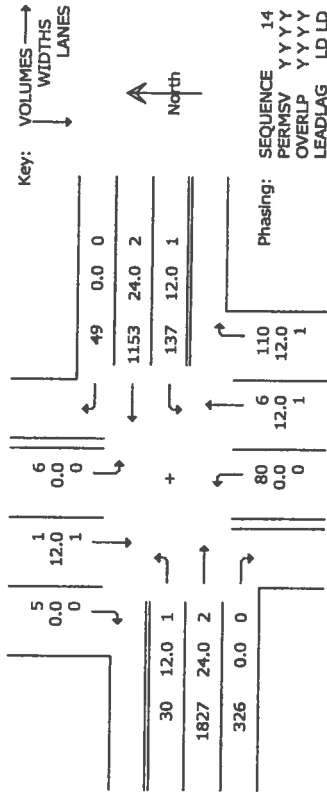
EB Approach

RT+TH LT	24/2 12/1	0.775 0.000	0.707 0.073	2382 243	288	2658	1.116 0.128	74.7 5.3	*E A
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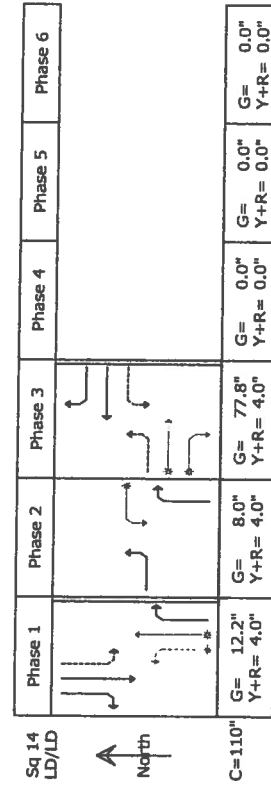
SIGNAL2000/TEAPAC[Ver 2.71.07] - HCM Input Worksheet

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	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Pk-tr fact, PHF	.70	.70	.70	.80	.80	.80	.72	.72	.72	.81	.81	.81
Predetermined Act	A	A	A	A	A	A	A	A	A	A	A	A
Strup 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	0	0	0	0	0	0	0	0
Bike vol, vBic	0	0	0	0	0	0	0	0	0	0	0	0
Parking locatns	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Park mnvrs, Nm	0	0	0	0	0	0	0	0	0	0	0	0
Bus stops, NB	0	0	0	0	0	0	0	0	0	0	0	0
Grade, %G	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0



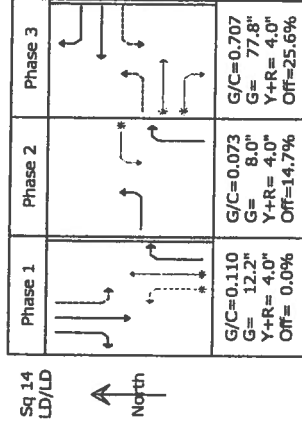
SIGNAL2000/TEAPAC[Ver 2.71.07] - Capacity Analysis Summary

Intersection Averages for Int. # 1 -

V/C 0.907 (Critical V/C 1.070)

Control Delay 51.7

Level of Service D



C=110 sec G= 98.0 sec = 89.1% Y=12.0 sec = 10.9% Ped= 0.0 sec = 0.0%

Lane Group	Width/ Lanes	Reqd g/C	Used g/C	Service Rate @C (vph)	Adj Volume	v/c	HCM Delay	L S	Queue Model 1
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SB Approach

RT+TH+LT	12/1	0.208	0.110	1	137	17	0.106	44.3	D+
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NB Approach

RT	12/1	0.250	0.220	58	324	153	0.453	38.1	D+
TH+LT	12/1	0.247	0.110	1	122	119	0.815	76.6	*E

WB Approach

RT+TH	24/2	0.479	0.707	2422	1502	171	0.620	8.9	A
LT	12/1	0.180	0.073	99	174	171	0.891	76.9	*E

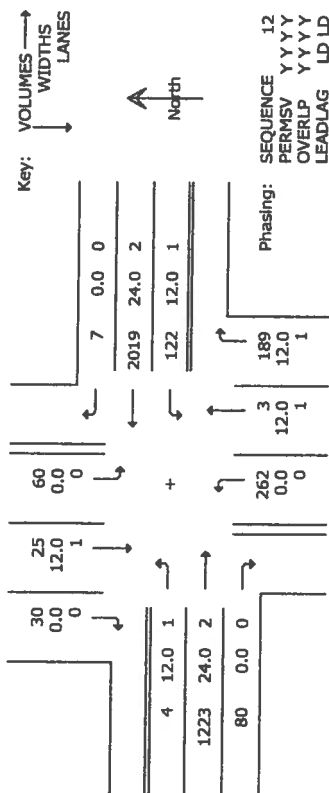
EB Approach

RT+TH	24/2	0.775	0.707	2382	2658	37	1.116	74.7	*E
LT	12/1	0.000	0.073	243	288	37	0.128	5.3	A

SIGNAL2000/TEAPAC[Ver 2.71.07] - HCM Input Worksheet

Intersection # 1 -

Area Location Type: NONCBD



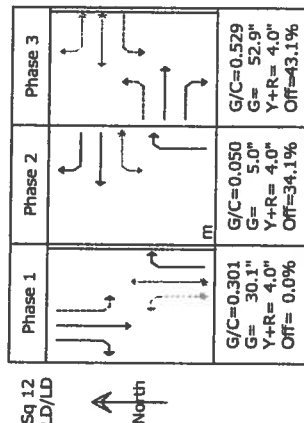
	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT
Heavy veh, %HV	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Pk-hr fact, PHF	.89	.89	.89	.86	.86	.86	.79	.79	.79	.92	.92	.92
Pretimed or Act	A	A	A	A	A	A	A	A	A	A	A	A
Strup lost, l1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Ext eff gm, e	2.0	2.0	2.0	2.0	2.0	2.0	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	0	0	0	0	0	0	0	0
Bike vol, vbic	0	0	0	0	0	0	0	0	0	0	0	0
Parking locatns	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Park mnvrs, Nm	0	0	0	0	0	0	0	0	0	0	0	0
Bus stops, NB	0	0	0	0	0	0	0	0	0	0	0	0
Grade, %G	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0

Sq 12 LD/LD	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Phase 6
G= 30.1" Y+R= 4.0"	G= 5.0" Y+R= 4.0"	G= 5.0" Y+R= 4.0"	G= 52.9" Y+R= 4.0"	G= 0.0" Y+R= 0.0"	G= 0.0" Y+R= 0.0"	G= 0.0" Y+R= 0.0"

C=100"

SIGNAL2000/TEAPAC[Ver 2.71.07] - Capacity Analysis Summary

Intersection Averages for Int # 1 -
V/C 0.933 (Critical V/C 1.062) Control Delay 53.2 Level of Service D



C=100 sec G= 88.0 sec = 88.0% Y=12.0 sec = 12.0% Ped= 0.0 sec = 0.0%

Lane Group	Width/Lanes	Reqd g/C	Used g/C	Service Rate Q/C (vph) @E	Adj Volume	v/c	HCM Delay	L Queue Model 1
RT+TH+LT	12/1	0.250	0.301	185	129	0.448	29.4	C
RT	12/1	0.259	0.391	485	601	0.398	22.4	C+
TH+LT	12/1	0.382	0.301	228	336	0.971	75.1	*E

RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT
12/1	12/1	12/1	12/1	12/1	12/1	12/1	12/1	12/1	12/1	12/1	12/1
0.259	0.391	0.301	485	601	228	0.398	22.4	75.1	0.398	22.4	75.1
485	601	228	0.398	22.4	75.1	0.398	22.4	75.1	0.398	22.4	75.1

RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT
12/1	12/1	12/1	12/1	12/1	12/1	12/1	12/1	12/1	12/1	12/1	12/1
0.259	0.391	0.301	485	601	228	0.398	22.4	75.1	0.398	22.4	75.1
485	601	228	0.398	22.4	75.1	0.398	22.4	75.1	0.398	22.4	75.1

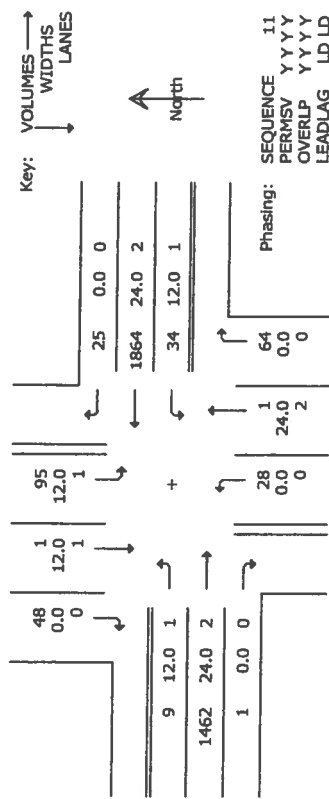
RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT
12/1	12/1	12/1	12/1	12/1	12/1	12/1	12/1	12/1	12/1	12/1	12/1
0.259	0.391	0.301	485	601	228	0.398	22.4	75.1	0.398	22.4	75.1
485	601	228	0.398	22.4	75.1	0.398	22.4	75.1	0.398	22.4	75.1

RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT
12/1	12/1	12/1	12/1	12/1	12/1	12/1	12/1	12/1	12/1	12/1	12/1
0.259	0.391	0.301	485	601	228	0.398	22.4	75.1	0.398	22.4	75.1
485	601	228	0.398	22.4	75.1	0.398	22.4	75.1	0.398	22.4	75.1

SIGNAL2000/TEAPAC[Ver 2.71.07] - 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	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Pk-hr fact, PHF	.86	.86	.86	.84	.84	.84	.80	.80	.80	.93	.93	.93
Pretimed or Act	A	A	A	A	A	A	A	A	A	A	A	A
Strup 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 gm, 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	0	0	0	0	0	0	0	0
Bike vol, vbic	0	0	0	0	0	0	0	0	0	0	0	0
Parking locatns	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Park mintrs, Nm	0	0	0	0	0	0	0	0	0	0	0	0
Bus stops, NB	0	0	0	0	0	0	0	0	0	0	0	0
Grade, %G	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0

Sq 11 LD/LD	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Phase 6
G= 12.9" Y+R= 4.0"	G= 79.1" Y+R= 4.0"	G= 79.1" Y+R= 4.0"	G= 0.0" Y+R= 0.0"	G= 0.0" Y+R= 0.0"	G= 0.0" Y+R= 0.0"	G= 0.0" Y+R= 0.0"

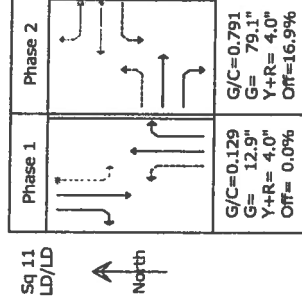
C=100"

SIGNAL2000/TEAPAC[Ver 2.71.07] - Capacity Analysis Summary

Intersection Averages for Int # 1 -
V/C 0.700 (Critical V/C 0.808)

Level of Service A

Control Delay 9.4



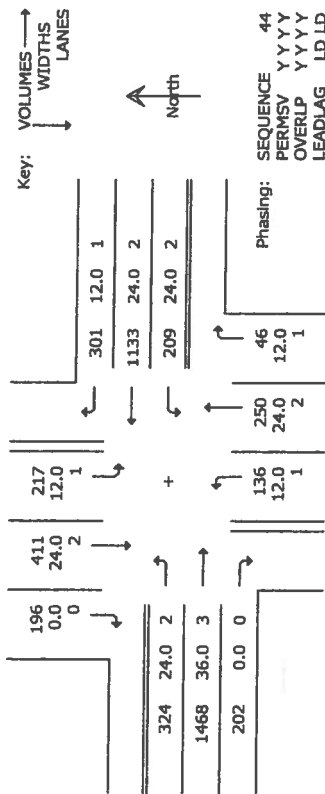
C=100 sec G= 92.0 sec = 92.0% Y= 8.0 sec = 8.0% Ped= 0.0 sec = 0.0%

Lane Group	Width/Lanes	Reqd g/C	Used g/C	Service Rate @C (vph)	Adj Volume	V/c	HCM Delay	L	Queue Model 1
SB Approach									
RT+TH	12/1	0.183	0.129	1	179	0.286	40.2	D+	70 ft
LT	12/1	0.214	0.129	1	139	0.692	53.8	*D	153 ft
NB Approach									
RT+TH+LT	24/2	0.185	0.129	1	328	0.338	40.2	D+	76 ft
WB Approach									
RT+TH	24/2	0.657	0.791	2720	2249	0.827	8.6	*A	929 ft
LT	12/1	0.313	0.791	162	191	0.209	3.2	A	16 ft
EB Approach									
RT+TH	24/2	0.486	0.791	2725	1573	0.577	4.3	A	425 ft
LT	12/1	0.185	0.791	53	10	0.139	3.3	A	4 ft

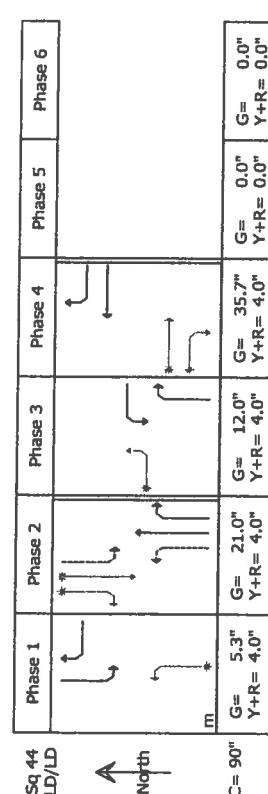
SIGNAL2000/TEAPAC[Ver 2.71.07] - HCM Input Worksheet

Intersection # 1 -

Area Location Type: NONCBD



	RT	TH	LT	WB	TH	RT	NB	TH	RT	LT	EB	TH	LT
Heavy veh, %H/V	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Pk-hr fact, PHF	.87	.87	.87	.88	.88	.91	.91	.91	.91	.91	.88	.88	.88
Pretimed or Act	A	A	A	A	A	A	A	A	A	A	A	A	A
Strup 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	2.0
Ext eff gm, 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	2.0
Arrival typ, AT	3	3	3	3	3	3	3	3	3	3	3	3	3
Ped vol, vped	0	0	0	0	0	0	0	0	0	0	0	0	0
Bike vol, vbic	0	0	0	0	0	0	0	0	0	0	0	0	0
Parking locatns	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Park mnvrs, Nm	0	0	0	0	0	0	0	0	0	0	0	0	0
Bus stops, NB	0	0	0	0	0	0	0	0	0	0	0	0	0
Grade, %G	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0



SIGNAL2000/TEAPAC[Ver 2.71.07] - Capacity Analysis Summary

Intersection Averages for Int # 1 -

V/C 0.949 (Critical V/C 0.941)

Control Delay 40.8

Level of Service D+

Phase	Phase 1	Phase 2	Phase 3	Phase 4
Sq 44 LD/LD				
North				
G/C=0.059	G= 5.3"	G/C=0.234	G/C=0.133	G/C=0.397
Y+R= 4.0"	Y+R= 4.0"	Y+R= 4.0"	Y+R= 4.0"	Y+R= 4.0"
Off= 0.0%	Off=10.3%	Off=38.1%	Off=55.9%	Off=55.9%

C = 90 sec G = 74.0 sec = 82.2% Y=16.0 sec = 17.8% Ped = 0.0 sec = 0.0%

Lane Group	Width/ Lanes	Reqd g/C	Service Rate @C (vph)	Adj Volume	V/C	HCM Delay	L Queue Model 1
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SB Approach

RT+TH LT	24/2 12/1	0.271 0.063	0.234 0.059	550 241	766 324	697 249	0.910 0.769	48.5 37.2	*D+ D+	480 288
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NB Approach

RT TH LT	12/1 24/2 12/1	0.140 0.162 0.073	0.411 0.234 0.059	540 582 128	632 805 173	51 275 149	0.081 0.342 0.823	16.2 29.0 50.1	B C *D	38 144 193
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WB Approach

RT TH LT	12/1 24/2 12/1	0.299 0.408 0.158	0.500 0.397 0.133	698 1246 91	769 1368 442	342 1288 238	0.445 0.942 0.536	14.9 39.0 37.7	B+ D+ D+	261 835 143
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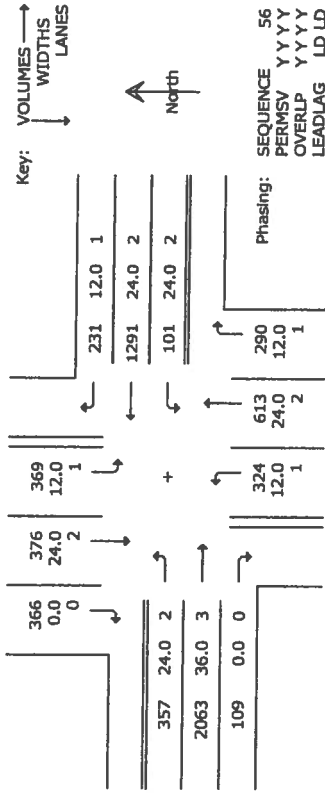
EB Approach

RT+TH LT	36/3 24/2	0.416 0.186	0.397 0.133	1793 91	1921 442	1898 368	0.988 0.829	44.6 50.4	*D+ *D	931 251
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SIGNAL2000/TEAPAC[Ver 2.71.07] - HCM Input Worksheet

Intersection # 1 -

Area Location Type: NONCBD



	SB	RT	TH	LT	WB	RT	TH	LT	NB	RT	TH	LT	EB	RT	TH	LT
Heavy veh, %HV	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Pk-hr fact, PHF	.80	.80	.80	.80	.91	.91	.91	.90	.90	.90	.90	.90	.94	.94	.94	.94
Pretimed or Act	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
Strup 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	2.0	2.0	2.0	2.0
Ext eff gtm, 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	2.0	2.0	2.0	2.0
Arrival typ, AT	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Ped vol, vped	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bike vol, vbic	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Parking locatns	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Park minvrs, Nm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bus stops, NB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grade, %G	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0

Sq 56 LD/LD	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Phase 6
	G= 22.9" Y+R= 4.0"	G= 3.1" Y+R= 4.0"	G= 25.3" Y+R= 4.0"	G= 5.0" Y+R= 4.0"	G= 4.9" Y+R= 4.0"	G= 44.9" Y+R= 4.0"

C=130"

SIGNAL2000/TEAPAC[Ver 2.71.07] - Capacity Analysis Summary

Intersection Averages for Int # 1 -

V/C 1.074 (Critical V/C 1.127)

Control Delay 108.8

Level of Service F

Sq 56 LD/LD	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Phase 6
	G/C=0.176 G= 22.9" Y+R= 4.0" Off= 0.0%	G/C=0.023 G= 3.1" Y+R= 4.0" Off=20.7%	G/C=0.195 G= 25.3" Y+R= 4.0" Off=26.1%	G/C=0.038 G= 5.0" Y+R= 4.0" Off=48.6%	G/C=0.037 G= 4.9" Y+R= 4.0" Off=55.5%	G/C=0.346 G= 44.9" Y+R= 4.0" Off=62.4%

C=130 sec G=106.0 sec = 81.5% Y=24.0 sec = 18.5% Ped= 0.0 sec = 0.0%

Lane Group	Width/ Lanes	Reqd g/C	Used g/C	Service Rate @C (vph)	Adj Volume	v/c	HCM Delay	L Queue Model 1
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SB Approach

RT+TH LT	24/2 12/1	0.401 0.324	0.249 0.230	1 312	792 449	927 461	1.168 1.022	137.6 87.3	*F *F	1116 ft 899 ft
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120.9 F

NB Approach

RT TH LT	12/1 24/2 12/1	0.362 0.349 0.260	0.264 0.195 0.176	1 224	388 652 351	322 681 360	0.793 1.016 1.006	54.9 91.3 87.7	D F *F	519 ft 718 ft 713 ft
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81.8 F

WB Approach

RT TH LT	12/1 24/2 12/1	0.337 0.478 0.279	0.606 0.346 0.038	848 661 1	933 1191 93	254 1419 111	0.272 1.191 0.867	12.2 137.2 104.7	B+ *F *F	205 ft 1678 ft 123 ft
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117.4 F

EB Approach

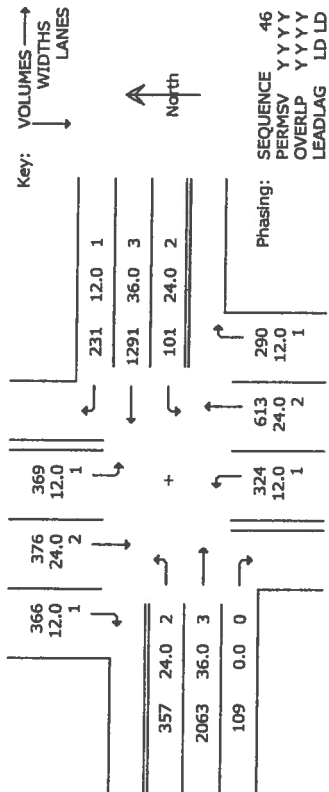
RT+TH LT	36/3 24/2	0.515 0.311	0.414 0.107	1580 1	2025 316	2311 380	1.141 1.067	108.2 124.8	F *F	1780 ft 450 ft
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110.5 F

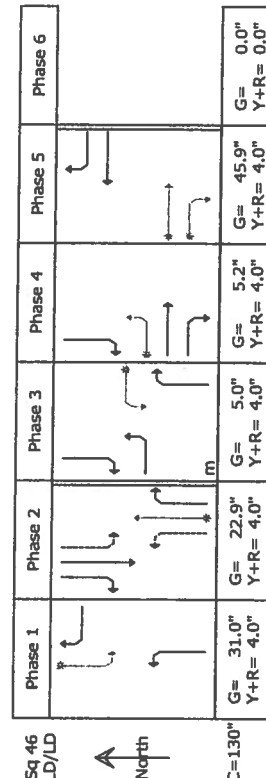
SIGNAL2000/TEAPAC[Ver 2.71.07] - HCM Input Worksheet

Intersection # 1 -

Area Location Type: NONCBD



	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT	RT	TH	LT
Heavy veh, %HV	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Pk-hr fact, PHF	.80	.80	.80	.91	.91	.91	.91	.91	.91	.91	.91	.91	.91	.91	.91	.91	.91	.91
Pretimed or Act	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
Strup 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	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	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	3	3	3	3	3	3
Ped vol, vped	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bike vol, vbic	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Parking locatns	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Park mnvrs, Nm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bus stops, NB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grade, %G	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0



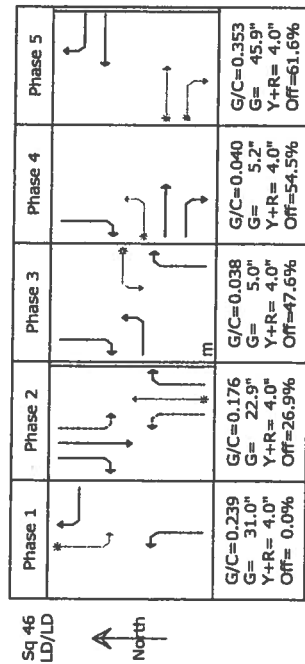
SIGNAL2000/TEAPAC[Ver 2.71.07] - Capacity Analysis Summary

Intersection Averages for Int # 1 -

V/C 0.949 (Critical V/C 1.074)

Control Delay 77.1

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	Reqd	g/C	Used	Service Rate @C (vph)	Adj Volume	v/c	HCM Delay	L	Queue Model
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SB Approach

RT	12/1	0.418	0.316	182	476	457	0.942	70.3	E	805 ft
TH	24/2	0.321	0.176	1	582	470	0.776	57.4	E+	416 ft
LT	12/1	0.322	0.239	327	466	461	0.989	77.3	*E	861 ft

NB Approach

RT	12/1	0.362	0.245	1	356	322	0.854	64.0	E+	548 ft
TH	24/2	0.349	0.176	1	582	681	1.124	129.1	*F	812 ft
LT	12/1	0.243	0.239	354	476	360	0.756	36.1	D+	516 ft

WB Approach

RT	12/1	0.337	0.623	880	958	254	0.265	11.2	B+	197 ft
TH	36/3	0.394	0.353	1040	1742	1419	0.815	41.3	D+	781 ft
LT	24/2	0.279	0.038	1	93	111	0.867	104.7	*F	123 ft

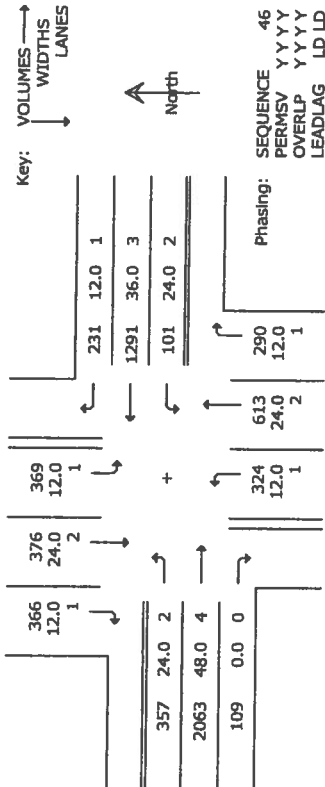
EB Approach

RT+TH	36/3	0.515	0.424	1660	2073	2311	1.115	96.5	*F	1722 ft
LT	24/2	0.311	0.109	1	325	380	1.044	117.0	*F	439 ft

SIGNAL2000/TEAPAC[Ver 2.71.07] - HCM Input Worksheet

Intersection # 1 -

Area Location Type: NONCBD



	RT	LT	WB	TH	RT	LT	NB	TH	RT	LT	EB	TH	LT
Heavy veh, %HV	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Pk-hr fact, PHF	.80	.80	.80	.91	.91	.91	.90	.90	.90	.90	.94	.94	.94
Pretimed or Act	A	A	A	A	A	A	A	A	A	A	A	A	A
Strup 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	2.0
Ext eff gm, 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	2.0
Arrival typ, AT	3	3	3	3	3	3	3	3	3	3	3	3	3
Ped vol, vped	0	0	0	0	0	0	0	0	0	0	0	0	0
Bike vol, vbic	0	0	0	0	0	0	0	0	0	0	0	0	0
Parking locatns	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Park mnvrs, Nm	0	0	0	0	0	0	0	0	0	0	0	0	0
Bus stops, NB	0	0	0	0	0	0	0	0	0	0	0	0	0
Grade, %G	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0

Sq 46 LD/LD	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Phase 6
	G= 23.0" Y+R= 4.0"	G= 20.4" Y+R= 4.0"	G= 5.0" Y+R= 4.0"	G= 3.4" Y+R= 4.0"	G= 28.2" Y+R= 4.0"	G= 0.0" Y+R= 0.0"

C=100"

SIGNAL2000/TEAPAC[Ver 2.71.07] - Capacity Analysis Summary

Intersection Averages for Int # 1 -
V/C 0.904 (Critical V/C 0.970)

Control Delay 51.7

Level of Service D

Sq 46 LD/LD	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5
	G/C=0.230 G= 23.0" Y+R= 4.0" Off= 0.0%	G/C=0.204 G= 20.4" Y+R= 4.0" Off=27.0%	G/C=0.050 G= 5.0" Y+R= 4.0" Off=51.4%	G/C=0.034 G= 3.4" Y+R= 4.0" Off=60.4%	G/C=0.282 G= 28.2" Y+R= 4.0" Off=67.8%

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	Used	Service Rate @C (vph) @E	Adj Volume	v/c	HCM Delay	L Queue Model 1
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SB Approach

RT	12/1	0.376	0.368	443	566	457	0.807	36.9	D+	551 ft
TH	24/2	0.234	0.204	291	703	470	0.669	39.1	D+	307 ft
LT	12/1	0.278	0.230	382	467	461	0.987	66.1	*E+	705 ft

NB Approach

RT	12/1	0.303	0.294	305	452	322	0.712	36.8	D+	386 ft
TH	24/2	0.278	0.204	291	703	681	0.969	65.8	*E+	555 ft
LT	12/1	0.191	0.230	431	498	360	0.723	24.0	C+	391 ft

WB Approach

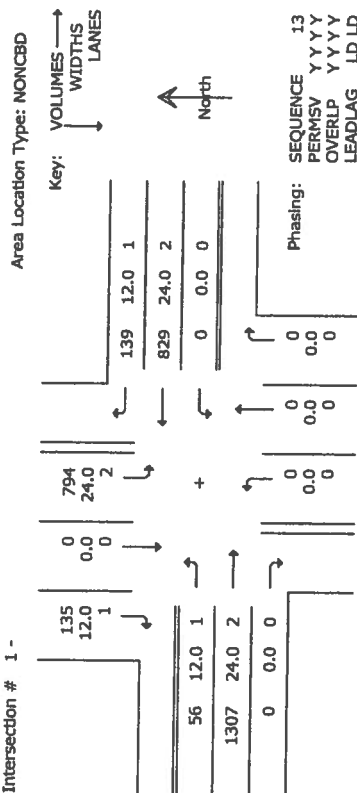
RT	12/1	0.267	0.552	779	849	254	0.299	12.2	B+	181 ft
TH	36/3	0.339	0.282	1044	1391	1419	1.020	65.2	*E+	826 ft
LT	24/2	0.179	0.050	1	143	111	0.665	56.3	*E+	85 ft

EB Approach

RT+TH	48/4	0.387	0.356	2065	2323	2311	0.995	49.5	D	943 ft
LT	24/2	0.220	0.124	1	402	380	0.918	68.5	*E	310 ft

SIGNAL2000/TEAPAC[Ver 2.71.07] - HCM Input Worksheet

Intersection # 1 -



	SB		WB		NB		EB	
	RT	LT	RT	LT	RT	LT	RT	LT
Heavy veh, %HV	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Pk-hr fact, PHF	.80	.80	.73	.73	.85	.85	.87	.87
Prefined on Act	A	A	A	A	A	A	A	A
Strup lost, t1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Ext eff gm, e	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
Ped vol, vped	0	0	0	0	0	0	0	0
Bike vol, vbic	0	0	0	0	0	0	0	0
Parking locatns	NO	NO	NO	NO	NO	NO	NO	NO
Park mnvrs, Nm	0	0	0	0	0	0	0	0
Bus stops, NB	0	0	0	0	0	0	0	0
Grade, %G	.0	.0	.0	.0	.0	.0	.0	.0

Sq 13 LD/LD	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Phase 6
C=100"	G= 39.3" Y+R= 4.0"	G= 5.0" Y+R= 4.0"	G= 43.7" Y+R= 4.0"	G= 0.0" Y+R= 0.0"	G= 0.0" Y+R= 0.0"	G= 0.0" Y+R= 0.0"

SIGNAL2000/TEAPAC[Ver 2.71.07] - Capacity Analysis Summary

Intersection Averages for Int # 1 -

V/C 0.725 (Critical V/C 0.797)

Level of Service C+

Control Delay 23.8

Sq 13 LD/LD	Phase 1	Phase 2	Phase 3
	G/C=0.393 G= 39.3" Y+R= 4.0" Off= 0.0%	G/C=0.050 G= 5.0" Y+R= 4.0" Off=43.3%	G/C=0.437 G= 43.7" Y+R= 4.0" Off=52.3%

C=100 sec G= 88.0 sec = 88.0% Y=12.0 sec = 12.0% Ped= 0.0 sec = 0.0%

Lane Group	Width/ Lanes	Reqd	g/C Used	Service Rate @C (vph)	Adj Volume	v/c	HCM Delay	L	Queue Model 1
------------	--------------	------	----------	-----------------------	------------	-----	-----------	---	---------------

SB Approach

RT	LT	12/1	24/2	0.223	0.355	0.483	0.393	654	1150	743	1313	169	992	0.227	0.756	15.2	28.7	B	*C	131 ft	573 ft
----	----	------	------	-------	-------	-------	-------	-----	------	-----	------	-----	-----	-------	-------	------	------	---	----	--------	--------

WB Approach

RT	TH	12/1	24/2	0.234	0.381	0.870	0.437	1338	1370	1338	1504	190	1136	0.142	0.755	1.0	25.9	A	C+	43 ft	642 ft
----	----	------	------	-------	-------	-------	-------	------	------	------	------	-----	------	-------	-------	-----	------	---	----	-------	--------

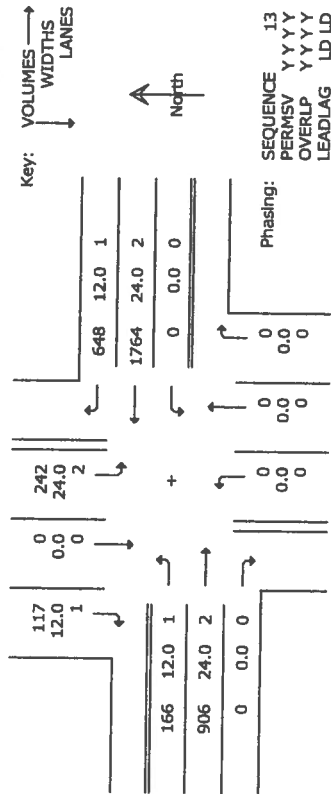
EB Approach

TH	LT	24/2	12/1	0.469	0.010	0.527	0.050	1736	134	1815	172	1502	64	0.828	0.364	23.2	17.5	*C+	*B	846 ft	54 ft
----	----	------	------	-------	-------	-------	-------	------	-----	------	-----	------	----	-------	-------	------	------	-----	----	--------	-------

SIGNAL2000/TEAPAC[Ver 2.71.07] - HCM Input Worksheet

Intersection # 1 -

Area Location Type: NONCBD



	RT	TH	LT	SB	TH	LT	WB	TH	LT	NB	TH	LT	EB	TH	LT
Heavy veh, %HV	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Pk-hr fact, PHF	.86	.86	.86	.92	.92	.92	.85	.85	.85	.85	.85	.85	.89	.89	.89
Pretimed or Act	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
Strup 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	2.0	2.0	2.0
Ext eff gm, 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	2.0	2.0	2.0
Arrival typ, AT	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Ped vol, vped	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bike vol, vbic	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Parking locatns	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO
Park mnvrs, Nm	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bus stops, NB	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grade, %G	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0

	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Phase 6
Sq 13 LD/LD						
C= 90"	G= 11.2" Y+R= 4.0"	G= 8.7" Y+R= 4.0"	G= 58.1" Y+R= 4.0"	G= 0.0" Y+R= 0.0"	G= 0.0" Y+R= 0.0"	G= 0.0" Y+R= 0.0"

SIGNAL2000/TEAPAC[Ver 2.71.07] - Capacity Analysis Summary

Intersection Averages for Int # 1 -

V/C 0.661 (Critical V/C 0.850)

Control Delay 14.0

Level of Service B+

Sq 13 LD/LD	Phase 1	Phase 2	Phase 3
	G/C=0.125 G= 11.2" Y+R= 4.0" Off= 0.0%	G/C=0.096 G= 8.7" Y+R= 4.0" Off=16.9%	G/C=0.646 G= 58.1" Y+R= 4.0" Off=31.0%

C= 90 sec G= 78.0 sec = 86.7% Y=12.0 sec = 13.3% Ped= 0.0 sec = 0.0%

Lane Group	Width/ Lanes	g/C	Reqd	Used	Service Rate @C (vph) @E	Adj Volume	v/c	HCM Delay	L	Queue Model 1
------------	-----------------	-----	------	------	-----------------------------	---------------	-----	--------------	---	------------------

SB Approach

RT	12/1	0.176	0.265	285	408	136	0.333	27.1	C+	132 ft
LT	24/2	0.166	0.125	40	411	281	0.675	42.0	*D+	178 ft

WB Approach

RT	12/1	0.504	0.815	1254	1254	704	0.561	3.4	A	303 ft
TH	24/2	0.567	0.646	2226	2226	1917	0.861	16.4	*B	940 ft

EB Approach

TH	24/2	0.340	0.787	2710	2710	1018	0.376	3.0	A	202 ft
LT	12/1	0.102	0.096	180	240	187	0.763	38.4	*D+	150 ft

8.5 A

Analysis Summary

General Information

Site Information

Analyst	Agency or Company	Analysis Period/Year	Comment
top	Terry O. Brown, P.E.	AM 2009	2009 AM Peak Hour BUILD Conditions NO Park
		Major Street	Vista del Norte Dr.
		Minor Street	Las Lomitas Dr.
		Jurisdiction/Date	5/22/2007

Input Data

[illegible]

Length of study period (h)

Signal upstream of Movement 2

0.25

Movement 5

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	230	0.323	1	12.5	B	12.5 B
	2							
	3							
EB	①	41	1449	0.028	0	7.6	A	
WB	④							

CHAPTER 17 - TWSC - UNSIGNALIZED INTERSECTIONS WORKSHEET

Analysis Summary

General Information

Site Information

Analyst tob Jurisdiction/Date CoA 5/22/2007
 Agency or Company Terry O. Brown, P.E. Major Street Vista del Norte Dr.
 Analysis Period/Year PM 2009 Minor Street Las Lomitas Dr.
 Comment 2009 PM Peak Hour BUILD Conditions NO Park

Input Data

Lane Configuration	EB			WB			NB			SB		
Lane 1 (curb)	T			TR						LR		
Lane 2	L											
Lane 3												
Lane 4												
Lane 5												
Movement	EB			WB			NB			SB		
	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)	17	44			113	219				124		59
PHF	0.90	0.90			0.90	0.90				0.90		0.90
Percent of heavy vehicles, HV	3	3			3	3				3		3
Flow rate	19	49			126	243				138		66
Flare storage (# of vehs)												
Median storage (# of vehs)												
Signal upstream of Movement 2												
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	204	688	0.296	1	12.4	B	12.4
	2								
	3								
EB	①		19	1184	0.016	0	8.1	A	
WB	④								

CHAPTER 17 - TWSC - UNSIGNALIZED INTERSECTIONS WORKSHEET

Analysis Summary

General Information

Site Information

Analyst tob Jurisdiction/Date Coa 3/28/2007
 Agency or Company Terry O. Brown, P.E. Major Street El Pueblo
 Analysis Period/Year AM 2009 Minor Street Las Lomitas Dr.
 Comment 2009 AM Peak Hour BUILD Condition NO Park

Input Data

Lane Configuration	EB			WB			NB			SB		
Lane 1 (curb)	R			T			R					
Lane 2	T			LT			L					
Lane 3												
Lane 4												
Lane 5												
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)		516	233	160	106		104		129			
PHF		0.90	0.90	0.90	0.90		0.90		0.90			
Percent of heavy vehicles, HV		3	3	3	3		3		3			
Flow rate		573	259	178	118		116		143			
Flare storage (# of vehs)												
Median storage (# of vehs)												
Signal upstream of Movement 2												
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	143	460	0.311	1	16.3	C	31.8
	2	L	116	188	0.618	3	50.9	F	
	3								
SB	1								
	2								
	3								
EB	①								
WB	④		178	790	0.225	1	10.9	B	

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CHAPTER 17 - TWSC - UNSIGNALIZED INTERSECTIONS WORKSHEET

Analysis Summary

General Information

Site Information

Analyst <u>tob</u>	Jurisdiction/Date <u>Coa</u> <u>3/28/2007</u>
Agency or Company <u>Terry O. Brown, P.E.</u>	Major Street <u>El Pueblo</u>
Analysis Period/Year <u>PM</u> <u>2009</u>	Minor Street <u>Las Lomitas Dr.</u>
Comment <u>2009 PM Peak Hour BUILD Condition NO Park</u>	

Input Data

Lane Configuration	EB			WB			NB			SB		
Lane 1 (curb)	R			T			R					
Lane 2	T			LT			L					
Lane 3												
Lane 4												
Lane 5												
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)		96	124	123	243		281		188			
PHF		0.90	0.90	0.90	0.90		0.90		0.90			
Percent of heavy vehicles, HV		3	3	3	3		3		3			
Flow rate		107	138	137	270		312		209			
Flare storage (# of vehs)												
Median storage (# of vehs)												
Signal upstream of Movement 2												
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	209	924	0.226	1	10.0	A	22.8 C
	2	L	312	436	0.715	6	31.4	D	
	3								
SB	1								
	2								
	3								
EB	①								
WB	④		137	1312	0.104	0	8.1	A	

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CHAPTER 17 - TWSC - UNSIGNALIZED INTERSECTIONS WORKSHEET

Analysis Summary

General Information

Analyst tob
 Agency or Company Terry O. Brown, P.E.
 Analysis Period/Year AM 2009
 Comment 2009 AM Peak Hour BUILD Conditions NO Park

Site Information

Jurisdiction/Date CoA 5/22/2007
 Major Street Osuna Rd.
 Minor Street Driveway "A"

Input Data

Lane Configuration	EB			WB			NB			SB		
Lane 1 (curb)	T			R						R		
Lane 2	T			T						L		
Lane 3	L			T								
Lane 4												
Lane 5												
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)	44	2225			912	44				38		38
PHF	0.85	0.95			0.95	0.85				0.85		0.85
Percent of heavy vehicles, HV	3	3			3	3				3		3
Flow rate	52	2342			960	52				45		45
Flare storage (# of vehs)												
Median storage (# of vehs)										1		
Signal upstream of Movement 2												
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	R	45	529	0.085	0	12.4	B	29.5 D
	2	L	45	130	0.345	1	46.6	E	
	3								
EB		①	52	675	0.077	0	10.8	B	
WB		④							

CHAPTER 17 - TWSC - UNSIGNALIZED INTERSECTIONS WORKSHEET

Analysis Summary

General Information

Site Information

Analyst <u>tob</u>	Jurisdiction/Date <u>CoA</u> <u>5/22/2007</u>
Agency or Company <u>Terry O. Brown, P.E.</u>	Major Street <u>Osuna Rd.</u>
Analysis Period/Year <u>PM</u> <u>2009</u>	Minor Street <u>Driveway "A"</u>
Comment <u>2009 PM Peak Hour BUILD Conditions NO Park</u>	

Input Data

Lane Configuration	EB			WB			NB			SB		
Lane 1 (curb)	T			R						R		
Lane 2	T			T						L		
Lane 3	L			T								
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)	96	1151			2271	122				103		130
PHF	0.85	0.95			0.95	0.85				0.85		0.85
Percent of heavy vehicles, HV	3	3			3	3				3		3
Flow rate	113	1212			2391	144				121		153
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	R	153	177	0.863	6	88.6	F	624.8
	2	L	121	36	3.377	14	1302.7	F	
	3								
EB		①	113	171	0.660	4	59.5	F	
WB		④							

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CHAPTER 17 - TWSC - UNSIGNALIZED INTERSECTIONS WORKSHEET

Analysis Summary

General Information

Analyst tob
 Agency or Company Terry O. Brown, P.E.
 Analysis Period/Year AM 2009
 Comment 2009 AM Peak Hour BUILD Conditions NO Park

Site Information

Jurisdiction/Date CoA 5/22/2007
 Major Street Vista del Norte
 Minor Street Driveway "B"

Input Data

Lane Configuration	NB			SB			WB			EB		
Lane 1 (curb)	R			TR			TR			TR		
Lane 2	T			T			L			L		
Lane 3	T			L								
Lane 4	L											
Lane 5												
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)	27	129	29	15	875	11	25	1	13	11	1	37
PHF	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent of heavy vehicles, HV	3	3	3	3	3	3	3	3	3	3	3	3
Flow rate	32	152	34	18	1029	13	29	1	15	13	1	44
Flare storage (# of vehs)												
Median storage (# of vehs)							1			1		
Signal upstream of Movement 2												
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	TR	16	796	0.020	0	9.6	A	14.2
	2	L	29	334	0.087	0	16.8	C	
	3								B
EB	1	TR	45	485	0.093	0	13.2	B	15.7
	2	L	13	198	0.066	0	24.5	C	
	3								C
NB	①		32	657	0.048	0	10.8	B	
SB	④		18	1379	0.013	0	7.6	A	

CHAPTER 17 - TWSC - UNSIGNALIZED INTERSECTIONS WORKSHEET

Analysis Summary

General Information

Site Information

Analyst tob Jurisdiction/Date CoA 5/22/2007
 Agency or Company Terry O. Brown, P.E. Major Street Vista del Norte
 Analysis Period/Year PM 2009 Minor Street Driveway "B"
 Comment 2009 PM Peak Hour BUILD Conditions NO Park

Input Data

Lane Configuration	NB			SB			WB			EB		
Lane 1 (curb)	R			TR			TR			TR		
Lane 2	T			T			L			L		
Lane 3	T			L								
Lane 4	L											
Lane 5												
Movement	NB			SB			WB			EB		
	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)	37	705	49	25	232	11	52	1	7	11	1	27
PHF	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent of heavy vehicles, HV	3	3	3	3	3	3	3	3	3	3	3	3
Flow rate	44	829	58	29	273	13	61	1	8	13	1	32
Flare storage (# of vehs)												
Median storage (# of vehs)							1			1		
Signal upstream of Movement 2												
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	TR	9	511	0.018	0	12.2	B	24.2
	2	L	61	232	0.263	1	26.0	D	
	3								
EB	1	TR	33	807	0.041	0	9.7	A	11.4
	2	L	13	346	0.038	0	15.8	C	
	3								
NB	①		44	1266	0.034	0	7.9	A	
SB	④		29	753	0.039	0	10.0	A	

CHAPTER 17 - TWSC - UNSIGNALIZED INTERSECTIONS WORKSHEET

Analysis Summary

General Information		Site Information	
Analyst	<u>tob</u>	Jurisdiction/Date	<u>CoA</u> <u>5/22/2007</u>
Agency or Company	<u>Terry O. Brown, P.E.</u>	Major Street	<u>Osuna Rd.</u>
Analysis Period/Year	<u>AM</u> <u>2009</u>	Minor Street	<u>Driveway "C"</u>
Comment	<u>2009 AM Peak Hour BUILD Conditions NO Park</u>		

Input Data

Lane Configuration	EB			WB			NB			SB		
Lane 1 (curb)	T			R						R		
Lane 2	T			T						L		
Lane 3	L			T								
Lane 4												
Lane 5												
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)	44	2231			905	44				38		38
PHF	0.85	0.95			0.95	0.85				0.85		0.85
Percent of heavy vehicles, HV	3	3			3	3				3		3
Flow rate	52	2348			953	52				45		45
Flare storage (# of vehs)												
Median storage (# of vehs)										1		
Signal upstream of Movement 2	<u> </u> ft			Movement 5			<u> </u> ft					
Length of study period (h)	<u>0.25</u>											

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								29.4
	2								
	3								
SB	1	R	45	532	0.085	0	12.4	B	D
	2	L	45	130	0.345	1	46.5	E	
	3								
EB		①	52	679	0.076	0	10.7	B	
WB		④							

CHAPTER 17 - TWSC - UNSIGNALIZED INTERSECTIONS WORKSHEET

Analysis Summary

General Information

Analyst tob
 Agency or Company Terry O. Brown, P.E.
 Analysis Period/Year PM 2009
 Comment 2009 PM Peak Hour BUILD Conditions NO Park

Site Information

Jurisdiction/Date CoA 5/22/2007
 Major Street Osuna Rd.
 Minor Street Driveway "C"

Input Data

Lane Configuration	EB			WB			NB			SB		
Lane 1 (curb)	T			R						R		
Lane 2	T			T						L		
Lane 3	L			T								
Lane 4												
Lane 5												
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)	98	1146			2275	120				104		128
PHF	0.85	0.95			0.95	0.85				0.85		0.85
Percent of heavy vehicles, HV	3	3			3	3				3		3
Flow rate	115	1206			2395	141				122		151
Flare storage (# of vehs)												
Median storage (# of vehs)										1		
Signal upstream of Movement 2												
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	R	151	177	0.855	6	87.1	F	650.1 F
	2	L	122	35	3.468	14	1346.9	F	
	3								
EB	①		115	171	0.675	4	61.3	F	
WB	④								

Traffic Count Data Sheet

Year Counts Taken: 2006		Vista del Norte Commercial Development (Osuna Rd. / Vista del Norte)			
		E-W Street Osuna		Speed Limit (Osuna)=	45 MPH
		N-S Street: 2nd St		Speed Limit (2nd St)=	45 MPH
		SIGNALIZED		Date of Count:	3/16/06

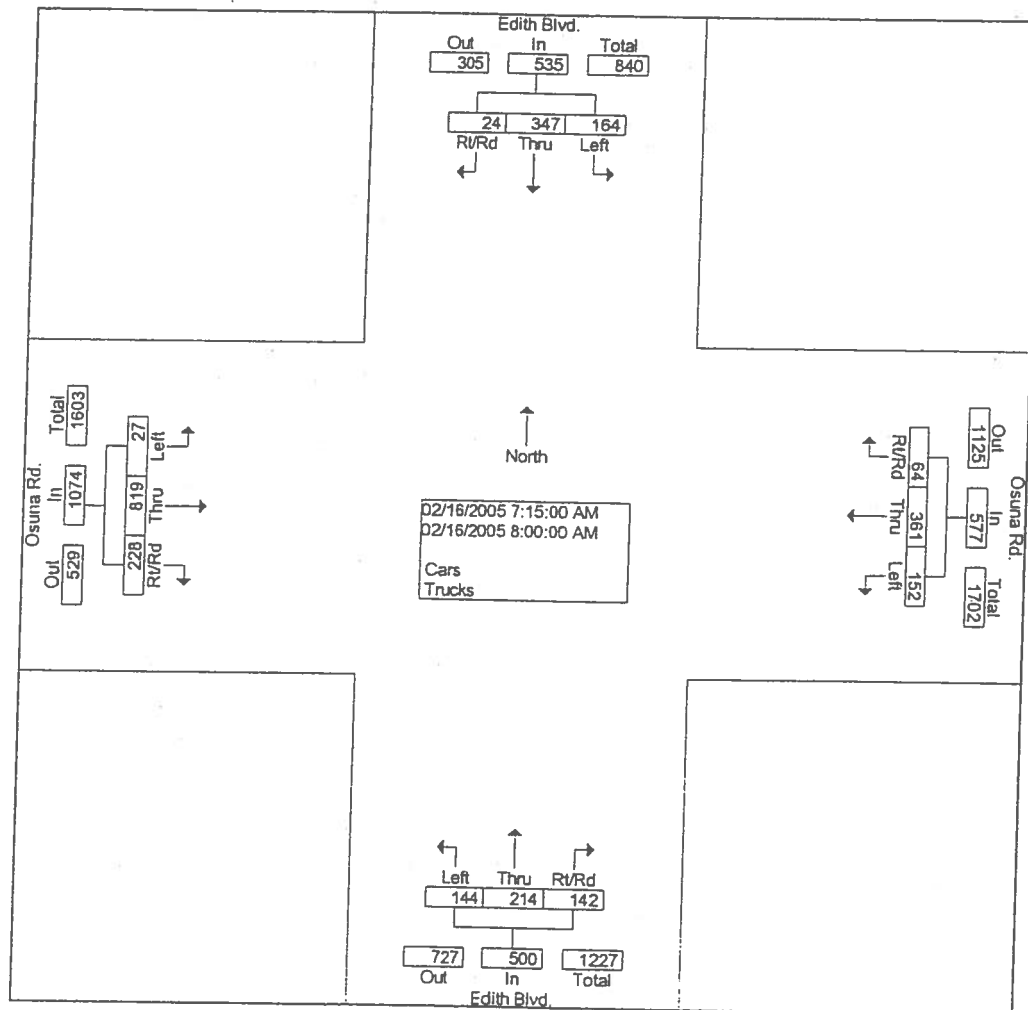
Begin Time	End Time	Eastbound (Osuna)			Westbound (Osuna)			Northbound (2nd St)			Southbound (2nd St)		
		L	T	R	L	T	R	L	T	R	L	T	R
7:00 AM	7:15 AM	16	94	16	23	36	41	8	123	59	101	285	9
7:15 AM	7:30 AM	12	97	7	28	36	52	5	119	55	115	303	11
7:30 AM	7:45 AM	22	96	19	19	45	35	9	147	58	82	291	7
7:45 AM	8:00 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	184	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
Intersection Turning Movement Analysis

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

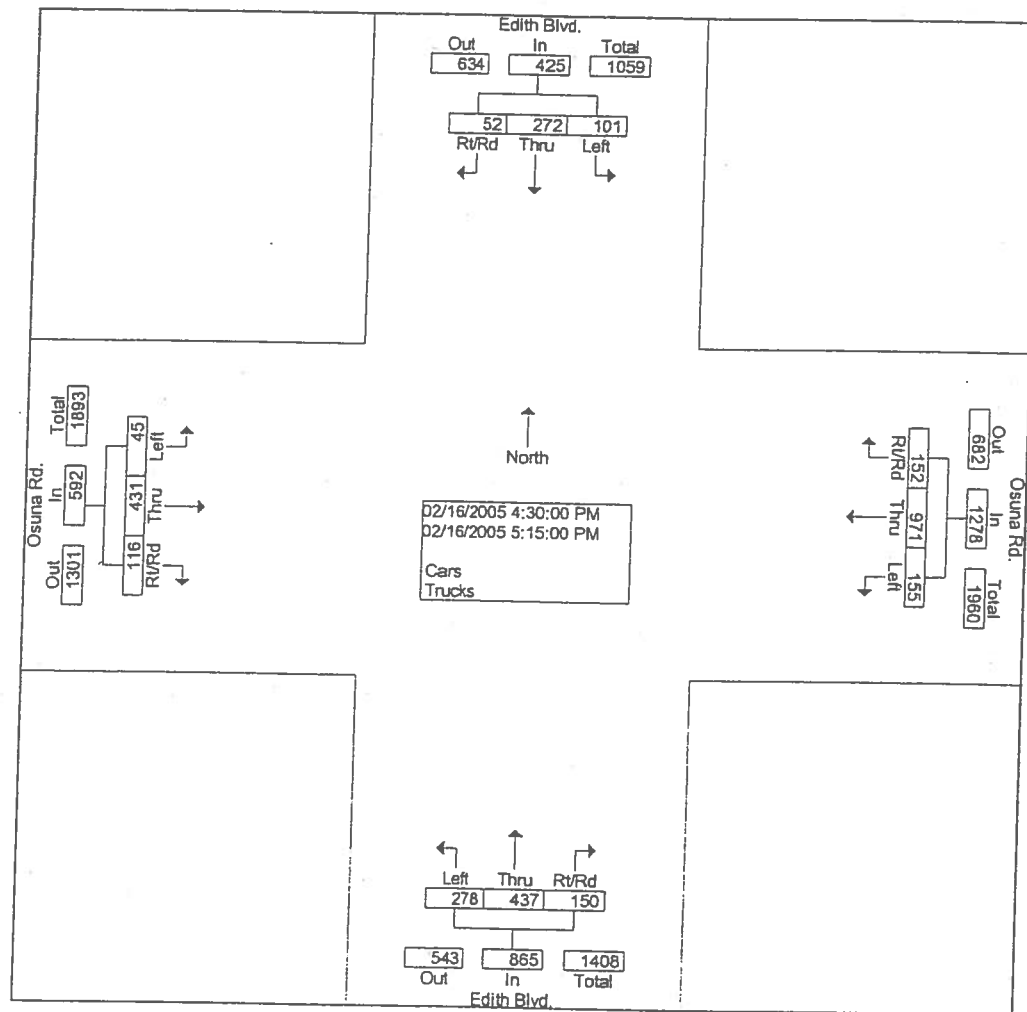
	Edith Blvd. From North					Osuna Rd. From East					Edith Blvd. From South					Osuna Rd. From West					
Start Time	Left	Thru	Right	Rv/R d	App. Total	Left	Thru	Right	Rv/R d	App. Total	Left	Thru	Right	Rv/R d	App. Total	Left	Thru	Right	Rv/R d	App. Total	Int. Total
Peak Hour From 06:45 to 09:30 - Peak 1 of 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
Intersection/Turning Movement Analysis

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

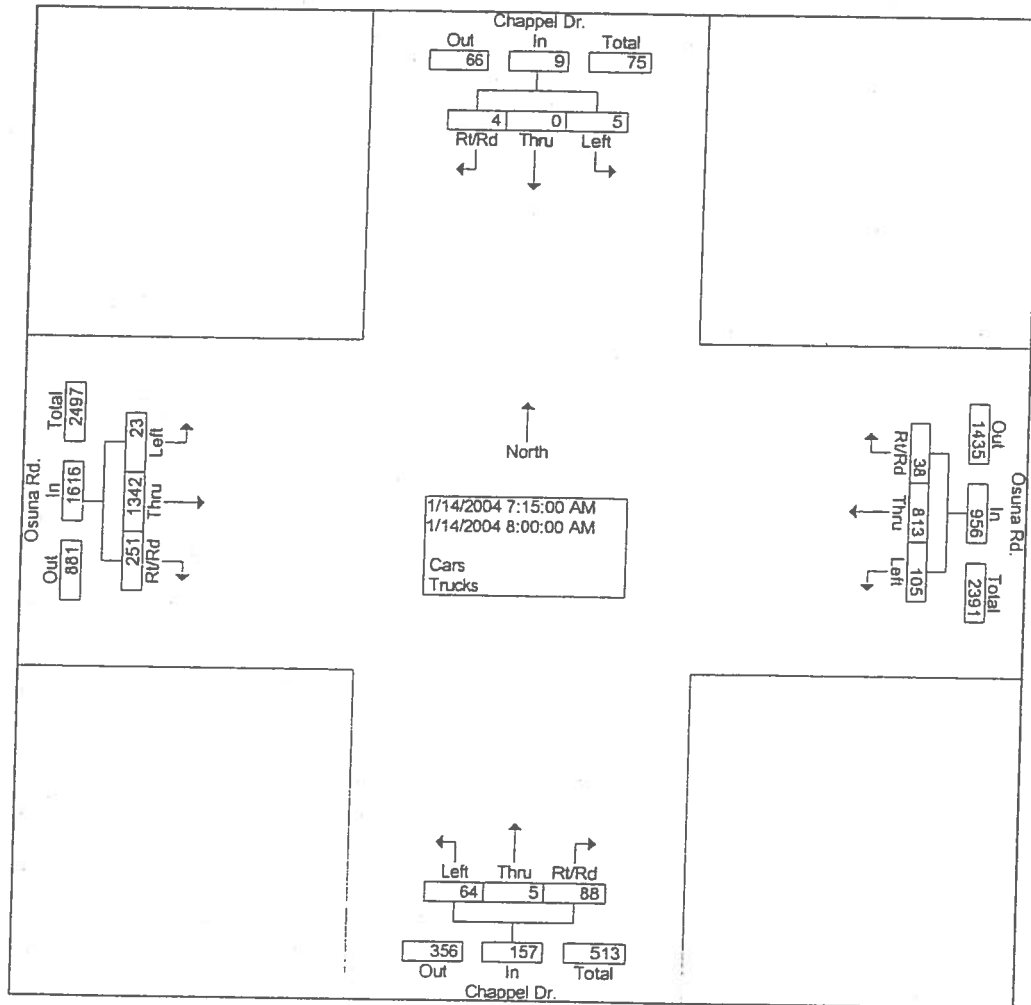
	Edith Blvd. From North					Osuna Rd. From East					Edith Blvd. From South					Osuna Rd. From West									
Start Time	Left	Thru	Right	Rt/R d	App. Total	Left	Thru	Right	Rt/R d	App. Total	Left	Thru	Right	Rt/R d	App. Total	Left	Thru	Right	Rt/R d	App. Total	Int. Total				
Peak Hour From 15:00 to 17:45 - 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					



Mid-Region Council of Governments
Intersection Turning Movement Analysis

File Name : Osuna Rd. and Chappel D
Site Code : 00025372
Start Date : 01/14/2004
Page No : 3

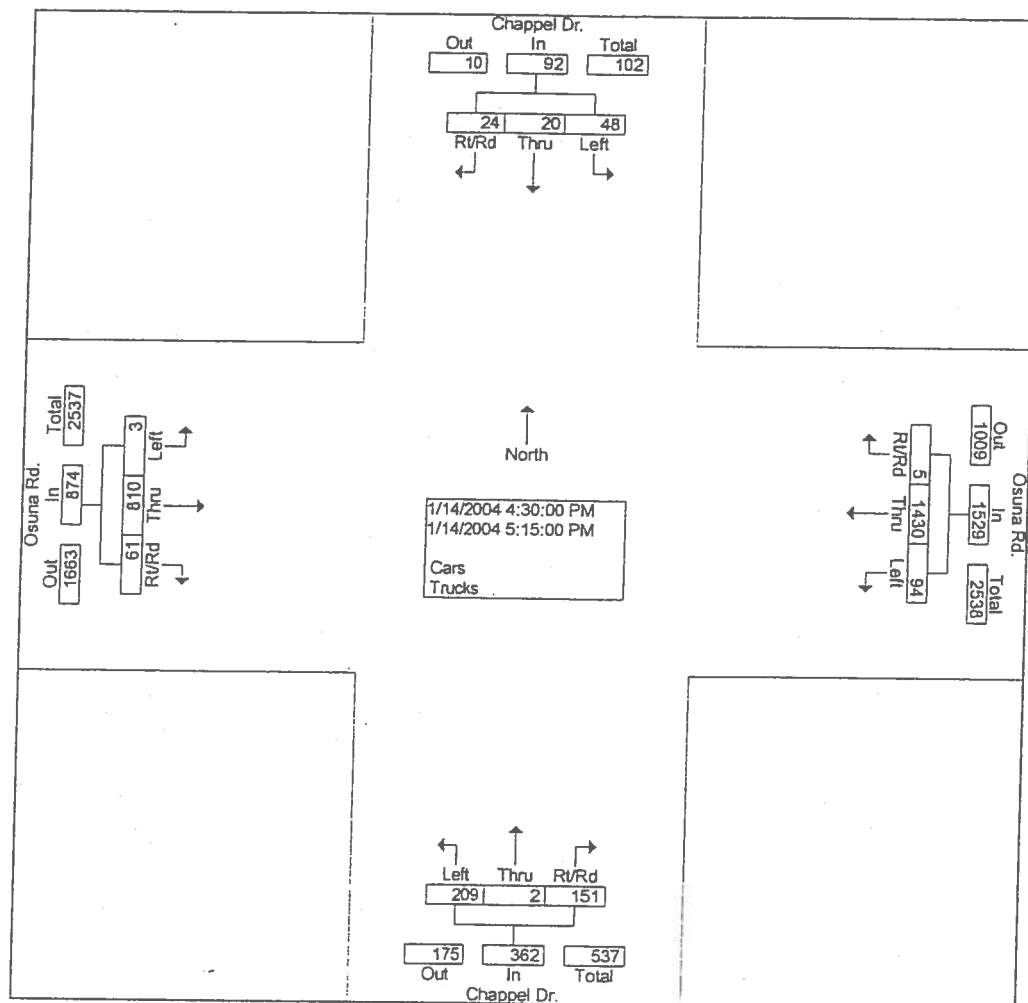
Start Time	Chappel Dr. From North					Osuna Rd. From East					Chappel Dr. From South					Osuna Rd. From West					Int. Total
	Left	Thru	Right	Rt/R d	App. Total	Left	Thru	Right	Rt/R d	App. Total	Left	Thru	Right	Rt/R d	App. Total	Left	Thru	Right	Rt/R d	App. Total	
Peak Hour From 06:45 to 09:30 - Peak 1 of 1																					
Intersection 07:15																					
Volume	5	0	2	2	9	105	813	36	2	956	64	5	64	24	157	23	1342	237	14	1616	2738
Percent	55.6	0.0	22.2	22.2		11.0	85.0	3.8	0.2		40.8	3.2	40.8	15.3		1.4	83.0	14.7	0.9		
Volume	5	0	2	2	9	105	813	36	2	956	64	5	64	24	157	23	1342	237	14	1616	2738
Volume	3	0	1	2	6	36	193	8	2	239	19	2	29	5	55	4	411	78	6	499	799
Peak Factor																					0.857
High Int. 07:45						07:30					07:45					07:45					
Volume	3	0	1	2	6	30	263	9	0	302	19	2	29	5	55	4	411	78	6	499	
Peak Factor					0.375					0.791					0.714						0.810



Mid-Region Council of Governments
Intersection Turning Movement Analysis

File Name : Osuna Rd. and Chappel Dr
Site Code : 00025372
Start Date : 01/14/2004
Page No : 5

	Chappel Dr. From North					Osuna Rd. From East					Chappel Dr. 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	48	20	15	9	92	94	1430	5	0	1529	209	2	104	47	362	3	810	56	5	874	2857
Percent	52.2	21.7	16.3	9.8		6.1	93.5	0.3	0.0		57.7	0.6	28.7	13.0		0.3	92.7	6.4	0.6		
Volume	48	20	15	9	92	94	1430	5	0	1529	209	2	104	47	362	3	810	56	5	874	2857
Volume	14	6	4	2	26	22	421	1	0	444	73	1	35	6	115	1	214	15	0	231	816
Peak Factor																					0.875
High Int. Volume	17:00					17:00					17:00					16:45					
Volume	14	6	4	2	26	22	421	1	0	444	73	1	35	6	115	1	214	20	2	237	
Peak Factor					0.885					0.861					0.787						0.922



Traffic Count Data Sheet

Year Counts Taken: 2006 Vista del Norte Commercial Development

E-W Street Osuna

N-S Street: Academy Pkwy

Speed Limit (Osuna)= 45 MPH

Speed Limit (Academy Pkwy)= 25 MPH

Date of Count: 4/14/06

SIGNALIZED

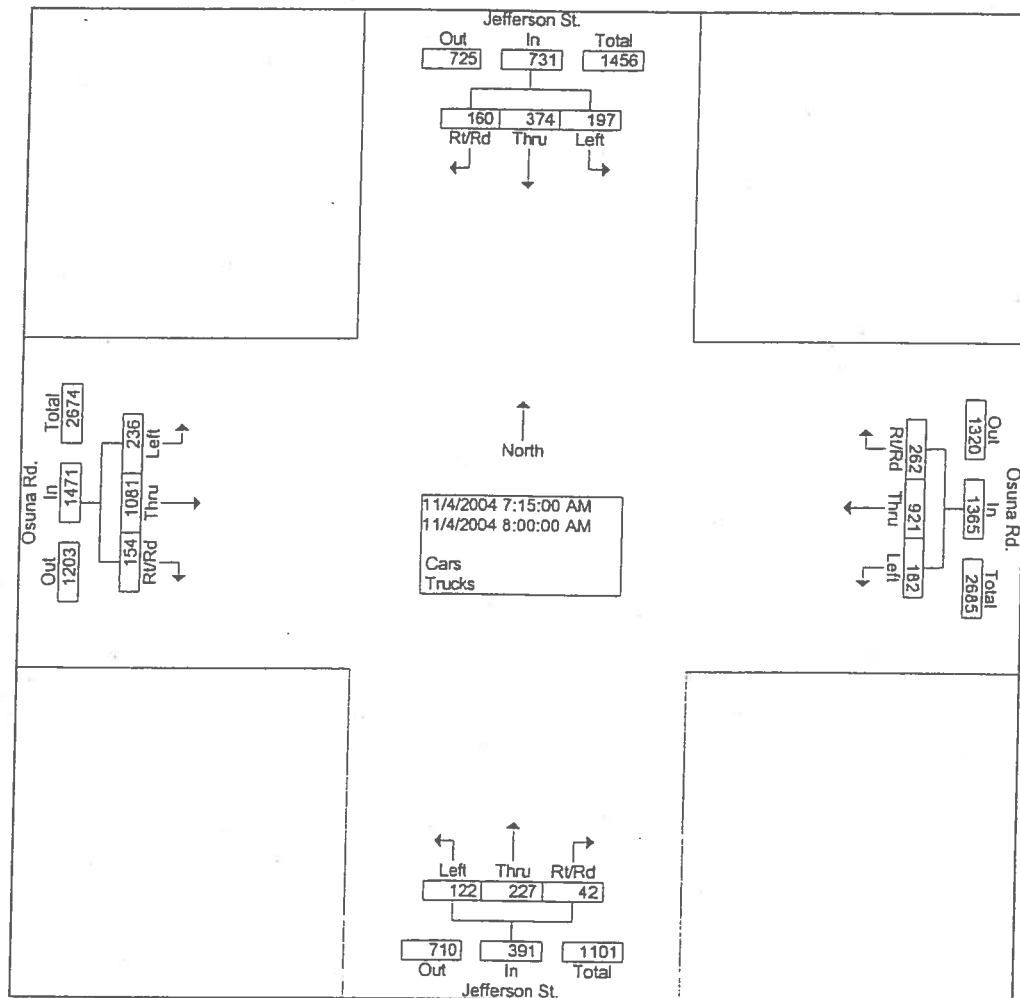
Begin Time	End Time	Eastbound (Osuna)			Westbound (Osuna)			Northbound (Academy Pkwy)			Southbound (Academy Pkwy)		
		L	T	R	L	T	R	L	T	R	L	T	R
7:00 AM	7:15 AM	9	225	5	24	174	42	2	0	3	3	0	3
7:15 AM	7:30 AM	47	247	4	9	162	46	4	0	3	9	0	2
7:30 AM	7:45 AM	12	326	0	8	264	18	2	0	6	8	0	5
7:45 AM	8:00 AM	14	327	1	10	193	26	1	0	4	15	0	5
8:00 AM	8:15 AM	16	349	2	12	199	28	2	0	8	16	0	2
8:15 AM	8:30 AM	12	301	1	9	189	17	1	0	5	13	0	5
8:30 AM	8:45 AM	42	294	4	8	172	24	4	0	7	44	0	5
8:45 AM	9:00 AM	9	204	2	40	180	46	0	0	4	47	0	4
AM Peak Hour Volumes		54	1303	4	39	845	89	6	0	23	52	0	17
% of Total Traffic		2.2%	53.6%	0.2%	1.6%	34.7%	3.7%	0.2%	0.0%	0.9%	2.1%	0.0%	0.7%
% Directional			56.0%			40.0%			1.2%	2.8%			
AM Peak Hour Factor			0.93			0.84			0.73	0.86			

Begin Time	End Time	Eastbound (Osuna)			Westbound (Osuna)			Northbound (Academy Pkwy)			Southbound (Academy Pkwy)		
		L	T	R	L	T	R	L	T	R	L	T	R
4:00 PM	4:15 PM	2	268	4	43	296	9	4	4	11	12	0	40
4:15 PM	4:30 PM	4	262	0	44	304	9	6	0	14	22	0	12
4:30 PM	4:45 PM	3	279	0	9	322	7	8	0	15	21	0	12
4:45 PM	5:00 PM	2	282	0	7	349	4	6	0	13	23	1	11
5:00 PM	5:15 PM	1	309	0	6	392	5	6	0	14	19	0	10
5:15 PM	5:30 PM	2	225	0	7	381	5	4	0	14	20	0	9
5:30 PM	5:45 PM	4	244	0	0	380	4	5	0	42	12	0	9
5:45 PM	6:00 PM	0	472	0	5	254	2	3	0	8	11	0	6
PM Peak Hour Volumes		8	1095	0	29	1444	21	24	0	56	83	1	42
% of Total Traffic		0.3%	39.1%	0.0%	1.0%	51.5%	0.7%	0.9%	0.0%	2.0%	3.0%	0.0%	1.5%
% Directional			39.4%			53.3%			2.9%	4.5%			
PM Peak Hour Factor			0.89			0.93			0.87	0.90			

Mid-Region Council of Governments
Intersection Turning Movement Analysis

File Name : Osuna Rd. and Jefferson St
Site Code : 00025373
Start Date : 11/04/2004
Page No : 3

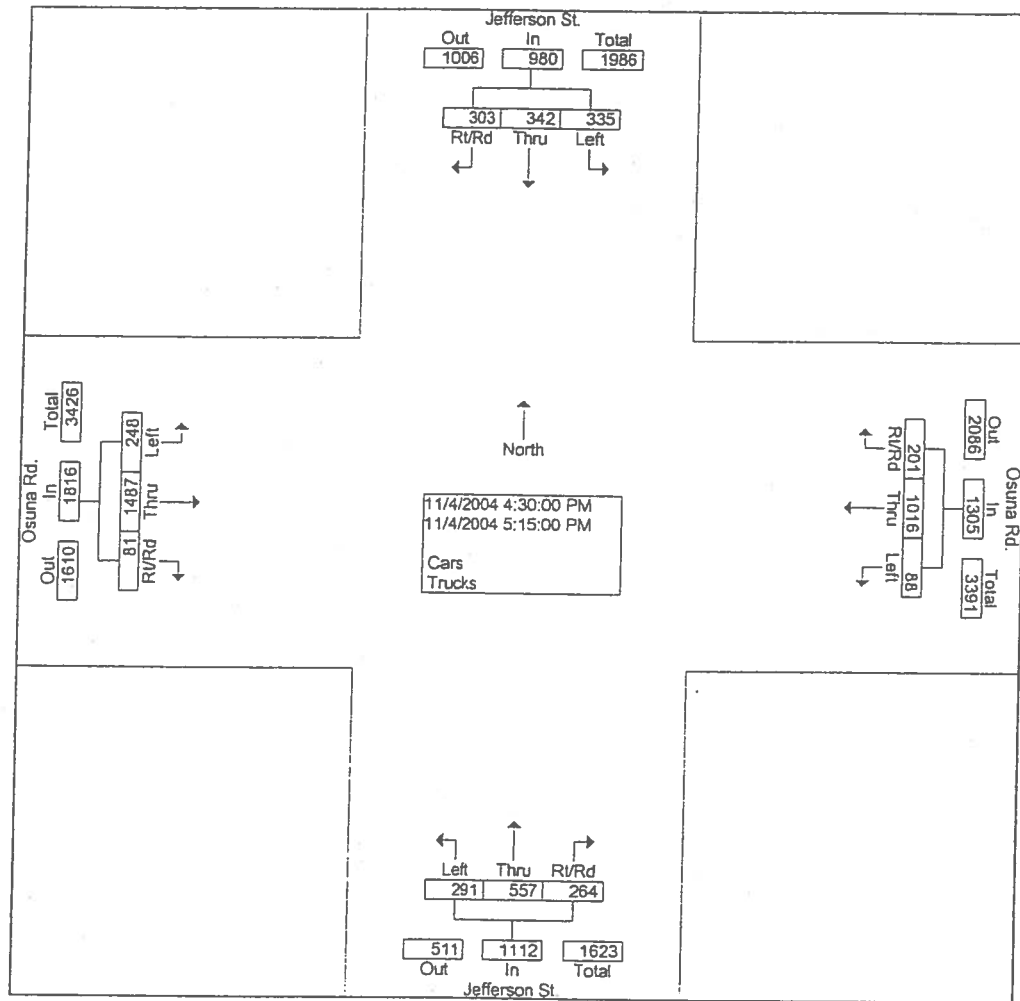
	Jefferson St. From North					Osuna Rd. From East					Jefferson St. From South					Osuna Rd. From West					
Start Time	Left	Thru	Right	Rt/R d	App. Total	Left	Thru	Right	Rt/R d	App. Total	Left	Thru	Right	Rt/R d	App. Total	Left	Thru	Right	Rt/R d	App. Total	Int. Total
Peak Hour From 06:45 to 09:30 - Peak 1 of 1																					
Intersection	07:15																				
Volume	197	374	157	3	731	182	921	251	11	1365	122	227	30	12	391	236	1081	147	7	1471	3958
Percent	26.9	51.2	21.5	0.4		13.3	67.5	18.4	0.8		31.2	58.1	7.7	3.1		16.0	73.5	10.0	0.5		
Volume	197	374	157	3	731	182	921	251	11	1365	122	227	30	12	391	236	1081	147	7	1471	3958
Volume	58	105	47	1	211	53	264	74	0	391	34	61	9	4	108	91	285	41	1	418	1128
Peak Factor																					0.877
High Int.	07:45					07:45					07:45					07:45					
Volume	58	105	47	1	211	53	264	74	0	391	34	61	9	4	108	91	285	41	1	418	
Peak Factor					0.866					0.873					0.905					0.880	



Mid-Region Council of Governments
Intersection Turning Movement Analysis

File Name : Osuna Rd. and Jefferson St
Site Code : 00025373
Start Date : 11/04/2004
Page No : 5

	Jefferson St. From North					Osuna Rd. From East					Jefferson St. From South					Osuna Rd. From West					
Start Time	Left	Thru	Right	Rt/R d	App. Total	Left	Thru	Right	Rt/R d	App. Total	Left	Thru	Right	Rt/R d	App. Total	Left	Thru	Right	Rt/R d	App. Total	Int. Total
Peak Hour From 15:00 to 17:45 - Peak 1 of 1																					
Intersection 16:30	335	342	297	6	980	88	1016	176	25	1305	291	557	219	45	1112	248	1487	80	1	1816	5213
Volume	34.2	34.9	30.3	0.6		6.7	77.9	13.5	1.9		26.2	50.1	19.7	4.0		13.7	81.9	4.4	0.1		
Percent	335	342	297	6	980	88	1016	176	25	1305	291	557	219	45	1112	248	1487	80	1	1816	5213
Volume	89	115	104	1	309	29	268	55	6	358	72	142	69	14	297	80	382	13	0	475	1439
Peak Factor																					0.906
High Int. Volume	17:00					17:00					17:15					16:30					
Peak Factor	89	115	104	1	309	29	268	55	6	358	88	158	52	10	308	71	399	15	0	485	0.936
					0.793					0.911					0.903						



Traffic Count Data Sheet

Year Counts Taken: 2006
 Vista del Norte Commercial Development (Osuna Rd. / Vista del Norte)
 E-W Street Osuna
 N-S Street: Vista del Norte
 SIGNALIZED
 Speed Limit (Osuna)= 45 MPH
 Speed Limit (Vista del Norte)= 30 MPH
 Date of Count: 3/15/06

Begin Time	End Time	Eastbound (Osuna)			Westbound (Osuna)			Northbound (Vista del Norte)			Southbound (Vista del Norte)		
		L	T	R	L	T	R	L	T	R	L	T	R
7:00 AM	7:15 AM	6	271	1	2	131	16	0	0	0	141	0	25
7:15 AM	7:30 AM	4	260	0	0	144	18	0	0	0	136	0	20
7:30 AM	7:45 AM	4	313	0	1	220	29	0	0	0	207	0	30
7:45 AM	8:00 AM	7	339	1	0	143	28	0	0	0	181	0	21
8:00 AM	8:15 AM	5	268	4	3	116	25	0	0	0	136	0	15
8:15 AM	8:30 AM	2	224	0	2	98	38	4	0	1	104	0	12
8:30 AM	8:45 AM	9	204	0	0	123	26	0	0	0	109	0	14
8:45 AM	9:00 AM	44	216	4	4	149	31	0	0	0	117	0	14
AM Peak Hour Volumes		21	1183	2	3	638	91	0	0	0	665	0	96
% of Total Traffic		0.8%	43.8%	0.1%	0.1%	23.6%	3.4%	0.0%	0.0%	0.0%	24.6%	0.0%	3.6%
% Directional			44.7%			27.1%			0.0%				
AM Peak Hour Factor			0.87			0.73			0.0%		28.2%		
									#DIV/0!				0.80

Begin Time	End Time	Eastbound (Osuna)			Westbound (Osuna)			Northbound (Vista del Norte)			Southbound (Vista del Norte)		
		L	T	R	L	T	R	L	T	R	L	T	R
4:00 PM	4:15 PM	14	144	0	0	258	76	0	0	2	27	0	15
4:15 PM	4:30 PM	20	186	0	0	306	94	0	0	0	39	0	15
4:30 PM	4:45 PM	16	225	0	4	331	114	0	0	1	31	0	8
4:45 PM	5:00 PM	24	173	0	1	329	119	0	0	1	42	0	16
5:00 PM	5:15 PM	21	207	0	0	380	133	0	0	1	35	0	11
5:15 PM	5:30 PM	33	156	0	0	331	153	0	0	0	47	0	12
5:30 PM	5:45 PM	34	159	0	4	349	144	0	0	4	53	0	11
5:45 PM	6:00 PM	24	143	0	0	304	120	0	0	0	34	0	9
PM Peak Hour Volumes		94	761	0	5	1371	519	0	0	3	155	0	47
% of Total Traffic		3.2%	25.8%	0.0%	0.2%	46.4%	17.6%	0.0%	0.0%	0.1%	5.2%	0.0%	1.6%
% Directional			28.9%			64.1%			0.1%			6.8%	
PM Peak Hour Factor			0.89			0.92			0.75				0.86

Traffic Count Data Sheet

Year Counts Taken: 2006
 Vista del Norte Commercial Development (Osuna Rd. / Vista del Norte)
 E-W Street Vista del Norte
 N-S Street: Las Lomitas
 Speed Limit (Vista del Norte)= 30 MPH
 Speed Limit (Las Lomitas)= 30 MPH
 Date of Count: 3/17/06

UN SIGNALIZED

Begin Time	End Time	Eastbound (Vista del Norte)			Westbound (Vista del Norte)			Northbound (Las Lomitas)			Southbound (Las Lomitas)		
		L	T	R	L	T	R	L	T	R	L	T	R
7:00 AM	7:15 AM	4	18	0	0	3	16	0	0	0	34	0	2
7:15 AM	7:30 AM	5	16	0	0	3	18	0	0	0	35	0	4
7:30 AM	7:45 AM	8	20	0	0	5	18	0	0	0	43	0	3
7:45 AM	8:00 AM	11	35	0	0	5	14	0	0	0	46	0	2
8:00 AM	8:15 AM	8	13	0	0	2	12	0	0	0	36	0	4
8:15 AM	8:30 AM	8	14	0	0	5	12	0	0	0	27	0	0
8:30 AM	8:45 AM	6	15	0	0	4	10	0	0	0	23	0	2
8:45 AM	9:00 AM	9	17	0	0	4	13	0	0	0	29	0	3
AM Peak Hour Volumes		32	84	0	0	15	62	0	0	0	160	0	13
% of Total Traffic		8.7%	23.0%	0.0%	0.0%	4.1%	16.9%	0.0%	0.0%	0.0%	43.7%	0.0%	3.6%
% Directional			31.7%			21.0%			0.0%		47.3%		
AM Peak Hour Factor			0.63			0.84			#DIV/0!				

Begin Time	End Time	Eastbound (Vista del Norte)			Westbound (Vista del Norte)			Northbound (Las Lomitas)			Southbound (Las Lomitas)		
		L	T	R	L	T	R	L	T	R	L	T	R
4:00 PM	4:15 PM	3	14	0	0	14	25	0	0	0	19	0	5
4:15 PM	4:30 PM	5	9	0	0	13	23	0	0	0	15	0	7
4:30 PM	4:45 PM	2	13	0	0	19	45	0	0	0	18	0	12
4:45 PM	5:00 PM	3	6	0	0	14	41	0	0	0	24	0	6
5:00 PM	5:15 PM	4	12	0	0	23	47	0	0	0	21	0	11
5:15 PM	5:30 PM	4	9	0	0	27	49	0	0	0	21	0	13
5:30 PM	5:45 PM	3	5	0	0	20	41	0	0	0	23	0	14
5:45 PM	6:00 PM	4	6	0	0	21	43	0	0	0	19	0	13
PM Peak Hour Volumes		15	32	0	0	91	180	0	0	0	84	0	51
% of Total Traffic		3.3%	7.1%	0.0%	0.0%	20.1%	39.7%	0.0%	0.0%	0.0%	18.5%	0.0%	11.3%
% Directional			10.4%			59.8%			0.0%		29.8%		
PM Peak Hour Factor			0.73			0.89			#DIV/0!				

Traffic Count Data Sheet

Year Counts Taken: 2006 Vista del Norte Commercial Development (Osuna Rd. / Vista del Norte)
 E-W Street El Pueblo Speed Limit (El Pueblo)= 35 MPH
 N-S Street Las Lomitas Speed Limit (Las Lomitas)= 35 MPH
 Date of Count: 3/8/06

UNSIGNALIZED

Begin Time	End Time	Eastbound (El Pueblo)			Westbound (El Pueblo)			Northbound (Las Lomitas)			Southbound (Las Lomitas)		
		L	T	R	L	T	R	L	T	R	L	T	R
7:00 AM	7:15 AM	0	91	24	6	18	0	14	0	17	0	0	0
7:15 AM	7:30 AM	0	102	28	4	17	0	16	0	22	0	0	0
7:30 AM	7:45 AM	0	90	29	6	20	0	15	0	20	0	0	0
7:45 AM	8:00 AM	0	94	38	1	22	0	28	0	27	0	0	0
8:00 AM	8:15 AM	0	45	25	3	14	0	40	0	46	0	0	0
8:15 AM	8:30 AM	0	58	49	2	10	0	9	0	15	0	0	0
8:30 AM	8:45 AM	0	35	3	4	9	0	12	0	18	0	0	0
8:45 AM	9:00 AM	0	35	5	4	14	0	9	0	40	0	0	0
AM Peak Hour Volumes		0	377	119	17	77	0	73	0	86	0	0	0
% of Total Traffic		0.0%	50.3%	15.9%	2.3%	10.3%	0.0%	9.7%	0.0%	11.5%	0.0%	0.0%	0.0%
% Directional			66.2%			12.6%			21.2%			0.0%	
AM Peak Hour Factor			0.94			0.90			0.72				#DIV/0!

Begin Time	End Time	Eastbound (El Pueblo)			Westbound (El Pueblo)			Northbound (Las Lomitas)			Southbound (Las Lomitas)		
		L	T	R	L	T	R	L	T	R	L	T	R
4:00 PM	4:15 PM	0	22	40	6	30	0	22	0	8	0	0	0
4:15 PM	4:30 PM	0	20	15	45	33	0	19	0	6	0	0	0
4:30 PM	4:45 PM	0	24	8	18	38	0	30	0	7	0	0	0
4:45 PM	5:00 PM	0	11	16	21	25	0	32	0	11	0	0	0
5:00 PM	5:15 PM	0	22	21	18	44	0	61	0	6	0	0	0
5:15 PM	5:30 PM	0	17	26	17	42	0	36	0	7	0	0	0
5:30 PM	5:45 PM	0	14	22	18	30	0	34	0	21	0	0	0
5:45 PM	6:00 PM	0	44	13	48	24	0	23	0	8	0	0	0
PM Peak Hour Volumes		0	64	85	74	141	0	163	0	45	0	0	0
% of Total Traffic		0.0%	11.2%	14.9%	12.9%	24.7%	0.0%	28.5%	0.0%	7.9%	0.0%	0.0%	0.0%
% Directional			26.0%			37.6%			36.4%			0.0%	
PM Peak Hour Factor			0.87			0.87			0.78				#DIV/0!

Signalized Intersection Information SheetIntersection: Osuna Rd. / Chappel Dr.Speed Limit - E-W Street: 45 M.P.H.Speed Limit - N-S Street: 40 M.P.H.Type of Intersection Control: SignalizedDate:
4/15/2006**East Bound Approach: Osuna Rd.**

	Left Turn Lanes	Thru / Lefts	Thru Lanes	Thru / Rights	Right Turn Lanes					
		-			-					
Length	125				0					
	<table><tr><td>Left Turn Arrow?</td><td>Thru Green</td><td>Right Turn Arrow?</td></tr><tr><td>YES</td><td>YES</td><td>NO</td></tr></table>				Left Turn Arrow?	Thru Green	Right Turn Arrow?	YES	YES	NO
Left Turn Arrow?	Thru Green	Right Turn Arrow?								
YES	YES	NO								

Is there a right turn slip laned that by-passes the traffic signal? NO**West Bound Approach: Osuna Rd.**

	Left Turn Lanes	Thru / Lefts	Thru Lanes	Thru / Rights	Right Turn Lanes					
		-			-					
Length	125				0					
	<table><tr><td>Left Turn Arrow?</td><td>Thru Green</td><td>Right Turn Arrow?</td></tr><tr><td>YES</td><td>YES</td><td>NO</td></tr></table>				Left Turn Arrow?	Thru Green	Right Turn Arrow?	YES	YES	NO
Left Turn Arrow?	Thru Green	Right Turn Arrow?								
YES	YES	NO								

Is there a right turn slip laned that by-passes the traffic signal? NO**North Bound Approach: Chappel Dr.**

CHAPPEL ST.					
	Left Turn Lanes	Thru / Lefts	Thru Lanes	Thru / Rights	Right Turn Lanes
	-		-	-	
Length	0				50
	Left Turn Arrow?		Thru Green	Right Turn Arrow?	
	NO		YES	NO	

Is there a right turn slip laned that by-passes the traffic signal? NO**South Bound Approach: Chappel Dr.**

CHAPPEL ST.					
	Left Turn Lanes	Thru / Lefts	Thru Lanes	Thru / Rights	Right Turn Lanes
	-	-	1	-	-
Length	0				0
		Left Turn Arrow?	Thru Green	Right Turn Arrow?	
		NO	YES	NO	

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

NOTE: Existing Geometry

Signalized Intersection Information SheetIntersection: Osuna Rd. / Academy ParkwaySpeed Limit - E-W Street: 45 M.P.H.Speed Limit - N-S Street: 40 M.P.H.Type of Intersection Control: Signalized

Date:

4/15/2006**East Bound Approach:**Osuna Rd.

	Left Turn Lanes	Thru / Lefts	Thru Lanes	Thru / Rights	Right Turn Lanes
Length	150	-			-
					0
	Left Turn Arrow?	Thru Green	Right Turn Arrow?		
	NO	YES	NO		

Is there a right turn slip laned that by-passes the traffic signal? NO**West Bound Approach:**Osuna Rd.

	Left Turn Lanes	Thru / Lefts	Thru Lanes	Thru / Rights	Right Turn Lanes
Length	150	-			-
					0
	Left Turn Arrow?	Thru Green	Right Turn Arrow?		
	NO	YES	NO		

Is there a right turn slip laned that by-passes the traffic signal? NO**North Bound Approach:**Academy Parkway

	Left Turn Lanes	Thru / Lefts	Thru Lanes	Thru / Rights	Right Turn Lanes
Length	0	-		-	-
					0
	Left Turn Arrow?	Thru Green	Right Turn Arrow?		
	NO	YES	NO		

Is there a right turn slip laned that by-passes the traffic signal? NO**South Bound Approach:**Academy Parkway

	Left Turn Lanes	Thru / Lefts	Thru Lanes	Thru / Rights	Right Turn Lanes
Length	100	-	-		-
					0
	Left Turn Arrow?	Thru Green	Right Turn Arrow?		
	NO	YES	NO		

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

NOTE: Existing Geometry

Signalized Intersection Information Sheet

Intersection: Osuna Rd. / Jefferson St.

Speed Limit - E-W Street: 45 M.P.H.

Speed Limit - N-S Street: 40 M.P.H.

Type of Intersection Control: Signalized

Date:
4/15/2006

East Bound Approach:

Osuna Rd.

	Left Turn Lanes	Thru / Lefts	Thru Lanes	Thru / Rights	Right Turn Lanes
	2	-	2	1	-
Length	210				0
	Left Turn Arrow?	Thru Green	Right Turn Arrow?		
	YES	YES	YES		

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

West Bound Approach:

Osuna Rd.

	Left Turn Lanes	Thru / Lefts	Thru Lanes	Thru / Rights	Right Turn Lanes
	2	-	2	-	1
Length	175				350
	Left Turn Arrow?	Thru Green	Right Turn Arrow?		
	YES	YES	YES		

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

North Bound Approach:

Jefferson St.

	Left Turn Lanes	Thru / Lefts	Thru Lanes	Thru / Rights	Right Turn Lanes
	1	-	2	-	1
Length	160				150
	Left Turn Arrow?	Thru Green	Right Turn Arrow?		
	YES	YES	NO		

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

South Bound Approach:

Jefferson St.

	Left Turn Lanes	Thru / Lefts	Thru Lanes	Thru / Rights	Right Turn Lanes
	1	-	1	1	-
Length	275				0
	Left Turn Arrow?	Thru Green	Right Turn Arrow?		
	YES	YES	YES		

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

NOTE: Existing Geometry

Signalized Intersection Information SheetIntersection: Osuna Rd. / Vista del NorteSpeed Limit - E-W Street: 45 M.P.H.Speed Limit - N-S Street: 30 M.P.H.Type of Intersection Control: Signalized

Date:

4/15/2006**East Bound Approach:****Osuna Rd.**

Osana Rd.					
	Left Turn Lanes	Thru / Lefts	Thru Lanes	Thru / Rights	Right Turn Lanes
	1	-	2	-	-
Length	300				0
	Left Turn Arrow?		Thru Green	Right Turn Arrow?	
	YES		YES	NO	

Is there a right turn slip laned that by-passes the traffic signal? NO**West Bound Approach:****Osuna Rd.**

Osana Rd.					
	Left Turn Lanes	Thru / Lefts	Thru Lanes	Thru / Rights	Right Turn Lanes
	-	-	2	-	1
Length	0				300
	Left Turn Arrow?		Thru Green	Right Turn Arrow?	
	NO		YES	NO	

Is there a right turn slip laned that by-passes the traffic signal? NO**North Bound Approach:****Vista del Norte**

Vista del Norte										
	Left Turn Lanes	Thru / Lefts	Thru Lanes	Thru / Rights	Right Turn Lanes					
	-	-	-	-	-					
Length	0				0					
	<table><tr><td>Left Turn Arrow?</td><td>Thru Green</td><td>Right Turn Arrow?</td></tr><tr><td>NO</td><td>NO</td><td>NO</td></tr></table>				Left Turn Arrow?	Thru Green	Right Turn Arrow?	NO	NO	NO
Left Turn Arrow?	Thru Green	Right Turn Arrow?								
NO	NO	NO								

Is there a right turn slip laned that by-passes the traffic signal? NO**South Bound Approach:****Vista del Norte**

Vista del Norte					
	Left Turn Lanes	Thru / Lefts	Thru Lanes	Thru / Rights	Right Turn Lanes
	2	-	-	-	1
Length	475				400
	Left Turn Arrow?		Thru Green	Right Turn Arrow?	
	YES		YES	NO	

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

NOTE: Existing Geometry

Signalized Intersection Information Sheet

Intersection: El Pueblo Rd. / Las Lomitas

Speed Limit - E-W Street: 45 M.P.H.

Speed Limit - N-S Street: 30 M.P.H.

Type of Intersection Control: Two-Way Stop

Date:
4/15/2006

East Bound Approach:

El Pueblo Rd.

Left Turn Lanes					Thru / Lefts					Thru Lanes					Thru / Rights					Right Turn Lanes									
					-					1					-					1									
Length					0																				300				
					Left Turn Arrow?					Thru Green					Right Turn Arrow?														
					NO					NO					NO														

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

West Bound Approach:

El Pueblo Rd.

LTPueblo Rd.										
	Left Turn Lanes	Thru / Lefts	Thru Lanes	Thru / Rights	Right Turn Lanes					
	-	1	1	-	-					
Length	500				0					
	<table><tr><td>Left Turn Arrow?</td><td>Thru Green</td><td>Right Turn Arrow?</td></tr><tr><td>NO</td><td>NO</td><td>NO</td></tr></table>				Left Turn Arrow?	Thru Green	Right Turn Arrow?	NO	NO	NO
Left Turn Arrow?	Thru Green	Right Turn Arrow?								
NO	NO	NO								

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

North Bound Approach:

Las Lomitas

Left Turn Lanes		Thru / Lefts	Thru Lanes	Thru / Rights	Right Turn Lanes
	1	-	-	-	1
Length	280				0
		Left Turn Arrow?	Thru Green	Right Turn Arrow?	
		NO	NO	NO	

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

South Bound Approach:

Las Lomitas

Las Comitas										
	Left Turn Lanes	Thru / Lefts	Thru Lanes	Thru / Rights	Right Turn Lanes					
	-	-	-	-	-					
Length	0				0					
	<table><tr><td>Left Turn Arrow?</td><td>Thru Green</td><td>Right Turn Arrow?</td></tr><tr><td>NO</td><td>NO</td><td>NO</td></tr></table>				Left Turn Arrow?	Thru Green	Right Turn Arrow?	NO	NO	NO
Left Turn Arrow?	Thru Green	Right Turn Arrow?								
NO	NO	NO								

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

NOTE: Existing Geometry

Signalized Intersection Information SheetIntersection: Osuna Rd. / Vista del NorteSpeed Limit - E-W Street: 45 M.P.H.Speed Limit - N-S Street: 30 M.P.H.Type of Intersection Control: Signalized

Date:

4/15/2006**East Bound Approach:****Osuna Rd.**

Signal 101					
	Left Turn Lanes	Thru / Lefts	Thru Lanes	Thru / Rights	Right Turn Lanes
	1	-	2	-	-
Length	300				0
	Left Turn Arrow?		Thru Green	Right Turn Arrow?	
	YES		YES	NO	

Is there a right turn slip laned that by-passes the traffic signal? NO**West Bound Approach:****Osuna Rd.**

Signal No. _____					
	Left Turn Lanes	Thru / Lefts	Thru Lanes	Thru / Rights	Right Turn Lanes
	-	-	2	-	1
Length	0				300
		Left Turn Arrow?	Thru Green	Right Turn Arrow?	
		NO	YES	NO	

Is there a right turn slip laned that by-passes the traffic signal? NO**North Bound Approach:****Vista del Norte**

Vista del Norte											
	Left Turn Lanes	Thru / Lefts	Thru Lanes	Thru / Rights	Right Turn Lanes						
	-	-	-	-	-						
Length	0				0						
	<table><tr><td>Left Turn Arrow?</td><td>Thru Green</td><td>Right Turn Arrow?</td></tr><tr><td>NO</td><td>NO</td><td>NO</td></tr></table>					Left Turn Arrow?	Thru Green	Right Turn Arrow?	NO	NO	NO
Left Turn Arrow?	Thru Green	Right Turn Arrow?									
NO	NO	NO									

Is there a right turn slip laned that by-passes the traffic signal? NO**South Bound Approach:****Vista del Norte**

DATA FOR NORTH					
	Left Turn Lanes	Thru / Lefts	Thru Lanes	Thru / Rights	Right Turn Lanes
	2	-	-	-	1
Length	475				400
	Left Turn Arrow?		Thru Green	Right Turn Arrow?	
	YES		YES	NO	

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

NOTE: Existing Geometry

Signalized Intersection Information Sheet

Intersection: El Pueblo Rd. / Las Lomitas

Speed Limit - E-W Street: 45 M.P.H.

Speed Limit - N-S Street: 30 M.P.H.

Type of Intersection Control: Two-Way Stop

Date:
4/15/2006

East Bound Approach:

El Pueblo Rd.

	Left Turn Lanes	Thru / Lefts	Thru Lanes	Thru / Rights	Right Turn Lanes
	-	-		-	
Length	0				300
	Left Turn Arrow?		Thru Green	Right Turn Arrow?	
	NO		NO	NO	

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

West Bound Approach:

El Pueblo Rd.

	Left Turn Lanes	Thru / Lefts	Thru Lanes	Thru / Rights	Right Turn Lanes
	-			-	-
Length	500				0
	Left Turn Arrow?		Thru Green	Right Turn Arrow?	
	NO		NO	NO	

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

North Bound Approach:

Las Lomitas

	Left Turn Lanes	Thru / Lefts	Thru Lanes	Thru / Rights	Right Turn Lanes
		-	-	-	
Length	280				0
	Left Turn Arrow?		Thru Green	Right Turn Arrow?	
	NO		NO	NO	

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

South Bound Approach:

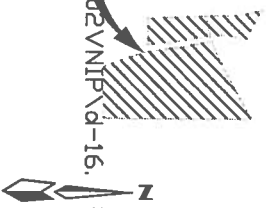
Las Lomitas

	Left Turn Lanes	Thru / Lefts	Thru Lanes	Thru / Rights	Right Turn Lanes
	-	-	-	-	-
Length	0				0
	Left Turn Arrow?		Thru Green	Right Turn Arrow?	
	NO		NO	NO	

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

NOTE: Existing Geometry

FINAL SITE PLAN VNP-16



LOCATION MAP

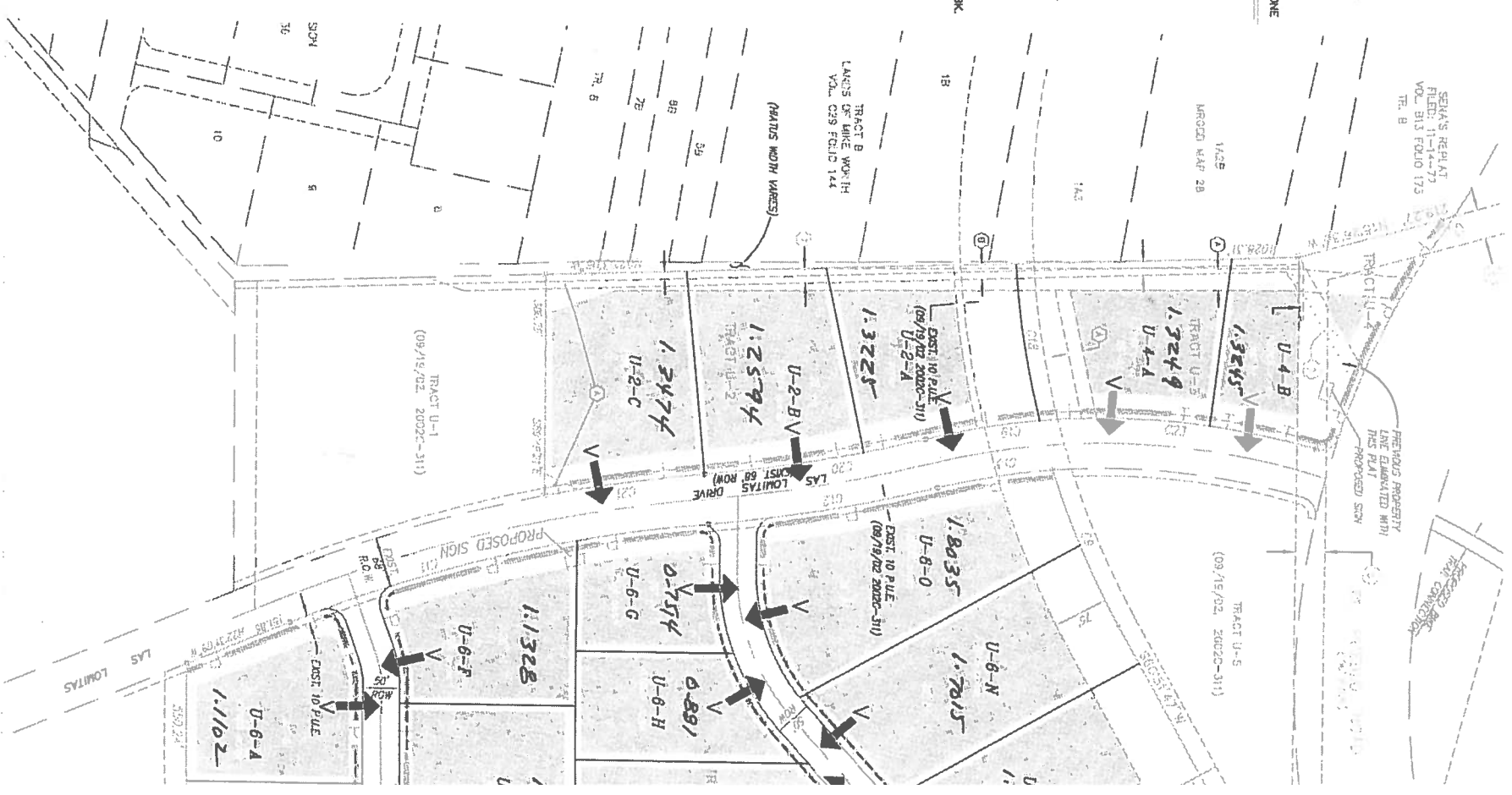
SCALE: NONE

ZONE: ATLAS D-16-Z

- EXISTING EASEMENTS
- 1 PUBLIC DRAINAGE EASEMENT (09/18/02 2002C-311)
 - 2 PUBLIC SANITARY SEWER EASEMENT (09/18/02 2002C-311)
 - 3 EXISTING 30' SANITARY SEWER EASEMENT (03-16-99, 99C-57)
 - 4 40' GAS LINE RIGHT-OF-WAY AND EASEMENT 10/10/55 BK. D-328, PG. 539-540
 - 5 SANITARY SEWER EASEMENT 9/27/89, MISC. 116, PG. 648-651, PARCEL NO. 4, 17-18.
 - 6 20' SEWER LINE & PUBLIC UTILITY EASEMENT 11/25/89 BK. MISC. 157, PG. 17-18.
 - 7 EXISTING 10' PNM TRANSMISSION LINE EASEMENT (03-16-99, 99C-57)
 - 8 EXISTING 5x75' PNM ANCHOR EASEMENT (03-16-99, 99C-57)
 - 9 EXISTING 30' AMFCA ACCESS EASEMENT (12-10-99, 99C-331)
 - 10 EXISTING 100' PNM RAILROAD EASEMENT (03-11-57, BK.D-378, PG. 383)
 - 11 EXISTING 100' PNM RAILROAD EASEMENT (05-28-57, BK.D-387, PGS. 384-389)

LEGEND

1. Tract U-1 Land Status within the El Paso County, Texas, Projected Section 22, Township 11 North, Range 3 East, New Mexico Principal Meridian, 100 Acres, more or less, being all that land and interest therein, as the same is shown and designated on said plat filed for record in the Office of the County Clerk of Bernalillo County, New Mexico on September 19, 2002 in Book 10022, Page 311 and containing 30.0220 acres more or less.



Las Lomitas Industrial Park (El Pueblo Rd. / Las Lomitas)
Trip Generation Data

USE (ITE CODE)	24 HOUR TWO-WAY VOLUME	A. M. PEAK HOUR		P. M. PEAK HOUR	
		ENTER	EXIT	ENTER	EXIT
Industrial Park (130)					
	GROSS				
	Units				
	30.00	257	53	67	251
	Acres				

ITE Trip Generation Equations:

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

$$T = 47.943 (X) + 595.337$$

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)

$$\ln(T) = 0.822 \ln(X) + 2.941$$

83% Enter, 17% Exit

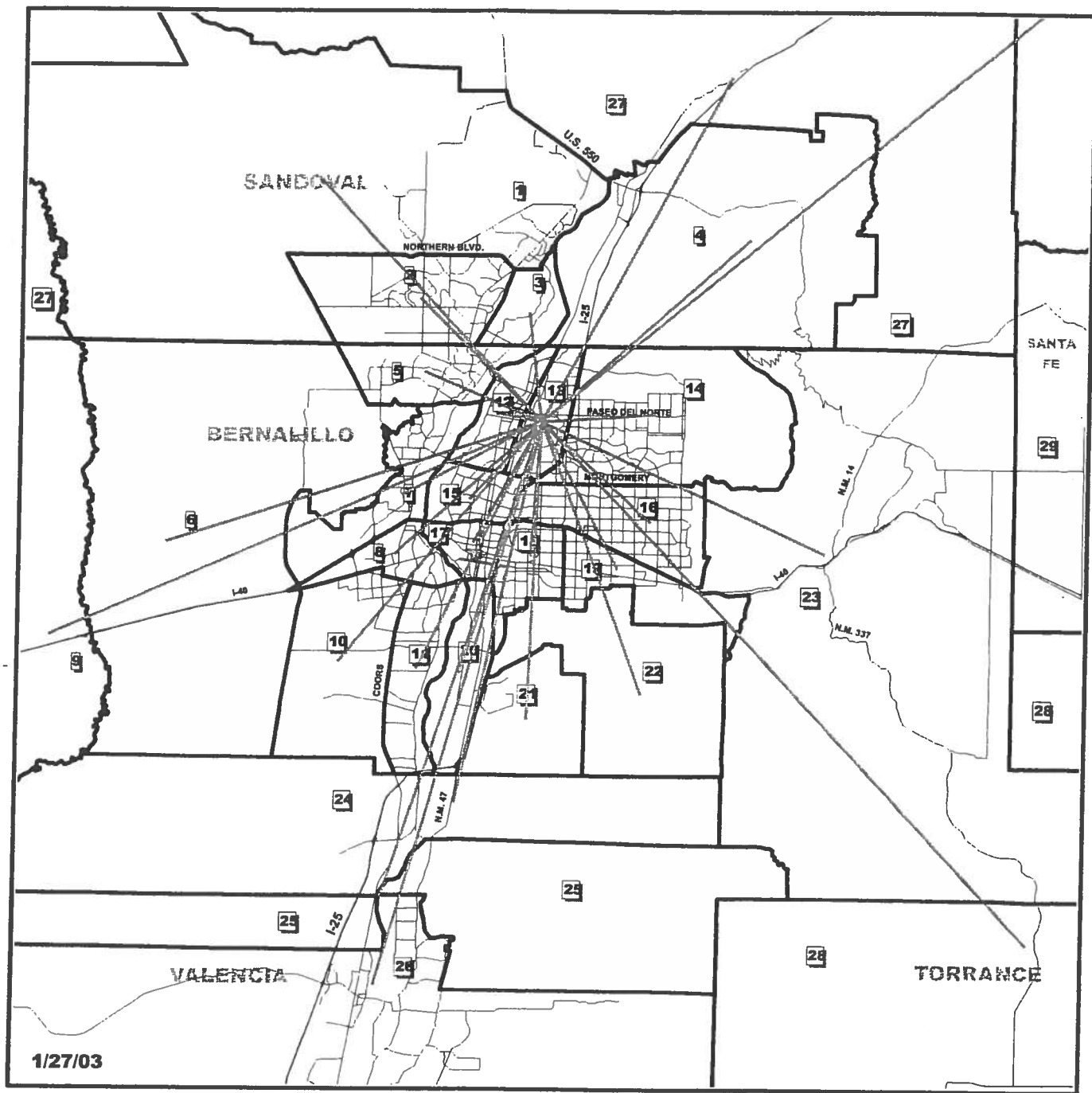
Average Vehicle Trip Ends on a Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 4pm and 6pm (P.M. PEAK HOUR)

$$\ln(T) = 0.764 \ln(X) + 3.164$$

21% Enter, 79% Exit

Comments:
Tract No.

Based on ITE Trip Generation Manual - 7th Edition



Subareas of the MRCOG Region

22 Subarea Identification Number

Subarea boundaries extend to county boundary where full extent of subarea not shown except for Subarea 29 which only includes southern Santa Fe County.

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

Vista del Norte Industrial Park (El Pueblo Rd. / Las Lomitas Dr.) Trip Distribution - Subarea Map

Trip Distribution Table
Las Lomitas Industrial Park (El Pueblo Rd. / Las Lomitas Dr.)

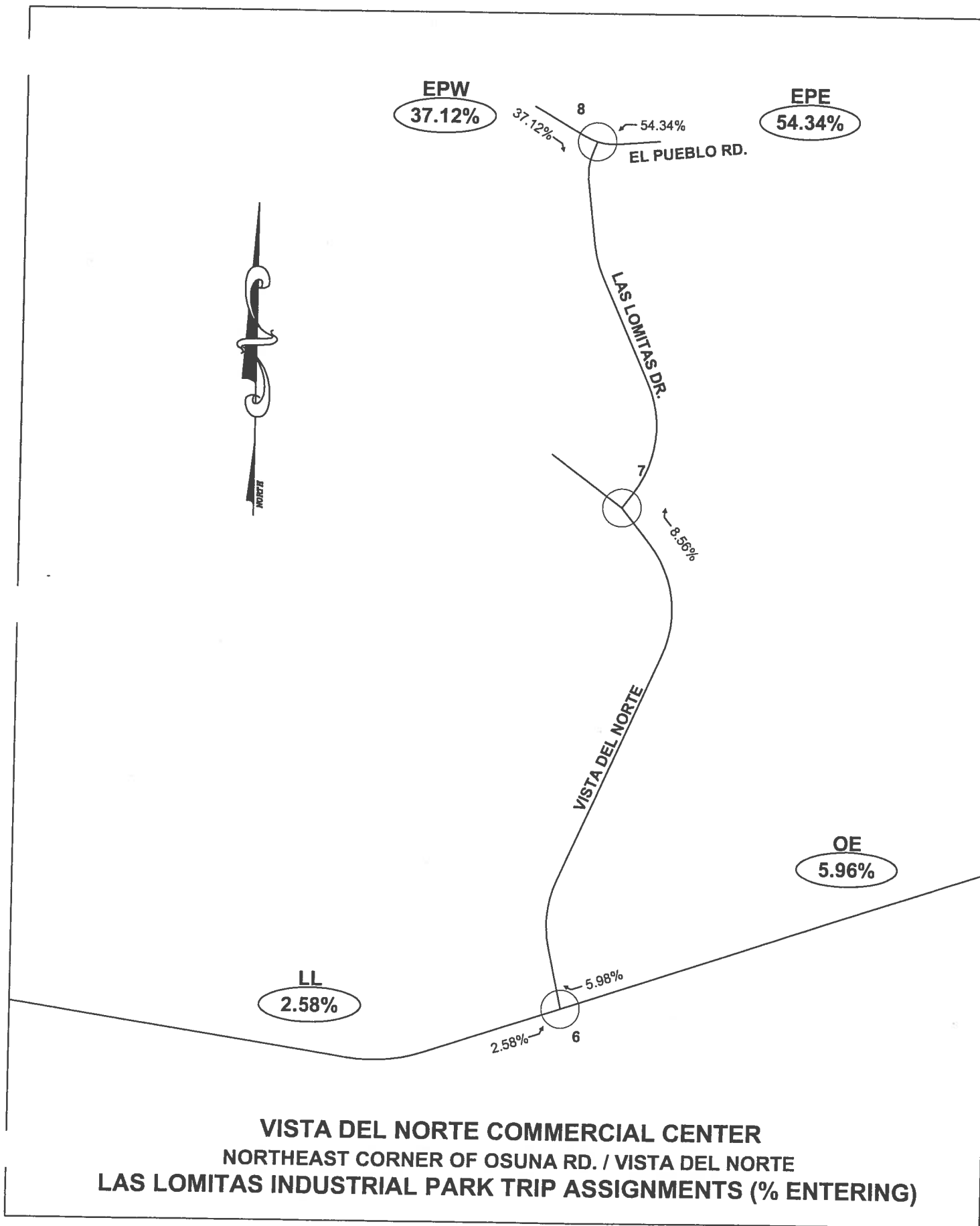
Sub Area Population Data:
For determination of Trip Distribution for Proposed IP Development
*2000 and 2025 Data Taken from Mid-Region Council of Governments' 2025 Socioeconomic
2025 Socioeconomic Forecasts by Data Analysis Subzones for the Mid-Region of New Mexico (S-03-01)*

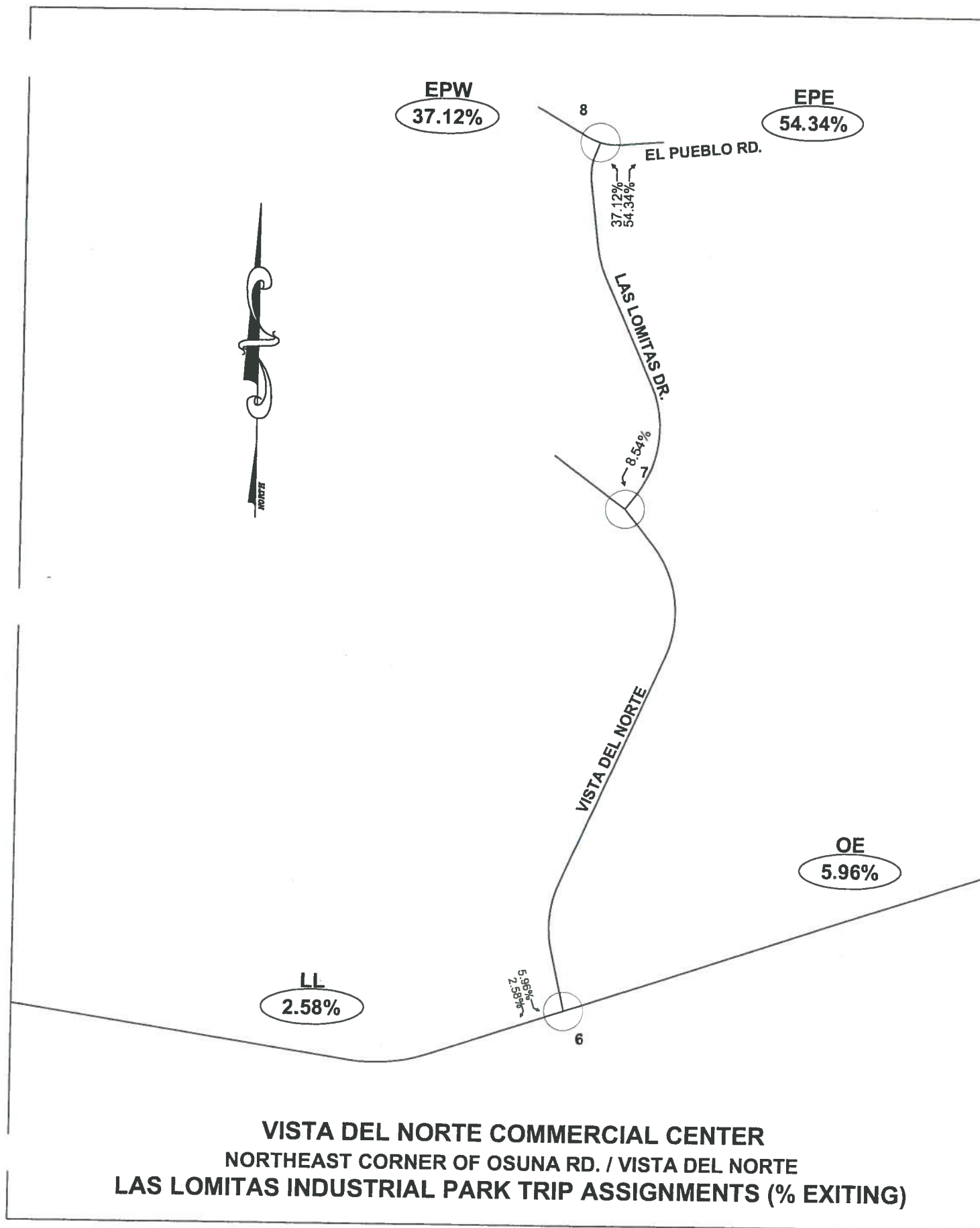
Sub Area I.D.#	% Sub Area in Study	2005 Population	2010 Population	Interpolated Population for the Year 2008	Population in Study	Dist. (Mi.)	Population / Distance	% Utilizir
1	100%	26,972	39,738	34,632	2,008	14.07	143	
2	100%	39,348	40,610	40,105	34,632	7.37	4,699	
3	100%	7,865	8,728	8,383	8,383	5.03	1,668	
4	100%	13,387	14,936	14,316	14,316	11.73	1,221	
5	100%	35,968	44,203	40,909	40,909	5.36	7,632	
6	100%	2,784	3,950	3,484	3,484	16.75	208	
7	100%	48,565	59,615	55,195	55,195	6.70	8,238	
8	100%	27,546	28,553	28,150	28,150	8.71	3,232	
9	100%	1,678	1,888	1,804	1,804	23.45	77	
10	100%	39,532	4,822	18,706	18,706	14.07	1,329	
11	100%	32,051	33,202	32,742	32,742	5.03	6,516	
12	100%	16,144	16,146	16,145	16,145	2.01	8,032	
13	100%	8,715	10,146	9,574	9,574	1.34	7,144	
14	100%	93,104	94,279	93,809	93,809	5.03	18,668	
15	100%	24,691	25,262	25,034	25,034	4.02	6,227	
16	100%	108,882	108,353	108,565	108,565	6.70	16,204	
17	100%	20,920	21,196	21,086	21,086	6.03	3,497	
18	100%	42,078	41,670	41,833	41,833	6.03	6,938	
19	100%	59,027	58,888	58,944	58,944	7.37	7,998	
20	100%	9,482	9,699	9,612	9,612	11.39	844	
21	100%	6	6	6	6	13.40	0	
22	100%	4,231	3,629	3,870	3,870	13.40	289	
23	100%	18,140	20,390	19,490	19,490	14.07	1,385	
24	100%	2,393	2,554	2,490	2,490	17.42	143	
25	100%	1,009	1,062	1,041	1,041	22.11	47	
26	100%	75,506	85,654	81,595	81,595	26.13	3,123	
27	100%	20,955	22,276	21,748	21,748	17.42	1,248	
28	100%	19,524	21,690	20,824	20,824	31.49	661	
29	100%	11,360	13,771	12,807	12,807	28.14	455	
		811,863	836,916	826,895	788,798		117,868	

Trip Distribution Table
Las Lomitas Industrial Park (El Pueblo Rd. / Las Lomitas Dr.)

Sub Area Population Data:
For determination of Trip Distribution for Proposed IP 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)*

										(EW) El Pueblo West	
Sub Area I.D.#	% Sub Area in Study	2005 Population	2010 Population	Interpolated Population for the Year 2008	Population in Study	Dist. (Mi.)	Population / Distance	% Utilizing	% Population / Dist. Utilizing	Population	
1	100%	26,972	39,738	34,632	2,008	14.07	143	100%	0.12%	143	
2	100%	39,348	40,610	40,105	34,632	7.37	4,699	100%	3.99%	4,699	
3	100%	7,865	8,728	8,383	8,383	5.03	1,668	100%	1.42%	1,668	
4	100%	13,387	14,936	14,316	14,316	11.73	1,221	0%	0.00%	0	
5	100%	35,968	44,203	40,909	40,909	5.36	7,632	100%	6.48%	7,632	
6	100%	2,784	3,950	3,484	3,484	16.75	208	0%	0.00%	0	
7	100%	48,565	59,615	55,195	55,195	6.70	8,238	0%	0.00%	0	
8	100%	27,546	28,553	28,150	28,150	8.71	3,232	0%	0.00%	0	
9	100%	1,678	1,888	1,804	1,804	23.45	77	0%	0.00%	0	
10	100%	39,532	4,822	18,706	18,706	14.07	1,329	0%	0.00%	0	
11	100%	32,051	33,202	32,742	32,742	5.03	6,516	0%	0.00%	0	
12	100%	16,144	16,146	16,145	16,145	2.01	8,032	80%	5.45%	6,426	
13	100%	8,715	10,146	9,574	9,574	1.34	7,144	30%	1.82%	2,143	
14	100%	93,104	94,279	93,809	93,809	5.03	18,668	70%	11.09%	13,068	
15	100%	24,691	25,262	25,034	25,034	4.02	6,227	100%	5.28%	6,227	
16	100%	108,882	108,353	108,565	108,565	6.70	16,204	0%	0.00%	0	
17	100%	20,920	21,196	21,086	21,086	6.03	3,497	50%	1.48%	1,748	
18	100%	42,078	41,670	41,833	41,833	6.03	6,938	0%	0.00%	0	
19	100%	59,027	58,888	58,944	58,944	7.37	7,998	0%	0.00%	0	
20	100%	9,482	9,699	9,612	9,612	11.39	844	0%	0.00%	0	
21	100%	6	6	6	6	13.40	0	0%	0.00%	0	
22	100%	4,231	3,629	3,870	3,870	13.40	289	0%	0.00%	0	
23	100%	18,140	20,390	19,490	19,490	14.07	1,385	0%	0.00%	0	
24	100%	2,393	2,554	2,490	2,490	17.42	143	0%	0.00%	0	
25	100%	1,009	1,062	1,041	1,041	22.11	47	0%	0.00%	0	
26	100%	75,506	85,654	81,595	81,595	26.13	3,123	0%	0.00%	0	
27	100%	20,955	22,276	21,748	21,748	17.42	1,248	0%	0.00%	0	
28	100%	19,524	21,690	20,824	20,824	31.49	661	0%	0.00%	0	
29	100%	11,360	13,771	12,807	12,807	28.14	455	0%	0.00%	0	
		811,863	836,916	826,895	788,798		117,868		37.12%	43,755	
		</									





Las Lomitas Industrial Park (El Pueblo Rd. / Las Lomitas Dr.)
 Projected Turning Movements Worksheet
Osuna Rd. / Vista del Norte

INTERSECTION :E-W Street: **Osuna Rd.** (6)N-S Street: **Vista del Norte**

Year of Existing Counts 2006

Implementation Year 2006

Growth Rates

	0.00%			0.00%			0.00%			0.00%		
	Eastbound (Osuna Rd.)			Westbound (Osuna Rd.)			Northbound (Vista del Norte)			Southbound (Vista del Norte)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Percent Office Trips Generated(Entering)	2.58%	0.00%	0.00%	0.00%	0.00%	5.98%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Percent Office Trips Generated(Exiting)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	5.98%	0.00%	2.58%
Total Trips Generated	7	0	0	0	0	15	0	0	0	3	0	1

	Eastbound (Osuna Rd.)			Westbound (Osuna Rd.)			Northbound (Vista del Norte)			Southbound (Vista del Norte)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Percent Office Trips Generated(Entering)	2.58%	0.00%	0.00%	0.00%	0.00%	5.98%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Percent Office Trips Generated(Exiting)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	5.98%	0.00%	2.58%
Total Trips Generated	2	0	0	0	0	4	0	0	0	15	0	6

Number of Office Trips Generated

Entering	Exiting		
257	53	A.M.	100% Office Development
67	251	P.M.	

Las Lomitas Industrial Park (El Pueblo Rd. / Las Lomitas Dr.)

Projected Turning Movements Worksheet

Vista del Norte / Las Lomitas Dr.

INTERSECTION:

E-W Street: **Vista del Norte**
N-S Street: **Las Lomitas Dr.**

(7)

Year of Existing Counts
Implementation Year

2006
2006

Growth Rates

Percent Office Trips Generated(Entering)
Percent Office Trips Generated(Exiting)
Total Trips Generated

0.00%			0.00%			0.00%			0.00%		
Eastbound (Vista del Norte)			Westbound (Vista del Norte)			Northbound (Las Lomitas Dr.)			Southbound (Las Lomitas Dr.)		
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
0.00%	0.00%	0.00%	0.00%	0.00%	8.54%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	8.54%	0.00%	0.00%
0	0	0	0	0	22	0	0	0	5	0	0

Percent Office Trips Generated(Entering)
Percent Office Trips Generated(Exiting)
Total Trips Generated

Eastbound (Vista del Norte)			Westbound (Vista del Norte)			Northbound (Las Lomitas Dr.)			Southbound (Las Lomitas Dr.)		
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
0.00%	0.00%	0.00%	0.00%	0.00%	8.54%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	8.54%	0.00%	0.00%
0	0	0	0	0	6	0	0	0	21	0	0

Number of Office Trips Generated

Entering Exiting
257 53 A.M. 100% Office Development
67 251 P.M.

Las Lomas Industrial Park (El Pueblo Rd. / Las Lomas Dr.)
 Projected Turning Movements Worksheet
El Pueblo Rd. / Las Lomas Dr.

INTERSECTION :

E-W Street: El Pueblo Rd. (8)

N-S Street: Las Lomas Dr.

Year of Existing Counts

2006

Implementation Year

2006

Growth Rates

	0.00%			0.00%			0.00%			0.00%		
	Eastbound (El Pueblo Rd.)			Westbound (El Pueblo Rd.)			Northbound (Las Lomas Dr.)			Southbound (Las Lomas Dr.)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Percent Office Trips Generated(Entering)	0.00%	0.00%	37.12%	54.34%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Percent Office Trips Generated(Exiting)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	37.12%	0.00%	54.43%	0.00%	0.00%	0.00%
Total Trips Generated	0	0	95	140	0	0	20	0	29	0	0	0

	Eastbound (El Pueblo Rd.)			Westbound (El Pueblo Rd.)			Northbound (Las Lomas Dr.)			Southbound (Las Lomas Dr.)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Percent Office Trips Generated(Entering)	0.00%	0.00%	37.12%	54.34%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Percent Office Trips Generated(Exiting)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	37.12%	0.00%	54.43%	0.00%	0.00%	0.00%
Total Trips Generated	0	0	25	36	0	0	93	0	137	0	0	0

Number of Office Trips Generated	Entering	Exiting		
	257	53	A.M.	100% Office Development
	67	251	P.M.	