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North Valley Little League Fields

(Edith Blvd N. of Candelaria Rd)

Traffic Impact Study

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F I N A L

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North Valley Little League Fields
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Traffic Impact Analysis

Introduction

The purpose of this study is to evaluate the transportation conditions before and after implementation of the proposed North Valley Little League Fields and determine the impact of the development on the adjacent transportation system. The recommendations of this study will provide a basis for measures to mitigate the impact of the development of the site plan on critical intersections and street segments. This study is prepared to meet the requirements of the Bernalillo County Public Works Department associated with its review of the North Valley Little League Fields as shown on the plan on Page A-3 in the Appendix of this report.

Study Procedures

A scoping meeting was held with Bernalillo County Transportation staff in March of 2013 to discuss scope and methodology to be utilized within the proposed North Valley Little League Fields Traffic Impact Study. Also, a Scoping Report was submitted to the County for approval which defines the scope of this study. Specific items included format, intersections to be studied, intersection analysis procedures, existing traffic counts, trip distribution methodology, and implementation year definition.

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, 2010, using Trafficware's Synchro version 8 Highway Capacity Software for signalized and unsignalized intersections. For signalized intersections, the operational method of analysis was used for 2015 & 2025 conditions (NO BUILD and BUILD).

Intersections targeted for analysis in this study include Comanche Rd / Edith Blvd and Candelaria Rd / Edith Blvd. In addition, the proposed driveway for the site will be analyzed.

Study Area Characteristics

The subject area of land discussed in this report is bound on the west by railroad tracks, on the east by Edith Blvd, and on the north and south by occupied commercial / industrial property. See the North Valley Little League Fields site plan on Page A-3 in the Appendix of this report. A vicinity map showing the location of the project is included on Pages A-1 and A-2 in the Appendix of this report.

Generally, the adjacent land uses in the area of this project are M-1. The property on which this project is proposed is also zoned M-1. There are no other known proposed developments in the vicinity of this project.

The expected year of implementation of the project is 2015 & the horizon year is 2025.

The access point for this new site will be off of Edith Blvd as a full access driveway.

Edith Blvd. and Comanche Rd. are classified as a Minor Arterial Roadways and Candelaria Rd is classified as a Principal Arterial Roadway on the Long Range Roadway Plan for the Albuquerque Urban Area. Edith Blvd. is generally a four lane urban facility with a center two-way left turn lane. The posted speed limit along Edith Blvd in the vicinity of the project is 35 MPH. Comanche Rd is generally a four lane urban facility with raised medians to the west of Edith Blvd and a four lane urban facility with two-way left turn lanes to the East of Edith Blvd. The posted speed limit along Comanche Rd in the vicinity of this project is 30 to 40 MPH. Candelaria Rd is generally a six lane urban facility with raised medians. The posted speed limit along Candelaria Rd in the vicinity of this project is 35 MPH.

The Long Range Roadway Plan for the Albuquerque Urban Area Map is included in the report on Page A-4 of the Appendix.

Transit Facilities

ABQ Ride offers a commuter bus route during peak hours only along Candelaria Rd (Route 7). The ABQ Ride System Map and pertinent schedules are included on Appendix Pages A-78 thru A-79.

Bicycle Facilities

The Long Range Bikeway System Map shows an existing bike route along Edith Blvd. from Montano Rd., north to Osuna Rd. which will tie into a proposed bike lane north of Osuna Rd. and run to Alameda Blvd. A proposed bike route is shown from Montano Rd., south to Candelaria where it will tie to an existing bike lane which runs to Menaul Blvd. The Long Range Bikeway System Map also shows a proposed bike lane from north of Rio Grande Blvd. to I-25.

Pertinent Programmed Highway Improvements in the Current MTP:

The current MTP projects in the area of the North Valley Little League Fields consist of reconstruction and widening of Edith Blvd from Candelaria Rd to Montano Rd from two to five lanes. Both projects have already been completed and the current geometry is reflected in this TIA.

Description of Proposed Development

The North Valley Little League Fields project consists of a six-field complex, a portion of which will double as a retention pond. If the property were to develop in a manner significantly different than the proposed plan considered in this report such that the number of generated trips is significantly greater, then an update to this study may be required.

Access to the property is proposed via one full access drive off of Edith Blvd.

Trip Generation Rates

Trip generation rates for the six field complex were determined based on data contained in the Institute of Transportation Engineers (ITE) Trip Generation Manual, 9th Edition published in 2012. The following table lists the calculated daily, AM, and PM Peak Hour trip generation rates:

N. Valley Little League Fields

Trip Generation Data (ITE Trip Generation Manual - 9th Edition)

USE (ITE CODE)		24 HOUR TWO-WAY VOLUME	A. M. PEAK HOUR		P. M. PEAK HOUR	
		GROSS	ENTER	EXIT	ENTER	EXIT
	Units					
Soccer Complex (488)	6.00 Fields	428	4	3	71	35

The preceding table demonstrates the calculated trip generation rate based on the proposed plan for the site. There is no ITE Trip Generation rate data for Little League fields, but the trip generation rate for a soccer complex with six fields should approximate the trip generation rate for this project. No adjustment was made to account for pass-by trips or mixed use (internal capture) traffic reductions. The Individual Trip Generation Rate Worksheet for individual land uses are contained on Page A-6 in the Appendix.

Trip Distribution / Trip Assignments

Primary and Diverted Linked Trips:

Sports Facility Land Use

Primary and diverted linked trips for the land use developments were distributed proportionally to the 2015 & 2025 projected population / employment of Subareas citywide inversely proportional to the distance from the project to the subarea. Population data for the years 2015 & 2025 were taken from the 2035 Socioeconomic Forecasts for Data Analysis Subzones provided by the Mid Region Council of Governments (MRCOG). Population / employment data from the years 2015 & 2025 was interpolated linearly to obtain 2015 & 2025 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 subareas and data analysis subzones is shown on Appendix Pages A-7 thru A-10.

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 on Appendix Pages A-11 thru A-12.

Analysis of Existing Conditions

2011 Average Weekday Traffic Volumes (AWDT) for major streets in the site plan area are shown on Page A-5 of the Appendix.

An analysis of the existing conditions of the transportation system was not provided in this report for two primary reasons:

1) The implementation year analysis (2015) is only about two years into the future and significantly represents existing conditions.
2) The growth rate is so low, 0.5%; therefore, the existing condition volumes would not differ significantly from the NO BUILD condition volumes.

Pedestrian and Bicycle Volumes

Minimal pedestrians and bicyclists were observed during the traffic counts conducted for this analysis at the intersections of Candelaria Rd / Edith Blvd and Comanche Rd / Edith Blvd.

Background Traffic Growth

Implementation year (2015) background annual traffic growth rates for the project were considered for each individual approach to an intersection that was targeted for analysis based on data from the 2002 thru 2011 Traffic Flow maps prepared by the Mid-Region Council of Governments. Most of the Traffic Flow Data for those years 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 annual growth rate for each approach if that calculated rate appeared feasible. However, there were some instances where the rate indicated a negative growth trend or appeared to be unreasonably high or low. In those cases, an appropriate growth rate from an adjacent segment of the same roadway was used, a shorter time span was used to determine the growth rate, or the growth rate was considered to be a generic 0.5% if appropriate. 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 in the Appendix on Pages A-13 thru A-22. 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-22 thru A-35).

Projected Peak Hour Turning Movements for 2015 & 2025 Buildout

The annual growth rates were applied to the most recent peak hour traffic count volumes. The sum of the existing volumes plus growth constitute the 2015 & 2025 NO BUILD volumes utilized in this report. To these volumes, the generated trips based on implementation of the proposed North Valley Little League Fields were added to obtain the 2015 & 2025 BUILD volumes utilized for the 2015 & 2025 BUILD Condition analyses. See Appendix Pages A-22 thru A-35 for further information regarding the 2015 & 2025 turning movement volumes.

Implementation & Horizon Year Traffic Analysis

Classification of levels-of-service and delay for signalized and unsignalized intersections will be made based on criteria established by Synchro, Version 8 (Build 803, Revision 743) computer modeling software which approximates the 2010 Highway Capacity Manual methodology. The average control delay is calculated for each intersection and for each lane group of each leg of the intersection. The control delay then determines the level-of-service based on the following tables:

LEVEL-OF-SERVICE CRITERIA FOR SIGNALIZED INTERSECTIONS

Average Delay (secs)	Level-of-Service
≤ 10	A
> 10 and ≤ 20	B
> 20 and ≤ 35	C
> 35 and ≤ 55	D
> 55 and ≤ 80	E
> 80	F

LEVEL-OF-SERVICE CRITERIA FOR UNSIGNALIZED INTERSECTIONS

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

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

Following is a summary of the results of the Synchro Analysis for each of the intersections targeted for evaluation in this report:

Intersection #1 – Comanche Rd / Edith Blvd - Pages A-36 thru A-51

The following table provides a summary of the Levels-of-Service / delays associated with each case analyzed in this study:

Intersection: **1 - Comanche Rd. / Edith Blvd.**

		2015 AM Peak Hour BUILD					2015 PM Peak Hour BUILD			
		(EXIST. GEOM.)					(EXIST. GEOM.)			
		NO BUILD		BUILD			NO BUILD		BUILD	
		Lanes	LOS-Delay	Lanes	LOS-Delay		Lanes	LOS-Delay	Lanes	LOS-Delay
EB	L	1	B - 16.1	1	B - 16.1	L	1	B - 14.7	1	B - 14.8
	T	2	C - 26.0	2	C - 26.0	T	2	C - 20.6	2	C - 20.8
	R	>	C - 26.2	>	C - 26.3	R	>	C - 20.6	>	C - 20.8
WB	L	1	B - 18.0	1	B - 18.0	L	1	B - 15.1	1	B - 15.3
	T	2	C - 20.5	2	C - 20.6	T	2	C - 20.1	2	C - 20.2
	R	1	B - 18.6	1	C - 20.6	R	1	C - 20.1	1	C - 20.2
NB	L	1	B - 18.6	1	B - 18.7	L	1	B - 17.9	1	B - 18.0
	T	2	C - 26.5	2	C - 26.7	T	2	C - 25.1	2	C - 25.6
	R	1	C - 26.5	1	C - 26.7	R	1	C - 25.1	1	C - 25.6
SB	L	1	B - 17.6	1	B - 17.5	L	1	B - 17.0	1	B - 17.1
	T	2	C - 29.5	2	C - 29.6	T	2	C - 26.3	2	C - 26.7
	R	>	C - 29.8	>	C - 29.8	R	>	C - 27.0	>	C - 27.4
Intersection:			***C - 24.7***		***C - 24.7***			***C - 21.4***		***C - 21.7***

Note: ">" designates a shared right or left turn lane.

Intersection: **1 - Comanche Rd. / Edith Blvd.**

		2025 AM Peak Hour BUILD					2025 PM Peak Hour BUILD			
		(EXIST. GEOM.)					(EXIST. GEOM.)			
		NO BUILD		BUILD			NO BUILD		BUILD	
		Lanes	LOS-Delay	Lanes	LOS-Delay		Lanes	LOS-Delay	Lanes	LOS-Delay
EB	L	1	B - 16.7	1	B - 16.7	L	1	B - 15.0	1	B - 15.2
	T	2	C - 27.0	2	C - 27.0	T	2	C - 21.1	2	C - 21.5
	R	>	C - 27.2	>	C - 27.3	R	>	C - 21.1	>	C - 21.5
WB	L	1	B - 19.1	1	B - 19.1	L	1	B - 15.5	1	B - 15.7
	T	2	C - 21.4	2	C - 21.4	T	2	C - 20.6	2	C - 20.7
	R	1	C - 21.4	1	C - 21.4	R	1	C - 20.6	1	C - 20.7
NB	L	1	C - 20.2	1	C - 20.2	L	1	B - 17.9	1	B - 18.0
	T	2	C - 28.3	2	C - 28.6	T	2	C - 25.4	2	C - 26.0
	R	1	C - 28.3	1	C - 28.6	R	1	C - 25.4	1	C - 26.0
SB	L	1	B - 18.6	1	B - 18.6	L	1	B - 17.0	1	B - 17.0
	T	2	C - 30.8	2	C - 30.8	T	2	C - 26.8	2	C - 27.1
	R	>	C - 31.0	>	C - 31.0	R	>	C - 27.5	>	C - 27.9
Intersection:			***C - 25.8***		***C - 25.9***			***C - 21.8***		***C - 22.1***

Note: ">" designates a shared right or left turn lane.

Both the implementation year analysis and the horizon year analysis of the intersection of Comanche Rd / Edith Blvd in this report demonstrates that the projected levels-of-service and delays are acceptable for the AM Peak Hour and PM Peak Hour NO BUILD and BUILD conditions. The proposed development increases the delay at the intersection by less than 1

second. Therefore, no recommendations are made for the intersection of Comanche Rd. / Edith Blvd.

Calculated queue lengths for the signalized intersection of Comanche Rd. / Edith Blvd. are determined using Poisson's Arrival Method equations with a 95th percentile confidence level. Those 95th Percentile queue lengths are reported in the following table:

Queueing Analysis Summary Sheet

Project: N. Valley Little League Fields (Edith Blvd N. of Candelaria Rd)

Intersection: **Comanche Rd / Edith Blvd**

2015

Approach	Left Turns			Thru Movements			Right Turns		
Eastbound	# Lanes	Vol.	Length	# Lanes	Vol.	Length	# Lanes	Vol.	Length
Existing Lane Length	*1*	*126*	*150*	*2*	*570*	*Cont*	*0*	*123*	*0*
AM NO BUILD Queue	1	128	175	2	579	350	0	125	175
AM BUILD Queue	**1**	**128**	**175**	**2**	**579**	**350**	**0**	**125**	**175**
Existing Lane Length	*1*	*66*	*150*	*2*	*463*	*Cont*	*0*	*31*	*0*
PM NO BUILD Queue	1	67	100	2	470	300	0	31	75
PM BUILD Queue	**1**	**67**	**100**	**2**	**470**	**300**	**0**	**39**	**75**
Westbound	# Lanes	Vol.	Length	# Lanes	Vol.	Length	# Lanes	Vol.	Length
Existing Lane Length	*1*	*123*	*150*	*2*	*371*	*Cont*	*1*	*213*	*50*
AM NO BUILD Queue	1	125	175	2	377	250	1	216	250
AM BUILD Queue	**1**	**125**	**175**	**2**	**377**	**250**	**1**	**216**	**250**
Existing Lane Length	*1*	*97*	*150*	*2*	*540*	*Cont*	*1*	*288*	*50*
PM NO BUILD Queue	1	98	150	2	548	325	1	292	325
PM BUILD Queue	**1**	**104**	**150**	**2**	**548**	**325**	**1**	**292**	**325**
Northbound	# Lanes	Vol.	Length	# Lanes	Vol.	Length	# Lanes	Vol.	Length
Existing Lane Length	*1*	*41*	*240*	*2*	*379*	*Cont*	*1*	*110*	*300*
AM NO BUILD Queue	1	42	75	2	385	250	1	112	150
AM BUILD Queue	**1**	**42**	**75**	**2**	**385**	**250**	**1**	**112**	**150**
Existing Lane Length	*1*	*125*	*240*	*2*	*371*	*Cont*	*1*	*213*	*300*
PM NO BUILD Queue	1	127	175	2	377	250	1	216	250
PM BUILD Queue	**1**	**131**	**175**	**2**	**382**	**250**	**1**	**219**	**250**
Southbound	# Lanes	Vol.	Length	# Lanes	Vol.	Length	# Lanes	Vol.	Length
Existing Lane Length	*1*	*145*	*280*	*2*	*472*	*Cont*	*0*	*43*	*0*
AM NO BUILD Queue	1	147	200	2	479	300	0	44	75
AM BUILD Queue	**1**	**147**	**200**	**2**	**480**	**300**	**0**	**44**	**75**
Existing Lane Length	*1*	*181*	*280*	*2*	*311*	*Cont*	*0*	*101*	*0*
PM NO BUILD Queue	1	184	225	2	316	225	0	103	150
PM BUILD Queue	**1**	**184**	**225**	**2**	**327**	**225**	**0**	**103**	**150**

	AM	PM
Cycle Length:	100	100

NOTE: Queue lengths are in feet.

The eastbound left turn lane is approximately 150 feet. SimTraffic demonstrates that the 95th Percentile queue falls within the existing left turn lane. The westbound left turn lane is approximately 150 feet. SimTraffic demonstrates that the 95th Percentile queue exceeds the

existing left turn lane. However, this queueing analysis demonstrates that the westbound thru traffic is the controlling queue and will block the westbound left turn lane as an existing condition. The northbound left turn lane is approximately 240 feet and the northbound right turn lane is approximately 300 feet. SimTraffic demonstrates that the 95th Percentile queue falls within the existing left turn lane. The southbound left turn lane is approximately 280 feet. SimTraffic demonstrates that the 95th Percentile queue falls within the existing left turn lane. The lengths of the existing left turn lanes at the intersection cannot be extended except by reducing the length of complementary left turn lanes at other intersections and / or driveways. Therefore, no improvements are recommended for the auxiliary lanes at the intersection of Comanche Rd / Edith Blvd. Generally speaking, the Poisson's 95th Percentile calculated queue length tends to yield conservatively high results.

Intersection #2 – Candelaria Rd / Edith Blvd - Pages A-52 thru A-67

The following table provides a summary of the Levels-of-Service / delays associated with each case analyzed in this study:

Intersection: 2 - Candelaria Rd. / Edith Blvd.

		2015 AM Peak Hour BUILD					2015 PM Peak Hour BUILD			
		(EXIST. GEOM.)					(EXIST. GEOM.)			
		NO BUILD		BUILD			NO BUILD		BUILD	
		Lanes	LOS-Delay	Lanes	LOS-Delay		Lanes	LOS-Delay	Lanes	LOS-Delay
EB	L	1	B - 14.3	1	B - 14.3	L	1	B - 19.8	1	C - 20.2
	T	3	B - 20.0	3	B - 20.0	T	3	C - 22.7	3	C - 23.0
	R	>	C - 20.6	>	C - 20.6	R	>	C - 23.0	>	C - 23.3
WB	L	1	B - 16.3	1	B - 16.3	L	1	B - 18.2	1	B - 18.5
	T	2	C - 20.5	2	C - 20.6	T	2	C - 25.4	2	C - 25.8
	R	1	B - 15.7	1	B - 15.7	R	1	B - 19.9	1	C - 20.7
NB	L	1	B - 16.1	1	B - 16.1	L	1	B - 15.1	1	B - 15.1
	T	2	C - 27.5	2	C - 27.5	T	2	C - 28.4	2	C - 28.6
	R	>	C - 28.1	>	C - 28.1	R	>	C - 28.6	>	C - 28.9
SB	L	1	B - 16.7	1	B - 16.9	L	1	B - 17.0	1	B - 17.4
	T	2	C - 21.9	2	C - 22.2	T	2	B - 19.4	2	B - 19.5
	R	1	B - 14.6	1	B - 14.7	R	1	B - 17.0	1	B - 17.0
Intersection:			***C - 20.6***		***C - 20.6***			***C - 23.3***		***C - 23.5***

Note: ">" designates a shared right or left turn lane.

Intersection: **2 - Candelaria Rd. / Edith Blvd.**

		2025 AM Peak Hour BUILD					2025 PM Peak Hour BUILD			
		(EXIST. GEOM.)					(EXIST. GEOM.)			
		NO BUILD		BUILD			NO BUILD		BUILD	
		Lanes	LOS-Delay	Lanes	LOS-Delay		Lanes	LOS-Delay	Lanes	LOS-Delay
EB	L	1	B - 14.7	1	B - 14.7	L	1	C - 20.4	1	C - 20.7
	T	3	C - 20.6	3	C - 20.6	T	3	C - 23.2	3	C - 23.4
	R	>	C - 21.2	>	C - 21.2	R	>	C - 23.5	>	C - 23.8
WB	L	1	B - 17.2	1	B - 17.2	L	1	B - 18.4	1	B - 18.7
	T	2	C - 21.4	2	C - 21.5	T	2	C - 27.1	2	C - 27.6
	R	1	B - 16.3	1	B - 16.3	R	1	C - 20.3	1	C - 21.2
NB	L	1	B - 16.9	1	B - 16.9	L	1	B - 14.7	1	B - 14.8
	T	2	C - 28.4	2	C - 28.4	T	2	C - 28.8	2	C - 29.3
	R	>	C - 29.0	>	C - 29.0	R	>	C - 29.1	>	C - 29.6
SB	L	1	B - 17.3	1	B - 17.4	L	1	B - 16.8	1	B - 17.3
	T	2	C - 22.4	2	C - 22.7	T	2	B - 19.0	2	B - 19.1
	R	1	B - 14.7	1	B - 14.9	R	1	B - 16.6	1	B - 16.6
Intersection:			***C - 21.2***		***C - 21.3***			***C - 23.8***		***C - 24.1***

Note: ">" designates a shared right or left turn lane.

Both the implementation year analysis and the horizon year analysis of the intersection of Candelaria Rd / Edith Blvd in this report demonstrates that the projected levels-of-service and delays are acceptable for the AM Peak Hour and PM Peak Hour NO BUILD and BUILD conditions. The proposed development increases the delay at the intersection less than 0.5 seconds. Therefore, this study concludes that the development presents no significant impact to the calculated delays at the intersection of Candelaria Rd / Edith Blvd.

Calculated queue lengths for the signalized intersection of Candelaria Rd. / Edith Blvd. are determined using Poisson's Arrival Method equations with a 95th percentile confidence level. Those 95th Percentile queue lengths are reported in the following table:

Queueing Analysis Summary Sheet

Project: N. Valley Little League Fields (Edith Blvd N. of Candelaria Rd)

Intersection: **Candelaria Rd / Edith Blvd**

2015

Approach	Left Turns			Thru Movements			Right Turns		
Eastbound	# Lanes	Vol.	Length	# Lanes	Vol.	Length	# Lanes	Vol.	Length
Existing Lane Length	*1*	*174*	*100*	*3*	*663*	*Cont*	*0*	*77*	*0*
AM NO BUILD Queue	1	176	225	3	670	300	0	78	125
AM BUILD Queue	**1**	**176**	**225**	**3**	**670**	**300**	**0**	**78**	**125**
Existing Lane Length	*1*	*82*	*100*	*3*	*360*	*Cont*	*0*	*50*	*0*
PM NO BUILD Queue	1	83	125	3	364	175	0	51	100
PM BUILD Queue	**1**	**87**	**125**	**3**	**364**	**175**	**0**	**51**	**100**
Westbound	# Lanes	Vol.	Length	# Lanes	Vol.	Length	# Lanes	Vol.	Length
Existing Lane Length	*1*	*78*	*180*	*2*	*324*	*Cont*	*1*	*113*	*135*
AM NO BUILD Queue	1	79	125	2	327	225	1	114	150
AM BUILD Queue	**1**	**79**	**125**	**2**	**327**	**225**	**1**	**115**	**150**
Existing Lane Length	*1*	*103*	*180*	*2*	*600*	*Cont*	*1*	*191*	*135*
PM NO BUILD Queue	1	104	150	2	606	375	1	193	225
PM BUILD Queue	**1**	**104**	**150**	**2**	**606**	**375**	**1**	**217**	**250**
Northbound	# Lanes	Vol.	Length	# Lanes	Vol.	Length	# Lanes	Vol.	Length
Existing Lane Length	*1*	*35*	*150*	*2*	*332*	*Cont*	*0*	*73*	*0*
AM NO BUILD Queue	1	35	75	2	335	225	0	74	125
AM BUILD Queue	**1**	**35**	**75**	**2**	**336**	**225**	**0**	**74**	**125**
Existing Lane Length	*1*	*78*	*150*	*2*	*618*	*Cont*	*0*	*79*	*0*
PM NO BUILD Queue	1	79	125	2	624	375	0	80	125
PM BUILD Queue	**1**	**79**	**125**	**2**	**642**	**375**	**0**	**80**	**125**
Southbound	# Lanes	Vol.	Length	# Lanes	Vol.	Length	# Lanes	Vol.	Length
Existing Lane Length	*1*	*124*	*225*	*2*	*363*	*Cont*	*1*	*89*	*225*
AM NO BUILD Queue	1	125	175	2	367	250	1	90	125
AM BUILD Queue	**1**	**126**	**175**	**2**	**368**	**250**	**1**	**90**	**125**
Existing Lane Length	*1*	*82*	*225*	*2*	*327*	*Cont*	*1*	*176*	*225*
PM NO BUILD Queue	1	83	125	2	330	225	1	178	225
PM BUILD Queue	**1**	**95**	**150**	**2**	**339**	**225**	**1**	**180**	**225**

	AM	PM
Cycle Length:	100	100

NOTE: Queue lengths are in feet.

The eastbound left turn lane is approximately 100 feet. SimTraffic demonstrates that the 95th Percentile queues falls within the existing left turn lane however, this queueing analysis demonstrates that the eastbound thru traffic is the controlling queue and will block the

eastbound right turn lane as an existing condition. The westbound left turn lane is approximately 180 feet and the westbound right turn lane is approximately 300 feet, but there is an existing driveway approximately 180 feet east of Edith Blvd. Therefore, if the westbound right turn lane traffic queues greater than 180 feet, then the existing driveway will be blocked. SimTraffic demonstrates that the 95th Percentile queues fall within the existing left and right turn lanes. The northbound left turn lane is approximately 150 feet. SimTraffic demonstrates that the 95th Percentile queues falls within the existing left turn lane. Again, this queueing analysis demonstrates that the northbound thru traffic is the controlling queue and will block the eastbound right turn lane as an existing condition. The southbound left turn lane is approximately 225 feet and the southbound right turn lane is approximately 225 feet. SimTraffic demonstrates that the 95th Percentile queues fall within the existing left turn lane and the existing right turn lane. Since the small number of vehicles would not be worth the cost of extending the southbound right turn lane and because the southbound thru lane is the controlling queue and will block the southbound right turn lane anyway, the southbound right turn lane should not be extended. The lengths of the existing left turn lanes at the intersection cannot be extended except by reducing the length of complementary left turn lanes at other intersections and / or driveways. Therefore, no improvements are recommended for the auxiliary lanes at the intersection of Comanche Rd / Edith Blvd. Generally speaking, the Poisson's 95th Percentile calculated queue length tends to yield conservatively high results.

Intersection #3 –Driveway 'A' / Edith Blvd - Pages A-68 thru A-71

The following table provides a summary of the Levels-of-Service / delays associated with each case analyzed for the implementation year (2015 & 2025) in this study:

Intersection: **3 - Driveway "A" / Edith Blvd.**

		2015 AM Peak Hour BUILD					2015 PM Peak Hour BUILD				
		(EXIST. GEOM.)					(EXIST. GEOM.)				
		NO BUILD		BUILD			NO BUILD		BUILD		
		Lanes	LOS-Delay	Lanes	LOS-Delay		Lanes	LOS-Delay	Lanes	LOS-Delay	
EB	L	1	A - 0.0	1	A - 8.8	L	1	A - 0.0	1	A - 9.1	
	R	>	A - 0.0	>	A - 8.8	R	>	A - 0.0	>	A - 9.1	
NB	L	>	A - 0.0	>	B - 11.8	L	>	A - 0.0	>	B - 13.6	
	T	1	A - 0.0	1	A - 0.0	T	1	A - 0.0	1	A - 0.0	
	R	>	A - 0.0	>	A - 0.0	R	>	A - 0.0	>	A - 0.0	
SB	L	>	A - 0.0	>	A - 0.0	L	>	A - 0.0	>	A - 0.0	
	T	1	A - 0.0	1	A - 0.0	T	1	A - 0.0	1	A - 0.0	
	R	>	A - 0.0	>	A - 0.0	R	>	A - 0.0	>	A - 0.0	
Intersection:		***u - 0.0***		***u - 0.1***			***u - 0.0***		***u - 0.9***		

Note: ">" designates a shared right or left turn lane.

Driveway "A" does not exist for the NO BUILD Condition.

Intersection: **3 - Driveway "A" / Edith Blvd.**

		2025 AM Peak Hour BUILD					2025 PM Peak Hour BUILD				
		(EXIST. GEOM.)					(EXIST. GEOM.)				
		NO BUILD		BUILD			NO BUILD		BUILD		
		Lanes	LOS-Delay	Lanes	LOS-Delay		Lanes	LOS-Delay	Lanes	LOS-Delay	
EB	L	1	A - 0.0	1	B - 12.0	L	1	A - 0.0	1	B - 14.0	
	R	>	A - 0.0	>	B - 12.0	R	>	A - 0.0	>	B - 14.0	
NB	L	>	A - 0.0	>	A - 9.0	L	>	A - 0.0	>	A - 9.2	
	T	1	A - 0.0	1	A - 0.0	T	1	A - 0.0	1	A - 0.0	
	R	>	A - 0.0	>	A - 0.0	R	>	A - 0.0	>	A - 0.0	
SB	L	>	A - 0.0	>	A - 0.0	L	>	A - 0.0	>	A - 0.0	
	T	1	A - 0.0	1	A - 0.0	T	1	A - 0.0	1	A - 0.0	
	R	>	A - 0.0	>	A - 0.0	R	>	A - 0.0	>	A - 0.0	
Intersection:		***A - 0.0***		***A - 0.0***			***A - 0.0***		***A - 0.8***		

Note: ">" designates a shared right or left turn lane.

Driveway "A" does not exist for the NO BUILD Condition.

Driveway ‘A’ is proposed as a full access unsignalized intersection. The analysis demonstrates that the Levels-of-Service and delays are acceptable for all conditions analyzed. Therefore, no recommendations are made for the intersection of Driveway ‘A’ / Edith Blvd.

Findings and Conclusions

The proposed North Valley Little League Fields (2015 implementation year & 2025 horizon year) is found to have no significant adverse impact on the adjacent transportation system. What slight impact does occur to the transportation system can be mitigated by the following recommended measures.

Recommendations

All constructed improvements to proposed driveways and existing intersections shall be designed and built to maintain adequate safe sight distances to the degree possible. Driveway return radii shall be constructed to accommodate expected vehicle types and shall be a minimum of 30 feet.

Improvements on Bernalillo County streets and intersections should comply with requirements of the Bernalillo County Public Works Department.

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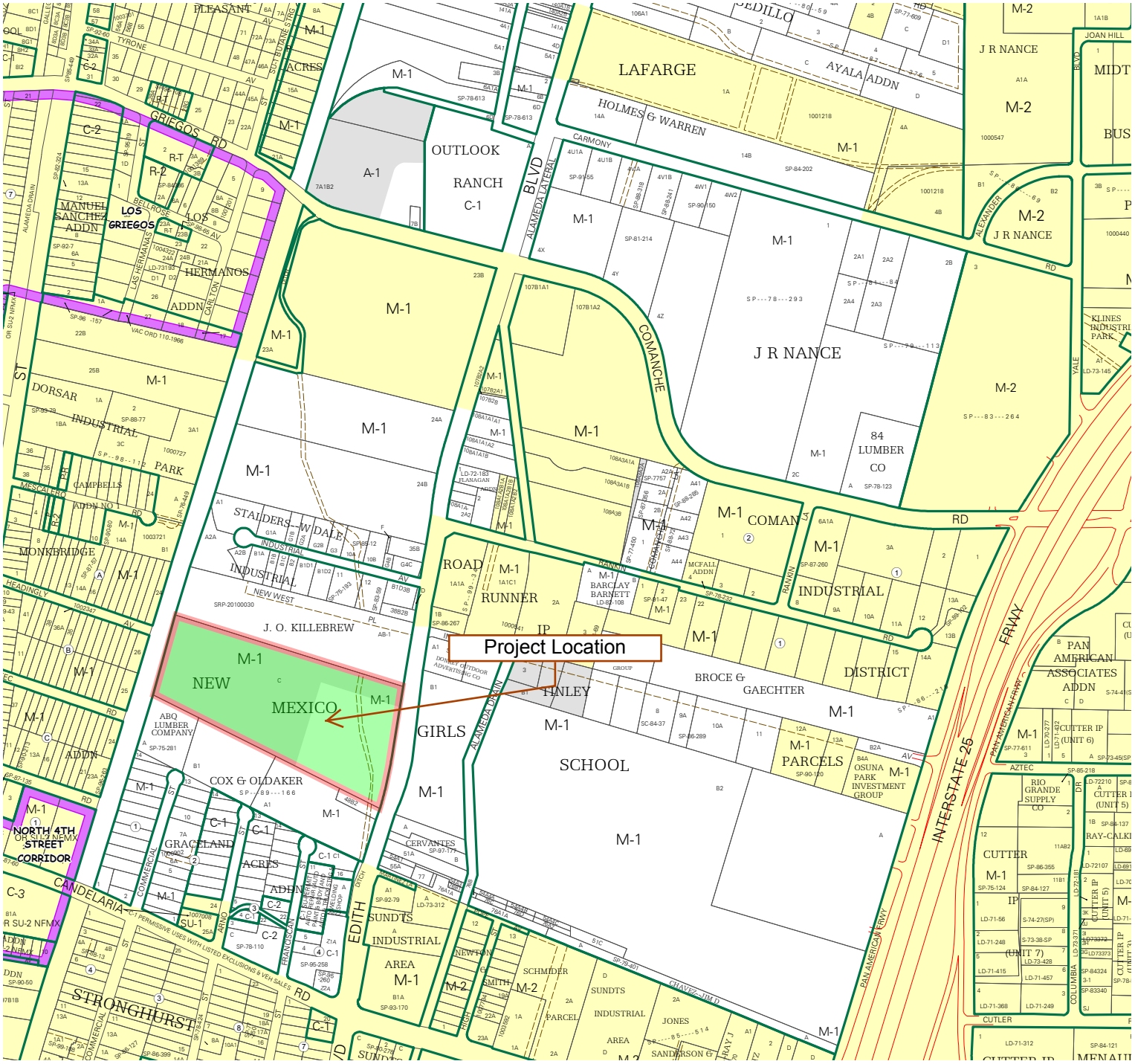
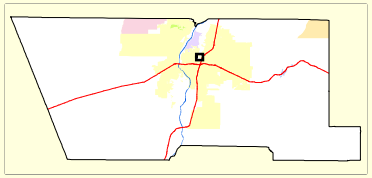
APPENDIX





LEGAL DESCRIPTION

T10N

R3E

SEC 4

UNIFORM PROPERTY CODE

1-015-060

250 0 250 500 750 1,000

Feet

Map amended through January 2013

PUBLIC WORKS DIVISION
GIS PROGRAM

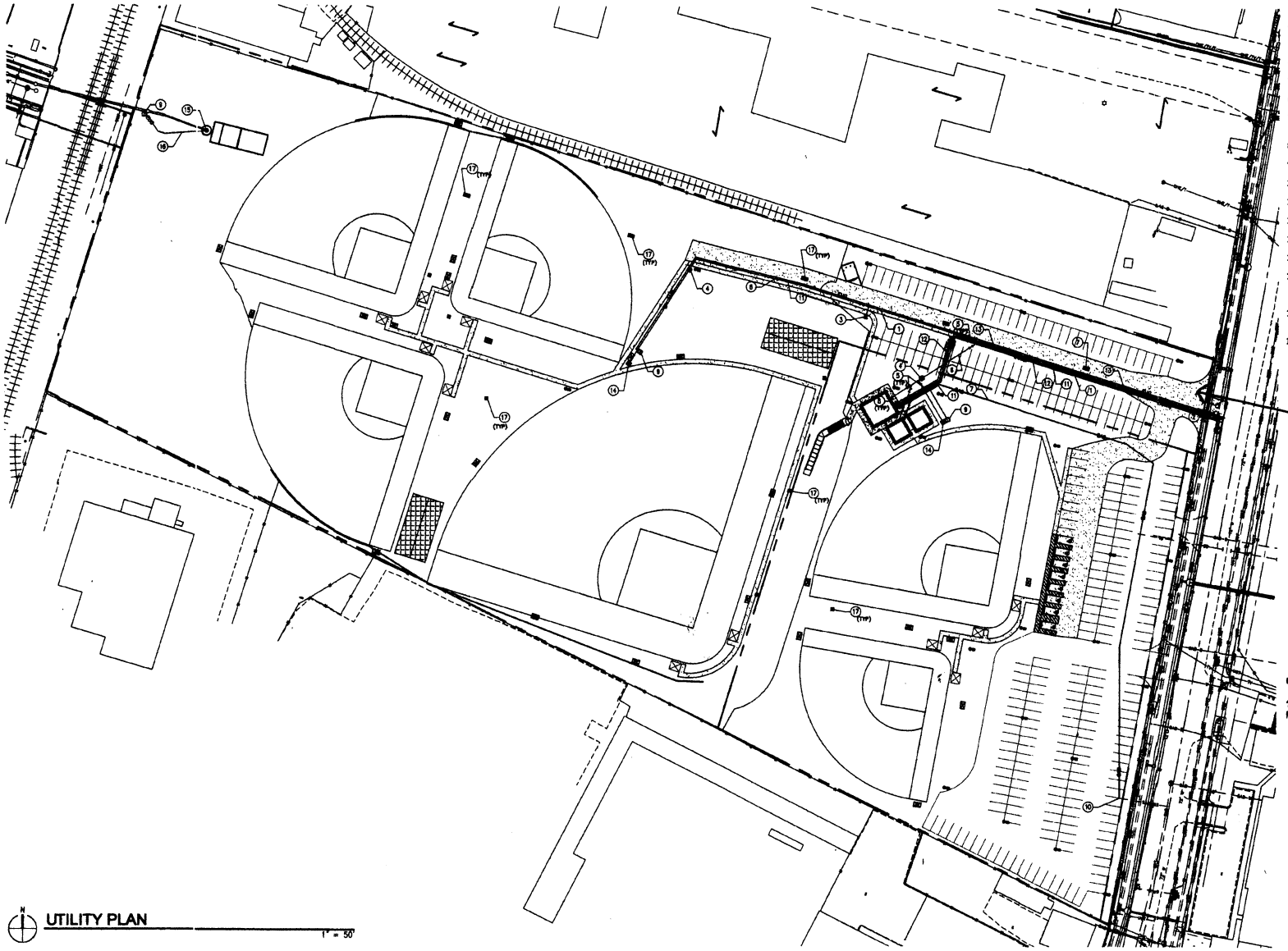
This information is for reference only. Bernalillo County assumes no liability for errors associated with the use of these data. Users are solely responsible for confirming data accuracy when necessary. Source data are from Bernalillo County and the City of Albuquerque. For current information visit www.bernco.gov/gis-program.

G-15-Z

N. Valley Little League Fields

(Edith Blvd N. of Candelaria Blvd)

Aerial Photo Map



KEYED NOTES:

1. NEW 6" WATER LINE
2. NEW 6" WATER LINE CONNECTION
3. NEW FIRE HYDRANT
4. NEW WATER METER
5. NEW GATE VALVE
6. NEW WATER SERVICE LINE
7. NEW SANITARY SEWER SERVICE LINE WITH GRINDER PUMP
8. NEW DOUBLE CLEAN OUT
9. NEW TRANSFORMER
10. CONNECT TO SANITARY SEWER STUB
11. NEW UNDERGROUND ELECTICAL SERVICE
12. NEW UNDERGROUND PHONE SERVICE
13. NEW GAS SERVICE
14. NEW IRRIGATION CONTROL BOX
15. NEW HYDROMATIC 15HP 460V, 3-PHASE SUBMERSIBLE PUMP WITH 6' MANHOLE, PIPE CONTROLS & RAIL
16. NEW 3-PHASE SERVICE TO SUBMERSIBLE PUMP
17. NEW STORM DRAIN INLET -SEE GRADING PLAN

GUY JACKSON AND ASSOCIATES, LLC
CIVIL ENGINEERING
10522 Florence Ave, NE, Albuquerque, NM 87122
Phone: 505-821-5798 | Cell: 505-235-1426

Edith Storm Drainage Ponds - Little League Fields Feasibility Study

May, 2010

UTILITY PLAN

C3.0

UTILITY PLAN 1" = 50'

* Driveway return radii shall be constructed to accommodate expected vehicle types and shall be a minimum of 30 feet.

ATTACHMENT A

Existing Proposed

- Facility with HOV Potential
- Limited Access Roadway (see Addendum for additional information)
- Principal Arterial
- Minor Arterial
- Collector

Dashed lines indicate proposed alignments.

- Grade Separation
- Interchange

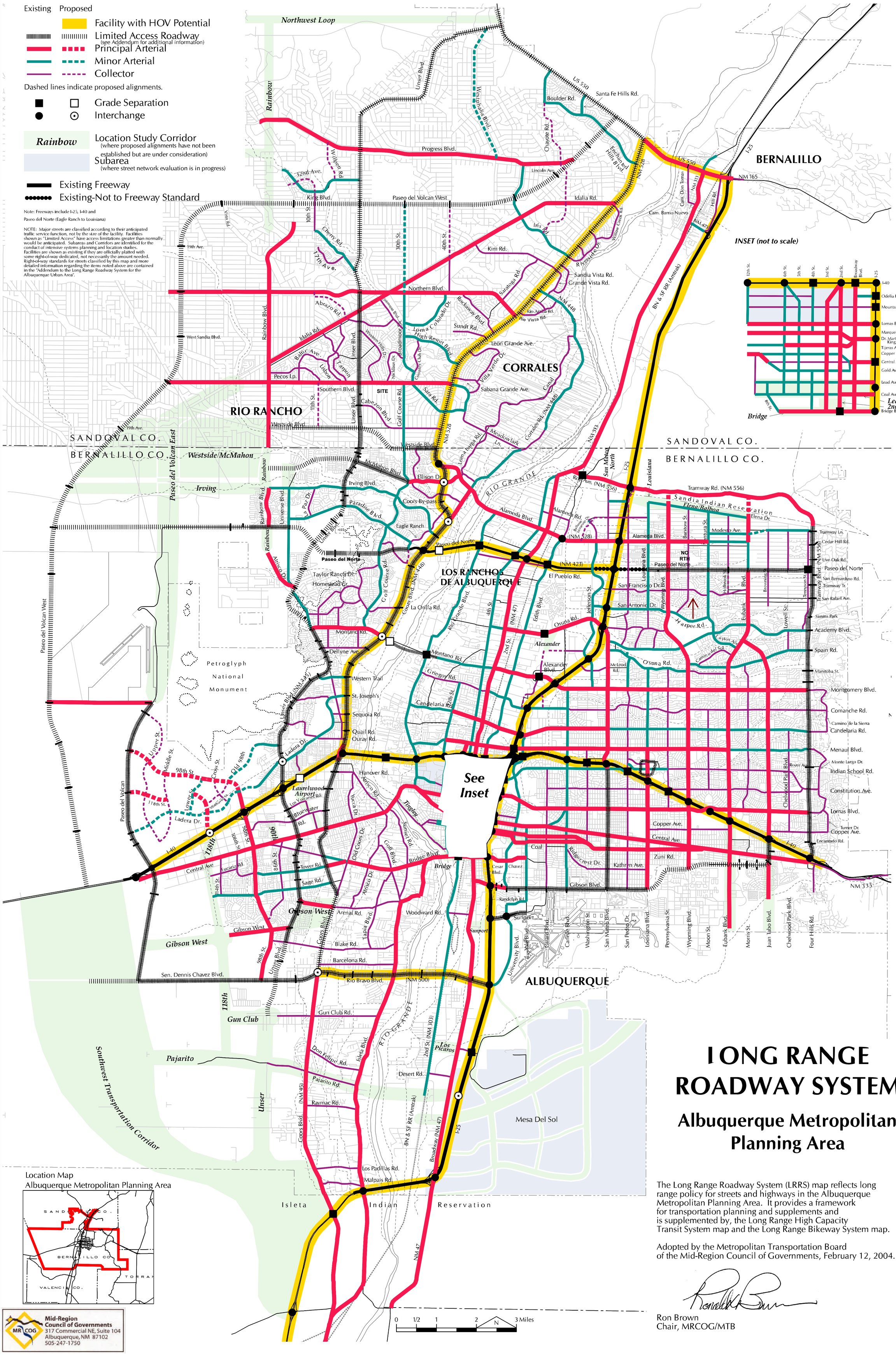
Rainbow Location Study Corridor (where proposed alignments have not been established but are under consideration)

Subarea (where street network evaluation is in progress)

- Existing Freeway
- Existing-Not to Freeway Standard

Note: Freeways include I-25, I-40 and Paseo del Norte (Eagle Ranch to Louisiana)

NOTE: Major streets are classified according to their anticipated traffic service function, not by the size of the facility. Facilities shown as "Limited Access" have access limitations greater than normally would be anticipated. Subareas and Corridors are identified for the conduct of intensive systems planning and location studies. Facilities are shown as existing if they are officially platted with some right-of-way dedicated, not necessarily the amount needed. Right-of-way standards for streets classified by this map and more detailed information regarding the items noted above are contained in the "Addendum to the Long Range Roadway System for the Albuquerque Urban Area".



LONG RANGE ROADWAY SYSTEM

Albuquerque Metropolitan Planning Area

Location Map
Albuquerque Metropolitan Planning Area

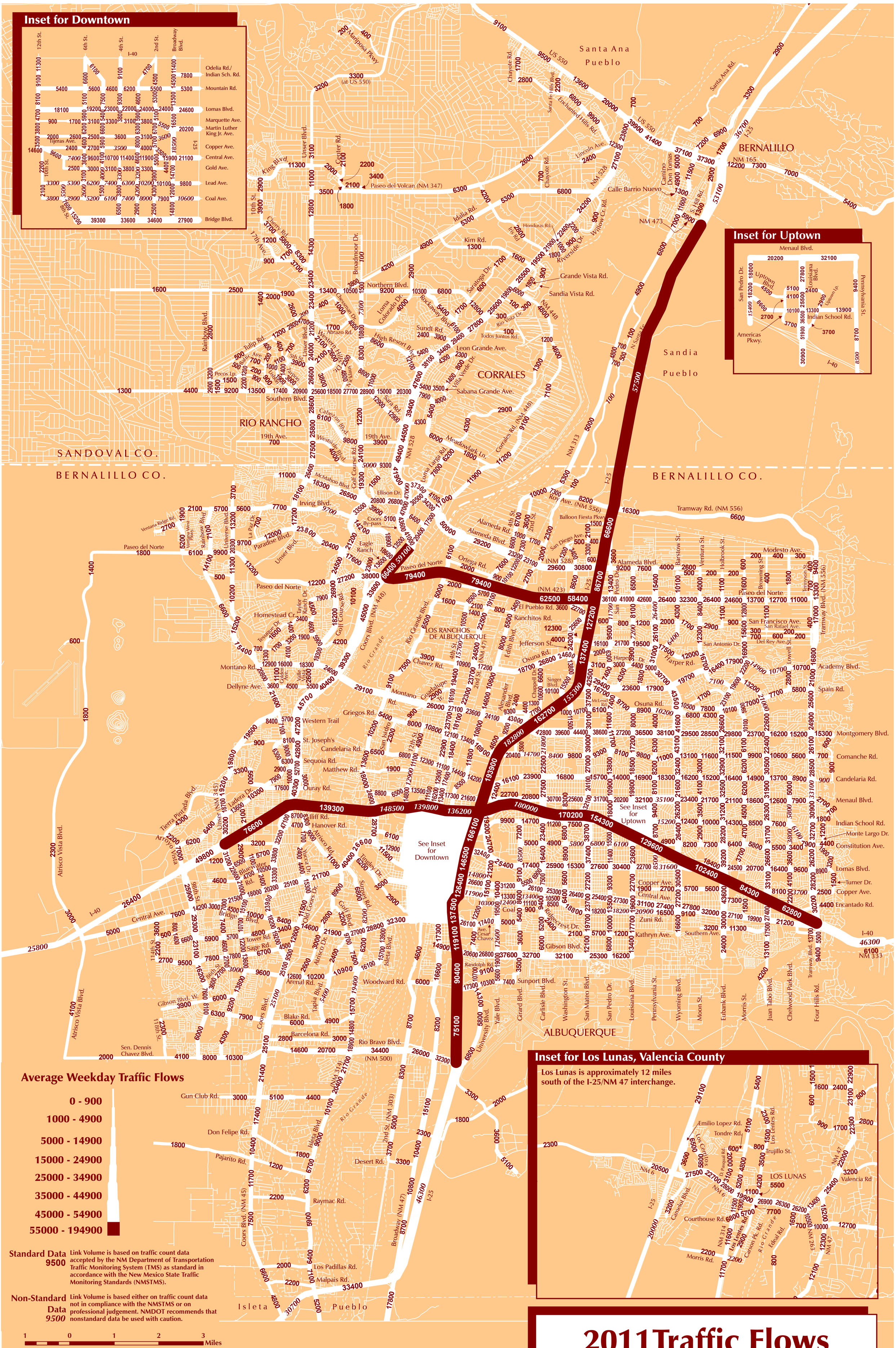
The Long Range Roadway System (LRRS) map reflects long range policy for streets and highways in the Albuquerque Metropolitan Planning Area. It provides a framework for transportation planning and supplements and is supplemented by, the Long Range High Capacity Transit System map and the Long Range Bikeway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

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

Ron Brown
Chair, MRCOG/MTB

Mid-Region Council of Governments
317 Commercial NE, Suite 104
Albuquerque, NM 87102
505-247-1750

02/13/04



2011 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.

N. Valley Little League Fields
Trip Generation Data (ITE Trip Generation Manual - 9th Edition)

USE (ITE CODE)	Units	24 HOUR TWO-WAY VOLUME	A. M. PEAK HOUR		P. M. PEAK HOUR	
		GROSS	ENTER	EXIT	ENTER	EXIT
Soccer Complex (488)	6.00 **Fields**	428	4	3	71	35

ITE Trip Generation Equations:

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

T = *71.33* (X) + *0*
50% Enter, *50%* Exit

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

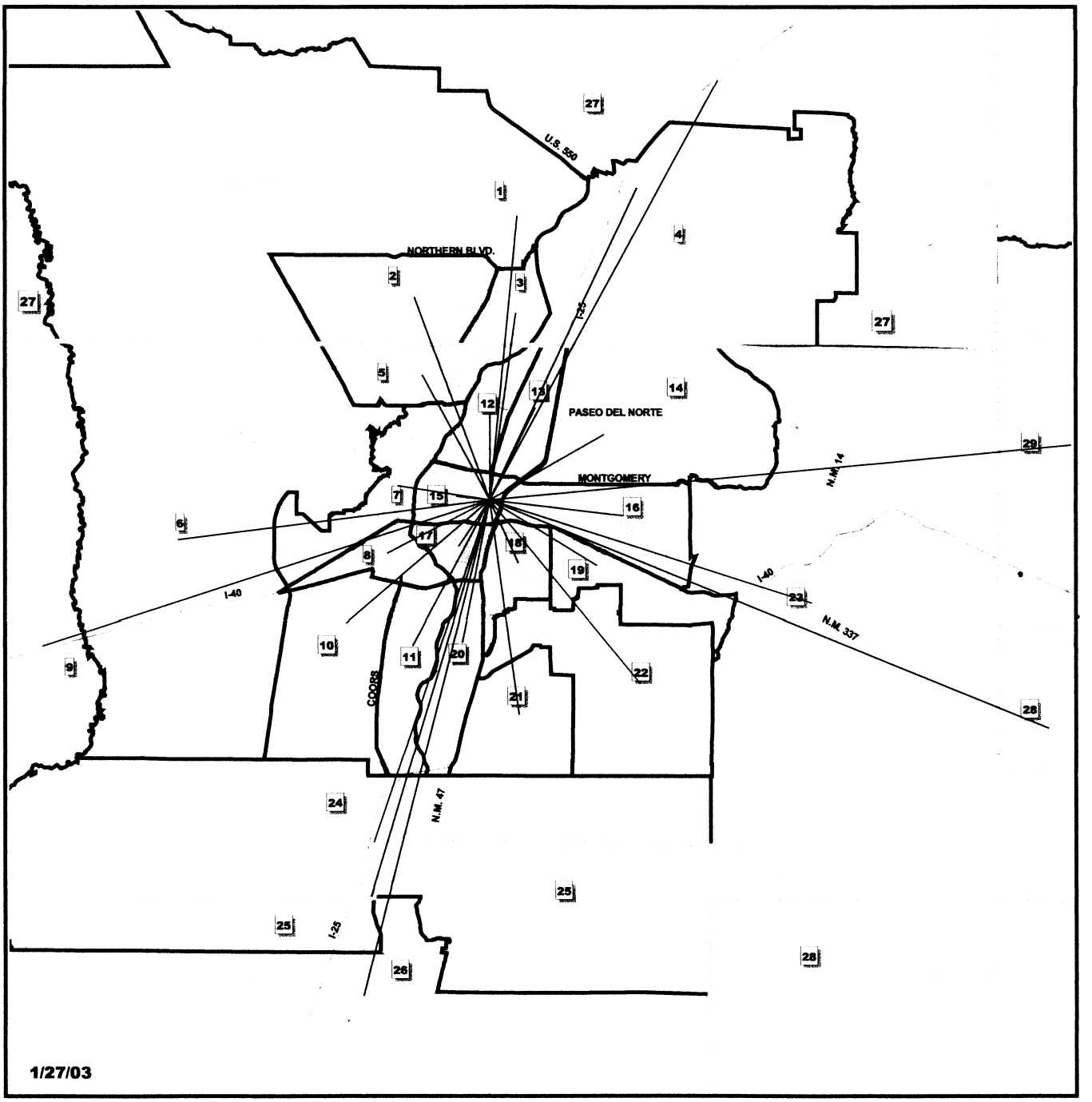
T = *1.12* (X) + *0*
57% Enter, *43%* Exit

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

T = *17.7* (X) + *0*
67% Enter, *33%* Exit

Comments:
Tract No.

Based on ITE Trip Generation Manual - 9th Edition



22 Subarea Identification Number

Figure 6

Subareas of the MRCOG Region

Mid-Region Council of Governments
317 Commercial NE, Suite 104
Albuquerque, NM 87102
505-247-1750

Subarea boundaries extend to county boundary where full extent of subarea not shown except for Subarea 29 which only includes southern Santa Fe County.

N. Valley Little League Fields (Edith Blvd N. of Candelaria Rd) Trip Distribution Subarea Map

Trip Distribution Table

N. Valley Little League Fields

Sub Area Employment Data:

For determination of Trip Distribution for Proposed **Residential Development Trips**

2015 and 2025 Data Taken from Mid-Region Council of Governments' 2035
Socioeconomic Forecasts by Data Analysis Subzones for the Mid-Region of New Mexico

										(EN) Edith Blvd North		(Cme) Camino de [illegible]			(Cal) Calle [illegible]		
Sub Area I.D.#	**% Sub Area In Study**	**2015 Employment**	**2025 Employment**	**Interpolated Employment for the Year**	Employment in Study	Dist. (Mi.)	**Employment / Distance**	**% Employment / Distance**	% Utilizing	% Employment / Dist. Utilizing	Employment	% Utilizing	% Employment / Dist. Utilizing	Employment	% Utilizing	% Employment / Dist. Utilizing	Employment
		2015	**2025**	2015													
1	100%	12,703	25,695	12,703	12,703	12.3	**1,033**	**1.09%**	0%	0.00%	0	100%	1.09%	1,033	0%	0.00%	0
2	100%	18,552	22,669	18,552	18,552	9.3	**1,995**	**2.10%**	0%	0.00%	0	100%	2.10%	1,995	0%	0.00%	0
3	100%	1,515	1,695	1,515	1,515	8.1	**187**	**0.20%**	0%	0.00%	0	100%	0.20%	187	0%	0.00%	0
4	100%	3,740	4,392	3,740	3,740	14.9	**251**	**0.26%**	0%	0.00%	0	100%	0.26%	251	0%	0.00%	0
5	100%	16,599	25,368	16,599	16,599	6.1	**2,721**	**2.87%**	50%	1.43%	1,361	0%	0.00%	0	0%	0.00%	0
6	100%	1,853	8,317	1,853	1,853	13.5	**137**	**0.14%**	0%	0.00%	0	0%	0.00%	0	100%	0.14%	137
7	100%	9,714	15,525	9,714	9,714	4	**2,429**	**2.56%**	50%	1.28%	1,214	0%	0.00%	0	50%	1.28%	1,214
8	100%	10,946	16,047	10,946	10,946	5	**2,189**	**2.31%**	0%	0.00%	0	0%	0.00%	0	100%	2.31%	2,189
9	100%	1,745	2,012	1,745	1,745	20.2	**86**	**0.09%**	0%	0.00%	0	0%	0.00%	0	100%	0.09%	86
10	100%	3,782	7,258	3,782	3,782	8.1	**467**	**0.49%**	0%	0.00%	0	0%	0.00%	0	100%	0.49%	467
11	100%	6,376	7,317	6,376	6,376	7.1	**898**	**0.95%**	0%	0.00%	0	0%	0.00%	0	100%	0.95%	898
12	100%	6,731	7,304	6,731	6,731	3.7	**1,819**	**1.92%**	50%	0.96%	910	0%	0.00%	0	0%	0.00%	0
13	100%	40,930	43,430	40,930	40,930	4.4	**9,302**	**9.81%**	50%	4.91%	4,651	0%	0.00%	0	0%	0.00%	0
14	100%	37,316	40,591	37,316	37,316	5.7	**6,547**	**6.90%**	50%	3.45%	3,273	0%	0.00%	0	0%	0.00%	0
15*	100%	16,633	17,690	16,633	16,633	1.5	**11,089**	**11.69%**	1%	0.08%	79	11%	1.25%	1,183	20%	2.38%	2,261
16	100%	62,474	65,263	62,474	62,474	5.8	**10,771**	**11.36%**	30%	3.41%	3,231	30%	3.41%	3,231	40%	4.54%	4,309
17	100%	39,102	39,919	39,102	39,102	2.4	**16,293**	**17.18%**	0%	0.00%	0	0%	0.00%	0	10%	1.72%	1,629
18	100%	46,080	50,268	46,080	46,080	3	**15,360**	**16.20%**	0%	0.00%	0	0%	0.00%	0	50%	8.10%	7,680
19	100%	28,254	29,328	28,254	28,254	5.4	**5,232**	**5.52%**	0%	0.00%	0	0%	0.00%	0	100%	5.52%	5,232
20	100%	7,602	9,770	7,602	7,602	6.2	**1,226**	**1.29%**	0%	0.00%	0	0%	0.00%	0	100%	1.29%	1,226
21	100%	1,392	21,398	1,392	1,392	9.3	**150**	**0.16%**	0%	0.00%	0	0%	0.00%	0	100%	0.16%	150
22	100%	28,721	30,372	28,721	28,721	10.2	**2,816**	**2.97%**	0%	0.00%	0	0%	0.00%	0	100%	2.97%	2,816
23	100%	2,916	4,611	2,916	2,916	14.5	**201**	**0.21%**	0%	0.00%	0	0%	0.00%	0	100%	0.21%	201
24	100%	2,337	2,604	2,337	2,337	15.6	**150**	**0.16%**	0%	0.00%	0	0%	0.00%	0	100%	0.16%	150
25	100%	207	231	207	207	17.8	**12**	**0.01%**	0%	0.00%	0	0%	0.00%	0	100%	0.01%	12
26	100%	19,091	27,014	19,091	19,091	22	**868**	**0.92%**	0%	0.00%	0	0%	0.00%	0	100%	0.92%	868
27	100%	6,750	7,930	6,750	6,750	20.6	**328**	**0.35%**	0%	0.00%	0	100%	0.35%	328	0%	0.00%	0
28	100%	4,759	5,816	4,759	4,759	26	**183**	**0.19%**	0%	0.00%	0	0%	0.00%	0	100%	0.19%	183
29	100%	2,042	2,773	2,042	2,042	25.1	**81**	**0.09%**	0%	0.00%	0	0%	0.00%	0	100%	0.09%	81
		440,862	542,607	440,862	440,862		**94,820**	**100.00%**		15.52%	**14,719**		8.66%	**8,208**		33.53%	**31,789**
											15.52%			8.66%			33.53%

Trip Distribution Table

N. Valley Little League Fields

Sub Area Employment Data:

For determination of Trip Distribution for Proposed **Residential Development Trips**

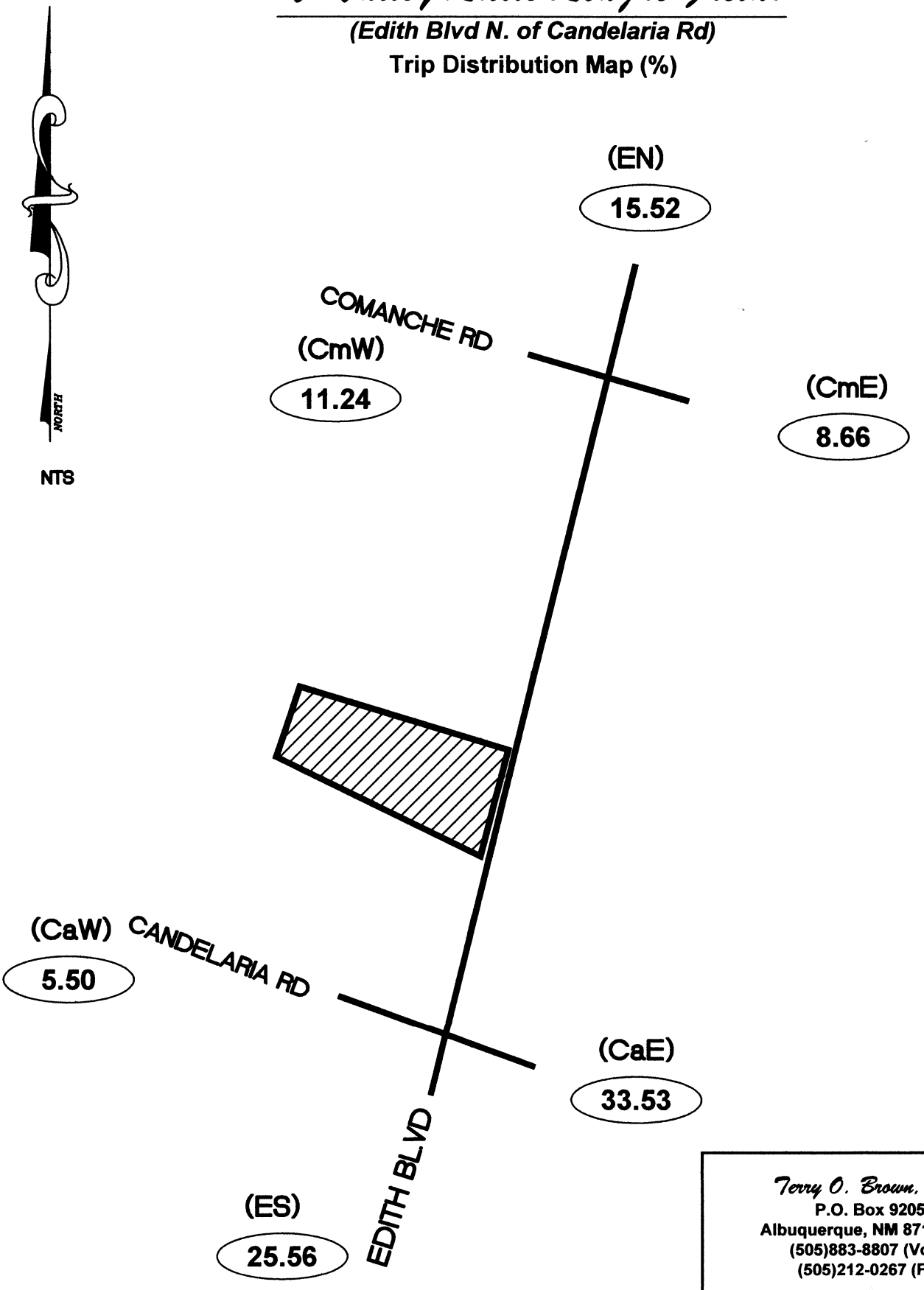
2015 and 2025 Data Taken from Mid-Region Council of Governments' 2035
Socioeconomic Forecasts by Data Analysis Subzones for the Mid-Region of New Mexico

								(ES) Edith Blvd South			(CaVi) Candelaria Blvd West			(CmW) Comanche Rd West		
Sub Area I.D.#	**% Sub Area In Study**	**2015 Employment**	**2025 Employment**	**Interpolated Employment for the Year**	Employment in Study	Dist. (Mi.)	**Employment / Distance**	% Utilizing	% Employment / Dist. Utilizing	Employment	% Utilizing	% Employment / Dist. Utilizing	Employment	% Utilizing	% Employment / Dist. Utilizing	Employment
		2015	**2025**	2015												
1	100%	12,703	25,695	12,703	12,703	12.3	**1,033**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
2	100%	18,552	22,669	18,552	18,552	9.3	**1,995**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
3	100%	1,515	1,695	1,515	1,515	8.1	**187**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
4	100%	3,740	4,392	3,740	3,740	14.9	**251**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5	100%	16,599	25,368	16,599	16,599	6.1	**2,721**	0%	0.00%	0	0%	0.00%	0	50%	1.43%	1,361
6	100%	1,853	8,317	1,853	1,853	13.5	**137**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
7	100%	9,714	15,525	9,714	9,714	4	**2,429**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
8	100%	10,946	16,047	10,946	10,946	5	**2,189**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
9	100%	1,745	2,012	1,745	1,745	20.2	**86**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
10	100%	3,782	7,258	3,782	3,782	8.1	**467**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
11	100%	6,376	7,317	6,376	6,376	7.1	**898**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
12	100%	6,731	7,304	6,731	6,731	3.7	**1,819**	0%	0.00%	0	0%	0.00%	0	50%	0.96%	910
13	100%	40,930	43,430	40,930	40,930	4.4	**9,302**	0%	0.00%	0	0%	0.00%	0	50%	4.91%	4,651
14	100%	37,316	40,591	37,316	37,316	5.7	**6,547**	0%	0.00%	0	0%	0.00%	0	50%	3.45%	3,273
15*	100%	16,633	17,690	16,633	16,633	1.5	**11,089**	46%	5.43%	5,153	18%	2.06%	1,954	4%	0.48%	459
16	100%	62,474	65,263	62,474	62,474	5.8	**10,771**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
17	100%	39,102	39,919	39,102	39,102	2.4	**16,293**	70%	12.03%	11,405	20%	3.44%	3,259	0%	0.00%	0
18	100%	46,080	50,268	46,080	46,080	3	**15,360**	50%	8.10%	7,680	0%	0.00%	0	0%	0.00%	0
19	100%	28,254	29,328	28,254	28,254	5.4	**5,232**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
20	100%	7,602	9,770	7,602	7,602	6.2	**1,226**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
21	100%	1,392	21,398	1,392	1,392	9.3	**150**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
22	100%	28,721	30,372	28,721	28,721	10.2	**2,816**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
23	100%	2,916	4,611	2,916	2,916	14.5	**201**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
24	100%	2,337	2,604	2,337	2,337	15.6	**150**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
25	100%	207	231	207	207	17.8	**12**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
26	100%	19,091	27,014	19,091	19,091	22	**868**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
27	100%	6,750	7,930	6,750	6,750	20.6	**328**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
28	100%	4,759	5,816	4,759	4,759	26	**183**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
29	100%	2,042	2,773	2,042	2,042	25.1	**81**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
		440,862	542,607	440,862	440,862		**94,820**		25.56%	**24,238**		5.50%	**5,212**		11.24%	**10,654**
										25.56%			5.50%			11.24%

N. Valley Little League Fields

(Edith Blvd N. of Candelaria Rd)

Trip Distribution Map (%)



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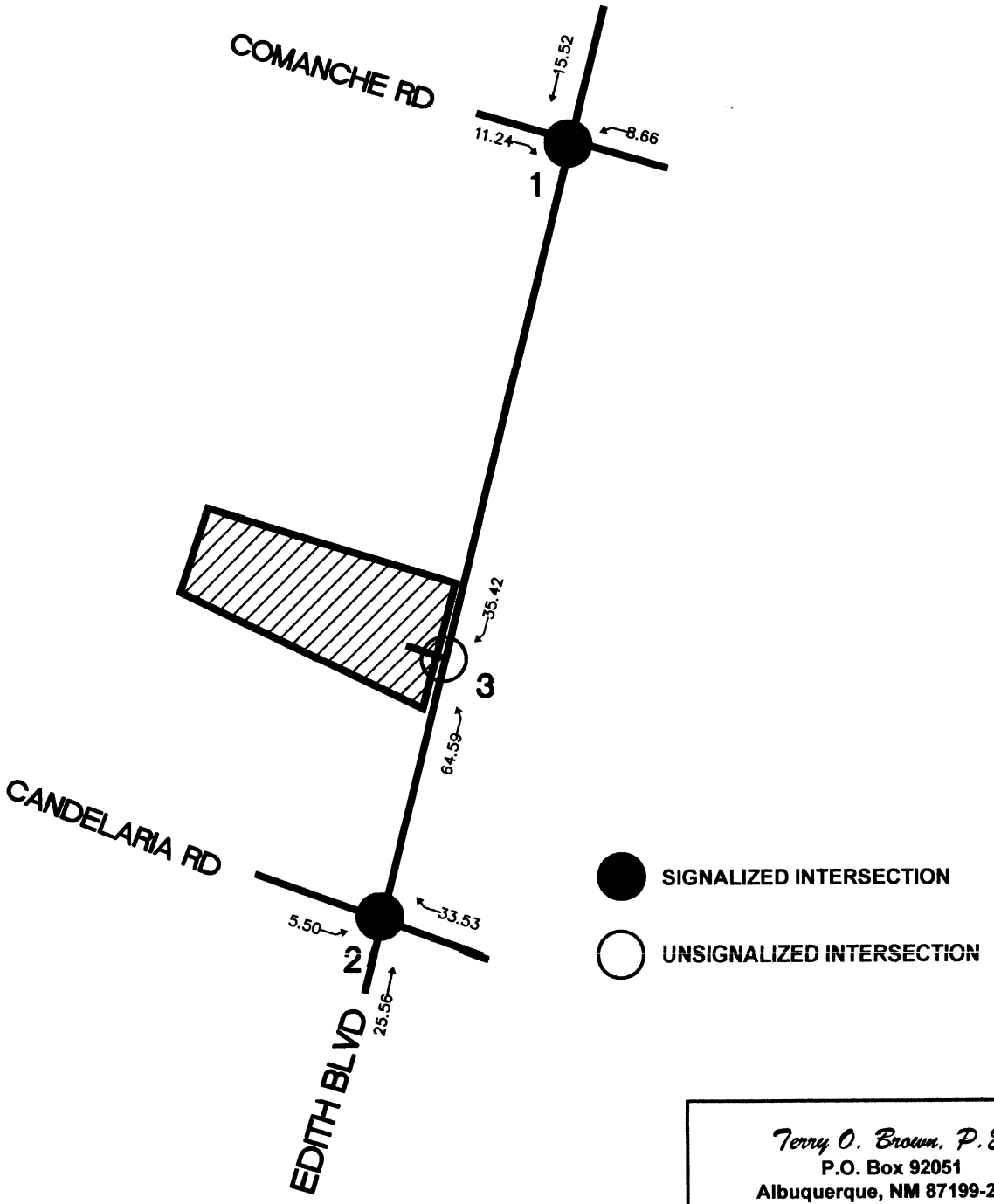
N. Valley Little League Fields

(Edith Blvd N. of Candelaria Rd)

Trip Assignments (% Entering)

NTS



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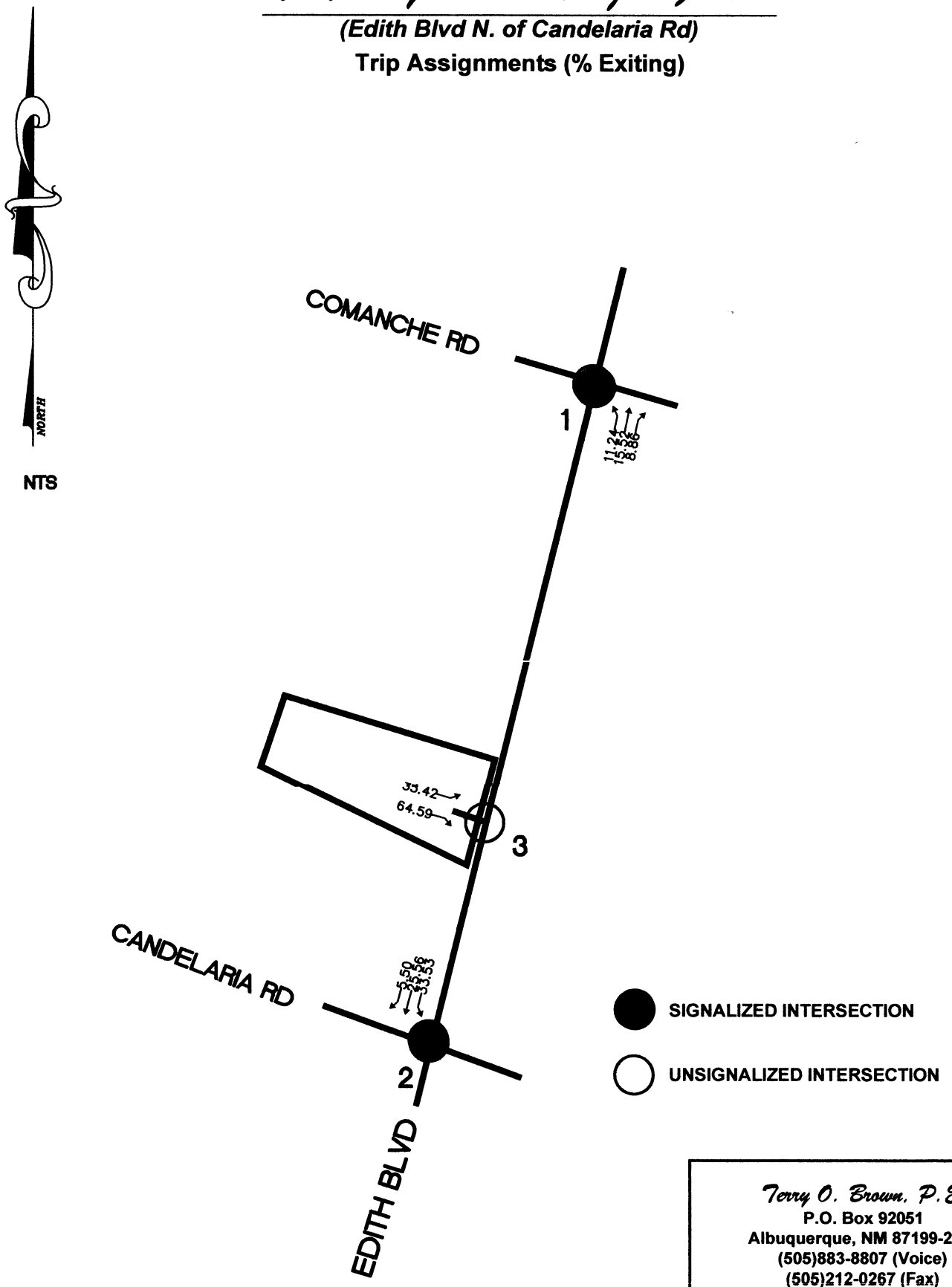
N. Valley Little League Fields

(Edith Blvd N. of Candelaria Rd)

Trip Assignments (% Exiting)



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N. Valley Little League Fields (Edith Blvd N. of Candelaria Rd)

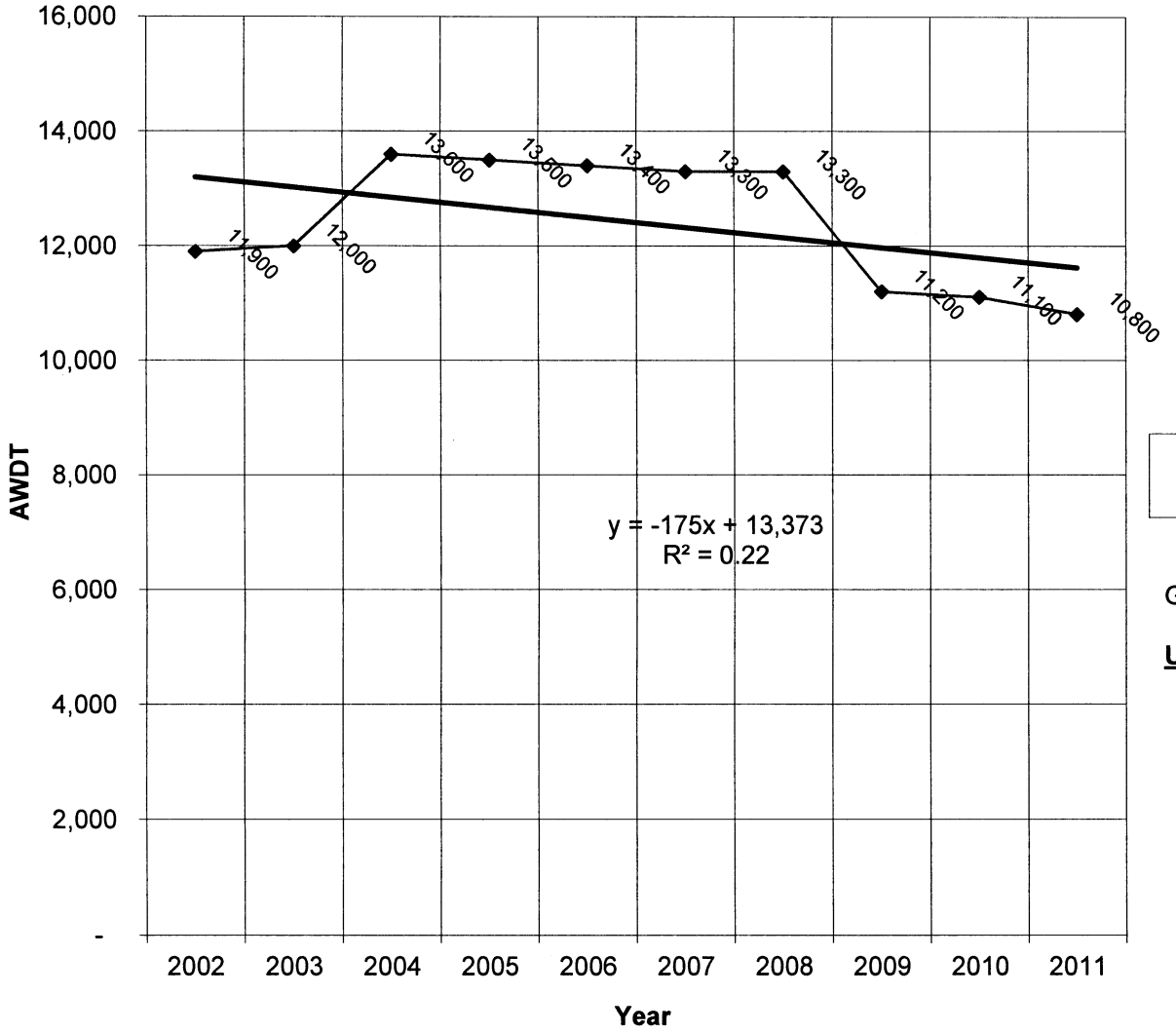
Historic Growth Rate Table

Traffic Flows from MRCOG Map

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Edith Blvd North of Comanche Rd	11,900	12,000	13,600	13,500	13,400	13,300	13,300	11,200	11,100	10,800
Comanche Rd East of Edith Blvd	19,800	20,000	17,900	17,800	17,600	17,500	18,800	18,700	18,500	16,900
Edith btwn Comanche & Candelaria	18,100	12,100	12,100	10,800	10,700	10,700	10,600	10,600	12,100	11,800
Candelaria Rd East of Edith Blvd	35,900	16,700	16,700	16,600	16,500	16,400	15,700	15,600	15,400	14,200
Edith Blvd South of Candelaria Rd	11,000	9,600	9,500	9,500	9,500	9,400	9,400	8,800	8,700	8,500
Edith Blvd South of Candelaria Rd	22,000	16,900	15,200	15,200	15,000	14,900	14,900	13,500	13,400	14,400
Comanche Rd West of Edith Blvd	15,100	15,200	13,800	14,400	14,300	14,100	15,700	15,700	15,500	13,400

NValleyFields_Growth.xls

Historic Growth Chart Edith Blvd North of Comanche Rd (2002-2011)



Edith Blvd North of Comanche Rd

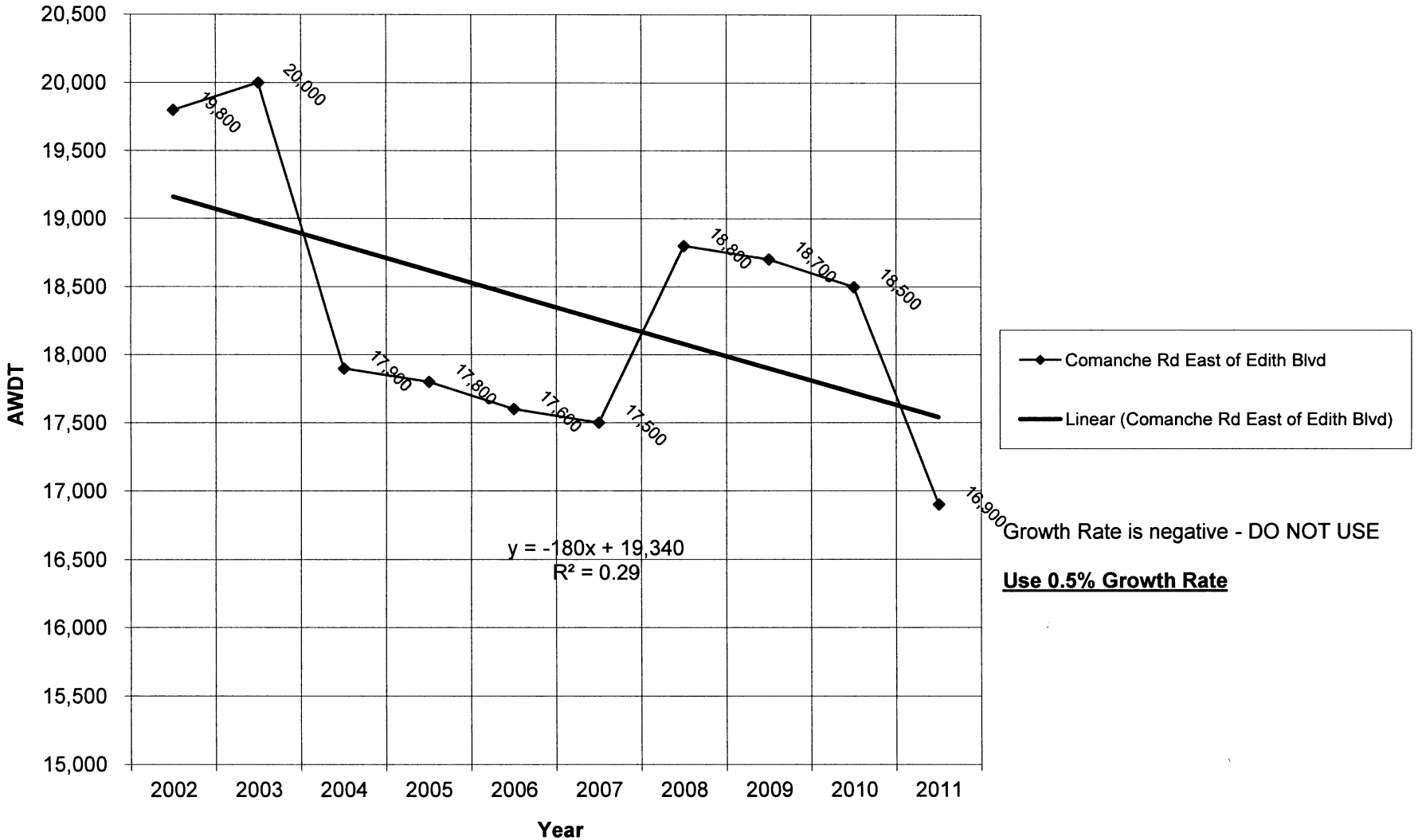
Linear (Edith Blvd North of Comanche Rd)

Growth Rate is negative - DO NOT USE

Use 0.5% Growth Rate

NValleyFields_Growth.xls

Historic Growth Chart Comanche Rd East of Edith Blvd (2002-2011)

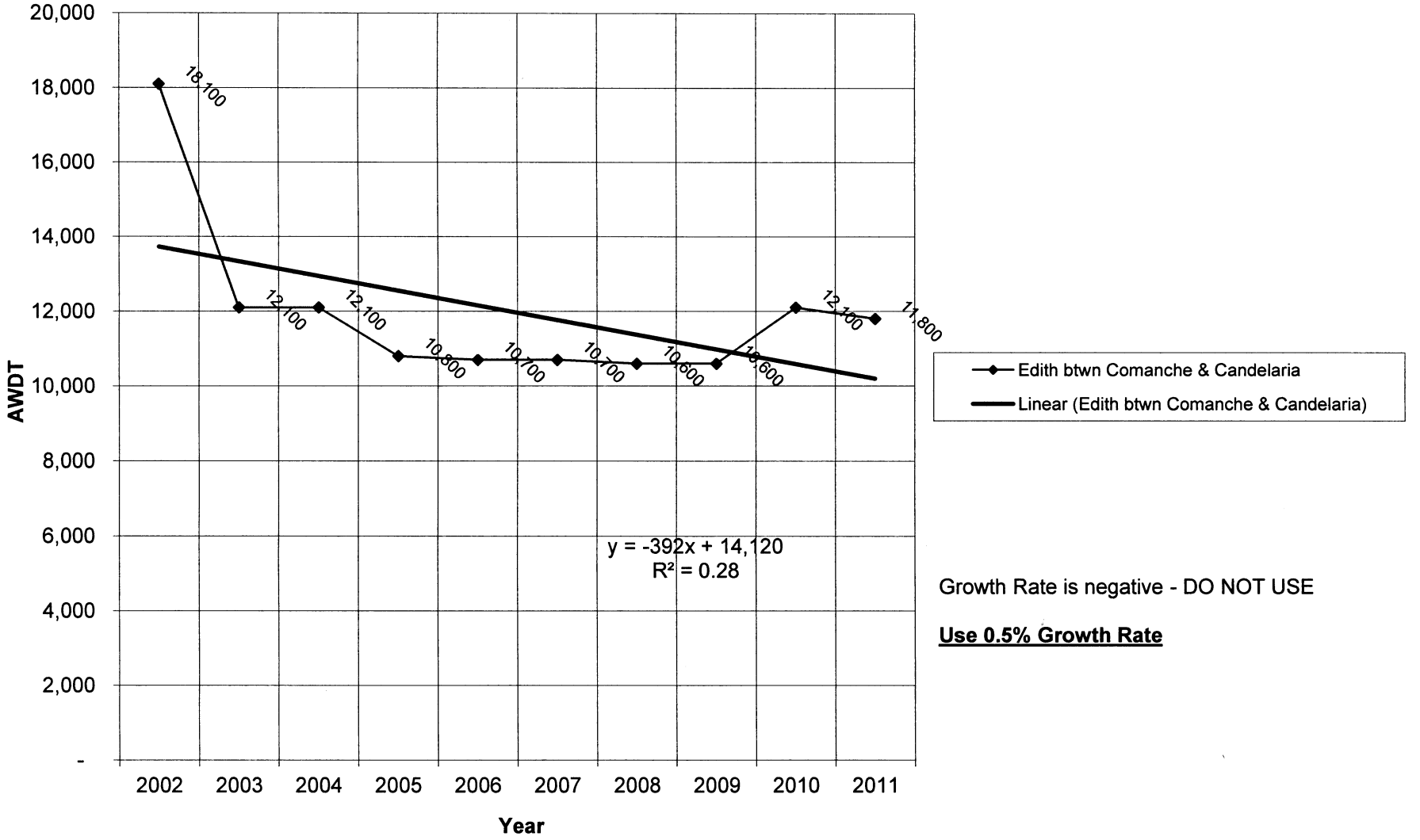


Growth Rate is negative - DO NOT USE

Use 0.5% Growth Rate

NValleyFields_Growth.xls

Historic Growth Chart Edith btwn Comanche & Candelaria (2002-2011)

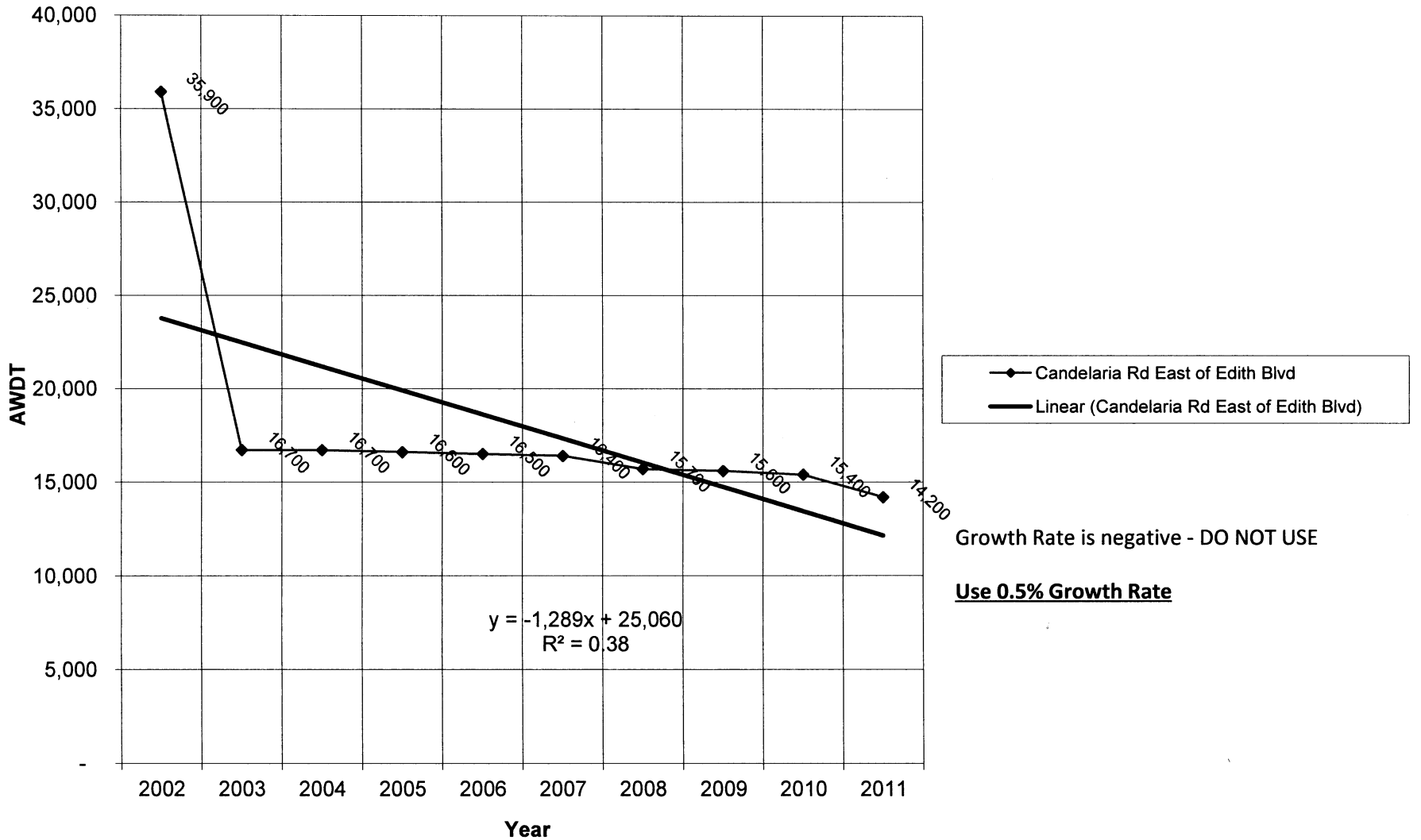


Growth Rate is negative - DO NOT USE

Use 0.5% Growth Rate

NValleyFields_Growth.xls

Historic Growth Chart Candelaria Rd East of Edith Blvd (2002-2011)

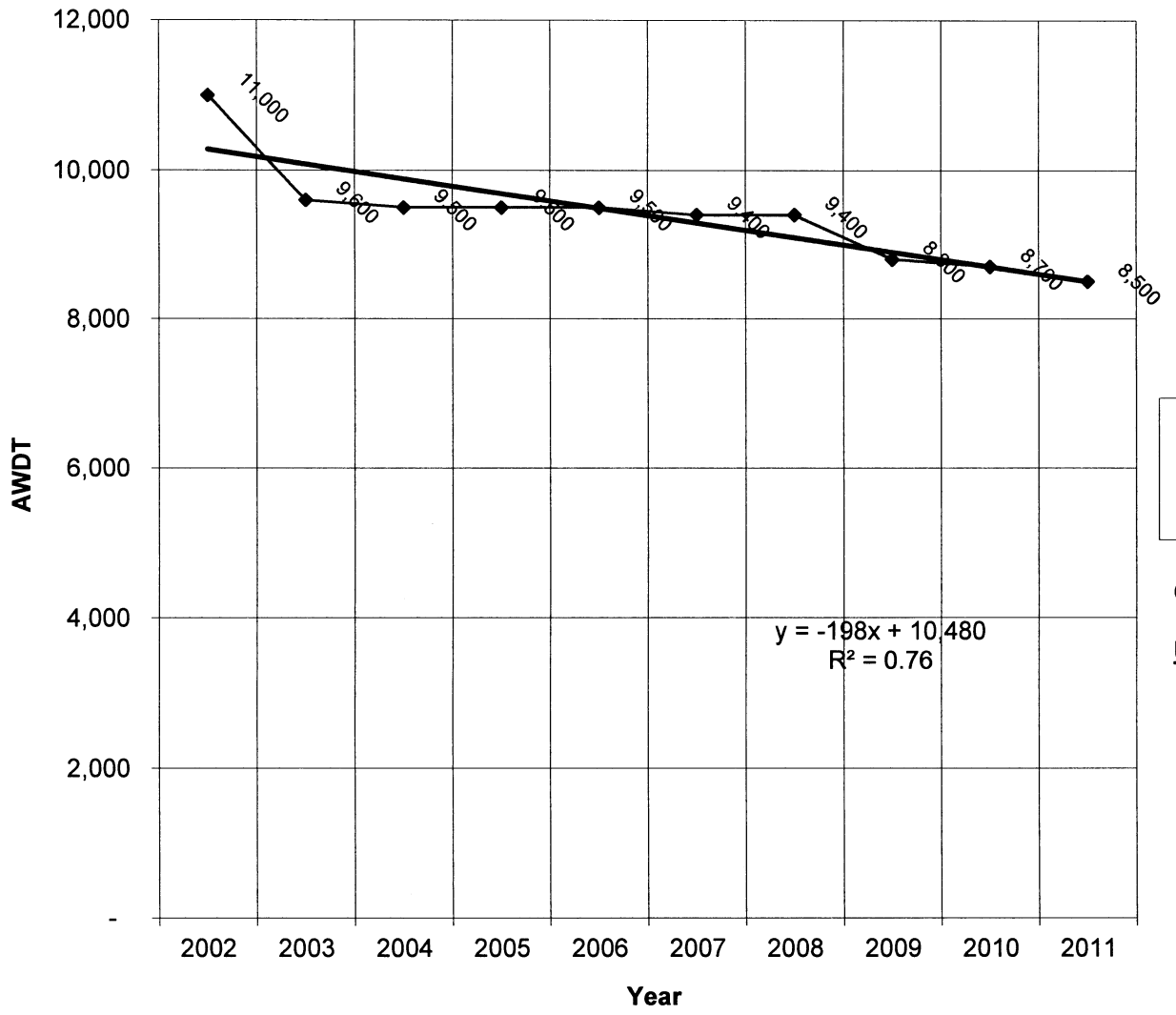


Growth Rate is negative - DO NOT USE

Use 0.5% Growth Rate

NValleyFields_Growth.xls

Historic Growth Chart Edith Blvd South of Candelaria Rd (2002-2011)



Edith Blvd South of Candelaria Rd

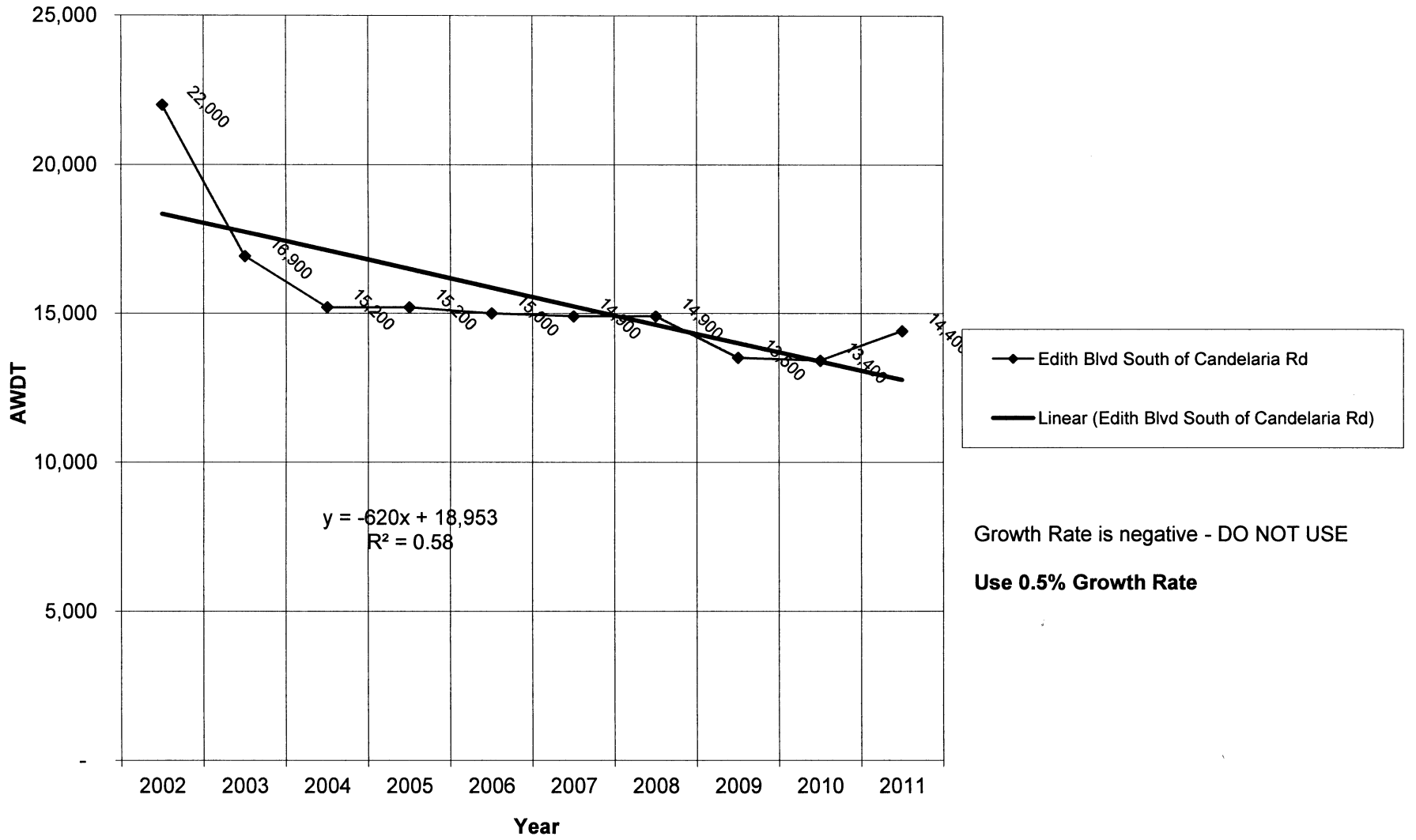
Linear (Edith Blvd South of Candelaria Rd)

Growth Rate is negative - DO NOT USE

Use 0.5% Growth Rate

NValleyFields_Growth.xls

Historic Growth Chart Edith Blvd South of Candelaria Rd (2002-2011)

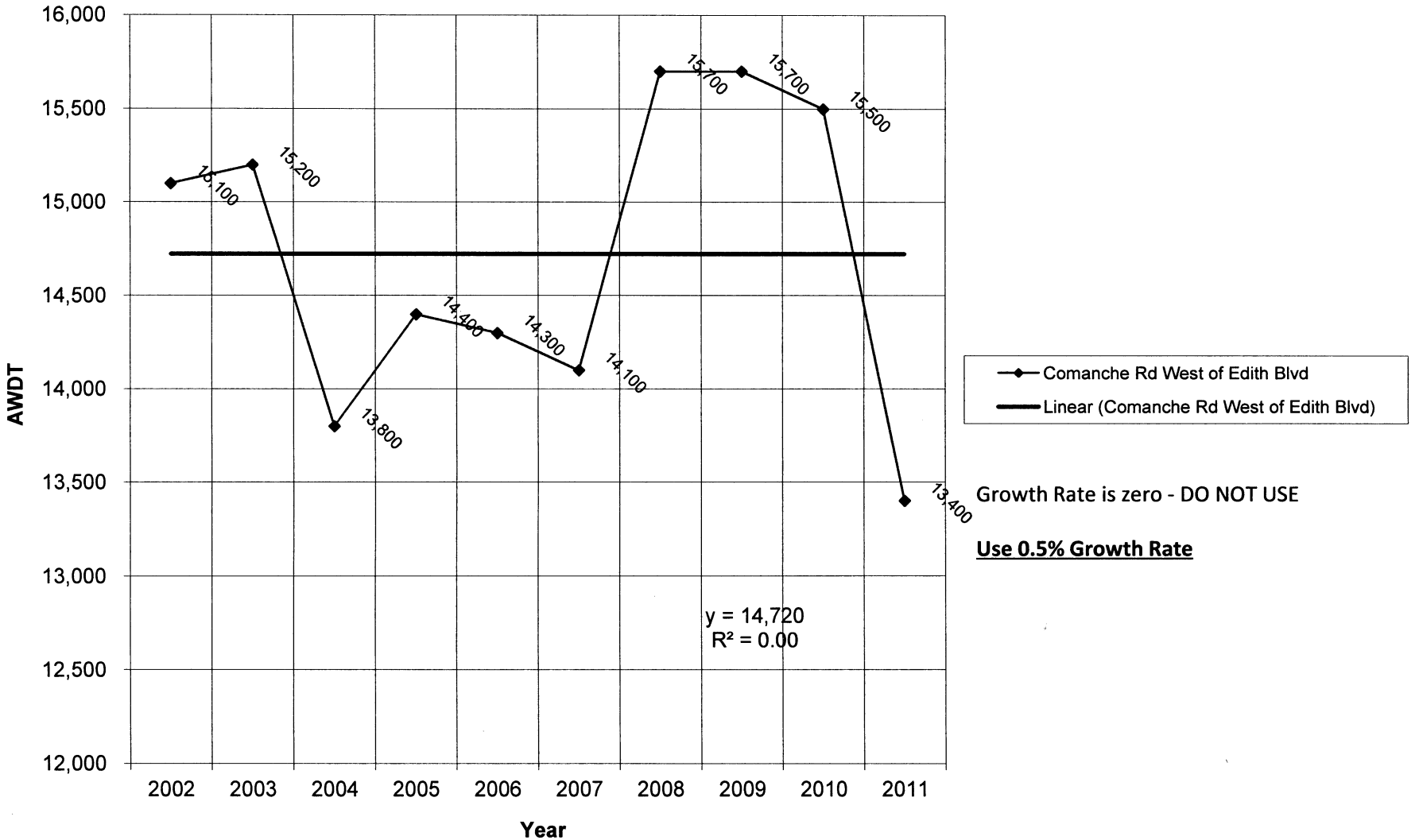


Growth Rate is negative - DO NOT USE

Use 0.5% Growth Rate

NValleyFields_Growth.xls

Historic Growth Chart Comanche Rd West of Edith Blvd (2002-2011)



Growth Rate is zero - DO NOT USE

Use 0.5% Growth Rate

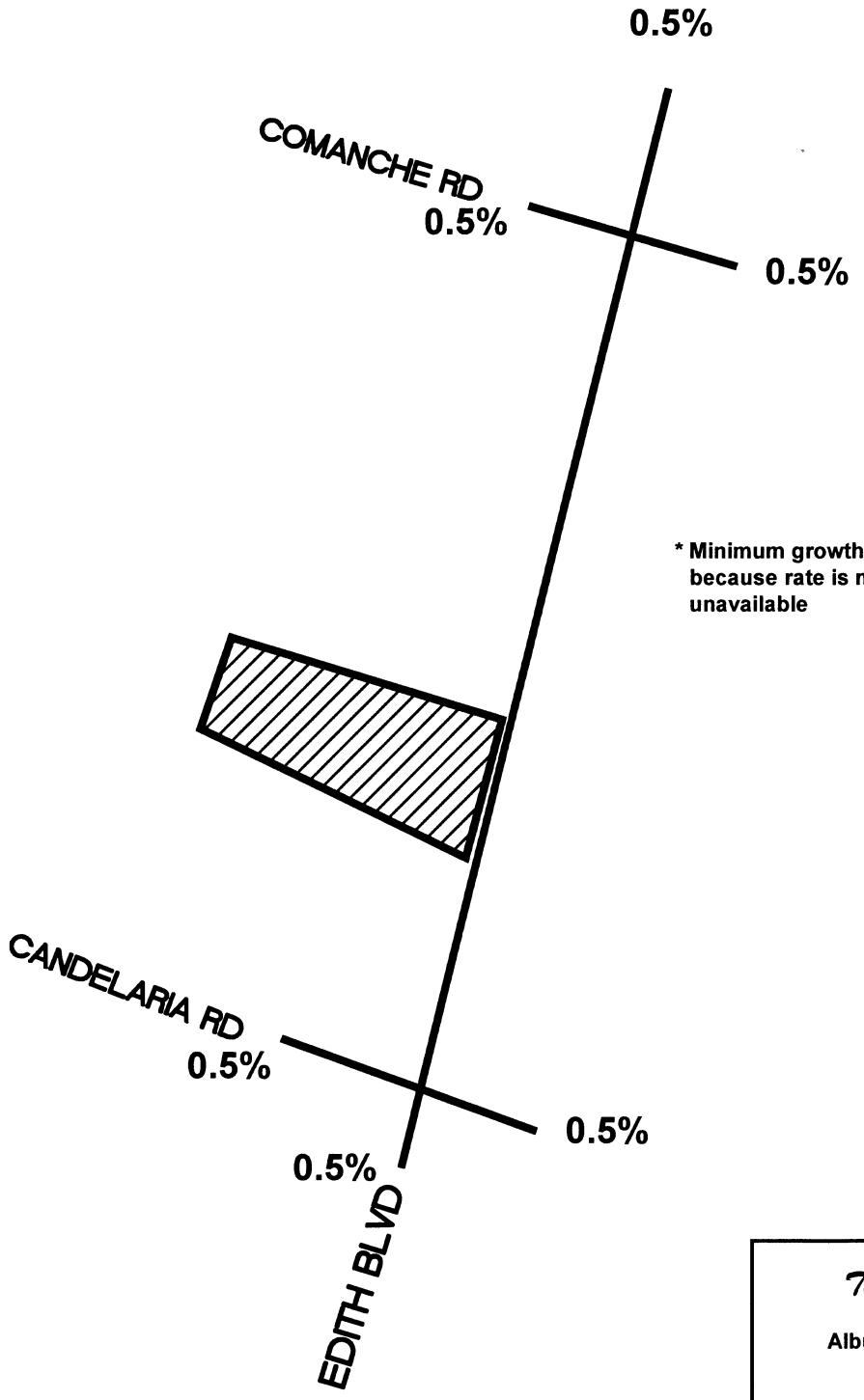
NValleyFields_Growth.xls

N. Valley Little League Fields

(Edith Blvd N. of Candelaria Rd)

Growth Rate Map (%)

NTS



* Minimum growth rate of 0.5% used because rate is negative or unavailable

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N. Valley Little League Fields (Edith Blvd N. of Candelaria Rd)

Projected Turning Movements SUMMARY

PROPOSED DEVELOPMENT (2015) - 100% Development

INTERSECTION: **Summary**

Comanche Rd / Edith Blvd

(1)

3.0% Truck

	0.91			0.93			0.75			0.78		PHF
	Eastbound (Comanche Rd)			Westbound (Comanche Rd)			Northbound (Edith Blvd)			Southbound (Edith Blvd)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing (2013)	127	573	124	124	373	214	41	381	111	146	474	43
2015 (NO BUILD - A.M.)	*128*	*579*	*125*	*125*	*377*	*216*	*42*	*385*	*112*	*147*	*479*	*44*
2015 (BUILD - A.M.)	***128***	***579***	***125***	***125***	***377***	***216***	***42***	***385***	***112***	***147***	***480***	***44***

	0.85			0.92			0.89			0.96		PHF
	Eastbound (Comanche Rd)			Westbound (Comanche Rd)			Northbound (Edith Blvd)			Southbound (Edith Blvd)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing (2013)	66	465	31	97	543	289	126	373	214	182	313	102
2015 (NO BUILD - P.M.)	*67*	*470*	*31*	*98*	*548*	*292*	*127*	*377*	*216*	*184*	*316*	*103*
2015 (BUILD - P.M.)	***67***	***470***	***39***	***104***	***548***	***292***	***131***	***382***	***219***	***184***	***327***	***103***

Candelaria Rd / Edith Blvd

(2)

3.0% Truck

	0.83			0.88			0.84			0.92		PHF
	Eastbound (Candelaria Rd)			Westbound (Candelaria Rd)			Northbound (Edith Blvd)			Southbound (Edith Blvd)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing (2013)	174	663	77	78	324	113	35	332	73	124	363	89
2015 (NO BUILD - A.M.)	*176*	*670*	*78*	*79*	*327*	*114*	*35*	*335*	*74*	*125*	*367*	*90*
2015 (BUILD - A.M.)	***176***	***670***	***78***	***79***	***327***	***115***	***35***	***336***	***74***	***126***	***368***	***90***

	0.90			0.91			0.84			0.92		PHF
	Eastbound (Candelaria Rd)			Westbound (Candelaria Rd)			Northbound (Edith Blvd)			Southbound (Edith Blvd)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing (2013)	82	360	50	103	600	191	78	618	79	82	327	176
2015 (NO BUILD - P.M.)	*83*	*364*	*51*	*104*	*606*	*193*	*79*	*624*	*80*	*83*	*330*	*178*
2015 (BUILD - P.M.)	***87***	***364***	***51***	***104***	***606***	***217***	***79***	***642***	***80***	***95***	***339***	***180***

Driveway "A" / Edith Blvd

(3)

3.0% Truck

	0.85			0.85			0.92			0.92		PHF
	Eastbound (Driveway "A")			Westbound (Driveway "A")			Northbound (Edith Blvd)			Southbound (Edith Blvd)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing (2013)	0	0	0	0	0	0	0	522	0	0	576	0
2015 (NO BUILD - A.M.)	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*527*	*0*	*0*	*582*	*0*
2015 (BUILD - A.M.)	***1***	***0***	***2***	***0***	***0***	***0***	***3***	***527***	***0***	***0***	***582***	***1***

	0.85			0.85			0.92			0.92		PHF
	Eastbound (Driveway "A")			Westbound (Driveway "A")			Northbound (Edith Blvd)			Southbound (Edith Blvd)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing (2013)	0	0	0	0	0	0	0	859	0	0	585	0
2015 (NO BUILD - P.M.)	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*868*	*0*	*0*	*591*	*0*
2015 (BUILD - P.M.)	***12***	***0***	***23***	***0***	***0***	***0***	***46***	***868***	***0***	***0***	***591***	***25***

N. Valley Little League Fields (Edith Blvd N. of Candelaria Rd)

Projected Turning Movements Worksheet

Comanche Rd / Edith Blvd

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

N-S Street: **Edith Blvd**

Year of Existing Counts 2012

Implementation Year **2015**

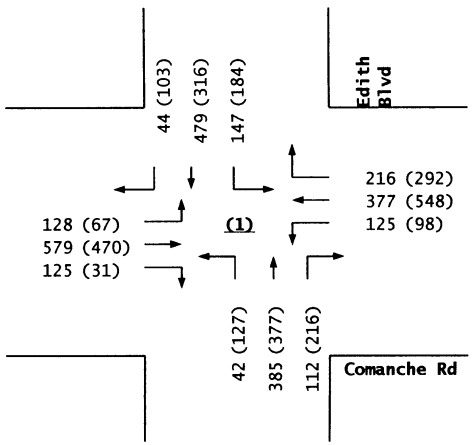
	Eastbound (Comanche Rd)			Westbound (Comanche Rd)			Northbound (Edith Blvd)			Southbound (Edith Blvd)		
Growth Rates	0.50%			0.50%			0.50%			0.50%		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	126	570	123	123	371	213	41	379	110	145	472	43
Background Traffic Growth	2	9	2	2	6	3	1	6	2	2	7	1
Subtotal	128	579	125	125	377	216	42	385	112	147	479	44
Subtotal (NO BUILD - A.M.)	***128***	***579***	***125***	***125***	***377***	***216***	***42***	***385***	***112***	***147***	***479***	***44***
Percent Residential Trips Generated(Entering)	*0.00%*	*0.00%*	*11.24%*	*8.66%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*15.52%*	*0.00%*
Percent Residential Trips Generated(Exiting)	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*11.24%*	*15.52%*	*8.86%*	*0.00%*	*0.00%*	*0.00%*
Total Trips Generated	0	0	0	0	0	0	0	0	0	0	1	0
Total AM Peak Hour BUILD Volumes	**128**	**579**	**125**	**125**	**377**	**216**	**42**	**385**	**112**	**147**	**480**	**44**

	Eastbound (Comanche Rd)			Westbound (Comanche Rd)			Northbound (Edith Blvd)			Southbound (Edith Blvd)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	66	463	31	97	540	288	125	371	213	181	311	101
Background Traffic Growth	1	7	0	1	8	4	2	6	3	3	5	2
Subtotal (NO BUILD - P.M.)	***67***	***470***	***31***	***98***	***548***	***292***	***127***	***377***	***216***	***184***	***316***	***103***
Percent Residential Trips Generated(Entering)	*0.00%*	*0.00%*	*11.24%*	*8.66%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*15.52%*	*0.00%*
Percent Residential Trips Generated(Exiting)	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*11.24%*	*15.52%*	*8.86%*	*0.00%*	*0.00%*	*0.00%*
Total Trips Generated	0	0	8	6	0	0	4	5	3	0	11	0
Total PM Peak Hour BUILD Volumes	**67**	**470**	**39**	**104**	**548**	**292**	**131**	**382**	**219**	**184**	**327**	**103**

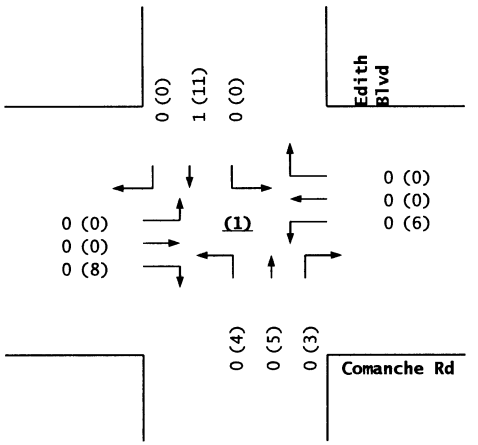
	Entering	Exiting		
Number of Residential Trips Generated	**4**	**3**	A.M.	100% Residential Development
	71	**35**	P.M.	

	Eastbound (Comanche Rd)			Westbound (Comanche Rd)			Northbound (Edith Blvd)			Southbound (Edith Blvd)		
2013 AM Peak Hr. Volumes	127	573	124	124	373	214	41	381	111	146	474	43
2013 PM Peak Hr. Volumes	66	465	31	97	543	289	126	373	214	182	313	102

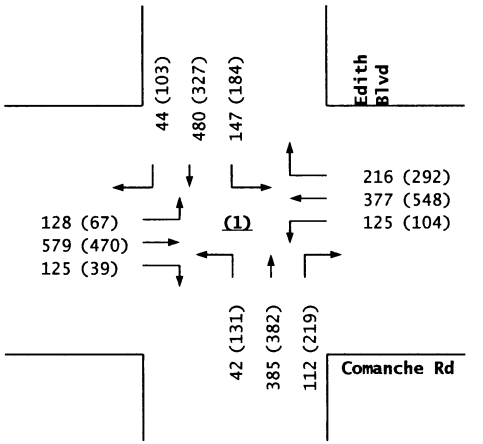
2015
NO BUILD



Trips



2015
BUILD



Comanche Rd / Edith Blvd

N. Valley Little League Fields (Edith Blvd N. of Candelaria Rd)

Projected Turning Movements Worksheet

Candelaria Rd / Edith Blvd

INTERSECTION: E-W Street: **Candelaria Rd** (2)

N-S Street: **Edith Blvd**

Year of Existing Counts 2013

Implementation Year **2015**

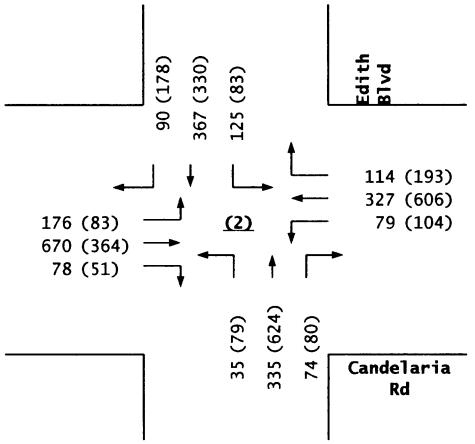
	Eastbound (Candelaria Rd)			Westbound (Candelaria Rd)			Northbound (Edith Blvd)			Southbound (Edith Blvd)		
Growth Rates	0.50%			0.50%			0.50%			0.50%		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	174	663	77	78	324	113	35	332	73	124	363	89
Background Traffic Growth	2	7	1	1	3	1	0	3	1	1	4	1
Subtotal	176	670	78	79	327	114	35	335	74	125	367	90
Subtotal (NO BUILD - A.M.)	***176***	***670***	***78***	***79***	***327***	***114***	***35***	***335***	***74***	***125***	***367***	***90***
Percent Residential Trips Generated(Entering)	*5.50%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*33.53%*	*0.00%*	*25.56%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*
Percent Residential Trips Generated(Exiting)	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*33.53%*	*25.56%*	*5.50%*
Total Trips Generated	0	0	0	0	0	1	0	1	0	1	1	0
Total AM Peak Hour BUILD Volumes	**176**	**670**	**78**	**79**	**327**	**115**	**35**	**336**	**74**	**126**	**368**	**90**

	Eastbound (Candelaria Rd)			Westbound (Candelaria Rd)			Northbound (Edith Blvd)			Southbound (Edith Blvd)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	82	360	50	103	600	191	78	618	79	82	327	176
Background Traffic Growth	1	4	1	1	6	2	1	6	1	1	3	2
Subtotal (NO BUILD - P.M.)	***83***	***364***	***51***	***104***	***606***	***193***	***79***	***624***	***80***	***83***	***330***	***178***
Percent Residential Trips Generated(Entering)	*5.50%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*33.53%*	*0.00%*	*25.56%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*
Percent Residential Trips Generated(Exiting)	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*33.53%*	*25.56%*	*5.50%*
Total Trips Generated	4	0	0	0	0	24	0	18	0	12	9	2
Total PM Peak Hour BUILD Volumes	**87**	**364**	**51**	**104**	**606**	**217**	**79**	**642**	**80**	**95**	**339**	**180**

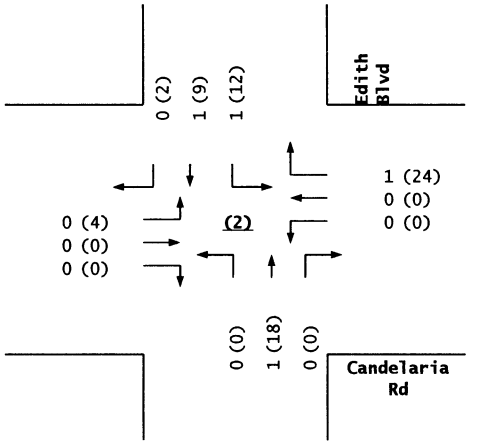
	Entering	Exiting		
Number of Residential Trips Generated	**4**	**3**	A.M.	100% Residential Development
	71	**35**	P.M.	

	Eastbound (Candelaria Rd)			Westbound (Candelaria Rd)			Northbound (Edith Blvd)			Southbound (Edith Blvd)		
2013 AM Peak Hr. Volumes	174	663	77	78	324	113	35	332	73	124	363	89
2013 PM Peak Hr. Volumes	82	360	50	103	600	191	78	618	79	82	327	176

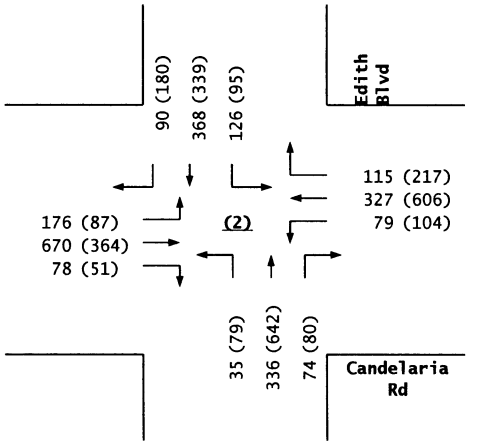
2015
NO BUILD



Trips



2015
BUILD



Candelaria Rd / Edith Blvd

N. Valley Little League Fields (Edith Blvd N. of Candelaria Rd)

Projected Turning Movements Worksheet

Driveway "A" / Edith Blvd

INTERSECTION: E-W Street: **Driveway "A"** (3)

N-S Street: **Edith Blvd**

Year of Existing Counts 2013

Implementation Year **2015**

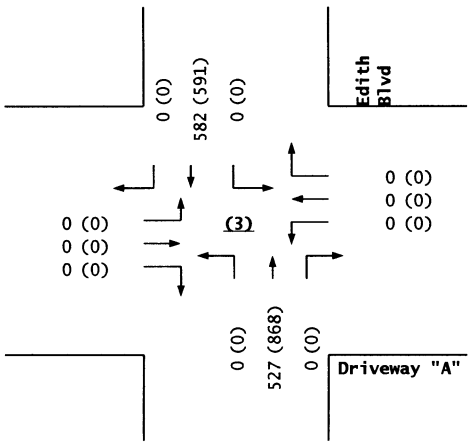
	Eastbound (Driveway "A")			Westbound (Driveway "A")			Northbound (Edith Blvd)			Southbound (Edith Blvd)		
Growth Rates	0.50%			0.50%			0.50%			0.50%		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	0	0	0	0	0	0	0	522	0	0	576	0
Background Traffic Growth	0	0	0	0	0	0	0	5	0	0	6	0
Subtotal	0	0	0	0	0	0	0	527	0	0	582	0
Subtotal (NO BUILD - A.M.)	***0***	***0***	***0***	***0***	***0***	***0***	***0***	***527***	***0***	***0***	***582***	***0***
Percent Residential Trips Generated(Entering)	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	***64.59%***	*0.00%*	*0.00%*	*0.00%*	*0.00%*	***35.42%***
Percent Residential Trips Generated(Exiting)	***35.42%***	*0.00%*	***64.59%***	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*
Total Trips Generated	1	0	2	0	0	0	3	0	0	0	0	1
Total AM Peak Hour BUILD Volumes	**1**	**0**	**2**	**0**	**0**	**0**	**3**	**527**	**0**	**0**	**582**	**1**

	Eastbound (Driveway "A")			Westbound (Driveway "A")			Northbound (Edith Blvd)			Southbound (Edith Blvd)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	0	0	0	0	0	0	0	859	0	0	585	0
Background Traffic Growth	0	0	0	0	0	0	0	9	0	0	6	0
Subtotal (NO BUILD - P.M.)	***0***	***0***	***0***	***0***	***0***	***0***	***0***	***868***	***0***	***0***	***591***	***0***
Percent Residential Trips Generated(Entering)	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	***64.59%***	*0.00%*	*0.00%*	*0.00%*	*0.00%*	***35.42%***
Percent Residential Trips Generated(Exiting)	***35.42%***	*0.00%*	***64.59%***	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*
Total Trips Generated	12	0	23	0	0	0	46	0	0	0	0	25
Total PM Peak Hour BUILD Volumes	**12**	**0**	**23**	**0**	**0**	**0**	**46**	**868**	**0**	**0**	**591**	**25**

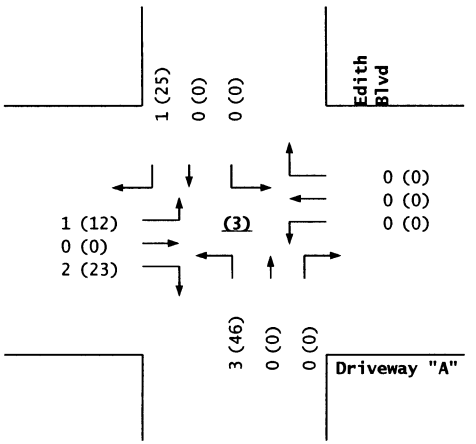
	Entering	Exiting		
Number of Residential Trips Generated	**4**	**3**	A.M.	100% Residential Development
	71	**35**	P.M.	

	Eastbound (Driveway "A")			Westbound (Driveway "A")			Northbound (Edith Blvd)			Southbound (Edith Blvd)		
2013 AM Peak Hr. Volumes	0	0	0	0	0	0	0	522	0	0	576	0
2013 PM Peak Hr. Volumes	0	0	0	0	0	0	0	859	0	0	585	0

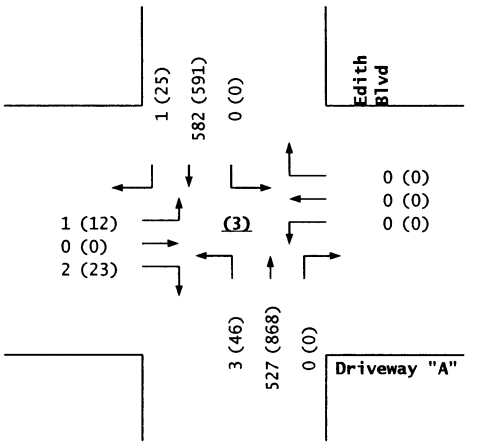
2015
NO BUILD



Trips



2015
BUILD



Driveway "A" / Edith Blvd

N. Valley Little League Fields

Projected Turning Movements SUMMARY

PROPOSED DEVELOPMENT (2025) - 100% Development

INTERSECTION: **Summary**

Comanche Rd / Edith Blvd
(1)
3.0% Truck

													PHF
		0.91			0.93			0.75			0.78		
	Eastbound (Comanche Rd)			Westbound (Comanche Rd)			Northbound (Edith Blvd)			Southbound (Edith Blvd)			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Existing (2013)	127	573	124	124	373	214	41	381	111	146	474	43	
2025 (NO BUILD - A.M.)	*134*	*607*	*131*	*131*	*395*	*227*	*44*	*404*	*117*	*154*	*503*	*46*	
2025 (BUILD - A.M.)	***134***	***607***	***131***	***131***	***395***	***227***	***44***	***404***	***117***	***154***	***504***	***46***	
		0.85			0.92			0.89			0.96		PHF
	Eastbound (Comanche Rd)			Westbound (Comanche Rd)			Northbound (Edith Blvd)			Southbound (Edith Blvd)			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Existing (2013)	66	465	31	97	543	289	126	373	214	182	313	102	
2025 (NO BUILD - P.M.)	*70*	*493*	*33*	*103*	*575*	*307*	*133*	*395*	*227*	*193*	*331*	*108*	
2025 (BUILD - P.M.)	***70***	***493***	***41***	***109***	***575***	***307***	***137***	***400***	***230***	***193***	***342***	***108***	

Candelaria Rd / Edith Blvd
(2)
3.0% Truck

													PHF
		0.83			0.88			0.84			0.92		
	Eastbound (Candelaria Rd)			Westbound (Candelaria Rd)			Northbound (Edith Blvd)			Southbound (Edith Blvd)			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Existing (2013)	174	663	77	78	324	113	35	332	73	124	363	89	
2025 (NO BUILD - A.M.)	*184*	*703*	*82*	*83*	*343*	*120*	*37*	*352*	*77*	*131*	*385*	*94*	
2025 (BUILD - A.M.)	***184***	***703***	***82***	***83***	***343***	***121***	***37***	***353***	***77***	***132***	***386***	***94***	
		0.90			0.91			0.84			0.92		PHF
	Eastbound (Candelaria Rd)			Westbound (Candelaria Rd)			Northbound (Edith Blvd)			Southbound (Edith Blvd)			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Existing (2013)	82	360	50	103	600	191	78	618	79	82	327	176	
2025 (NO BUILD - P.M.)	*87*	*382*	*53*	*109*	*636*	*202*	*83*	*655*	*84*	*87*	*347*	*187*	
2025 (BUILD - P.M.)	***91***	***382***	***53***	***109***	***636***	***226***	***83***	***673***	***84***	***99***	***356***	***189***	

Driveway "A" / Edith Blvd
(3)
3.0% Truck

													PHF
		0.85			0.85			0.92			0.92		
	Eastbound (Driveway "A")			Westbound (Driveway "A")			Northbound (Edith Blvd)			Southbound (Edith Blvd)			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Existing (2013)	0	0	0	0	0	0	0	522	0	0	576	0	
2025 (NO BUILD - A.M.)	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*553*	*0*	*0*	*611*	*0*	
2025 (BUILD - A.M.)	***1***	***0***	***2***	***0***	***0***	***0***	***3***	***553***	***0***	***0***	***611***	***1***	
		0.85			0.85			0.92			0.92		PHF
	Eastbound (Driveway "A")			Westbound (Driveway "A")			Northbound (Edith Blvd)			Southbound (Edith Blvd)			
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Existing (2013)	0	0	0	0	0	0	0	859	0	0	585	0	
2025 (NO BUILD - P.M.)	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*911*	*0*	*0*	*620*	*0*	
2025 (BUILD - P.M.)	***12***	***0***	***23***	***0***	***0***	***0***	***46***	***911***	***0***	***0***	***620***	***25***	

N. Valley Little League Fields

Projected Turning Movements Worksheet

Comanche Rd / Edith Blvd

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

N-S Street: **Edith Blvd**

Year of Existing Counts 2012

Horizon Year **2025**

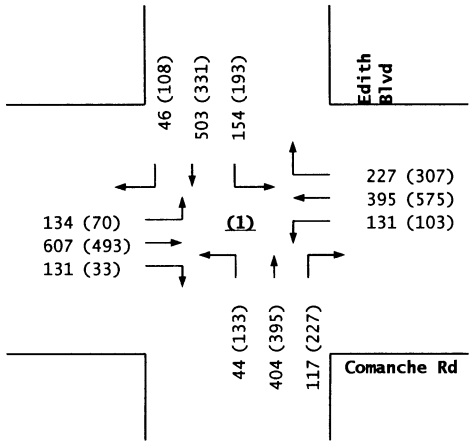
	Eastbound (Comanche Rd)			Westbound (Comanche Rd)			Northbound (Edith Blvd)			Southbound (Edith Blvd)		
Growth Rates	0.50%			0.50%			0.50%			0.50%		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	126	570	123	123	371	213	41	379	110	145	472	43
Background Traffic Growth	8	37	8	8	24	14	3	25	7	9	31	3
Subtotal	134	607	131	131	395	227	44	404	117	154	503	46
Subtotal (NO BUILD - A.M.)	***134***	***607***	***131***	***131***	***395***	***227***	***44***	***404***	***117***	***154***	***503***	***46***
Percent Residential Trips Generated(Entering)	*0.00%*	*0.00%*	*11.24%*	*8.66%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*15.52%*	*0.00%*
Percent Residential Trips Generated(Exiting)	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*11.24%*	*15.52%*	*8.86%*	*0.00%*	*0.00%*	*0.00%*
Total Trips Generated	0	0	0	0	0	0	0	0	0	0	1	0
Total AM Peak Hour BUILD Volumes	**134**	**607**	**131**	**131**	**395**	**227**	**44**	**404**	**117**	**154**	**504**	**46**

	Eastbound (Comanche Rd)			Westbound (Comanche Rd)			Northbound (Edith Blvd)			Southbound (Edith Blvd)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	66	463	31	97	540	288	125	371	213	181	311	101
Background Traffic Growth	4	30	2	6	35	19	8	24	14	12	20	7
Subtotal (NO BUILD - P.M.)	***70***	***493***	***33***	***103***	***575***	***307***	***133***	***395***	***227***	***193***	***331***	***108***
Percent Residential Trips Generated(Entering)	*0.00%*	*0.00%*	*11.24%*	*8.66%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*15.52%*	*0.00%*
Percent Residential Trips Generated(Exiting)	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*11.24%*	*15.52%*	*8.86%*	*0.00%*	*0.00%*	*0.00%*
Total Trips Generated	0	0	8	6	0	0	4	5	3	0	11	0
Total PM Peak Hour BUILD Volumes	**70**	**493**	**41**	**109**	**575**	**307**	**137**	**400**	**230**	**193**	**342**	**108**

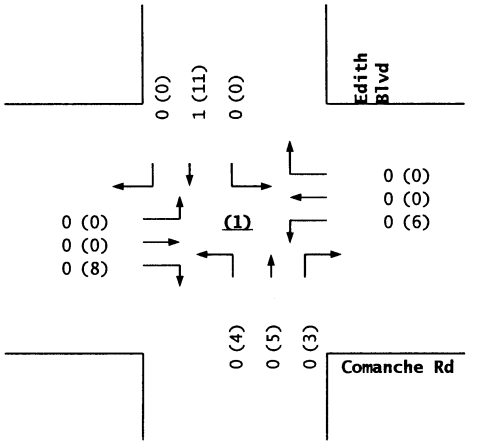
	Entering	Exiting		
Number of Residential Trips Generated	**4**	**3**	A.M.	100% Residential Development
	71	**35**	P.M.	

	Eastbound (Comanche Rd)			Westbound (Comanche Rd)			Northbound (Edith Blvd)			Southbound (Edith Blvd)		
2013 AM Peak Hr. Volumes	127	573	124	124	373	214	41	381	111	146	474	43
2013 PM Peak Hr. Volumes	66	465	31	97	543	289	126	373	214	182	313	102

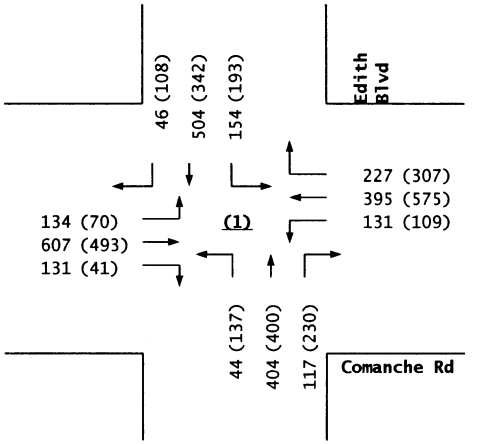
2025
NO BUILD



Trips



2025
BUILD



Comanche Rd / Edith Blvd

N. Valley Little League Fields

Projected Turning Movements Worksheet

Candelaria Rd / Edith Blvd

INTERSECTION: E-W Street: **Candelaria Rd** (2)

N-S Street: **Edith Blvd**

Year of Existing Counts 2013

Horizon Year **2025**

	Eastbound (Candelaria Rd)			Westbound (Candelaria Rd)			Northbound (Edith Blvd)			Southbound (Edith Blvd)		
Growth Rates	0.50%			0.50%			0.50%			0.50%		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	174	663	77	78	324	113	35	332	73	124	363	89
Background Traffic Growth	10	40	5	5	19	7	2	20	4	7	22	5
Subtotal	184	703	82	83	343	120	37	352	77	131	385	94
Subtotal (NO BUILD - A.M.)	***184***	***703***	***82***	***83***	***343***	***120***	***37***	***352***	***77***	***131***	***385***	***94***
Percent Residential Trips Generated(Entering)	***5.50%***	*0.00%*	*0.00%*	*0.00%*	*0.00%*	***33.53%***	*0.00%*	***25.56%***	*0.00%*	*0.00%*	*0.00%*	*0.00%*
Percent Residential Trips Generated(Exiting)	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	***33.53%***	***25.56%***	***5.50%***
Total Trips Generated	0	0	0	0	0	1	0	1	0	1	1	0
Total AM Peak Hour BUILD Volumes	**184**	**703**	**82**	**83**	**343**	**121**	**37**	**353**	**77**	**132**	**386**	**94**

	Eastbound (Candelaria Rd)			Westbound (Candelaria Rd)			Northbound (Edith Blvd)			Southbound (Edith Blvd)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	82	360	50	103	600	191	78	618	79	82	327	176
Background Traffic Growth	5	22	3	6	36	11	5	37	5	5	20	11
Subtotal (NO BUILD - P.M.)	***87***	***382***	***53***	***109***	***636***	***202***	***83***	***655***	***84***	***87***	***347***	***187***
Percent Residential Trips Generated(Entering)	***5.50%***	*0.00%*	*0.00%*	*0.00%*	*0.00%*	***33.53%***	*0.00%*	***25.56%***	*0.00%*	*0.00%*	*0.00%*	*0.00%*
Percent Residential Trips Generated(Exiting)	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	***33.53%***	***25.56%***	***5.50%***
Total Trips Generated	4	0	0	0	0	24	0	18	0	12	9	2
Total PM Peak Hour BUILD Volumes	**91**	**382**	**53**	**109**	**636**	**226**	**83**	**673**	**84**	**99**	**356**	**189**

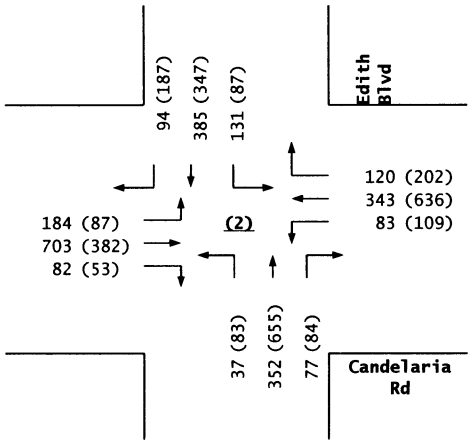
	Entering	Exiting		
Number of Residential Trips Generated	**4**	**3**	A.M.	100% Residential Development
	71	**35**	P.M.	

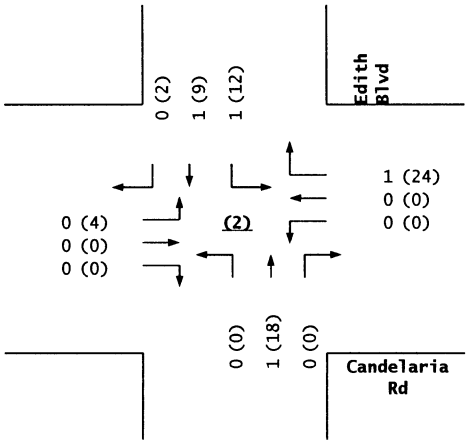
	Eastbound (Candelaria Rd)			Westbound (Candelaria Rd)			Northbound (Edith Blvd)			Southbound (Edith Blvd)		
2013 AM Peak Hr. Volumes	174	663	77	78	324	113	35	332	73	124	363	89
2013 PM Peak Hr. Volumes	82	360	50	103	600	191	78	618	79	82	327	176

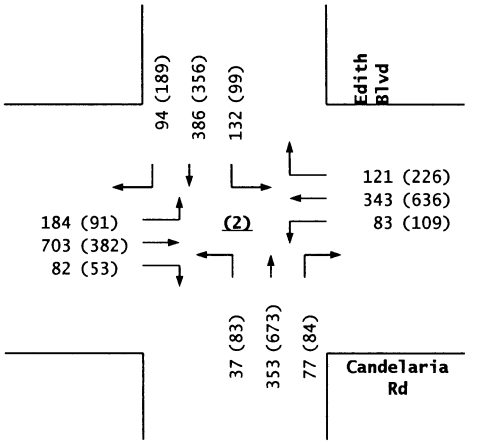
2025
NO BUILD

Trips

2025
BUILD







Candelaria Rd / Edith Blvd

N. Valley Little League Fields

Projected Turning Movements Worksheet

Driveway "A" / Edith Blvd

INTERSECTION: E-W Street: **Driveway "A"** (3)

N-S Street: **Edith Blvd**

Year of Existing Counts 2013

Horizon Year **2025**

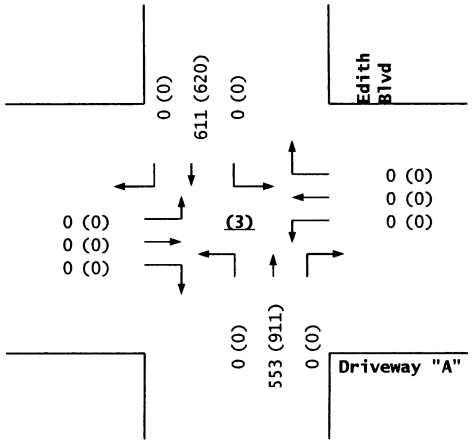
	Eastbound (Driveway "A")			Westbound (Driveway "A")			Northbound (Edith Blvd)			Southbound (Edith Blvd)		
Growth Rates	0.50%			0.50%			0.50%			0.50%		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	0	0	0	0	0	0	0	522	0	0	576	0
Background Traffic Growth	0	0	0	0	0	0	0	31	0	0	35	0
Subtotal	0	0	0	0	0	0	0	553	0	0	611	0
Subtotal (NO BUILD - A.M.)	***0***	***0***	***0***	***0***	***0***	***0***	***0***	***553***	***0***	***0***	***611***	***0***
Percent Residential Trips Generated(Entering)	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	***64.59%***	*0.00%*	*0.00%*	*0.00%*	*0.00%*	***35.42%***
Percent Residential Trips Generated(Exiting)	***35.42%***	*0.00%*	***64.59%***	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*
Total Trips Generated	1	0	2	0	0	0	3	0	0	0	0	1
Total AM Peak Hour BUILD Volumes	**1**	**0**	**2**	**0**	**0**	**0**	**3**	**553**	**0**	**0**	**611**	**1**

	Eastbound (Driveway "A")			Westbound (Driveway "A")			Northbound (Edith Blvd)			Southbound (Edith Blvd)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	0	0	0	0	0	0	0	859	0	0	585	0
Background Traffic Growth	0	0	0	0	0	0	0	52	0	0	35	0
Subtotal (NO BUILD - P.M.)	***0***	***0***	***0***	***0***	***0***	***0***	***0***	***911***	***0***	***0***	***620***	***0***
Percent Residential Trips Generated(Entering)	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	***64.59%***	*0.00%*	*0.00%*	*0.00%*	*0.00%*	***35.42%***
Percent Residential Trips Generated(Exiting)	***35.42%***	*0.00%*	***64.59%***	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*
Total Trips Generated	12	0	23	0	0	0	46	0	0	0	0	25
Total PM Peak Hour BUILD Volumes	**12**	**0**	**23**	**0**	**0**	**0**	**46**	**911**	**0**	**0**	**620**	**25**

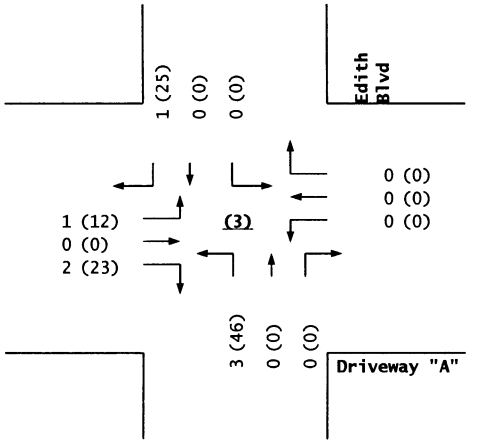
	Entering	Exiting		
Number of Residential Trips Generated	**4**	**3**	A.M.	100% Residential Development
	71	**35**	P.M.	

	Eastbound (Driveway "A")			Westbound (Driveway "A")			Northbound (Edith Blvd)			Southbound (Edith Blvd)		
2013 AM Peak Hr. Volumes	0	0	0	0	0	0	0	522	0	0	576	0
2013 PM Peak Hr. Volumes	0	0	0	0	0	0	0	859	0	0	585	0

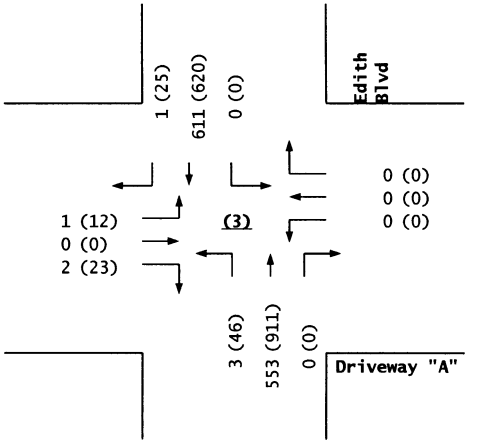
2025
NO BUILD



Trips



2025
BUILD



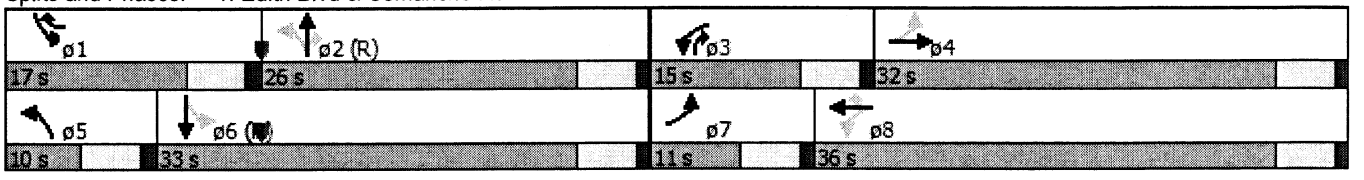
Driveway "A" / Edith Blvd

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Volume (vph)	128	579	125	377	216	42	385	112	147	479
Turn Type	pm+pt	NA	pm+pt	NA	pm+ov	pm+pt	NA	pm+ov	pm+pt	NA
Protected Phases	7	4	3	8	1	5	2	3	1	6
Permitted Phases	4		8		8	2		2	6	
Detector Phase	7	4	3	8	1	5	2	3	1	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	21.0	10.0	21.0	10.0	10.0	21.0	10.0	10.0	21.0
Total Split (s)	11.0	32.0	15.0	36.0	17.0	10.0	26.0	15.0	17.0	33.0
Total Split (%)	12.2%	35.6%	16.7%	40.0%	18.9%	11.1%	28.9%	16.7%	18.9%	36.7%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag
Lead-Lag Optimize?										
Recall Mode	Min	Min	Min	Min	Min	Min	C-Min	Min	Min	C-Min
Act Effct Green (s)	32.0	24.7	35.4	26.4	41.9	31.6	25.8	39.8	40.2	30.5
Actuated g/C Ratio	0.36	0.27	0.39	0.29	0.47	0.35	0.29	0.44	0.45	0.34
v/c Ratio	0.37	0.81	0.52	0.39	0.29	0.20	0.51	0.19	0.49	0.57
Control Delay	18.8	36.5	22.6	25.9	5.5	16.4	24.9	2.9	20.6	27.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.8	36.5	22.6	25.9	5.5	16.4	24.9	2.9	20.6	27.0
LOS	B	D	C	C	A	B	C	A	C	C
Approach Delay		33.8		19.2			19.7			25.6
Approach LOS		C		B			B			C

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 32 (36%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 65
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.81
Intersection Signal Delay: 25.1 Intersection LOS: C
Intersection Capacity Utilization 62.4% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 1: Edith Blvd & Comanche Rd



Terry O. Brown, P.E.
6/1/2013

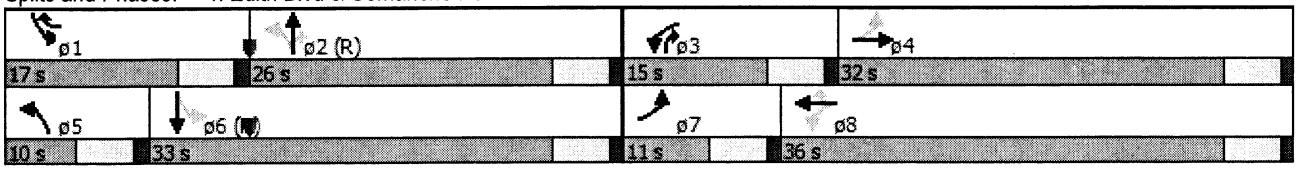
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	128	579	125	125	377	216	42	385	112	147	479	44
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0
Lanes	1	2	0	1	2	1	1	2	1	1	2	0
Cap, veh/h	444	872	188	310	1088	626	308	903	510	389	933	85
Arrive On Green	0.08	0.30	0.30	0.08	0.29	0.00	0.07	0.24	0.00	0.10	0.28	0.28
Sat Flow, veh/h	1757	2944	633	1757	3689	1568	1757	3689	1568	1757	3332	303
Grp Volume(v), veh/h	141	398	375	134	405	0	56	513	0	188	339	331
Grp Sat Flow(s),veh/h/ln	1757	1845	1733	1757	1845	1568	1757	1845	1568	1757	1845	1791
Q Serve(g_s), s	4.0	14.1	14.2	3.8	6.3	0.0	1.6	8.9	0.0	5.4	11.8	11.9
Cycle Q Clear(g_c), s	4.0	14.1	14.2	3.8	6.3	0.0	1.6	8.9	0.0	5.4	11.8	11.9
Prop In Lane	1.00		0.37	1.00		1.00	1.00		1.00	1.00		0.17
Lane Grp Cap(c), veh/h	444	546	513	310	1088	626	308	903	510	389	517	502
V/C Ratio(X)	0.32	0.73	0.73	0.43	0.37	0.00	0.18	0.57	0.00	0.48	0.66	0.66
Avail Cap(c_a), veh/h	445	684	642	410	1570	830	308	1064	578	496	709	688
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	0.91	0.91	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.7	23.0	23.0	17.1	20.3	0.0	18.4	24.1	0.0	16.6	23.1	23.2
Incr Delay (d2), s/veh	0.4	3.0	3.2	0.9	0.2	0.0	0.3	2.4	0.0	0.9	6.4	6.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.6	6.4	6.1	1.6	2.8	0.0	0.7	4.3	0.0	2.3	6.2	6.1
Lane Grp Delay (d), s/veh	16.1	26.0	26.2	18.0	20.5	0.0	18.6	26.5	0.0	17.6	29.5	29.8
Lane Grp LOS	B	C	C	B	C		B	C		B	C	C
Approach Vol, veh/h		914			539			569			858	
Approach Delay, s/veh		24.6			19.9			25.7			27.0	
Approach LOS		C			B			C			C	
Timer												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	11.0	26.6		10.9	26.5		10.0	22.8		12.6	25.4	
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Max Green Setting (Gmax), s	6.0	27.0		10.0	31.0		5.0	21.0		12.0	28.0	
Max Q Clear Time (g_c+I1), s	6.0	16.2		5.8	8.3		3.6	10.9		7.4	13.9	
Green Ext Time (p_c), s	0.0	5.4		0.1	8.0		0.0	5.3		0.2	6.5	
Intersection Summary												
HCM 2010 Ctrl Delay			24.7									
HCM 2010 LOS			C									
Notes												

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Volume (vph)	128	579	125	377	216	42	385	112	147	480
Turn Type	pm+pt	NA	pm+pt	NA	pm+ov	pm+pt	NA	pm+ov	pm+pt	NA
Protected Phases	7	4	3	8	1	5	2	3	1	6
Permitted Phases	4		8		8	2		2	6	
Detector Phase	7	4	3	8	1	5	2	3	1	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	21.0	10.0	21.0	10.0	10.0	21.0	10.0	10.0	21.0
Total Split (s)	11.0	32.0	15.0	36.0	17.0	10.0	26.0	15.0	17.0	33.0
Total Split (%)	12.2%	35.6%	16.7%	40.0%	18.9%	11.1%	28.9%	16.7%	18.9%	36.7%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag
Lead-Lag Optimize?										
Recall Mode	Min	Min	Min	Min	Min	Min	C-Min	Min	Min	C-Min
Act Effct Green (s)	32.0	24.7	35.4	26.4	41.9	31.6	25.8	39.8	40.2	30.5
Actuated g/C Ratio	0.36	0.27	0.39	0.29	0.47	0.35	0.29	0.44	0.45	0.34
v/c Ratio	0.37	0.81	0.52	0.39	0.29	0.20	0.51	0.19	0.49	0.57
Control Delay	18.8	36.5	22.6	25.9	5.5	14.2	23.9	3.8	20.6	27.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.8	36.5	22.6	25.9	5.5	14.2	23.9	3.8	20.6	27.0
LOS	B	D	C	C	A	B	C	A	C	C
Approach Delay		33.8		19.2			19.0			25.6
Approach LOS		C		B			B			C

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 32 (36%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 65
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.81
Intersection Signal Delay: 24.9 Intersection LOS: C
Intersection Capacity Utilization 62.4% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 1: Edith Blvd & Comanche Rd



Terry O. Brown, P.E.
6/1/2013

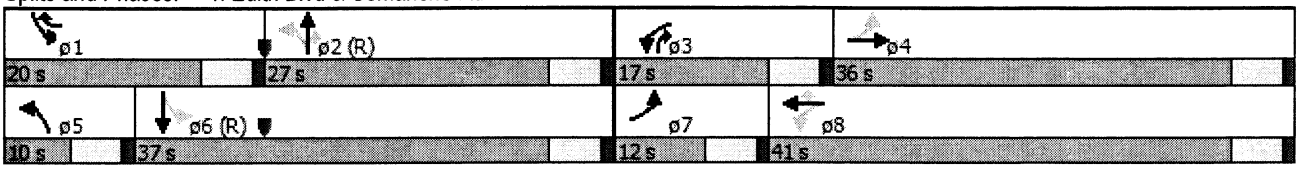
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	128	579	125	125	377	216	42	385	112	147	480	44
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0
Lanes	1	2	0	1	2	1	1	2	1	1	2	0
Cap, veh/h	443	872	187	310	1088	626	308	903	510	389	934	85
Arrive On Green	0.08	0.30	0.30	0.08	0.29	0.00	0.07	0.24	0.00	0.10	0.28	0.28
Sat Flow, veh/h	1757	2944	633	1757	3689	1568	1757	3689	1568	1757	3333	303
Grp Volume(v), veh/h	141	398	375	134	405	0	56	513	0	188	340	331
Grp Sat Flow(s),veh/h/ln	1757	1845	1733	1757	1845	1568	1757	1845	1568	1757	1845	1791
Q Serve(g_s), s	4.0	14.1	14.2	3.8	6.3	0.0	1.6	8.9	0.0	5.4	11.9	11.9
Cycle Q Clear(g_c), s	4.0	14.1	14.2	3.8	6.3	0.0	1.6	8.9	0.0	5.4	11.9	11.9
Prop In Lane	1.00		0.37	1.00		1.00	1.00		1.00	1.00		0.17
Lane Grp Cap(c), veh/h	443	546	513	310	1088	626	308	903	510	389	517	502
V/C Ratio(X)	0.32	0.73	0.73	0.43	0.37	0.00	0.18	0.57	0.00	0.48	0.66	0.66
Avail Cap(c_a), veh/h	445	683	642	410	1569	830	308	1063	578	496	709	688
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.7	23.0	23.0	17.1	20.3	0.0	18.4	24.1	0.0	16.6	23.1	23.2
Incr Delay (d2), s/veh	0.4	3.0	3.2	0.9	0.2	0.0	0.3	2.6	0.0	0.9	6.4	6.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.6	6.4	6.1	1.6	2.8	0.0	0.7	4.3	0.0	2.3	6.2	6.1
Lane Grp Delay (d), s/veh	16.1	26.0	26.3	18.0	20.6	0.0	18.7	26.7	0.0	17.5	29.6	29.8
Lane Grp LOS	B	C	C	B	C		B	C		B	C	C
Approach Vol, veh/h		914			539			569			859	
Approach Delay, s/veh		24.6			19.9			25.9			27.0	
Approach LOS		C			B			C			C	
Timer												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	11.0	26.6		10.9	26.5		10.0	22.8		12.6	25.4	
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Max Green Setting (Gmax), s	6.0	27.0		10.0	31.0		5.0	21.0		12.0	28.0	
Max Q Clear Time (g_c+I1), s	6.0	16.2		5.8	8.3		3.6	10.9		7.4	13.9	
Green Ext Time (p_c), s	0.0	5.4		0.1	8.0		0.0	5.3		0.2	6.5	
Intersection Summary												
HCM 2010 Ctrl Delay			24.7									
HCM 2010 LOS			C									
Notes												

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Volume (vph)	134	607	131	395	227	44	404	117	154	503
Turn Type	pm+pt	NA	pm+pt	NA	pm+ov	pm+pt	NA	pm+ov	pm+pt	NA
Protected Phases	7	4	3	8	1	5	2	3	1	6
Permitted Phases	4		8		8	2		2	6	
Detector Phase	7	4	3	8	1	5	2	3	1	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	21.0	10.0	21.0	10.0	10.0	21.0	10.0	10.0	21.0
Total Split (s)	12.0	36.0	17.0	41.0	20.0	10.0	27.0	17.0	20.0	37.0
Total Split (%)	12.0%	36.0%	17.0%	41.0%	20.0%	10.0%	27.0%	17.0%	20.0%	37.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag
Lead-Lag Optimize?										
Recall Mode	Min	Min	Min	Min	Min	Min	C-Min	Min	Min	C-Min
Act Effct Green (s)	36.5	28.5	40.5	30.5	47.5	35.3	29.5	44.5	45.8	35.7
Actuated g/C Ratio	0.36	0.28	0.40	0.30	0.48	0.35	0.30	0.44	0.46	0.36
v/c Ratio	0.39	0.82	0.57	0.40	0.30	0.22	0.52	0.20	0.51	0.57
Control Delay	20.4	39.6	25.6	27.9	6.4	14.9	30.9	11.6	22.5	28.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	20.4	39.6	25.6	27.9	6.4	14.9	30.9	11.6	22.5	28.7
LOS	C	D	C	C	A	B	C	B	C	C
Approach Delay		36.7		21.0			25.7			27.3
Approach LOS		D		C			C			C

Intersection Summary

Cycle Length: 100
Actuated Cycle Length: 100
Offset: 88 (88%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 65
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.82
Intersection Signal Delay: 28.1 Intersection LOS: C
Intersection Capacity Utilization 64.6% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 1: Edith Blvd & Comanche Rd



Terry O. Brown, P.E.
6/1/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	134	607	131	131	395	227	44	404	117	154	503	46
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0
Lanes	1	2	0	1	2	1	1	2	1	1	2	0
Cap, veh/h	442	911	196	304	1140	649	292	923	519	380	972	89
Arrive On Green	0.08	0.31	0.31	0.08	0.31	0.00	0.06	0.25	0.00	0.11	0.29	0.29
Sat Flow, veh/h	1757	2943	635	1757	3689	1568	1757	3689	1568	1757	3331	304
Grp Volume(v), veh/h	147	418	393	141	425	0	59	539	0	197	357	347
Grp Sat Flow(s),veh/h/ln	1757	1845	1733	1757	1845	1568	1757	1845	1568	1757	1845	1791
Q Serve(g_s), s	4.4	15.9	15.9	4.2	7.1	0.0	1.9	10.1	0.0	6.0	13.4	13.4
Cycle Q Clear(g_c), s	4.4	15.9	15.9	4.2	7.1	0.0	1.9	10.1	0.0	6.0	13.4	13.4
Prop In Lane	1.00		0.37	1.00		1.00	1.00		1.00	1.00		0.17
Lane Grp Cap(c), veh/h	442	571	536	304	1140	649	292	923	519	380	538	522
V/C Ratio(X)	0.33	0.73	0.73	0.46	0.37	0.00	0.20	0.58	0.00	0.52	0.66	0.66
Avail Cap(c_a), veh/h	456	728	683	431	1690	883	292	1033	565	531	751	729
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	0.91	0.91	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.3	24.2	24.2	18.0	21.2	0.0	19.9	25.9	0.0	17.5	24.4	24.5
Incr Delay (d2), s/veh	0.4	2.8	3.0	1.1	0.2	0.0	0.3	2.5	0.0	1.1	6.3	6.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.8	7.3	6.9	1.8	3.2	0.0	0.8	4.8	0.0	2.6	6.9	6.7
Lane Grp Delay (d), s/veh	16.7	27.0	27.2	19.1	21.4	0.0	20.2	28.3	0.0	18.6	30.8	31.0
Lane Grp LOS	B	C	C	B	C		C	C		B	C	C
Approach Vol, veh/h		958			566			598			901	
Approach Delay, s/veh		25.5			20.8			27.5			28.2	
Approach LOS		C			C			C			C	

Timer												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	11.4	29.3		11.3	29.3		10.0	24.7		13.3	27.9	
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Max Green Setting (Gmax), s	7.0	31.0		12.0	36.0		5.0	22.0		15.0	32.0	
Max Q Clear Time (g_c+I1), s	6.4	17.9		6.2	9.1		3.9	12.1		8.0	15.4	
Green Ext Time (p_c), s	0.0	6.4		0.2	9.1		0.0	5.4		0.3	7.5	

Intersection Summary												
HCM 2010 Ctrl Delay			25.8									
HCM 2010 LOS			C									

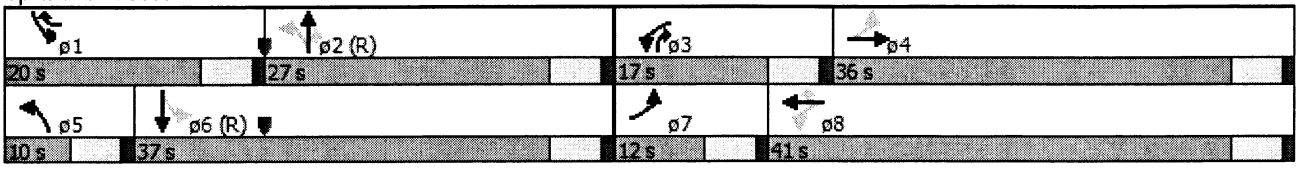
Notes

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Volume (vph)	134	607	131	395	227	44	404	117	154	504
Turn Type	pm+pt	NA	pm+pt	NA	pm+ov	pm+pt	NA	pm+ov	pm+pt	NA
Protected Phases	7	4	3	8	1	5	2	3	1	6
Permitted Phases	4		8		8	2		2	6	
Detector Phase	7	4	3	8	1	5	2	3	1	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	21.0	10.0	21.0	10.0	10.0	21.0	10.0	10.0	21.0
Total Split (s)	12.0	36.0	17.0	41.0	20.0	10.0	27.0	17.0	20.0	37.0
Total Split (%)	12.0%	36.0%	17.0%	41.0%	20.0%	10.0%	27.0%	17.0%	20.0%	37.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag
Lead-Lag Optimize?										
Recall Mode	Min	Min	Min	Min	Min	Min	C-Min	Min	Min	C-Min
Act Effct Green (s)	36.5	28.5	40.5	30.5	47.5	35.3	29.5	44.5	45.8	35.7
Actuated g/C Ratio	0.36	0.28	0.40	0.30	0.48	0.35	0.30	0.44	0.46	0.36
v/c Ratio	0.39	0.82	0.57	0.40	0.30	0.22	0.52	0.20	0.51	0.57
Control Delay	20.4	39.6	25.6	27.9	6.4	17.2	33.0	11.3	22.5	28.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	20.4	39.6	25.6	27.9	6.4	17.2	33.0	11.3	22.5	28.7
LOS	C	D	C	C	A	B	C	B	C	C
Approach Delay		36.7		21.0			27.3			27.3
Approach LOS		D		C			C			C

Intersection Summary

Cycle Length: 100
Actuated Cycle Length: 100
Offset: 88 (88%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 65
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.82
Intersection Signal Delay: 28.4 Intersection LOS: C
Intersection Capacity Utilization 64.6% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 1: Edith Blvd & Comanche Rd



Terry O. Brown, P.E.
6/1/2013

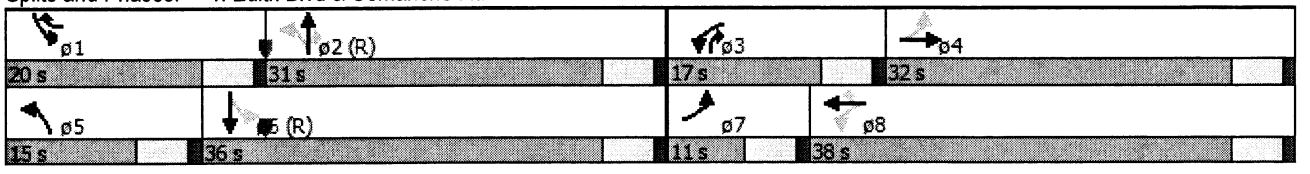
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	134	607	131	131	395	227	44	404	117	154	504	46
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0
Lanes	1	2	0	1	2	1	1	2	1	1	2	0
Cap, veh/h	442	911	196	304	1139	649	292	924	519	380	972	89
Arrive On Green	0.08	0.31	0.31	0.08	0.31	0.00	0.06	0.25	0.00	0.10	0.29	0.29
Sat Flow, veh/h	1757	2943	635	1757	3689	1568	1757	3689	1568	1757	3332	304
Grp Volume(v), veh/h	147	418	393	141	425	0	59	539	0	197	357	348
Grp Sat Flow(s),veh/h/ln	1757	1845	1733	1757	1845	1568	1757	1845	1568	1757	1845	1791
Q Serve(g_s), s	4.4	15.9	15.9	4.2	7.1	0.0	1.9	10.1	0.0	6.0	13.4	13.4
Cycle Q Clear(g_c), s	4.4	15.9	15.9	4.2	7.1	0.0	1.9	10.1	0.0	6.0	13.4	13.4
Prop In Lane	1.00		0.37	1.00		1.00	1.00		1.00	1.00		0.17
Lane Grp Cap(c), veh/h	442	571	536	304	1139	649	292	924	519	380	538	523
V/C Ratio(X)	0.33	0.73	0.73	0.46	0.37	0.00	0.20	0.58	0.00	0.52	0.66	0.67
Avail Cap(c_a), veh/h	456	727	683	431	1689	882	292	1032	565	531	751	729
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.3	24.2	24.3	18.0	21.2	0.0	19.9	25.9	0.0	17.5	24.5	24.5
Incr Delay (d2), s/veh	0.4	2.8	3.0	1.1	0.2	0.0	0.3	2.7	0.0	1.1	6.3	6.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.8	7.3	6.9	1.8	3.2	0.0	0.8	4.8	0.0	2.6	6.9	6.7
Lane Grp Delay (d), s/veh	16.7	27.0	27.3	19.1	21.4	0.0	20.2	28.6	0.0	18.6	30.8	31.0
Lane Grp LOS	B	C	C	B	C		C	C		B	C	C
Approach Vol, veh/h		958			566			598			902	
Approach Delay, s/veh		25.6			20.8			27.7			28.2	
Approach LOS		C			C			C			C	
Timer												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	11.4	29.3		11.3	29.3		10.0	24.7		13.3	28.0	
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Max Green Setting (Gmax), s	7.0	31.0		12.0	36.0		5.0	22.0		15.0	32.0	
Max Q Clear Time (g_c+I1), s	6.4	17.9		6.2	9.1		3.9	12.1		8.0	15.4	
Green Ext Time (p_c), s	0.0	6.4		0.2	9.1		0.0	5.4		0.3	7.5	
Intersection Summary												
HCM 2010 Ctrl Delay			25.9									
HCM 2010 LOS			C									
Notes												

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Volume (vph)	67	470	98	548	292	127	377	216	184	316
Turn Type	pm+pt	NA	pm+pt	NA	pm+ov	pm+pt	NA	pm+ov	pm+pt	NA
Protected Phases	7	4	3	8	1	5	2	3	1	6
Permitted Phases	4		8		8	2		2	6	
Detector Phase	7	4	3	8	1	5	2	3	1	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	21.0	10.0	21.0	10.0	10.0	21.0	10.0	10.0	21.0
Total Split (s)	11.0	32.0	17.0	38.0	20.0	15.0	31.0	17.0	20.0	36.0
Total Split (%)	11.0%	32.0%	17.0%	38.0%	20.0%	15.0%	31.0%	17.0%	20.0%	36.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag
Lead-Lag Optimize?										
Recall Mode	Min	Min	Min	Min	Min	Min	C-Min	Min	Min	C-Min
Act Effct Green (s)	30.8	22.7	33.4	24.0	40.7	45.8	36.2	50.6	50.0	38.3
Actuated g/C Ratio	0.31	0.23	0.33	0.24	0.41	0.46	0.36	0.51	0.50	0.38
v/c Ratio	0.32	0.74	0.42	0.71	0.42	0.30	0.33	0.28	0.38	0.33
Control Delay	22.7	41.4	24.5	39.3	8.3	9.9	16.4	4.3	16.4	22.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.7	41.4	24.5	39.3	8.3	9.9	16.4	4.3	16.4	22.0
LOS	C	D	C	D	A	A	B	A	B	C
Approach Delay		39.2		28.1			11.6			20.3
Approach LOS		D		C			B			C

Intersection Summary

Cycle Length: 100
Actuated Cycle Length: 100
Offset: 16 (16%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 65
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.74
Intersection Signal Delay: 24.6 Intersection LOS: C
Intersection Capacity Utilization 56.7% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 1: Edith Blvd & Comanche Rd



Terry O. Brown, P.E.
6/1/2013

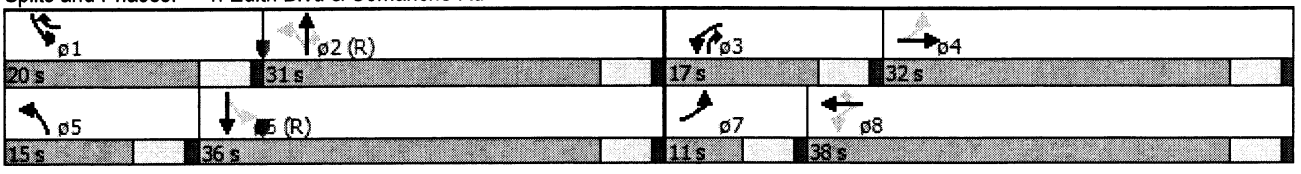
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	67	470	31	98	548	292	127	377	216	184	316	103
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0
Lanes	1	2	0	1	2	1	1	2	1	1	2	0
Cap, veh/h	369	995	65	369	1071	636	392	785	453	417	627	200
Arrive On Green	0.08	0.29	0.29	0.08	0.29	0.00	0.09	0.21	0.00	0.12	0.23	0.23
Sat Flow, veh/h	1757	3427	223	1757	3689	1568	1757	3689	1568	1757	2681	857
Grp Volume(v), veh/h	79	297	292	107	596	0	143	424	0	192	225	211
Grp Sat Flow(s),veh/h/ln	1757	1845	1805	1757	1845	1568	1757	1845	1568	1757	1845	1693
Q Serve(g_s), s	2.0	8.9	9.0	2.7	9.0	0.0	4.0	6.7	0.0	5.2	7.0	7.2
Cycle Q Clear(g_c), s	2.0	8.9	9.0	2.7	9.0	0.0	4.0	6.7	0.0	5.2	7.0	7.2
Prop In Lane	1.00		0.12	1.00		1.00	1.00		1.00	1.00		0.51
Lane Grp Cap(c), veh/h	369	536	524	369	1071	636	392	785	453	417	432	396
V/C Ratio(X)	0.21	0.55	0.56	0.29	0.56	0.00	0.36	0.54	0.00	0.46	0.52	0.53
Avail Cap(c_a), veh/h	395	761	745	557	1860	971	495	1465	743	617	874	802
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	0.83	0.83	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	14.4	19.7	19.7	14.7	19.7	0.0	17.4	22.9	0.0	16.2	21.9	21.9
Incr Delay (d2), s/veh	0.3	0.9	0.9	0.4	0.5	0.0	0.5	2.2	0.0	0.8	4.4	5.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.8	3.8	3.8	1.1	4.0	0.0	1.7	3.2	0.0	2.2	3.7	3.5
Lane Grp Delay (d), s/veh	14.7	20.6	20.6	15.1	20.1	0.0	17.9	25.1	0.0	17.0	26.3	27.0
Lane Grp LOS	B	C	C	B	C		B	C		B	C	C
Approach Vol, veh/h		668			703			567			628	
Approach Delay, s/veh		19.9			19.4			23.3			23.7	
Approach LOS		B			B			C			C	
Timer												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	10.0	24.0		10.0	24.0		11.1	18.9		12.5	20.3	
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Max Green Setting (Gmax), s	6.0	27.0		12.0	33.0		10.0	26.0		15.0	31.0	
Max Q Clear Time (g_c+I1), s	4.0	11.0		4.7	11.0		6.0	8.7		7.2	9.2	
Green Ext Time (p_c), s	0.0	6.9		0.1	8.1		0.1	5.2		0.3	5.7	
Intersection Summary												
HCM 2010 Ctrl Delay			21.4									
HCM 2010 LOS			C									
Notes												

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Volume (vph)	67	470	104	548	292	131	382	219	184	327
Turn Type	pm+pt	NA	pm+pt	NA	pm+ov	pm+pt	NA	pm+ov	pm+pt	NA
Protected Phases	7	4	3	8	1	5	2	3	1	6
Permitted Phases	4		8		8	2		2	6	
Detector Phase	7	4	3	8	1	5	2	3	1	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	21.0	10.0	21.0	10.0	10.0	21.0	10.0	10.0	21.0
Total Split (s)	11.0	32.0	17.0	38.0	20.0	15.0	31.0	17.0	20.0	36.0
Total Split (%)	11.0%	32.0%	17.0%	38.0%	20.0%	15.0%	31.0%	17.0%	20.0%	36.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag
Lead-Lag Optimize?										
Recall Mode	Min	Min	Min	Min	Min	Min	C-Min	Min	Min	C-Min
Act Effct Green (s)	31.0	23.0	34.2	24.6	41.2	45.3	35.8	50.4	49.4	37.8
Actuated g/C Ratio	0.31	0.23	0.34	0.25	0.41	0.45	0.36	0.50	0.49	0.38
v/c Ratio	0.32	0.75	0.43	0.69	0.42	0.31	0.34	0.28	0.39	0.34
Control Delay	22.2	41.2	24.5	38.3	8.2	10.1	18.8	6.0	16.9	22.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.2	41.2	24.5	38.3	8.2	10.1	18.8	6.0	16.9	22.6
LOS	C	D	C	D	A	B	B	A	B	C
Approach Delay		39.0		27.5			13.4			20.9
Approach LOS		D		C			B			C

Intersection Summary

Cycle Length: 100
Actuated Cycle Length: 100
Offset: 16 (16%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 65
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.75
Intersection Signal Delay: 24.9 Intersection LOS: C
Intersection Capacity Utilization 57.4% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 1: Edith Blvd & Comanche Rd



Terry O. Brown, P.E.
6/1/2013

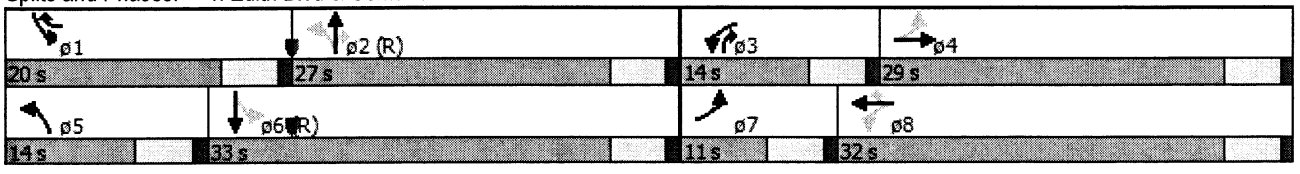
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	67	470	39	104	548	292	131	382	219	184	327	103
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0
Lanes	1	2	0	1	2	1	1	2	1	1	2	0
Cap, veh/h	368	977	81	365	1072	636	390	792	456	417	634	196
Arrive On Green	0.08	0.29	0.29	0.08	0.29	0.00	0.10	0.21	0.00	0.11	0.23	0.23
Sat Flow, veh/h	1757	3361	279	1757	3689	1568	1757	3689	1568	1757	2706	836
Grp Volume(v), veh/h	79	303	296	113	596	0	147	429	0	192	231	217
Grp Sat Flow(s),veh/h/ln	1757	1845	1795	1757	1845	1568	1757	1845	1568	1757	1845	1697
Q Serve(g_s), s	2.0	9.2	9.2	2.9	9.0	0.0	4.1	6.8	0.0	5.3	7.2	7.4
Cycle Q Clear(g_c), s	2.0	9.2	9.2	2.9	9.0	0.0	4.1	6.8	0.0	5.3	7.2	7.4
Prop In Lane	1.00		0.16	1.00		1.00	1.00		1.00	1.00		0.49
Lane Grp Cap(c), veh/h	368	536	522	365	1072	636	390	792	456	417	432	398
V/C Ratio(X)	0.21	0.57	0.57	0.31	0.56	0.00	0.38	0.54	0.00	0.46	0.53	0.55
Avail Cap(c_a), veh/h	394	757	737	551	1850	966	490	1458	739	615	869	799
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	14.5	19.8	19.8	14.9	19.8	0.0	17.4	23.0	0.0	16.3	22.1	22.1
Incr Delay (d2), s/veh	0.3	0.9	1.0	0.5	0.5	0.0	0.6	2.7	0.0	0.8	4.7	5.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.8	3.9	3.8	1.2	4.0	0.0	1.7	3.3	0.0	2.2	3.8	3.6
Lane Grp Delay (d), s/veh	14.8	20.8	20.8	15.3	20.2	0.0	18.0	25.6	0.0	17.1	26.7	27.4
Lane Grp LOS	B	C	C	B	C		B	C		B	C	C
Approach Vol, veh/h		678			709			576			640	
Approach Delay, s/veh		20.1			19.4			23.7			24.1	
Approach LOS		C			B			C			C	
Timer												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	10.0	24.1		10.0	24.1		11.3	19.1		12.6	20.4	
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Max Green Setting (Gmax), s	6.0	27.0		12.0	33.0		10.0	26.0		15.0	31.0	
Max Q Clear Time (g_c+I1), s	4.0	11.2		4.9	11.0		6.1	8.8		7.3	9.4	
Green Ext Time (p_c), s	0.0	6.9		0.1	8.1		0.1	5.3		0.3	5.8	
Intersection Summary												
HCM 2010 Ctrl Delay			21.7									
HCM 2010 LOS			C									
Notes												

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Volume (vph)	70	493	103	575	307	133	395	227	193	331
Turn Type	pm+pt	NA	pm+pt	NA	pm+ov	pm+pt	NA	pm+ov	pm+pt	NA
Protected Phases	7	4	3	8	1	5	2	3	1	6
Permitted Phases	4		8		8	2		2	6	
Detector Phase	7	4	3	8	1	5	2	3	1	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	21.0	10.0	21.0	10.0	10.0	21.0	10.0	10.0	21.0
Total Split (s)	11.0	29.0	14.0	32.0	20.0	14.0	27.0	14.0	20.0	33.0
Total Split (%)	12.2%	32.2%	15.6%	35.6%	22.2%	15.6%	30.0%	15.6%	22.2%	36.7%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag
Lead-Lag Optimize?										
Recall Mode	Min	Min	Min	Min	Min	Min	C-Min	Min	Min	C-Min
Act Effct Green (s)	28.5	21.2	31.1	22.5	38.9	37.7	28.8	42.4	42.5	31.3
Actuated g/C Ratio	0.32	0.24	0.35	0.25	0.43	0.42	0.32	0.47	0.47	0.35
v/c Ratio	0.33	0.75	0.43	0.71	0.43	0.33	0.40	0.31	0.43	0.38
Control Delay	20.5	37.6	22.2	35.3	8.2	9.9	22.9	12.4	16.8	21.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	20.5	37.6	22.2	35.3	8.2	9.9	22.9	12.4	16.8	21.8
LOS	C	D	C	D	A	A	C	B	B	C
Approach Delay		35.6		25.5			17.5			20.3
Approach LOS		D		C			B			C

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 84 (93%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 65
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.75
Intersection Signal Delay: 24.5 Intersection LOS: C
Intersection Capacity Utilization 58.7% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 1: Edith Blvd & Comanche Rd



Terry O. Brown, P.E.
6/1/2013

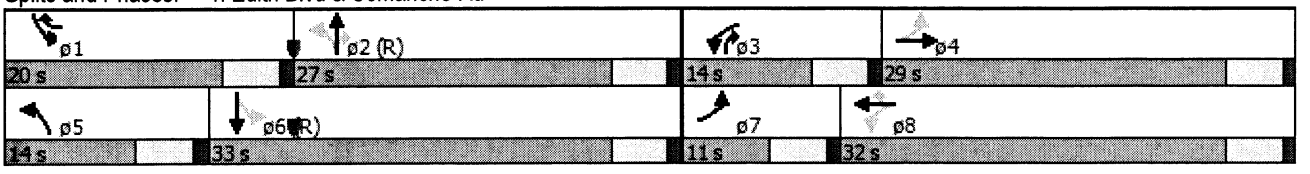
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	70	493	33	103	575	307	133	395	227	193	331	108
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0
Lanes	1	2	0	1	2	1	1	2	1	1	2	0
Cap, veh/h	356	978	66	356	1055	635	389	781	452	416	629	201
Arrive On Green	0.08	0.29	0.29	0.08	0.29	0.00	0.10	0.21	0.00	0.12	0.23	0.23
Sat Flow, veh/h	1757	3419	230	1757	3689	1568	1757	3689	1568	1757	2681	857
Grp Volume(v), veh/h	82	312	307	112	625	0	149	444	0	201	236	221
Grp Sat Flow(s),veh/h/ln	1757	1845	1804	1757	1845	1568	1757	1845	1568	1757	1845	1693
Q Serve(g_s), s	2.0	9.5	9.5	2.8	9.5	0.0	4.2	7.0	0.0	5.4	7.3	7.5
Cycle Q Clear(g_c), s	2.0	9.5	9.5	2.8	9.5	0.0	4.2	7.0	0.0	5.4	7.3	7.5
Prop In Lane	1.00		0.13	1.00		1.00	1.00		1.00	1.00		0.51
Lane Grp Cap(c), veh/h	356	527	516	356	1055	635	389	781	452	416	432	397
V/C Ratio(X)	0.23	0.59	0.59	0.31	0.59	0.00	0.38	0.57	0.00	0.48	0.54	0.56
Avail Cap(c_a), veh/h	383	679	664	464	1528	836	463	1245	649	611	792	727
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	0.77	0.77	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	14.7	20.0	20.0	15.0	20.0	0.0	17.4	23.0	0.0	16.1	21.9	22.0
Incr Delay (d2), s/veh	0.3	1.1	1.1	0.5	0.5	0.0	0.5	2.3	0.0	0.9	4.9	5.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.8	4.1	4.0	1.2	4.2	0.0	1.7	3.4	0.0	2.3	3.8	3.6
Lane Grp Delay (d), s/veh	15.0	21.1	21.1	15.5	20.6	0.0	17.9	25.4	0.0	17.0	26.8	27.5
Lane Grp LOS	B	C	C	B	C		B	C		B	C	C
Approach Vol, veh/h		701			737			593			658	
Approach Delay, s/veh		20.4			19.8			23.5			24.0	
Approach LOS		C			B			C			C	
Timer												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	10.0	23.6		10.0	23.6		11.3	18.8		12.8	20.3	
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Max Green Setting (Gmax), s	6.0	24.0		9.0	27.0		9.0	22.0		15.0	28.0	
Max Q Clear Time (g_c+I1), s	4.0	11.5		4.8	11.5		6.2	9.0		7.4	9.5	
Green Ext Time (p_c), s	0.0	6.3		0.1	7.1		0.1	4.8		0.3	5.7	
Intersection Summary												
HCM 2010 Ctrl Delay			21.8									
HCM 2010 LOS			C									
Notes												

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Volume (vph)	70	493	109	575	307	137	400	230	193	342
Turn Type	pm+pt	NA	pm+pt	NA	pm+ov	pm+pt	NA	pm+ov	pm+pt	NA
Protected Phases	7	4	3	8	1	5	2	3	1	6
Permitted Phases	4		8		8	2		2	6	
Detector Phase	7	4	3	8	1	5	2	3	1	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	21.0	10.0	21.0	10.0	10.0	21.0	10.0	10.0	21.0
Total Split (s)	11.0	29.0	14.0	32.0	20.0	14.0	27.0	14.0	20.0	33.0
Total Split (%)	12.2%	32.2%	15.6%	35.6%	22.2%	15.6%	30.0%	15.6%	22.2%	36.7%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag
Lead-Lag Optimize?										
Recall Mode	Min	Min	Min	Min	Min	Min	C-Min	Min	Min	C-Min
Act Effct Green (s)	28.6	21.3	31.5	22.8	39.2	37.3	28.5	42.2	42.3	31.1
Actuated g/C Ratio	0.32	0.24	0.35	0.25	0.44	0.41	0.32	0.47	0.47	0.35
v/c Ratio	0.33	0.76	0.45	0.70	0.42	0.35	0.40	0.31	0.43	0.39
Control Delay	20.3	37.6	22.6	34.8	8.2	11.7	24.7	14.4	17.1	22.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	20.3	37.6	22.6	34.8	8.2	11.7	24.7	14.4	17.1	22.1
LOS	C	D	C	C	A	B	C	B	B	C
Approach Delay		35.6		25.2			19.3			20.6
Approach LOS		D		C			B			C

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 84 (93%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 65
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.76
Intersection Signal Delay: 25.0 Intersection LOS: C
Intersection Capacity Utilization 59.4% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 1: Edith Blvd & Comanche Rd



Terry O. Brown, P.E.
6/1/2013

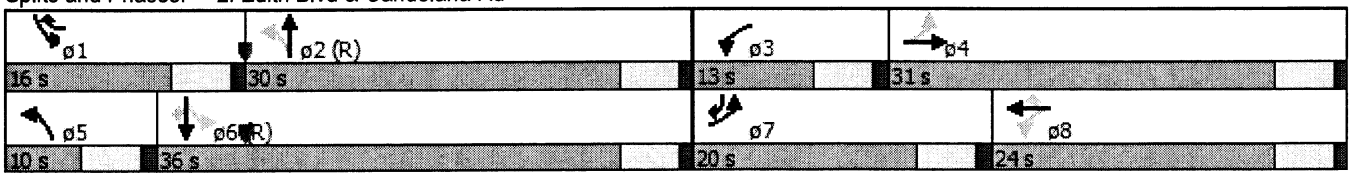
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	70	493	41	109	575	307	137	400	230	193	342	108
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	184.5	184.5	184.5	190.0
Lanes	1	2	0	1	2	1	1	2	1	1	2	0
Cap, veh/h	354	955	79	352	1054	634	389	793	459	417	637	198
Arrive On Green	0.08	0.28	0.28	0.08	0.29	0.00	0.10	0.21	0.00	0.12	0.24	0.24
Sat Flow, veh/h	1757	3363	278	1757	3689	1568	1757	3689	1568	1757	2703	838
Grp Volume(v), veh/h	82	318	310	118	625	0	154	449	0	201	241	227
Grp Sat Flow(s),veh/h/ln	1757	1845	1796	1757	1845	1568	1757	1845	1568	1757	1845	1697
Q Serve(g_s), s	2.1	9.8	9.8	3.0	9.6	0.0	4.3	7.1	0.0	5.5	7.5	7.7
Cycle Q Clear(g_c), s	2.1	9.8	9.8	3.0	9.6	0.0	4.3	7.1	0.0	5.5	7.5	7.7
Prop In Lane	1.00		0.15	1.00		1.00	1.00		1.00	1.00		0.49
Lane Grp Cap(c), veh/h	354	524	510	352	1054	634	389	793	459	417	435	400
V/C Ratio(X)	0.23	0.61	0.61	0.34	0.59	0.00	0.40	0.57	0.00	0.48	0.55	0.57
Avail Cap(c_a), veh/h	381	674	656	456	1517	831	458	1236	647	610	787	724
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	14.9	20.3	20.3	15.2	20.2	0.0	17.4	23.0	0.0	16.2	22.1	22.1
Incr Delay (d2), s/veh	0.3	1.1	1.2	0.6	0.5	0.0	0.7	2.9	0.0	0.9	5.0	5.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	0.8	4.3	4.2	1.3	4.2	0.0	1.8	3.5	0.0	2.3	4.0	3.8
Lane Grp Delay (d), s/veh	15.2	21.5	21.5	15.7	20.7	0.0	18.0	26.0	0.0	17.0	27.1	27.9
Lane Grp LOS	B	C	C	B	C		B	C		B	C	C
Approach Vol, veh/h		710			743			603			669	
Approach Delay, s/veh		20.8			19.9			23.9			24.3	
Approach LOS		C			B			C			C	
Timer												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	10.0	23.6		10.1	23.7		11.4	19.1		12.8	20.5	
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Max Green Setting (Gmax), s	6.0	24.0		9.0	27.0		9.0	22.0		15.0	28.0	
Max Q Clear Time (g_c+I1), s	4.1	11.8		5.0	11.6		6.3	9.1		7.5	9.7	
Green Ext Time (p_c), s	0.0	6.2		0.1	7.2		0.1	4.8		0.3	5.7	
Intersection Summary												
HCM 2010 Ctrl Delay			22.1									
HCM 2010 LOS			C									
Notes												

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Volume (vph)	176	670	79	327	114	35	335	125	367	90
Turn Type	pm+pt	NA	pm+pt	NA	pm+ov	pm+pt	NA	pm+pt	NA	pm+ov
Protected Phases	7	4	3	8	1	5	2	1	6	7
Permitted Phases	4		8		8	2		6		6
Detector Phase	7	4	3	8	1	5	2	1	6	7
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	21.0	10.0	21.0	10.0	10.0	21.0	10.0	21.0	10.0
Total Split (s)	20.0	31.0	13.0	24.0	16.0	10.0	30.0	16.0	36.0	20.0
Total Split (%)	22.2%	34.4%	14.4%	26.7%	17.8%	11.1%	33.3%	17.8%	40.0%	22.2%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lead
Lead-Lag Optimize?										
Recall Mode	Min	Min	Min	Min	Min	Min	C-Min	Min	C-Min	Min
Act Effct Green (s)	35.7	23.5	26.9	18.9	33.1	35.4	29.3	41.4	32.4	50.0
Actuated g/C Ratio	0.40	0.26	0.30	0.21	0.37	0.39	0.33	0.46	0.36	0.56
v/c Ratio	0.52	0.69	0.38	0.51	0.19	0.10	0.43	0.33	0.32	0.11
Control Delay	22.1	31.9	21.0	33.9	3.3	15.1	25.2	10.5	13.5	0.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.1	31.9	21.0	33.9	3.3	15.1	25.2	10.5	13.5	0.5
LOS	C	C	C	C	A	B	C	B	B	A
Approach Delay		30.0		25.2			24.4		10.8	
Approach LOS		C		C			C		B	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 24 (27%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 65
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.69
Intersection Signal Delay: 23.8 Intersection LOS: C
Intersection Capacity Utilization 54.3% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 2: Edith Blvd & Candelaria Rd



Terry O. Brown, P.E.
6/1/2013

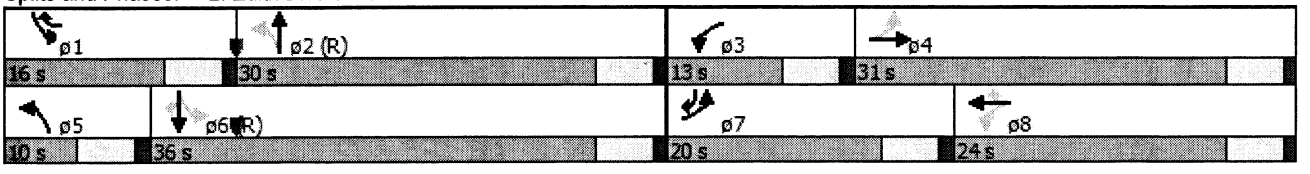
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	176	670	78	79	327	114	35	335	74	125	367	90
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	184.5
Lanes	1	3	0	1	2	1	1	2	0	1	2	1
Cap, veh/h	465	1421	165	338	928	533	384	689	151	368	910	571
Arrive On Green	0.12	0.29	0.29	0.08	0.25	0.25	0.08	0.23	0.23	0.09	0.25	0.25
Sat Flow, veh/h	1757	4871	564	1757	3689	1568	1757	2935	641	1757	3689	1568
Grp Volume(v), veh/h	212	610	291	90	372	130	42	249	238	136	399	98
Grp Sat Flow(s),veh/h/ln	1757	1845	1745	1757	1845	1568	1757	1845	1732	1757	1845	1568
Q Serve(g_s), s	5.3	9.1	9.2	2.4	5.5	3.9	1.1	7.8	7.9	3.6	5.9	2.8
Cycle Q Clear(g_c), s	5.3	9.1	9.2	2.4	5.5	3.9	1.1	7.8	7.9	3.6	5.9	2.8
Prop In Lane	1.00		0.32	1.00		1.00	1.00		0.37	1.00		1.00
Lane Grp Cap(c), veh/h	465	1076	509	338	928	533	384	433	407	368	910	571
V/C Ratio(X)	0.46	0.57	0.57	0.27	0.40	0.24	0.11	0.58	0.58	0.37	0.44	0.17
Avail Cap(c_a), veh/h	664	1476	698	419	1079	598	384	710	666	509	1760	932
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.81	0.81	0.81
Uniform Delay (d), s/veh	13.6	19.5	19.6	15.8	20.2	15.4	16.0	22.0	22.1	16.2	20.7	14.0
Incr Delay (d2), s/veh	0.7	0.5	1.0	0.4	0.3	0.2	0.1	5.5	6.0	0.5	1.2	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	2.2	4.1	4.0	1.0	2.4	1.4	0.4	4.1	3.9	1.5	2.8	1.1
Lane Grp Delay (d), s/veh	14.3	20.0	20.6	16.3	20.5	15.7	16.1	27.5	28.1	16.7	21.9	14.6
Lane Grp LOS	B	B	C	B	C	B	B	C	C	B	C	B
Approach Vol, veh/h		1113			592			529			633	
Approach Delay, s/veh		19.1			18.8			26.9			19.7	
Approach LOS		B			B			C			B	
Timer												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	12.6	24.0		10.0	21.3		10.0	20.3		10.8	21.0	
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Max Green Setting (Gmax), s	15.0	26.0		8.0	19.0		5.0	25.0		11.0	31.0	
Max Q Clear Time (g_c+I1), s	7.3	11.2		4.4	7.5		3.1	9.9		5.6	7.9	
Green Ext Time (p_c), s	0.4	7.8		0.1	6.6		0.0	5.3		0.1	6.4	
Intersection Summary												
HCM 2010 Ctrl Delay			20.6									
HCM 2010 LOS			C									
Notes												

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Volume (vph)	176	670	79	327	114	35	335	126	368	90
Turn Type	pm+pt	NA	pm+pt	NA	pm+ov	pm+pt	NA	pm+pt	NA	pm+ov
Protected Phases	7	4	3	8	1	5	2	1	6	7
Permitted Phases	4		8		8	2		6		6
Detector Phase	7	4	3	8	1	5	2	1	6	7
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	21.0	10.0	21.0	10.0	10.0	21.0	10.0	21.0	10.0
Total Split (s)	20.0	31.0	13.0	24.0	16.0	10.0	30.0	16.0	36.0	20.0
Total Split (%)	22.2%	34.4%	14.4%	26.7%	17.8%	11.1%	33.3%	17.8%	40.0%	22.2%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lead
Lead-Lag Optimize?										
Recall Mode	Min	Min	Min	Min	Min	Min	C-Min	Min	C-Min	Min
Act Effct Green (s)	35.7	23.5	26.9	18.9	33.1	35.4	29.3	41.4	32.4	50.0
Actuated g/C Ratio	0.40	0.26	0.30	0.21	0.37	0.39	0.33	0.46	0.36	0.56
v/c Ratio	0.52	0.69	0.38	0.51	0.19	0.10	0.43	0.33	0.32	0.11
Control Delay	22.1	31.9	21.0	33.9	3.3	15.2	25.2	10.4	13.0	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	22.1	31.9	21.0	33.9	3.3	15.2	25.2	10.4	13.0	0.4
LOS	C	C	C	C	A	B	C	B	B	A
Approach Delay		30.0		25.2			24.4		10.5	
Approach LOS		C		C			C		B	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 24 (27%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 65
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.69
Intersection Signal Delay: 23.7 Intersection LOS: C
Intersection Capacity Utilization 54.3% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 2: Edith Blvd & Candelaria Rd



Terry O. Brown, P.E.
6/1/2013

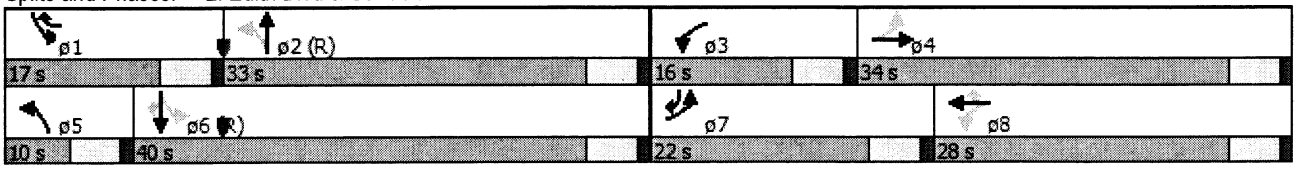
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	176	670	78	79	327	114	35	335	74	126	368	90
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	184.5
Lanes	1	3	0	1	2	1	1	2	0	1	2	1
Cap, veh/h	465	1421	164	337	927	534	384	689	151	369	911	571
Arrive On Green	0.12	0.29	0.29	0.08	0.25	0.25	0.08	0.23	0.23	0.09	0.25	0.25
Sat Flow, veh/h	1757	4871	564	1757	3689	1568	1757	2935	641	1757	3689	1568
Grp Volume(v), veh/h	212	610	291	90	372	130	42	249	238	137	400	98
Grp Sat Flow(s),veh/h/ln	1757	1845	1745	1757	1845	1568	1757	1845	1732	1757	1845	1568
Q Serve(g_s), s	5.3	9.1	9.2	2.4	5.5	3.9	1.1	7.8	7.9	3.7	6.0	2.8
Cycle Q Clear(g_c), s	5.3	9.1	9.2	2.4	5.5	3.9	1.1	7.8	7.9	3.7	6.0	2.8
Prop In Lane	1.00		0.32	1.00		1.00	1.00		0.37	1.00		1.00
Lane Grp Cap(c), veh/h	465	1076	509	337	927	534	384	433	407	369	911	571
V/C Ratio(X)	0.46	0.57	0.57	0.27	0.40	0.24	0.11	0.58	0.58	0.37	0.44	0.17
Avail Cap(c_a), veh/h	664	1475	698	418	1078	598	384	709	666	509	1759	931
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.6	19.5	19.6	15.9	20.3	15.4	16.0	22.0	22.1	16.2	20.7	14.0
Incr Delay (d2), s/veh	0.7	0.5	1.0	0.4	0.3	0.2	0.1	5.5	6.0	0.6	1.5	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	2.2	4.1	4.0	1.0	2.4	1.4	0.5	4.1	3.9	1.5	2.8	1.1
Lane Grp Delay (d), s/veh	14.3	20.0	20.6	16.3	20.6	15.7	16.1	27.5	28.1	16.9	22.2	14.7
Lane Grp LOS	B	C	C	B	C	B	B	C	C	B	C	B
Approach Vol, veh/h		1113			592			529			635	
Approach Delay, s/veh		19.1			18.8			26.9			19.9	
Approach LOS		B			B			C			B	
Timer												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	12.6	24.0		10.0	21.3		10.0	20.3		10.8	21.1	
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Max Green Setting (Gmax), s	15.0	26.0		8.0	19.0		5.0	25.0		11.0	31.0	
Max Q Clear Time (g_c+I1), s	7.3	11.2		4.4	7.5		3.1	9.9		5.7	8.0	
Green Ext Time (p_c), s	0.4	7.8		0.1	6.6		0.0	5.4		0.1	6.4	
Intersection Summary												
HCM 2010 Ctrl Delay			20.6									
HCM 2010 LOS			C									
Notes												

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Volume (vph)	184	703	83	343	120	37	352	131	385	94
Turn Type	pm+pt	NA	pm+pt	NA	pm+ov	pm+pt	NA	pm+pt	NA	pm+ov
Protected Phases	7	4	3	8	1	5	2	1	6	7
Permitted Phases	4		8		8	2		6		6
Detector Phase	7	4	3	8	1	5	2	1	6	7
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	21.0	10.0	21.0	10.0	10.0	21.0	10.0	21.0	10.0
Total Split (s)	22.0	34.0	16.0	28.0	17.0	10.0	33.0	17.0	40.0	22.0
Total Split (%)	22.0%	34.0%	16.0%	28.0%	17.0%	10.0%	33.0%	17.0%	40.0%	22.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lead
Lead-Lag Optimize?										
Recall Mode	Min	Min	Min	Min	Min	Min	C-Min	Min	C-Min	Min
Act Effct Green (s)	39.9	26.5	30.0	21.2	36.0	41.2	35.0	47.9	38.6	57.6
Actuated g/C Ratio	0.40	0.26	0.30	0.21	0.36	0.41	0.35	0.48	0.39	0.58
v/c Ratio	0.56	0.71	0.41	0.52	0.21	0.10	0.42	0.34	0.31	0.11
Control Delay	25.1	35.5	23.9	37.3	4.2	16.2	26.5	13.7	17.0	0.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.1	35.5	23.9	37.3	4.2	16.2	26.5	13.7	17.0	0.5
LOS	C	D	C	D	A	B	C	B	B	A
Approach Delay		33.5		28.0			25.7		13.7	
Approach LOS		C		C			C		B	

Intersection Summary

Cycle Length: 100
Actuated Cycle Length: 100
Offset: 64 (64%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 65
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.71
Intersection Signal Delay: 26.6 Intersection LOS: C
Intersection Capacity Utilization 56.1% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 2: Edith Blvd & Candelaria Rd



Terry O. Brown, P.E.
6/1/2013

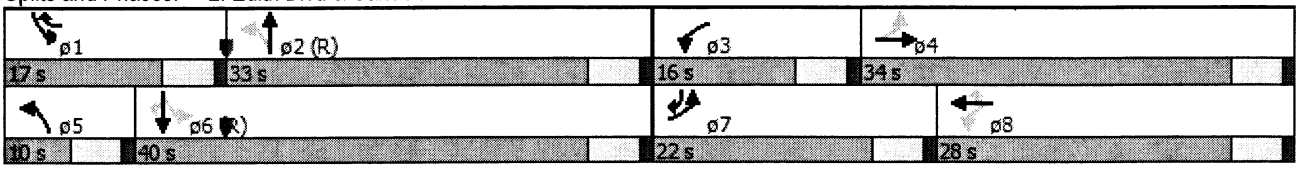
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	184	703	82	83	343	120	37	352	77	131	385	94
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	184.5
Lanes	1	3	0	1	2	1	1	2	0	1	2	1
Cap, veh/h	461	1482	172	324	955	545	376	715	156	363	957	592
Arrive On Green	0.12	0.30	0.30	0.07	0.26	0.26	0.07	0.24	0.24	0.09	0.26	0.26
Sat Flow, veh/h	1757	4868	566	1757	3689	1568	1757	2937	639	1757	3689	1568
Grp Volume(v), veh/h	222	641	305	94	390	136	44	262	249	142	418	102
Grp Sat Flow(s),veh/h/ln	1757	1845	1745	1757	1845	1568	1757	1845	1732	1757	1845	1568
Q Serve(g_s), s	5.7	10.1	10.1	2.6	6.0	4.3	1.2	8.6	8.7	3.9	6.5	3.0
Cycle Q Clear(g_c), s	5.7	10.1	10.1	2.6	6.0	4.3	1.2	8.6	8.7	3.9	6.5	3.0
Prop In Lane	1.00		0.32	1.00		1.00	1.00		0.37	1.00		1.00
Lane Grp Cap(c), veh/h	461	1123	531	324	955	545	376	449	421	363	957	592
V/C Ratio(X)	0.48	0.57	0.57	0.29	0.41	0.25	0.12	0.58	0.59	0.39	0.44	0.17
Avail Cap(c_a), veh/h	687	1555	735	477	1233	663	376	751	705	513	1877	983
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.80	0.80	0.80
Uniform Delay (d), s/veh	13.9	20.1	20.2	16.7	21.1	16.0	16.7	23.0	23.0	16.7	21.3	14.2
Incr Delay (d2), s/veh	0.8	0.5	1.0	0.5	0.3	0.2	0.1	5.5	6.0	0.6	1.2	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	2.3	4.4	4.3	1.1	2.7	1.6	0.5	4.5	4.4	1.7	3.0	1.1
Lane Grp Delay (d), s/veh	14.7	20.6	21.2	17.2	21.4	16.3	16.9	28.4	29.0	17.3	22.4	14.7
Lane Grp LOS	B	C	C	B	C	B	B	C	C	B	C	B
Approach Vol, veh/h		1168			620			555			662	
Approach Delay, s/veh		19.6			19.6			27.8			20.1	
Approach LOS		B			B			C			C	
Timer												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	13.1	25.9		10.0	22.8		10.0	21.7		11.1	22.9	
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Max Green Setting (Gmax), s	17.0	29.0		11.0	23.0		5.0	28.0		12.0	35.0	
Max Q Clear Time (g_c+I1), s	7.7	12.1		4.6	8.0		3.2	10.7		5.9	8.5	
Green Ext Time (p_c), s	0.4	8.8		0.1	8.2		0.0	6.0		0.2	7.0	
Intersection Summary												
HCM 2010 Ctrl Delay			21.2									
HCM 2010 LOS			C									
Notes												

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Volume (vph)	184	703	83	343	121	37	353	132	386	94
Turn Type	pm+pt	NA	pm+pt	NA	pm+ov	pm+pt	NA	pm+pt	NA	pm+ov
Protected Phases	7	4	3	8	1	5	2	1	6	7
Permitted Phases	4		8		8	2		6		6
Detector Phase	7	4	3	8	1	5	2	1	6	7
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	21.0	10.0	21.0	10.0	10.0	21.0	10.0	21.0	10.0
Total Split (s)	22.0	34.0	16.0	28.0	17.0	10.0	33.0	17.0	40.0	22.0
Total Split (%)	22.0%	34.0%	16.0%	28.0%	17.0%	10.0%	33.0%	17.0%	40.0%	22.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lead
Lead-Lag Optimize?										
Recall Mode	Min	Min	Min	Min	Min	Min	C-Min	Min	C-Min	Min
Act Effct Green (s)	39.9	26.5	30.0	21.2	36.0	41.2	35.0	48.0	38.6	57.6
Actuated g/C Ratio	0.40	0.26	0.30	0.21	0.36	0.41	0.35	0.48	0.39	0.58
v/c Ratio	0.56	0.71	0.41	0.52	0.21	0.10	0.42	0.35	0.31	0.11
Control Delay	25.1	35.5	23.9	37.3	4.2	16.2	26.5	11.2	13.8	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.1	35.5	23.9	37.3	4.2	16.2	26.5	11.2	13.8	0.4
LOS	C	D	C	D	A	B	C	B	B	A
Approach Delay		33.5		27.9			25.7		11.2	
Approach LOS		C		C			C		B	

Intersection Summary

Cycle Length: 100
Actuated Cycle Length: 100
Offset: 64 (64%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 65
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.71
Intersection Signal Delay: 26.0 Intersection LOS: C
Intersection Capacity Utilization 56.2% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 2: Edith Blvd & Candelaria Rd



Terry O. Brown, P.E.
6/1/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	184	703	82	83	343	121	37	353	77	132	386	94
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	184.5
Lanes	1	3	0	1	2	1	1	2	0	1	2	1
Cap, veh/h	460	1481	172	324	954	545	375	716	155	363	960	594
Arrive On Green	0.12	0.30	0.30	0.07	0.26	0.26	0.07	0.24	0.24	0.09	0.26	0.26
Sat Flow, veh/h	1757	4868	566	1757	3689	1568	1757	2939	638	1757	3689	1568
Grp Volume(v), veh/h	222	641	305	94	390	138	44	262	250	143	420	102
Grp Sat Flow(s),veh/h/ln	1757	1845	1745	1757	1845	1568	1757	1845	1732	1757	1845	1568
Q Serve(g_s), s	5.7	10.1	10.2	2.6	6.0	4.3	1.2	8.6	8.8	4.0	6.5	3.0
Cycle Q Clear(g_c), s	5.7	10.1	10.2	2.6	6.0	4.3	1.2	8.6	8.8	4.0	6.5	3.0
Prop In Lane	1.00		0.32	1.00		1.00	1.00		0.37	1.00		1.00
Lane Grp Cap(c), veh/h	460	1123	531	324	954	545	375	449	422	363	960	594
V/C Ratio(X)	0.48	0.57	0.57	0.29	0.41	0.25	0.12	0.58	0.59	0.39	0.44	0.17
Avail Cap(c_a), veh/h	686	1553	735	477	1232	663	375	750	704	512	1875	982
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.9	20.2	20.2	16.7	21.2	16.1	16.7	23.0	23.0	16.7	21.3	14.2
Incr Delay (d2), s/veh	0.8	0.5	1.0	0.5	0.3	0.2	0.1	5.5	6.0	0.7	1.5	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	2.3	4.4	4.3	1.1	2.7	1.6	0.5	4.5	4.4	1.7	3.1	0.1
Lane Grp Delay (d), s/veh	14.7	20.6	21.2	17.2	21.5	16.3	16.9	28.4	29.0	17.4	22.7	14.9
Lane Grp LOS	B	C	C	B	C	B	B	C	C	B	C	B
Approach Vol, veh/h		1168			622			556			665	
Approach Delay, s/veh		19.6			19.7			27.8			20.4	
Approach LOS		B			B			C			C	

Timer												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	13.2	26.0		10.0	22.8		10.0	21.8		11.1	22.9	
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Max Green Setting (Gmax), s	17.0	29.0		11.0	23.0		5.0	28.0		12.0	35.0	
Max Q Clear Time (g_c+I1), s	7.7	12.2		4.6	8.0		3.2	10.8		6.0	8.5	
Green Ext Time (p_c), s	0.4	8.8		0.1	8.2		0.0	6.0		0.2	7.0	

Intersection Summary												
HCM 2010 Ctrl Delay			21.3									
HCM 2010 LOS			C									

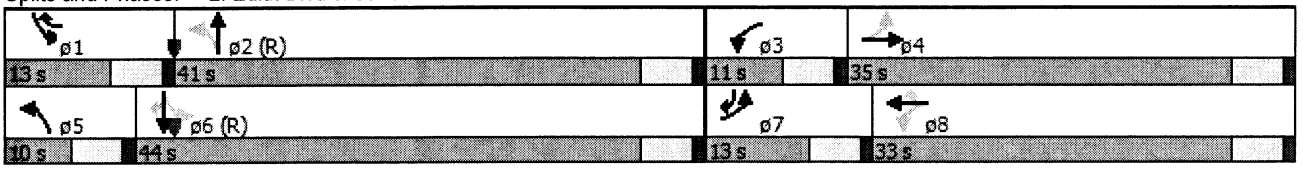
Notes

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Volume (vph)	83	364	104	606	193	79	624	83	330	178
Turn Type	pm+pt	NA	pm+pt	NA	pm+ov	pm+pt	NA	pm+pt	NA	pm+ov
Protected Phases	7	4	3	8	1	5	2	1	6	7
Permitted Phases	4		8		8	2		6		6
Detector Phase	7	4	3	8	1	5	2	1	6	7
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	21.0	10.0	21.0	10.0	10.0	21.0	10.0	21.0	10.0
Total Split (s)	13.0	35.0	11.0	33.0	13.0	10.0	41.0	13.0	44.0	13.0
Total Split (%)	13.0%	35.0%	11.0%	33.0%	13.0%	10.0%	41.0%	13.0%	44.0%	13.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lead
Lead-Lag Optimize?										
Recall Mode	Min	Min	Min	Min	Min	Min	C-Min	Min	C-Min	Min
Act Effct Green (s)	33.5	25.2	32.2	24.5	37.0	46.0	39.7	48.3	40.8	54.1
Actuated g/C Ratio	0.34	0.25	0.32	0.24	0.37	0.46	0.40	0.48	0.41	0.54
v/c Ratio	0.40	0.37	0.34	0.78	0.32	0.19	0.61	0.31	0.25	0.21
Control Delay	24.6	29.1	23.2	41.6	10.0	14.8	26.9	11.6	14.9	2.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.6	29.1	23.2	41.6	10.0	14.8	26.9	11.6	14.9	2.7
LOS	C	C	C	D	A	B	C	B	B	A
Approach Delay		28.4		32.7			25.7		10.8	
Approach LOS		C		C			C		B	

Intersection Summary

Cycle Length: 100
Actuated Cycle Length: 100
Offset: 4 (4%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 65
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.78
Intersection Signal Delay: 25.3 Intersection LOS: C
Intersection Capacity Utilization 62.4% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 2: Edith Blvd & Candelaria Rd



Terry O. Brown, P.E.
6/1/2013

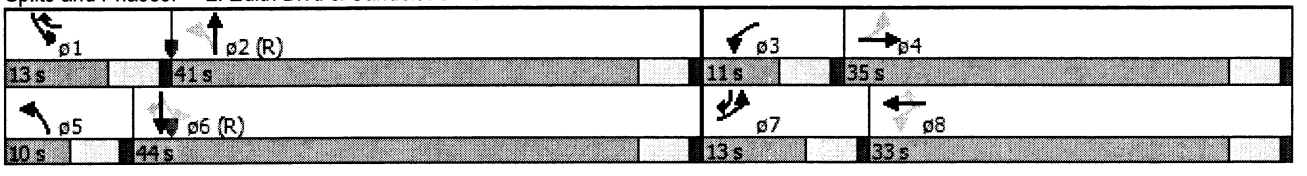
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	83	364	51	104	606	193	79	624	80	83	330	178
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	184.5
Lanes	1	3	0	1	2	1	1	2	0	1	2	1
Cap, veh/h	280	1280	177	402	1016	534	430	1076	137	295	1237	628
Arrive On Green	0.06	0.27	0.27	0.07	0.28	0.28	0.06	0.34	0.34	0.06	0.34	0.34
Sat Flow, veh/h	1757	4762	657	1757	3689	1568	1757	3207	410	1757	3689	1568
Grp Volume(v), veh/h	92	311	150	114	666	212	94	427	411	90	359	193
Grp Sat Flow(s),veh/h/ln	1757	1845	1729	1757	1845	1568	1757	1845	1772	1757	1845	1568
Q Serve(g_s), s	2.8	5.2	5.4	3.5	12.3	8.0	2.6	15.4	15.5	2.5	5.5	6.5
Cycle Q Clear(g_c), s	2.8	5.2	5.4	3.5	12.3	8.0	2.6	15.4	15.5	2.5	5.5	6.5
Prop In Lane	1.00		0.38	1.00		1.00	1.00		0.23	1.00		1.00
Lane Grp Cap(c), veh/h	280	992	465	402	1016	534	430	619	594	295	1237	628
V/C Ratio(X)	0.33	0.31	0.32	0.28	0.66	0.40	0.22	0.69	0.69	0.31	0.29	0.31
Avail Cap(c_a), veh/h	348	1436	673	413	1340	671	430	861	828	363	1866	895
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95
Uniform Delay (d), s/veh	19.1	22.5	22.6	17.8	24.7	19.4	14.9	22.2	22.2	16.4	18.9	15.8
Incr Delay (d2), s/veh	0.7	0.2	0.4	0.4	0.7	0.5	0.3	6.2	6.5	0.5	0.6	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.3	2.4	2.3	1.5	5.6	3.0	1.1	8.0	7.7	1.1	2.5	2.6
Lane Grp Delay (d), s/veh	19.8	22.7	23.0	18.2	25.4	19.9	15.1	28.4	28.6	17.0	19.4	17.0
Lane Grp LOS	B	C	C	B	C	B	B	C	C	B	B	B
Approach Vol, veh/h		553			992			932			642	
Approach Delay, s/veh		22.3			23.4			27.1			18.4	
Approach LOS		C			C			C			B	
Timer												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	10.0	25.7		10.5	26.2		10.0	30.9		10.0	30.9	
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Max Green Setting (Gmax), s	8.0	30.0		6.0	28.0		5.0	36.0		8.0	39.0	
Max Q Clear Time (g_c+I1), s	4.8	7.4		5.5	14.3		4.6	17.5		4.5	8.5	
Green Ext Time (p_c), s	0.0	9.0		0.0	6.9		0.0	8.4		0.1	10.4	
Intersection Summary												
HCM 2010 Ctrl Delay			23.3									
HCM 2010 LOS			C									
Notes												

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Volume (vph)	87	364	104	606	217	79	642	95	339	180
Turn Type	pm+pt	NA	pm+pt	NA	pm+ov	pm+pt	NA	pm+pt	NA	pm+ov
Protected Phases	7	4	3	8	1	5	2	1	6	7
Permitted Phases	4		8		8	2		6		6
Detector Phase	7	4	3	8	1	5	2	1	6	7
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	21.0	10.0	21.0	10.0	10.0	21.0	10.0	21.0	10.0
Total Split (s)	13.0	35.0	11.0	33.0	13.0	10.0	41.0	13.0	44.0	13.0
Total Split (%)	13.0%	35.0%	11.0%	33.0%	13.0%	10.0%	41.0%	13.0%	44.0%	13.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lead
Lead-Lag Optimize?										
Recall Mode	Min	Min	Min	Min	Min	Min	C-Min	Min	C-Min	Min
Act Effct Green (s)	33.6	25.3	32.1	24.5	37.2	45.8	39.5	48.5	40.8	54.1
Actuated g/C Ratio	0.34	0.25	0.32	0.24	0.37	0.46	0.40	0.48	0.41	0.54
v/c Ratio	0.43	0.36	0.34	0.78	0.36	0.19	0.63	0.37	0.26	0.21
Control Delay	25.3	29.1	23.2	41.6	12.0	14.8	27.4	13.7	17.5	4.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.3	29.1	23.2	41.6	12.0	14.8	27.4	13.7	17.5	4.3
LOS	C	C	C	D	B	B	C	B	B	A
Approach Delay		28.4		32.6			26.1		13.1	
Approach LOS		C		C			C		B	

Intersection Summary

Cycle Length: 100
Actuated Cycle Length: 100
Offset: 4 (4%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 65
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.78
Intersection Signal Delay: 25.9 Intersection LOS: C
Intersection Capacity Utilization 63.8% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 2: Edith Blvd & Candelaria Rd



Terry O. Brown, P.E.
6/1/2013

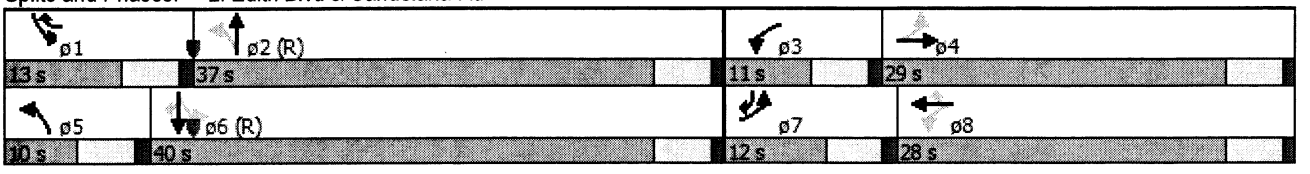
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	87	364	51	104	606	217	79	642	80	95	339	180
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	184.5
Lanes	1	3	0	1	2	1	1	2	0	1	2	1
Cap, veh/h	277	1279	176	400	1013	531	427	1094	136	290	1254	635
Arrive On Green	0.07	0.27	0.27	0.07	0.27	0.27	0.06	0.34	0.34	0.06	0.34	0.34
Sat Flow, veh/h	1757	4762	657	1757	3689	1568	1757	3219	400	1757	3689	1568
Grp Volume(v), veh/h	97	311	150	114	666	238	94	438	421	103	368	196
Grp Sat Flow(s),veh/h/ln	1757	1845	1729	1757	1845	1568	1757	1845	1774	1757	1845	1568
Q Serve(g_s), s	3.0	5.3	5.4	3.5	12.5	9.2	2.6	16.0	16.0	2.9	5.7	6.6
Cycle Q Clear(g_c), s	3.0	5.3	5.4	3.5	12.5	9.2	2.6	16.0	16.0	2.9	5.7	6.6
Prop In Lane	1.00		0.38	1.00		1.00	1.00		0.23	1.00		1.00
Lane Grp Cap(c), veh/h	277	991	464	400	1013	531	427	627	603	290	1254	635
V/C Ratio(X)	0.35	0.31	0.32	0.28	0.66	0.45	0.22	0.70	0.70	0.36	0.29	0.31
Avail Cap(c_a), veh/h	342	1418	665	410	1324	663	427	851	818	358	1844	886
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.4	22.8	22.9	18.1	25.1	20.1	14.9	22.3	22.3	16.7	18.9	15.8
Incr Delay (d2), s/veh	0.8	0.2	0.4	0.4	0.7	0.6	0.3	6.3	6.6	0.7	0.6	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.3	2.4	2.3	1.5	5.7	3.5	1.1	8.3	8.0	1.3	2.6	2.6
Lane Grp Delay (d), s/veh	20.2	23.0	23.3	18.5	25.8	20.7	15.1	28.6	28.9	17.4	19.5	17.0
Lane Grp LOS	C	C	C	B	C	C	B	C	C	B	B	B
Approach Vol, veh/h		558			1018			953			667	
Approach Delay, s/veh		22.6			23.8			27.4			18.5	
Approach LOS		C			C			C			B	
Timer												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	10.1	26.0		10.6	26.4		10.0	31.5		10.0	31.5	
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Max Green Setting (Gmax), s	8.0	30.0		6.0	28.0		5.0	36.0		8.0	39.0	
Max Q Clear Time (g_c+I1), s	5.0	7.4		5.5	14.5		4.6	18.0		4.9	8.6	
Green Ext Time (p_c), s	0.1	9.2		0.0	7.0		0.0	8.5		0.1	10.7	
Intersection Summary												
HCM 2010 Ctrl Delay			23.5									
HCM 2010 LOS			C									
Notes												

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Volume (vph)	87	382	109	636	202	83	655	87	347	187
Turn Type	pm+pt	NA	pm+pt	NA	pm+ov	pm+pt	NA	pm+pt	NA	pm+ov
Protected Phases	7	4	3	8	1	5	2	1	6	7
Permitted Phases	4		8		8	2		6		6
Detector Phase	7	4	3	8	1	5	2	1	6	7
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	21.0	10.0	21.0	10.0	10.0	21.0	10.0	21.0	10.0
Total Split (s)	12.0	29.0	11.0	28.0	13.0	10.0	37.0	13.0	40.0	12.0
Total Split (%)	13.3%	32.2%	12.2%	31.1%	14.4%	11.1%	41.1%	14.4%	44.4%	13.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lead
Lead-Lag Optimize?										
Recall Mode	Min	Min	Min	Min	Min	Min	C-Min	Min	C-Min	Min
Act Effct Green (s)	29.7	22.3	28.8	21.8	34.2	39.0	33.4	42.5	35.1	47.5
Actuated g/C Ratio	0.33	0.25	0.32	0.24	0.38	0.43	0.37	0.47	0.39	0.53
v/c Ratio	0.43	0.39	0.37	0.82	0.33	0.21	0.68	0.36	0.28	0.23
Control Delay	24.1	27.2	22.1	41.2	10.6	13.7	27.2	23.0	24.6	3.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.1	27.2	22.1	41.2	10.6	13.7	27.2	23.0	24.6	3.4
LOS	C	C	C	D	B	B	C	C	C	A
Approach Delay		26.7		32.5			25.9		18.0	
Approach LOS		C		C			C		B	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 48 (53%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 65
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.82
Intersection Signal Delay: 26.5 Intersection LOS: C
Intersection Capacity Utilization 64.7% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 2: Edith Blvd & Candelaria Rd



Terry O. Brown, P.E.
6/1/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	87	382	53	109	636	202	83	655	84	87	347	187
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	184.5
Lanes	1	3	0	1	2	1	1	2	0	1	2	1
Cap, veh/h	267	1219	166	390	974	518	428	1085	139	290	1249	635
Arrive On Green	0.07	0.26	0.26	0.08	0.26	0.26	0.07	0.34	0.34	0.07	0.34	0.34
Sat Flow, veh/h	1757	4770	649	1757	3689	1568	1757	3206	411	1757	3689	1568
Grp Volume(v), veh/h	97	326	157	120	699	222	99	449	431	95	377	203
Grp Sat Flow(s),veh/h/ln	1757	1845	1730	1757	1845	1568	1757	1845	1772	1757	1845	1568
Q Serve(g_s), s	3.0	5.4	5.6	3.7	13.0	8.3	2.7	16.1	16.1	2.6	5.7	6.7
Cycle Q Clear(g_c), s	3.0	5.4	5.6	3.7	13.0	8.3	2.7	16.1	16.1	2.6	5.7	6.7
Prop In Lane	1.00		0.38	1.00		1.00	1.00		0.23	1.00		1.00
Lane Grp Cap(c), veh/h	267	943	442	390	974	518	428	624	600	290	1249	635
V/C Ratio(X)	0.36	0.35	0.36	0.31	0.72	0.43	0.23	0.72	0.72	0.33	0.30	0.32
Avail Cap(c_a), veh/h	313	1172	550	398	1123	581	428	781	751	359	1709	831
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.93	0.93	0.93
Uniform Delay (d), s/veh	19.6	23.0	23.0	18.0	25.2	19.7	14.4	21.8	21.9	16.2	18.4	15.4
Incr Delay (d2), s/veh	0.8	0.2	0.5	0.4	1.9	0.6	0.3	7.0	7.3	0.6	0.6	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.3	2.5	2.4	1.5	6.1	3.2	1.1	8.2	7.9	1.1	2.6	2.6
Lane Grp Delay (d), s/veh	20.4	23.2	23.5	18.4	27.1	20.3	14.7	28.8	29.1	16.8	19.0	16.6
Lane Grp LOS	C	C	C	B	C	C	B	C	C	B	B	B
Approach Vol, veh/h		580			1041			979			675	
Approach Delay, s/veh		22.8			24.7			27.5			18.0	
Approach LOS		C			C			C			B	

Timer												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	10.0	24.3		10.7	25.0		10.0	30.6		10.0	30.6	
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Max Green Setting (Gmax), s	7.0	24.0		6.0	23.0		5.0	32.0		8.0	35.0	
Max Q Clear Time (g_c+I1), s	5.0	7.6		5.7	15.0		4.7	18.1		4.6	8.7	
Green Ext Time (p_c), s	0.0	8.1		0.0	5.0		0.0	7.5		0.1	10.5	

Intersection Summary	
HCM 2010 Ctrl Delay	23.8
HCM 2010 LOS	C

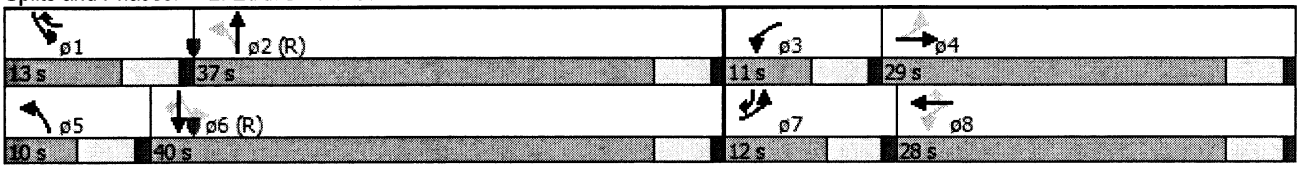
Notes

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Volume (vph)	91	382	109	636	226	83	673	99	356	189
Turn Type	pm+pt	NA	pm+pt	NA	pm+ov	pm+pt	NA	pm+pt	NA	pm+ov
Protected Phases	7	4	3	8	1	5	2	1	6	7
Permitted Phases	4		8		8	2		6		6
Detector Phase	7	4	3	8	1	5	2	1	6	7
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	21.0	10.0	21.0	10.0	10.0	21.0	10.0	21.0	10.0
Total Split (s)	12.0	29.0	11.0	28.0	13.0	10.0	37.0	13.0	40.0	12.0
Total Split (%)	13.3%	32.2%	12.2%	31.1%	14.4%	11.1%	41.1%	14.4%	44.4%	13.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lag	Lead
Lead-Lag Optimize?										
Recall Mode	Min	Min	Min	Min	Min	Min	C-Min	Min	C-Min	Min
Act Effct Green (s)	29.6	22.3	28.6	21.8	34.3	39.0	33.4	42.8	35.3	47.5
Actuated g/C Ratio	0.33	0.25	0.32	0.24	0.38	0.43	0.37	0.48	0.39	0.53
v/c Ratio	0.45	0.39	0.37	0.82	0.37	0.21	0.70	0.41	0.28	0.23
Control Delay	24.9	27.1	22.4	41.2	12.4	13.6	27.6	21.6	18.6	3.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	24.9	27.1	22.4	41.2	12.4	13.6	27.6	21.6	18.6	3.7
LOS	C	C	C	D	B	B	C	C	B	A
Approach Delay		26.7		32.4			26.2		14.7	
Approach LOS		C		C			C		B	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 48 (53%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 65
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.82
Intersection Signal Delay: 25.9 Intersection LOS: C
Intersection Capacity Utilization 66.1% ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 2: Edith Blvd & Candelaria Rd



Terry O. Brown, P.E.
6/1/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	91	382	53	109	636	226	83	673	84	99	356	189
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow veh/h/ln	184.5	184.5	190.0	184.5	184.5	184.5	184.5	184.5	190.0	184.5	184.5	184.5
Lanes	1	3	0	1	2	1	1	2	0	1	2	1
Cap, veh/h	266	1221	166	389	970	515	425	1100	137	285	1262	643
Arrive On Green	0.07	0.26	0.26	0.07	0.26	0.26	0.07	0.34	0.34	0.07	0.34	0.34
Sat Flow, veh/h	1757	4770	649	1757	3689	1568	1757	3217	402	1757	3689	1568
Grp Volume(v), veh/h	101	326	157	120	699	248	99	459	442	108	387	205
Grp Sat Flow(s),veh/h/ln	1757	1845	1730	1757	1845	1568	1757	1845	1774	1757	1845	1568
Q Serve(g_s), s	3.2	5.5	5.7	3.7	13.2	9.6	2.7	16.7	16.7	3.0	5.9	6.8
Cycle Q Clear(g_c), s	3.2	5.5	5.7	3.7	13.2	9.6	2.7	16.7	16.7	3.0	5.9	6.8
Prop In Lane	1.00		0.38	1.00		1.00	1.00		0.23	1.00		1.00
Lane Grp Cap(c), veh/h	266	944	443	389	970	515	425	631	606	285	1262	643
V/C Ratio(X)	0.38	0.35	0.35	0.31	0.72	0.48	0.23	0.73	0.73	0.38	0.31	0.32
Avail Cap(c_a), veh/h	308	1158	543	395	1110	575	425	772	743	353	1689	824
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.8	23.2	23.3	18.3	25.6	20.5	14.5	22.0	22.0	16.5	18.5	15.3
Incr Delay (d2), s/veh	0.9	0.2	0.5	0.4	2.0	0.7	0.3	7.2	7.5	0.8	0.6	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q (50%), veh/ln	1.4	2.5	2.4	1.6	6.2	3.7	1.1	8.7	8.4	1.3	2.7	2.7
Lane Grp Delay (d), s/veh	20.7	23.4	23.8	18.7	27.6	21.2	14.8	29.3	29.6	17.3	19.1	16.6
Lane Grp LOS	C	C	C	B	C	C	B	C	C	B	B	B
Approach Vol, veh/h		584			1067			1000			700	
Approach Delay, s/veh		23.0			25.1			28.0			18.1	
Approach LOS		C			C			C			B	

Timer												
Assigned Phs	7	4		3	8		5	2		1	6	
Phs Duration (G+Y+Rc), s	10.2	24.6		10.7	25.1		10.0	31.1		10.0	31.2	
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Max Green Setting (Gmax), s	7.0	24.0		6.0	23.0		5.0	32.0		8.0	35.0	
Max Q Clear Time (g_c+I1), s	5.2	7.7		5.7	15.2		4.7	18.7		5.0	8.8	
Green Ext Time (p_c), s	0.0	8.2		0.0	4.9		0.0	7.4		0.1	10.8	

Intersection Summary	
HCM 2010 Ctrl Delay	24.1
HCM 2010 LOS	C

Notes

Intersection	
Intersection Delay, s/veh	0.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	1	2	3	527	582	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	250
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	85	85	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	1	2	3	573	633	1

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	926	316	633	0	-	0
Stage 1	633	-	-	-	-	-
Stage 2	293	-	-	-	-	-
Follow-up Headway	3.53	3.33	2.23	-	-	-
Pot Capacity-1 Maneuver	266	677	939	-	-	-
Stage 1	489	-	-	-	-	-
Stage 2	728	-	-	-	-	-
Time blocked-Platoon, %				-	-	-
Mov Capacity-1 Maneuver	265	677	939	-	-	-
Mov Capacity-2 Maneuver	379	-	-	-	-	-
Stage 1	489	-	-	-	-	-
Stage 2	724	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12	0	0

Minor Lane / Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	939	-	536	-	-
HCM Lane V/C Ratio	0.003	-	0.007	-	-
HCM Control Delay (s)	8.847	0	11.8	-	-
HCM Lane LOS	A	A	B		
HCM 95th %tile Q(veh)	0.01	-	0.02	-	-

Notes

~ : Volume Exceeds Capacity; $: Delay Exceeds 300 Seconds; Error : Computation Not Defined

Intersection	
Intersection Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	1	2	3	553	611	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	250
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	85	85	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	1	2	3	601	664	1

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	971	332	664	0	-	0
Stage 1	664	-	-	-	-	-
Stage 2	307	-	-	-	-	-
Follow-up Headway	3.53	3.33	2.23	-	-	-
Pot Capacity-1 Maneuver	249	661	914	-	-	-
Stage 1	471	-	-	-	-	-
Stage 2	717	-	-	-	-	-
Time blocked-Platoon, %				-	-	-
Mov Capacity-1 Maneuver	248	661	914	-	-	-
Mov Capacity-2 Maneuver	364	-	-	-	-	-
Stage 1	471	-	-	-	-	-
Stage 2	713	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12	0	0

Minor Lane / Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	914	-	520	-	-
HCM Lane V/C Ratio	0.004	-	0.007	-	-
HCM Control Delay (s)	8.953	0	12	-	-
HCM Lane LOS	A	A	B		
HCM 95th %tile Q(veh)	0.011	-	0.02	-	-

Notes

~ : Volume Exceeds Capacity; $: Delay Exceeds 300 Seconds; Error : Computation Not Defined

Intersection	
Intersection Delay, s/veh	0.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	12	23	46	868	591	25
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	250
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	85	85	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	14	27	50	943	642	27

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1214	321	642	0	-	0
Stage 1	642	-	-	-	-	-
Stage 2	572	-	-	-	-	-
Follow-up Headway	3.53	3.33	2.23	-	-	-
Pot Capacity-1 Maneuver	173	672	932	-	-	-
Stage 1	483	-	-	-	-	-
Stage 2	525	-	-	-	-	-
Time blocked-Platoon, %				-	-	-
Mov Capacity-1 Maneuver	153	672	932	-	-	-
Mov Capacity-2 Maneuver	286	-	-	-	-	-
Stage 1	483	-	-	-	-	-
Stage 2	466	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	14	1	0

Minor Lane / Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	932	-	459	-	-
HCM Lane V/C Ratio	0.054	-	0.09	-	-
HCM Control Delay (s)	9.082	0.5	13.6	-	-
HCM Lane LOS	A	A	B		
HCM 95th %tile Q(veh)	0.17	-	0.294	-	-

Notes

~ : Volume Exceeds Capacity; $: Delay Exceeds 300 Seconds; Error : Computation Not Defined

Intersection	
Intersection Delay, s/veh	0.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	12	23	46	911	620	25
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	250
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	85	85	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	14	27	50	990	674	27

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1269	337	674	0	-	0
Stage 1	674	-	-	-	-	-
Stage 2	595	-	-	-	-	-
Follow-up Headway	3.53	3.33	2.23	-	-	-
Pot Capacity-1 Maneuver	159	656	906	-	-	-
Stage 1	465	-	-	-	-	-
Stage 2	511	-	-	-	-	-
Time blocked-Platoon, %				-	-	-
Mov Capacity-1 Maneuver	139	656	906	-	-	-
Mov Capacity-2 Maneuver	272	-	-	-	-	-
Stage 1	465	-	-	-	-	-
Stage 2	448	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	14	1	0

Minor Lane / Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	906	-	442	-	-
HCM Lane V/C Ratio	0.055	-	0.093	-	-
HCM Control Delay (s)	9.205	0.5	14	-	-
HCM Lane LOS	A	A	B		
HCM 95th %tile Q(veh)	0.175	-	0.306	-	-

Notes

~ : Volume Exceeds Capacity; $: Delay Exceeds 300 Seconds; Error : Computation Not Defined

Data Entry Sheet

Determination of Warrants for Deceleration Lanes

NM DOT State Access Management Manual Criteria

Driveway "A" / Edith Blvd

Project Information:

Project Name:	**N. Valley Little League Fields**
Project Location:	**Edith Blvd N. of Candelaria Rd**
Implemenation Year:	**2015**
Project Environment:	**Urban** **Multi-Lane**

Street Information:

Major Street Name:	**Edith Blvd**
Minor Street Name:	**Driveway "A"**

Intersection Information:

	Orientation	Prevailing Speed	No. Lanes Each Direction
Driveway "A"	**Eastbound**	**25**	**N/A**
Edith Blvd	**North-South**	**35**	**2**

Determine Case:

Case
1 Urban Two-Lane Highway - Use Table 17.B.1
2 Urban Multi-Lane Highway - Use Table 17.B-2
3 Rural Two Lane Highway - Use Table 17.B-3 and 17.B-5
4 Rural Multi-Lane Highway - Use Table 17.B-4 and 17.B-6

Edith Blvd is Case	**2**
Speed Category	**35 to 40**

SB Right Turn Volumes		**SB Thru Volumes**
2015 AM Pk. Hr. NO BUILD	0	582
2015 AM Pk. Hr. BUILD	1	582
2015 PM Pk. Hr. NO BUILD	0	591
2015 PM Pk. Hr. BUILD	25	591

NB Left Turn Volumes		**NB Thru Volumes**
2015 AM Pk. Hr. NO BUILD	0	527
2015 AM Pk. Hr. BUILD	3	527
2015 PM Pk. Hr. NO BUILD	0	868
2015 PM Pk. Hr. BUILD	46	868

Worksheet Developed by Terry O. Brown, P.E.

Determination of Warrants for Auxiliary Lanes

Project Name: **N. Valley Little League Fields**
Name of Highway: **Edith Blvd**
Name of Cross Street: **Driveway "A"**

Determination of Warrants for: Eastbound Driveway

Implementation Year Volumes - **2015** **Posted Speed Limit:** **35**

Right Turn Deceleration Lane - Implementation Year Volumes

Condition	Year	Projected Right Turn Volume	Warrant Volume in thru Lane	Projected Volume in thru Lane	✓ if Met	Lane Length (Deceleration)*	Adjustment Factor for Grade**	Lane Length (Storage)***	Total Lane Length	Taper Ratio
AM Peak Hour NO BUILD	**2015**	-	-	291		N/A		-	**N/A**	**N/A**
AM Peak Hour BUILD	**2015**	1	9,999	291		N/A		-	**N/A**	**N/A**
PM Peak Hour NO BUILD	**2015**	-	-	296		N/A		-	**N/A**	**N/A**
PM Peak Hour BUILD	**2015**	25	230	296	✓	250	1.00	-	**250**	**8:1**

Based on Table 17.B-2 (Criteria for Deceleration Lanes on Urban Multi-Lane Highways)

Left Turn Deceleration Lane - Implementation Year Volumes

Condition	Year	Projected Left Turn Volume	Warrant Volume in thru Lane	Projected Volume in thru Lane	✓ if Met	Lane Length (Deceleration)*	Adjustment Factor for Grade**	Lane Length (Storage)***	Total Lane Length	Taper Ratio
AM Peak Hour NO BUILD	**2015**	-	-	264		N/A		N/A	**N/A**	**N/A**
AM Peak Hour BUILD	**2015**	3	9,999	264		N/A		N/A	**N/A**	**N/A**
PM Peak Hour NO BUILD	**2015**	-	-	434		N/A		N/A	**N/A**	**N/A**
PM Peak Hour BUILD	**2015**	46	88	434	✓	250	1.00	50	**300**	**8:1**

Based on Table 17.B-2 (Criteria for Deceleration Lanes on Urban Multi-Lane Highways)

* **Lane Length Requirements based on Table 18.K-1 (Deceleration and Acceleraion Lengths)**
** **Enter Grade Adjustment Factor from Table 18.K-2 or other criteria.**
*** **Lane Storage Length is Based on a calculated 3-minute queue based on average arrival rate per minute.**
= Volume/Hr. divided by 60 times three (rounded) times 25 feet per vehicle.
Lane Storage Length for right turn decel lanes is zero unless there is a stop condition.

Notes and Comments:

1. This warrant sheet is for the eastbound Driveway "A" at 100% Development of the Project

Worksheet Developed by Terry O. Brown, P.E.

Table 17.B-2
Criteria For Deceleration Lanes On
URBAN MULTI-LANE HIGHWAYS

Turning Volume[1] (vph)	LEFT-TURN DECELERATION LANE Minimum Volume in Adjacent Through Lane (vphpl)[2]			RIGHT-TURN DECELERATION LANE Minimum Volume in Adjacent Through Lane (vphpl)[2]		
	≤30 mph	35 to 40 mph	45 to 55 mph	≤30 mph	35 to 40 mph	45 to 55 mph
<5	**Not Required**	**Not Required**	**Not Required**	**Not Required**	**Not Required**	**Not Required**
5	**Not Required**	**490**	**420**	**1,200**	**730**	**450**
10	**420**	**370**	**300**	**820**	**490**	**320**
15	**360**	**290**	**220**	**600**	**350**	**240**
20	**310**	**230**	**160**	**460**	**260**	**180**
25	**270**	**190**	**130**	**360**	**230**	**150**
30	**240**	**160**	**110**	**290**	**200**	**130**
35	**210**	**130**	**100**	**260**	**180**	**120**
40	**180**	**120**	**Required**	**240**	**170**	**110**
45	**160**	**110**	**Required**	**220**	**160**	**Required**
50	**140**	**Required**	**Required**	**200**	**Required**	**Required**
55	**120**	**Required**	**Required**	**190**	**Required**	**Required**
≥56	**Required**	**Required**	**Required**	**Required**	**Required**	**Required**
	Left-turn Decelerataion Lanes are Required on Urban Multi-lane Highways for the following Left-turn Volumes: • ≤30 mph : 56 vph or more • 35 to 40 mph : 46 vph or more • 45 to 55 mph : 36 vph or more			***Right-turn Decelerataion Lanes are Required on Urban Multi-lane Highways for the following Right-turn Volumes:*** • ≤30 mph : 56 vph or more • 35 to 40 mph : 46 vph or more • 45 to 55 mph : 41 vph or more		

Notes:

1. *Use linear interpolation for turning volumes between 5 and 55 vph.*
2. *The volume in the adjacent through lane includes through vehicles and turning vehicles.*

Table 18.K-1
Deceleration and Acceleration Lengths (feet)

Speed Change Lane Condition	Posted Speed (mph)									
	25	30	35	40	45	50	55	60	65	70
Deceleration Distance										
Stop Condition	150	200	250	325	400	475	550	650	725	850
Slow to 15 MPH	130	175	230	300	370	450	525	620	700	820
Deceleration Taper										
Length for 12-foot Lane	50	75	100	125	150	175	200	225	250	250
Straight Line Ratios (L:W)	4:1	6:1	8:1	10.5:1	12.5:1	14.5:1	16.5:1	18.5:1	21:1	21:1
Acceleration Lane Length	N/A	190	270	380	550	760	960	1,170	1,380	1,590
Acceleration Taper										
Length of 12-foot Lane	N/A	100	120	150	170	180	230	270	300	300
Straight Line Ratios (L:W)	N/A	8:1	10:1	12.5:1	14:1	15:1	19:1	22.5:1	25:1	25:1

Traffic Count Data Sheet

Year Counts Taken: **2012**

E-W Street Comanche Rd
N-S Street: Edith Blvd

Speed Limit (Comanche Rd)= 40 MPH
Speed Limit (Edith Blvd)= 35 MPH
Date of Count: 5/10/12

Begin Time	End Time	Eastbound (Comanche Rd)			Westbound (Comanche Rd)			Northbound (Edith Blvd)			Southbound (Edith Blvd)			Pedestrians		Bicycles	
		L	T	R	L	T	R	L	T	R	L	T	R	E-W	N-S	E-W	N-S
7:00 AM	7:15 AM	~~14~~	~~103~~	~~25~~	~~38~~	~~64~~	~~60~~	~~6~~	~~50~~	~~23~~	~~36~~	~~75~~	~~10~~	~~0~~	~~0~~	~~0~~	~~0~~
7:15 AM	7:30 AM	**24**	**123**	**24**	**27**	**88**	**67**	**9**	**71**	**17**	**31**	**94**	**6**	**0**	**0**	**0**	**0**
7:30 AM	7:45 AM	**34**	**160**	**19**	**29**	**77**	**48**	**10**	**91**	**22**	**29**	**123**	**11**	**0**	**0**	**0**	**0**
7:45 AM	8:00 AM	**31**	**154**	**40**	**34**	**108**	**49**	**13**	**138**	**28**	**45**	**151**	**15**	**0**	**0**	**0**	**0**
8:00 AM	8:15 AM	**37**	**133**	**40**	**33**	**98**	**49**	**9**	**79**	**43**	**40**	**104**	**11**	**0**	**0**	**0**	**0**
8:15 AM	8:30 AM	~~21~~	~~134~~	~~21~~	~~16~~	~~90~~	~~33~~	~~9~~	~~82~~	~~20~~	~~37~~	~~84~~	~~9~~	~~0~~	~~0~~	~~0~~	~~0~~
8:30 AM	8:45 AM	~~10~~	~~142~~	~~18~~	~~21~~	~~64~~	~~24~~	~~11~~	~~49~~	~~16~~	~~30~~	~~83~~	~~15~~	~~0~~	~~0~~	~~0~~	~~0~~
8:45 AM	9:00 AM	~~15~~	~~82~~	~~25~~	~~14~~	~~95~~	~~24~~	~~9~~	~~76~~	~~15~~	~~27~~	~~62~~	~~13~~	~~0~~	~~0~~	~~0~~	~~0~~
AM Peak Hour Volumes		**126**	**570**	**123**	**123**	**371**	**213**	**41**	**379**	**110**	**145**	**472**	**43**	**0**	**0**	**0**	**0**
% of Total Traffic		4.6%	21.0%	4.5%	4.5%	13.7%	7.8%	1.5%	14.0%	4.1%	5.3%	17.4%	1.6%	0.0%	0.0%	0.0%	0.0%
% Directional			30.2%			26.0%			19.5%			24.3%					
AM Peak Hour Factor			*0.91*			*0.93*			*0.74*			*0.78*					

Begin Time	End Time	Eastbound (Comanche Rd)			Westbound (Comanche Rd)			Northbound (Edith Blvd)			Southbound (Edith Blvd)			Pedestrians		Bicycles	
		L	T	R	L	T	R	L	T	R	L	T	R	E-W	N-S	E-W	N-S
4:00 PM	4:15 PM	~~11~~	~~112~~	~~17~~	~~18~~	~~118~~	~~68~~	~~32~~	~~132~~	~~39~~	~~44~~	~~85~~	~~24~~	~~0~~	~~0~~	~~0~~	~~0~~
4:15 PM	4:30 PM	~~19~~	~~90~~	~~13~~	~~23~~	~~122~~	~~63~~	~~12~~	~~152~~	~~38~~	~~56~~	~~79~~	~~20~~	~~0~~	~~0~~	~~0~~	~~0~~
4:30 PM	4:45 PM	**7**	**112**	**11**	**29**	**116**	**74**	**31**	**147**	**57**	**43**	**86**	**24**	**0**	**0**	**0**	**0**
4:45 PM	5:00 PM	**21**	**112**	**6**	**19**	**130**	**71**	**31**	**166**	**48**	**50**	**68**	**17**	**0**	**0**	**0**	**0**
5:00 PM	5:15 PM	**22**	**134**	**9**	**25**	**154**	**73**	**29**	**159**	**58**	**42**	**76**	**36**	**0**	**0**	**0**	**0**
5:15 PM	5:30 PM	**16**	**105**	**5**	**24**	**140**	**70**	**34**	**199**	**50**	**46**	**81**	**24**	**0**	**0**	**0**	**0**
5:30 PM	5:45 PM	~~18~~	~~109~~	~~1~~	~~15~~	~~129~~	~~68~~	~~25~~	~~161~~	~~35~~	~~25~~	~~61~~	~~25~~	~~0~~	~~0~~	~~0~~	~~0~~
5:45 PM	6:00 PM	~~21~~	~~83~~	~~9~~	~~9~~	~~145~~	~~75~~	~~15~~	~~114~~	~~36~~	~~21~~	~~48~~	~~17~~	~~0~~	~~0~~	~~0~~	~~0~~
PM Peak Hour Volumes		**66**	**463**	**31**	**97**	**540**	**288**	**125**	**671**	**213**	**181**	**311**	**101**	**0**	**0**	**0**	**0**
% of Total Traffic		2.1%	15.0%	1.0%	3.1%	17.5%	9.3%	4.0%	21.7%	6.9%	5.9%	10.1%	3.3%	0.0%	0.0%	0.0%	0.0%
% Directional			18.1%			30.0%			32.7%			19.2%					
PM Peak Hour Factor			*0.85*			*0.92*			*0.89*			*0.96*					

Traffic Count Data Sheet

Year Counts Taken: **2013**

E-W Street Candelaria Blvd
N-S Street: Edith Blvd
UNSIGNALIZED

Speed Limit (Candelaria Blvd)= 40 MPH
Speed Limit (Edith Blvd)= 35 MPH
Date of Count: 3/26/13

Begin Time	End Time	Eastbound (Candelaria Blvd)			Westbound (Candelaria Blvd)			Northbound (Edith Blvd)			Southbound (Edith Blvd)			Pedestrians		Bicycles	
		L	T	R	L	T	R	L	T	R	L	T	R	E-W	N-S	E-W	N-S
7:00 AM	7:15 AM	~~46~~	~~109~~	~~7~~	~~14~~	~~41~~	~~21~~	~~5~~	~~70~~	~~19~~	~~23~~	~~41~~	~~7~~	~~0~~	~~0~~	~~0~~	~~0~~
7:15 AM	7:30 AM	~~18~~	~~126~~	~~16~~	~~19~~	~~51~~	~~19~~	~~6~~	~~60~~	~~8~~	~~21~~	~~44~~	~~18~~	~~0~~	~~0~~	~~0~~	~~0~~
7:30 AM	7:45 AM	**45**	**127**	**22**	**12**	**79**	**19**	**5**	**71**	**13**	**15**	**80**	**26**	**0**	**0**	**0**	**0**
7:45 AM	8:00 AM	**42**	**177**	**17**	**13**	**72**	**32**	**10**	**102**	**19**	**40**	**94**	**23**	**0**	**0**	**0**	**0**
8:00 AM	8:15 AM	**48**	**204**	**24**	**32**	**88**	**26**	**11**	**97**	**22**	**34**	**98**	**18**	**0**	**0**	**0**	**0**
8:15 AM	8:30 AM	**39**	**155**	**14**	**21**	**85**	**36**	**9**	**62**	**19**	**35**	**91**	**22**	**0**	**0**	**0**	**0**
8:30 AM	8:45 AM	~~29~~	~~112~~	~~17~~	~~19~~	~~74~~	~~26~~	~~6~~	~~70~~	~~15~~	~~30~~	~~94~~	~~20~~	~~0~~	~~0~~	~~0~~	~~0~~
8:45 AM	9:00 AM	~~6~~	~~55~~	~~7~~	~~27~~	~~74~~	~~31~~	~~5~~	~~21~~	~~2~~	~~34~~	~~78~~	~~17~~	~~0~~	~~0~~	~~0~~	~~0~~
AM Peak Hour Volumes		**174**	**663**	**77**	**78**	**324**	**113**	**35**	**332**	**73**	**124**	**363**	**89**	**0**	**0**	**0**	**0**
% of Total Traffic		7.1%	27.1%	3.1%	3.2%	13.3%	4.6%	1.4%	13.6%	3.0%	5.1%	14.8%	3.6%	0.0%	0.0%	0.0%	0.0%
% Directional			37.4%			21.1%			18.0%			23.6%					
AM Peak Hour Factor			*0.83*			*0.88*			*0.84*			*0.92*					

Begin Time	End Time	Eastbound (Candelaria Blvd)			Westbound (Candelaria Blvd)			Northbound (Edith Blvd)			Southbound (Edith Blvd)			Pedestrians		Bicycles	
		L	T	R	L	T	R	L	T	R	L	T	R	E-W	N-S	E-W	N-S
4:00 PM	4:15 PM	~~20~~	~~95~~	~~15~~	~~21~~	~~115~~	~~33~~	~~16~~	~~96~~	~~16~~	~~33~~	~~59~~	~~40~~	~~0~~	~~0~~	~~0~~	~~0~~
4:15 PM	4:30 PM	~~30~~	~~106~~	~~6~~	~~27~~	~~154~~	~~35~~	~~15~~	~~116~~	~~23~~	~~21~~	~~80~~	~~52~~	~~0~~	~~0~~	~~0~~	~~0~~
4:30 PM	4:45 PM	~~20~~	~~95~~	~~9~~	~~20~~	~~119~~	~~33~~	~~20~~	~~93~~	~~14~~	~~25~~	~~82~~	~~38~~	~~0~~	~~0~~	~~0~~	~~0~~
4:45 PM	5:00 PM	**18**	**92**	**13**	**28**	**130**	**40**	**21**	**143**	**21**	**16**	**85**	**43**	**0**	**0**	**0**	**0**
5:00 PM	5:15 PM	**29**	**97**	**11**	**26**	**150**	**59**	**20**	**125**	**23**	**26**	**83**	**50**	**0**	**0**	**0**	**0**
5:15 PM	5:30 PM	**19**	**83**	**11**	**22**	**180**	**43**	**22**	**191**	**18**	**19**	**88**	**44**	**0**	**0**	**0**	**0**
5:30 PM	5:45 PM	**16**	**88**	**15**	**27**	**140**	**49**	**15**	**159**	**17**	**21**	**71**	**39**	**0**	**0**	**0**	**0**
5:45 PM	6:00 PM	~~12~~	~~65~~	~~4~~	~~14~~	~~124~~	~~33~~	~~20~~	~~84~~	~~20~~	~~11~~	~~45~~	~~29~~	~~0~~	~~0~~	~~0~~	~~0~~
PM Peak Hour Volumes		**82**	**360**	**50**	**103**	**600**	**191**	**78**	**618**	**79**	**82**	**327**	**176**	**0**	**0**	**0**	**0**
% of Total Traffic		3.0%	13.1%	1.8%	3.8%	21.8%	7.0%	2.8%	22.5%	2.9%	3.0%	11.9%	6.4%	0.0%	0.0%	0.0%	0.0%
% Directional			17.9%			32.6%			28.2%			21.3%					
PM Peak Hour Factor			*0.90*			*0.91*			*0.84*			*0.92*					

ABQ RIDE System Map

Effective December 15th 2012

Richard J. Berry
Mayor

Bruce Rizzieri
Director

SOUTHERN 551
UNSER
GOLF COURSE
NM 528
INTEL
155
Northwest Transit Center
MCMAHON
ELLISON
92
CNM WEST
IRVING
PARADISE
UNIVERSE
RAINBOW
GOLF COURSE
EAGLE RANCH
COORS
PASEO DEL NORTE
EL PUEBLO
ALAMEDA
BALLOON FIESTA PARK
140
551
LOUISIANA
WYOMING
VENTURA
EUBANK
SANDIA MOUNTAINS
JEFFERSON
SAN ANTONIO
MONTAÑO
RIO GRANDE
CHAVEZ
4TH
OSUNA
ACADEMY
LAYTON
93
SPAIN
1
LOWELL
TRAMWAY
CNM MONTOYA
MONTGOMERY
141
WESTERN
GRIEGOS
SAN BIDRO
12TH
36
EDITH
2ND
COMANCHE
13
CANDELARIA
CARLISLE
SAN MATEO
SAN PEDRO
MENAUL
LADERA
8TH
Uptown Transit Center
INDIAN SCHOOL
6
OLD TOWN
LOMAS
16/18
GIRARD
CONSTITUTION
766
JUAN TABO
DOWNTOWN
Dr MLK JR
UNM
11
CENTRAL
Central & Unser Transit Center
66
Alvarado Transportation Center
777
COPPER
ZUNI
51
BRIDGE
54
CNM
50
250
UNIVERSITY
YALE
GIBSON
217
98TH
TOWER
ATRISCO
ARENAL
VA H
G AVE
BROADWAY
SUNPORT
ALBUQUERQUE SUNPORT
KIRTLAND AFB
ISLETA
BLAKE
DENNIS CHAVEZ
RIO BRAVO
GUN CLUB
CNM SOUTH
RAYMAC
New Mexico RAIL RUNNER Commuter Express
MALPAIS
N
0 0.5 1 1.5 Miles

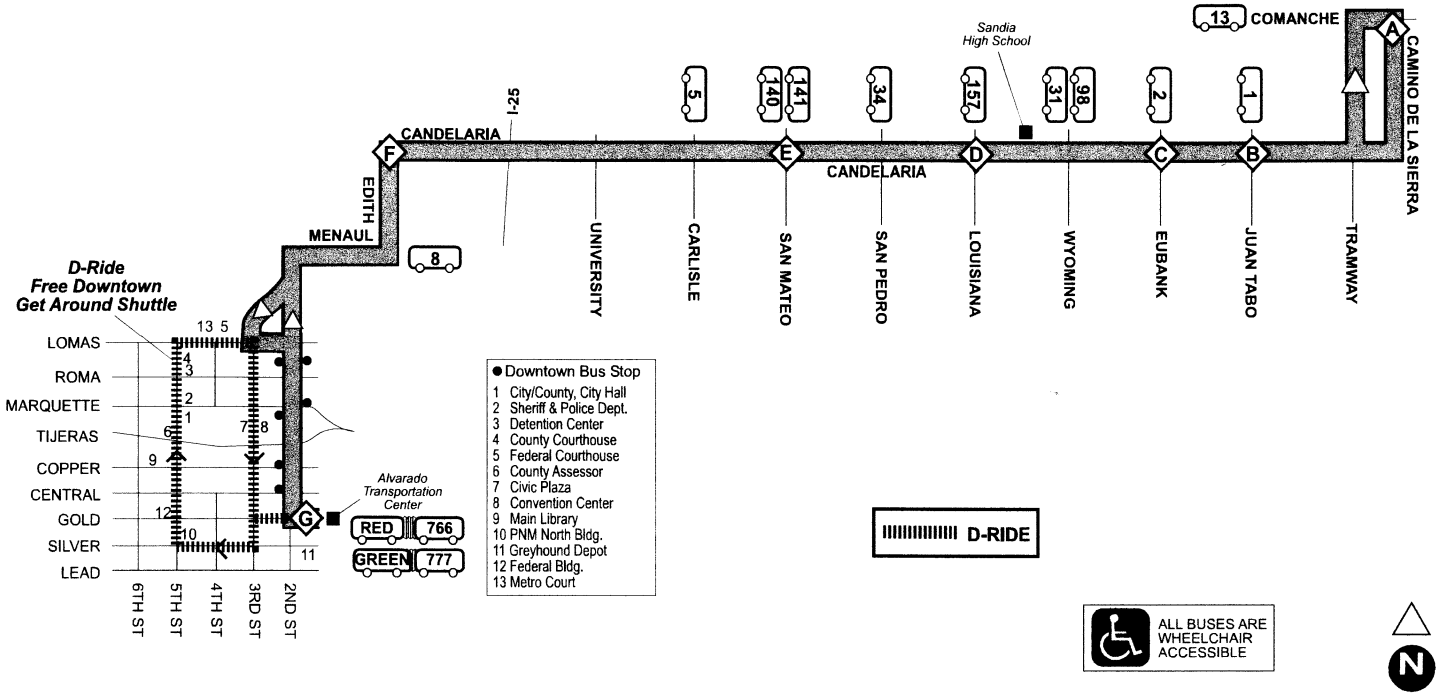
LEGEND

- 700 Rapid Ride Routes: Fast, Frequent Service
- 15 Regular Routes: Local All Day Service
- 15 Commuter Routes: Peak Hours Only
- 15 Service Variation: See Schedule
- Albuquerque Transit Center — ABQ Ride Transit Center
- Park & Ride
- Rail Runner Stations

For more detailed information visit www.myabqride.com or call 243-7433 (243-RIDE)

Route / Ruta 7
Candelaria Rd.

Effective: 12/15/2012



Route 7 - Weekday Westbound

CAMINO DE LA SIERRA & COMANCHE (A)	CANDELARIA & JUAN TABO (B)	CANDELARIA & EUBANK (C)	CANDELARIA & LOUISIANA (D)	CANDELARIA & SAN MATEO (E)	EDITH & CANDELARIA (F)	ALVARADO TRANSPORTATION CENTER (G)
6:29a	6:38a	6:42a	6:48a	6:52a	7:00a	7:14a
7:09a	7:18a	7:22a	7:29a	7:34a	7:42a	7:56a

Route 7 - Weekday Eastbound

ALVARADO TRANSPORTATION CENTER (G)	EDITH & CANDELARIA (F)	CANDELARIA & SAN MATEO (E)	CANDELARIA & LOUISIANA (D)	CANDELARIA & EUBANK (C)	CANDELARIA & JUAN TABO (B)	CAMINO DE LA SIERRA & COMANCHE (A)
2:30p	2:43p	2:51p	2:54p	3:01p	3:04p	3:12p
5:25p	5:40p	5:48p	5:51p	5:57p	6:00p	6:07p