Albuquerque Recycling Facility

(Edith Blvd N. of Comanche Rd)

Traffic Impact Study

October 12, 2012

F I N A L

Presented to:

Bernalillo County Public Works Department

Prepared for:

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Albuquerque Recycling Facility
(Edith Blvd. N. of Comanche Rd.)
Traffic Impact Analysis

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Albuquerque Recycling Facility
(Edith Blvd N. of Comanche Rd)
Traffic Impact Analysis

Introduction

The purpose of this study is to evaluate the transportation conditions before and after implementation of the proposed Albuquerque Recycling Facility and determine the impact of the development on the adjacent transportation system. The recommendations of this study will provide 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 Albuquerque Recycling Facility as shown on the plan on Pages A-3 and A-4 in the Appendix of this report.

Study Procedures

A scoping meeting was held with Bernalillo County Transportation staff in February of 2012 to discuss scope and methodology to be utilized within the proposed Albuquerque Recycling Facility Traffic Impact 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, 2000, using Trafficware's Synchro version 7 Highway Capacity Software for signalized and unsignalized intersections. For signalized intersections, the operational method of analysis was used for 2015 conditions (NO BUILD and BUILD).

It should be noted that Synchro 8 (using HCM 2010 methodology) was not utilized in this analysis since there are numerous problematic issues related to the new software. Synchro 8 was recently released, but there have been problems with the software that Trafficware is trying to address, but have not yet done so. Therefore, Synchro 7 was utilized for this study as required by the New Mexico Department of Transportation.

Intersections targeted for analysis in this study include Comanche Rd / Edith Blvd and Montano Rd / Edith Blvd. In addition, the proposed driveways 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 Albuquerque Recycling Facility site map on Page A-3 in the Appendix of this report. A vicinity map showing the location of the project is included on Page 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.

Two access points for this new site will be off of Edith Blvd as full access driveways.

Edith Blvd and Comanche Rd are classified as a Minor Arterial Roadways and Montano 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 Edit 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. Montano Rd is generally a six lane urban facility with raised medians. The posted speed limit along Montano Rd in the vicinity of this project is 45 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 regular bus route along Montano Rd (Route 157) and a commuter bus route during peak hours only along Comanche Rd (Route 13). The ABQ Ride System Map and pertinent schedules are included on Appendix Pages A-53 thru A-54.

Pertinent Programmed Highway Improvements in the Current MTP:

The current MTP projects in the area of the Albuquerque Recycling Facility consist of reconstruction and widening of Montano Rd from the Railroad tracks to Edith Blvd from four to six lanes and the 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 Albuquerque Recycling Facility consists of a 87,106 S.F. Material Recovery Building, a 20,010 S.F. Bale Inventory Yard, and a an Office Building which will be located within an existing building at the northeast corner of the site. 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 three full access drives off of Edith Blvd.

Trip Generation Rates

Trip generation rates for the Material Recovery Building and the Bale Inventory Yard were determined based on Trip Generation Volumes obtained by the developer. (See Appendix Pages A-8 thru A-9.) Trip generation rates for the Office Building were projected based on data contained in the Institute of Transportation Engineers (ITE) Trip Generation Manual, 8th Edition published in 2008. The following table lists the calculated daily, AM, and PM Peak Hour trip generation rates:

Albuquerque Recycle Center (Edith Blvd. North of Comanche Rd.)

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

COMMENT	USE (ITE CODE) / DESCRIPTION		24 HR VOL GROSS	A. M. PEAK HR. ENTER	A. M. PEAK HR. EXIT	P. M. PEAK HR. ENTER	P. M. PEAK HR. EXIT
	Summary Sheet	Units					
(from owner)	Recycling Facility	N/A	200	8	3	14	5
Office / Ed.	General Office Building (710) - Less than 51,000 S.F.	12.00	177	22	3	5	24
	Subtotal		**377**	**30**	**6**	**19**	**29**

The preceding table demonstrates the calculated trip generation rate based on the proposed plan and the projected uses for each building on the site. No adjustment was made to account for pass-by trips or mixed use (internal capture) traffic reductions. Trip Generation Rate Summary Table and Individual Trip Generation Rate Worksheets for individual land uses are contained on Page A-7 in the Appendix.

Trip Distribution / Trip Assignments

Primary and Diverted Linked Trips:

Office / Laboratory Land Uses

Primary and diverted linked trips for the land use developments were distributed proportionally to the 2015 and 2020 projected population / employment of Subareas citywide inversely proportional to the distance from the project to the subarea. Population data for the years 2015 and 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 and 2025 was interpolated linearly to obtain 2015 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-10 thru A-13.

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-14 thru A-15.

Analysis of Existing Conditions

2010 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 three 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 Montano Rd / Edith Blvd and Comanche Rd / Edith Blvd. Only one northbound pedestrian was observed at Comanche Rd / Edith Blvd during the AM traffic count and one northbound, two southbound, four westbound, and one eastbound pedestrian during the PM traffic count. Only three southbound and one westbound pedestrian was

observed during the AM traffic count at Montano Rd / Edith Blvd and one southbound, three eastbound, and three westbound pedestrians during the PM traffic count.

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 2001 thru 2010 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 1% or a generic 3% 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-17 thru A-22a. 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-26 thru A-35).

Projected Peak Hour Turning Movements for 2015 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 NO BUILD volumes utilized in this report. To these volumes, the generated trips based on implementation of the proposed Albuquerque Recycling Facility were added to obtain the 2015 BUILD volumes utilized for the 2015 BUILD Condition analyses. See Appendix Pages A-24 thru A-35 for further information regarding the 2015 turning movement volumes.

Implementation 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 7 (Build 763) computer modeling software which approximates the 2000 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 – Montano Rd / Edith Blvd - Pages A-36 thru A-39

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

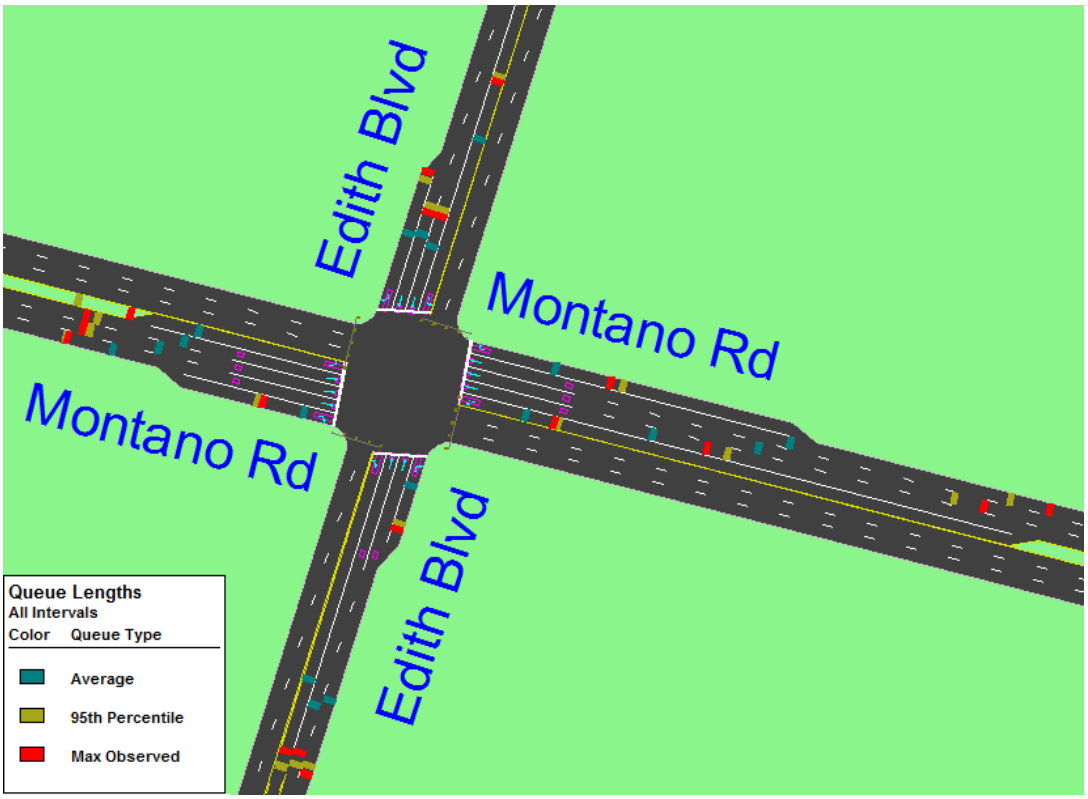
Intersection: 1 - MONTANO RD / EDITH BLVD

		2015 AM Peak Hour BUILD (EXIST. GEOM.)					2015 PM Peak Hour BUILD (EXIST. GEOM.)				
		NO BUILD		BUILD			NO BUILD		BUILD		
		Lanes	LOS-Delay	Lanes	LOS-Delay		Lanes	LOS-Delay	Lanes	LOS-Delay	
EB	L	1	B - 18.4	1	B - 18.8	L	1	C - 34.3	1	C - 34.4	
	T	3	D - 35.8	3	D - 36.9	T	3	C - 34.9	3	C - 35.0	
	R	1	B - 17.3	1	B - 17.8	R	1	B - 15.1	1	B - 15.1	
WB	L	1	C - 25.8	1	C - 27.3	L	1	C - 25.1	1	C - 25.5	
	T	3	C - 26.6	3	C - 27.0	T	3	D - 43.6	3	D - 43.6	
	R	1	B - 15.1	1	B - 15.4	R	1	B - 19.8	1	B - 19.8	
NB	L	1	C - 23.9	1	C - 32.5	L	1	C - 25.7	1	C - 22.6	
	T	2	D - 39.2	2	D - 40.9	T	2	C - 29.0	2	D - 41.1	
	R	1	D - 36.5	1	B - 18.9	R	1	B - 11.0	1	D - 37.9	
SB	L	1	C - 33.2	1	C - 32.5	L	1	D - 40.8	1	D - 40.9	
	T	2	D - 36.3	2	D - 35.7	T	2	D - 36.5	2	D - 36.7	
	R	1	C - 21.7	1	C - 21.4	R	1	C - 26.5	1	C - 26.7	
Intersection:			***C - 31.3***		***C - 31.6***			***C - 33.7***		***D - 36.3***	

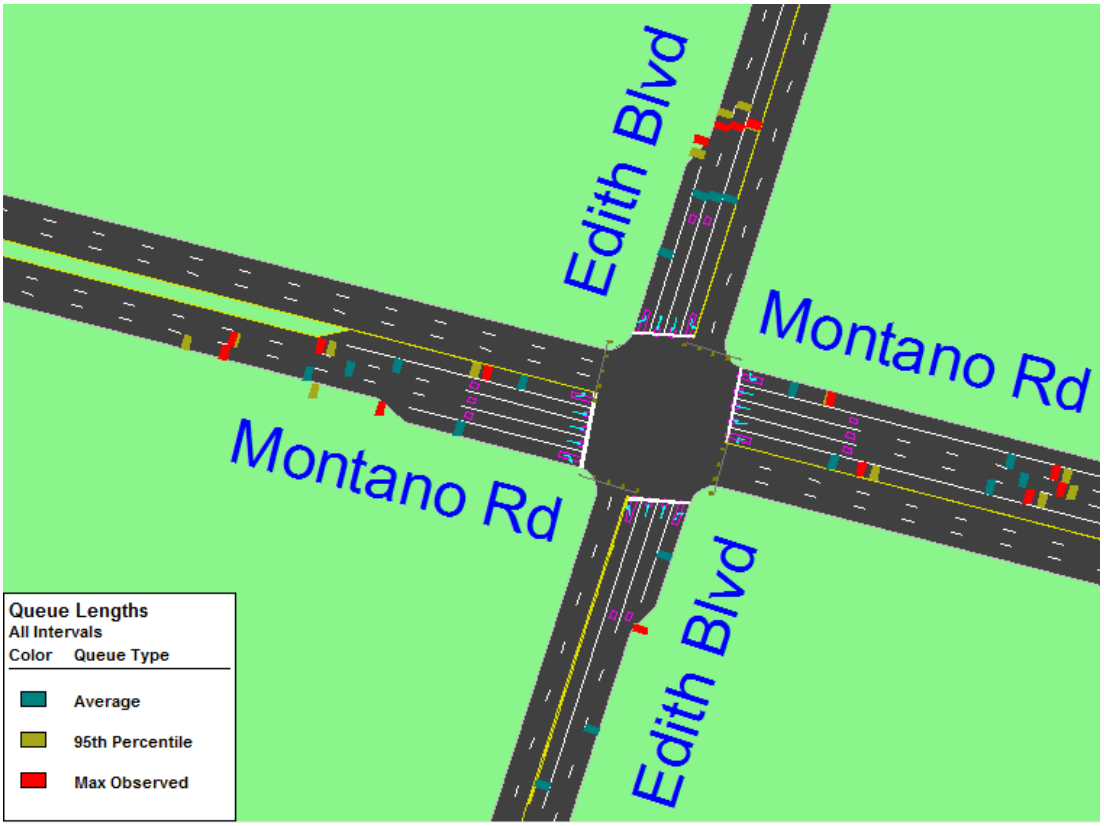
Note: ">" designates a shared right or left turn lane next to a thru lane.

The implementation year analysis of the intersection of Montano 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 from 0.3 to 2.6 seconds. Therefore, this study concludes that the development presents no significant impact to the calculated delays at the intersection of Montano Rd / Edith Blvd.

The following graphics summarize the results of the SimTraffic queuing analysis for the auxiliary lanes at the intersection for the 2015 NO BUILD and BUILD Conditions:



2015 NO BUILD QUEUES



2015 BUILD QUEUES

The eastbound left turn lane is approximately 200 feet and the eastbound right turn lane is approximately 140 feet. SimTraffic demonstrates that the 95th Percentile queues falls within the existing left turn lane and exceeds the existing right 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. It is important to note that in some cases the NO BUILD queues exceed the BUILD queues. This is because the signal splits are different. The westbound left turn lane is approximately 500 feet and the westbound right turn lane is approximately 300 feet. SimTraffic demonstrates that the 95th Percentile queues fall within the existing left and right turn lanes. The northbound left turn lane is approximately 250 feet and the northbound right turn lane is approximately 70 feet. SimTraffic demonstrates that the 95th Percentile queues falls within the existing left turn lane and exceeds the existing right 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 345 feet and the southbound right turn lane is approximately 125 feet. SimTraffic demonstrates that the 95th Percentile queues fall within the existing left turn lane and exceeds the existing right turn lane by only a couple of vehicles. 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. Therefore, no improvements are recommended to the auxiliary lanes at the intersection of Montano Rd / Edith Blvd.

Intersection #2 – Comanche Rd / Edith Blvd - Pages A-40 thru A-43

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

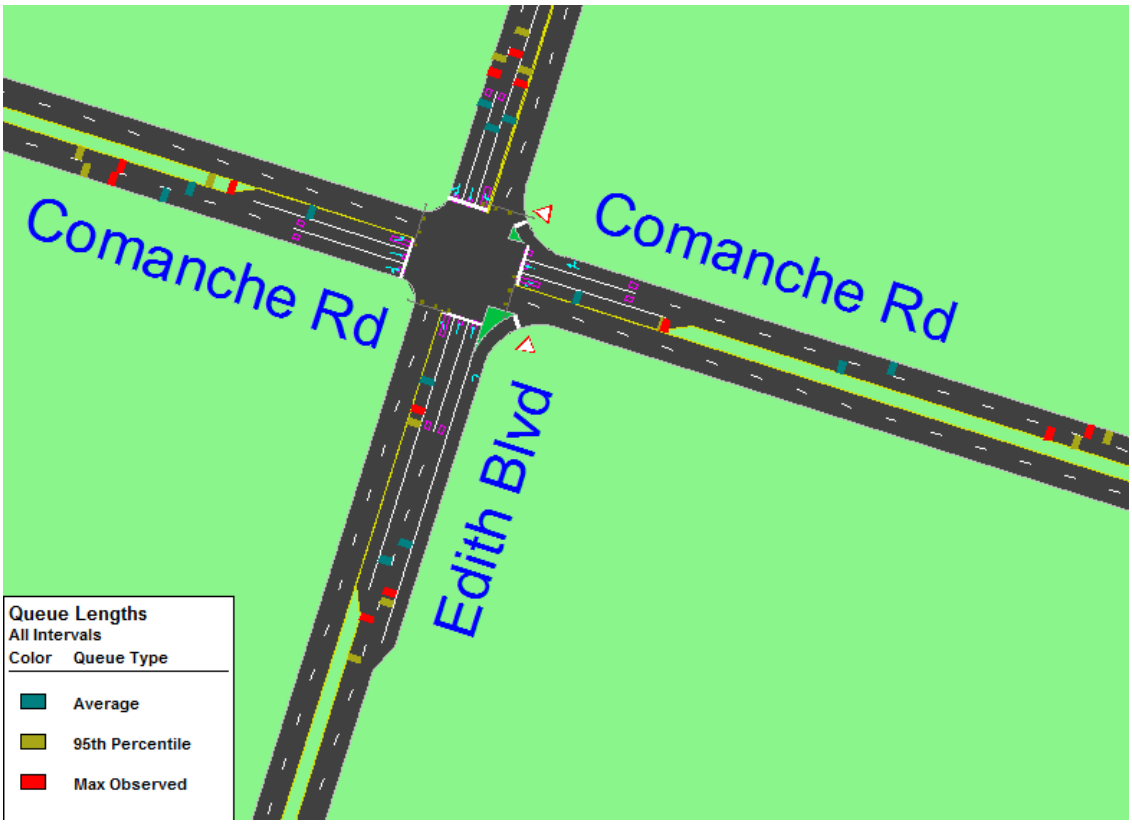
Intersection: 2 - COMANCHE RD / EDITH BLVD

		2015 AM Peak Hour BUILD (EXIST. GEOM.)				2015 PM Peak Hour BUILD (EXIST. GEOM.)			
		NO BUILD		BUILD		NO BUILD		BUILD	
		Lanes	LOS-Delay	Lanes	LOS-Delay	Lanes	LOS-Delay	Lanes	LOS-Delay
EB	L	1	C - 25.4	1	C - 25.8	1	C - 28.9	1	C - 28.9
	T	2	D - 43.1	2	D - 43.1	2	C - 34.7	2	D - 35.1
	R	>	D - 43.1	>	D - 43.1	>	C - 34.7	>	D - 35.1
WB	L	1	C - 27.6	1	C - 27.9	1	C - 23.2	1	C - 23.5
	T	2	D - 35.5	2	D - 35.6	2	D - 43.2	2	D - 45.0
	R	>	D - 35.5	>	D - 35.6	>	D - 43.2	>	D - 45.0
NB	L	1	C - 22.2	1	C - 22.3	1	C - 21.9	1	C - 21.9
	T	2	C - 31.5	2	C - 31.6	2	C - 35.0	2	D - 35.2
	R	1	B - 19.3	1	C - 26.5	1	C - 20.9	1	C - 20.9
SB	L	1	A - 9.2	1	C - 22.2	1	B - 18.8	1	B - 19.7
	T	2	B - 18.8	2	B - 17.0	2	C - 20.8	2	B - 19.9
	R	>	B - 18.8	>	B - 17.0	>	C - 20.8	>	B - 19.9
Intersection:		***C - 30.0***		***C - 30.8***		***C - 32.4***		***C - 32.9***	

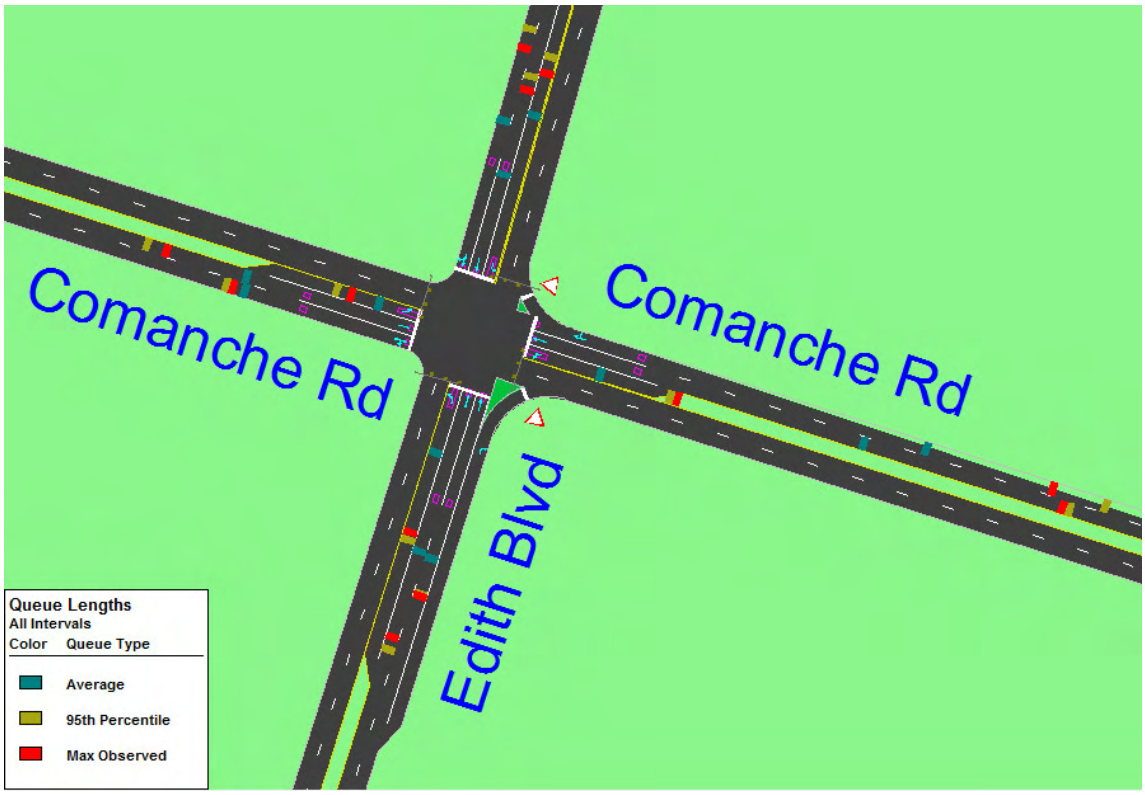
Note: ">" designates a shared right or left turn lane next to a thru lane.

The implementation 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 0.5 to 0.8 seconds. Therefore, no recommendations are made for the intersection of Rio Bravo Blvd / Broadway Blvd.

The following graphics summarize the results of the SimTraffic queuing analysis for the auxiliary lanes at the intersection for the 2015 NO BUILD and BUILD Conditions:



2015 NO BUILD QUEUES



2015 BUILD QUEUES

The eastbound left turn lane is approximately 130 feet. SimTraffic demonstrates that the 95th Percentile queue falls within the existing left turn lane. The westbound left turn lane is approximately 115 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 290 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. Therefore, no improvements are recommended for the auxiliary lanes at the intersection of Comanche Rd / Edith Blvd.

Intersection #3 –Driveway 'A' / Edith Blvd - Pages A-44 thru A-45

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

Intersection: 3 - DRIVEWAY 'A' / EDITH BLVD

2015 Peak Hour BUILD

		(EXIST. GEOM.)			
		AM BUILD		PM BUILD	
		Lanes	LOS-Delay	Lanes	LOS-Delay
EB	L	1	B - 13.5	1	B - 12.0
	R	>	B - 13.5	>	B - 12.0
NB	L	1	B - 10.1	1	A - 9.1
Intersection:		***u - 0.0***		***u - 0.0***	

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

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.

Intersection #4 - Driveway 'B' / Edith Blvd - Pages A-46 thru A-47

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

Intersection: 4 - DRIVEWAY 'B' / EDITH BLVD

2015 Peak Hour BUILD

		(EXIST. GEOM.)			
		AM BUILD		PM BUILD	
		Lanes	LOS-Delay	Lanes	LOS-Delay
EB	L	>	B - 14.1	>	B - 13.7
	R	>	B - 14.1	>	B - 13.7
NB	L	1	A - 10.0	1	A - 9.0
Intersection:			***u - 0.0***		***u - 0.0***

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

Driveway 'B' 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 'B' / Edith Blvd.

The proposed driveways are not aligned with the existing driveways along the east side of Edith Blvd. Even though this staggered driveway layout is not optimal, it is not inconsistent with the existing condition along the entire length of Edith Blvd from Comanche Rd to Montano Rd. See Appendix Page A-50 for Driveway Exhibit.

The queue lengths at the proposed driveways are not more than one vehicle length for any condition analyzed.

Findings and Conclusions

The proposed Albuquerque Recycling Facility (implementation year 2015) 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.

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

Proposed driveways shall be designed and constructed to facilitate anticipated truck design vehicles.

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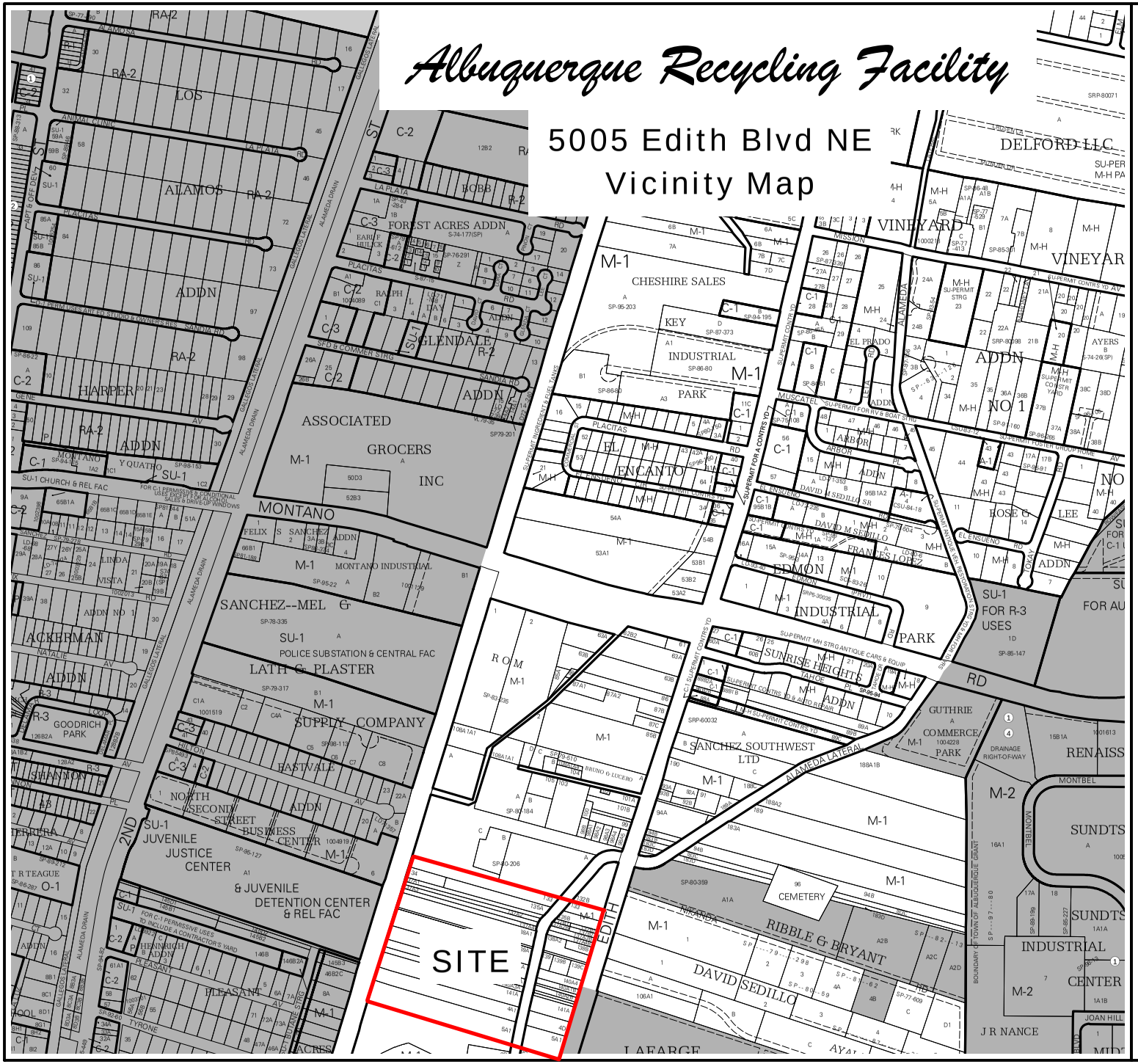
APPENDIX

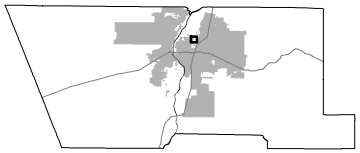
Rutherford Ln NE
Nikanda Rd NE
Edith Blvd NE
ALBUQUERQUE RECYCLE CENTER - 5005 EDITH BLVD NE
© 2012 Google
Google earth
Imagery Date: 2/14/2011
1991
35°07'54.92" N 106°37'55.07" W elev 4997 ft
Eye alt 6864 ft

A-1

Albuquerque Recycling Facility

5005 Edith Blvd NE
Vicinity Map





LEGAL DESCRIPTION

T11N

R3E

SEC 33

UNIFORM PROPERTY CODE

1-015-061

250 0 250 500 750 1,000

Feet

Map amended through July 2010

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.

F-15-Z

A-2

NORTH

SEE SHEET C401 FOR ENLARGED PARTIAL SITE PLAN OF THIS AREA

INDICATES NEW FIRE HYDRANT LOCATION WITH TWO (2) BOLLARDS

SEE SHEET C402 FOR ENLARGED PARTIAL SITE PLAN OF THIS AREA

TRUCK SCALE

10'-0" HIGH CHAIN LINK FENCING SYSTEM

INDICATES POLE LIGHT LOCATION

INDICATES NEW FIRE HYDRANT LOCATION WITH FOUR (4) BOLLARDS

EXISTING BUILDING

TEA HOUSE

BALE INVENTORY
20,010 SQUARE FEET

INDICATES LOCATION OF TRANSFORMER

MATERIAL RECOVERY FACILITY
86,995 SQUARE FEET

4'-0" DEEP TRUCK CARING DOCK

CONTAINER STORAGE
PAPER STORAGE

INDICATES NEW FIRE HYDRANT LOCATION WITH THREE (3) BOLLARDS

TIPPING POSITION TRUCK ENTRY

2" DEEP 3/4" GRAVEL OVER COMPACTED SUBGRADE

TYPE I PAVING

INDICATES LOCATION OF FIRE DEPARTMENT CONNECTIONS & PIV

INDICATES NEW FIRE HYDRANT LOCATION

40' RADIUS

SOUTH

SEE SHEET C403 FOR ENLARGED PARTIAL SITE PLAN OF THIS AREA

SEE SHEET C404 FOR ENLARGED PARTIAL SITE PLAN OF THIS AREA

WEST

EAST

175'-0" | 55'-0" | 230'-0" | 250'-0" | 35'-0" | 89'-6" | 118'-8"

SITE WALL & FENCING LEGEND

A — A INDICATES 10'-0" HIGH CHAIN LINK FENCING SYSTEM.

PLAN NORTH

TRUE NORTH

A1

SCALE: 1" = 40'-0"

MASTER SITE PLAN

0 10' 40' 60' 80'

CLAUDIO VIGIL ARCHITECTS

1801 Rio Grande Boulevard, N.W.
Albuquerque, New Mexico
Phone: (505) 842-1113
Fax: (505) 842-1330

OWNERSHIP OF INSTRUMENTS OF SERVICE

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CONSULTANTS

PROFESSIONAL SEAL

FRIEDMAN RECYCLING COMPANIES

CITY OF ALBUQUERQUE RECYCLING CENTER

NEW RECYCLING FACILITY

5049 EDITH BOULEVARD, N.E.
ALBUQUERQUE, NEW MEXICO

-	-	-
-	-	-
-	-	-
-	-	-
-	-	-
1	9-17-2012	BUILDING PERMIT SET
MARK	DATE	DESCRIPTION

PROJECT NUMBER:	11115
DRAWING FILE:	COA-RECYCLE-C101-MSP
DRAWN BY:	SMF
CHECK BY:	CAV
COPYRIGHT:	CLAUDIO VIGIL ARCHITECTS 2012
DATE:	OCTOBER 11, 2012

SHEET TITLE
MASTER SITE PLAN

SHEET NUMBER
C101

A-3

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
- 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".

Northwest Loop
Rainbow
Unser Blvd.
Westphalia Blvd.
US 550
Santa Fe Hills Rd.
Boulder Rd.
Chayote Rd.
Enchanted Hills Blvd.
NM 528
Progress Blvd.
Lincoln Ave.
Wilshelt Rd.
32nd Ave.
King Blvd.
Paseo del Volcan West
Idalia Rd.
Iris Rd.
Willow Creek Rd.
Cam. Barrio Nuevo
Cam. Don Tomas
NM 313
Hill Rd.
NM 165
BERNALILLO
I-25
NM 423
INSET (not to scale)
12th St.
6th St.
5th St.
4th St.
3rd St.
2nd St.
Broadway Blvd.
I-25
I-40
Odelia Rd.
Mountain Rd.
Lomas Blvd.
Marquette Ave.
Dr. Martin Luther King, Jr. Ave.
Tijeras Ave.
Copper Ave.
Central Ave.
Gold Ave.
Lead Ave.
Coal Ave.
Lead/Coal 2nd/3rd Bridge Blvd.
6th St.
Bridge
Vista Rd.
10th St.
Cherry Rd.
17th Ave.
19th Ave.
30th St.
40th St.
Kim Rd.
Sandia Vista Rd.
Grande Vista Rd.
Saratoga Rd.
Rivers Rd. NE
BN & SF RR (Amtrak)
Northern Blvd.
Abrazo Rd.
Rockaway Blvd.
Rio Arriba Rd.
Rio Vista Rd.
NM 448
Sundt Rd.
Loma Colorado Dr.
High Resort Blvd.
Leon Grande Ave.
Villa Verde Dr.
Sabana Grande Ave.
Canal
Corrales Rd. (NM 448)
CORRALES
West Sandia Blvd.
Idalia Rd.
Baltic Ave.
Lisbon
Tampin
Unser Blvd.
Western Hills Dr.
Broadmoor Dr.
Necklace Dr.
Country Club Dr.
Pecos Lp.
Southern Blvd.
11th St.
Cabezon Blvd.
Golf Course Rd.
Sara Rd.
RIO RANCHO
Westside Blvd.
19th Ave.
SANDOVAL CO.
BERNALILLO CO.
Paseo del Volcan East
Westside/McMahon
Irving
McMahon Blvd.
Irving Blvd.
Ellison Dr.
Loma Larga Rd.
Meadowlark Ln.
NM 313
San Mateo North
RIO GRANDE
Rio Rancho Blvd.
Unser Blvd.
La Paz Dr.
Paradise Blvd.
Coors By-pass
Eagle Ranch
Alameda Blvd.
Alameda Rd.
Ballooning Museum Dr.
(NM 528)
Tramway Rd. (NM 556)
Sandia Indian Reservation
Elena/Balboa
Elena Dr.
Modesto Ave.
Barstow St.
Ventura St.
Tramway Ln.
Cedar Hill Rd.
Live Oak Rd.
Paseo del Norte
San Bernardino Rd.
Tramway Tr.
San Rafael Ave.
Simms Park
Academy Blvd.
Spain Rd.
Manitoba St.
Montgomery Blvd.
Comanche Rd.
Camino de la Sierra
Candelaria Rd.
Menaul Blvd.
Monte Largo Dr.
Indian School Rd.
Constitution Ave.
Lomas Blvd.
Turner Dr.
Copper Ave.
Encantado Rd.
NM 333
Louisiana
Tramway Blvd. (NM 556)
Rainbow Blvd.
Atrisco Dr.
Taylor Ranch Dr.
Homestead Cir.
Golf Course Rd.
Coors Blvd. (NM 448)
LOS RANCHOS DE ALBUQUERQUE
El Pueblo Rd.
(NM 423)
San Francisco Dr.
San Antonio Dr.
Harper Rd.
Osuna Rd.
Alexander
Alexander Blvd.
McLeod Rd.
Cannino del Sol
La Orilla Rd.
Montano Rd.
Dellyne Ave.
Griegos Rd.
Candelaria Rd.
Western Trail
St. Joseph's
Sequoia Rd.
Quail Rd.
Ouray Rd.
Petroglyph National Monument
Paseo del Volcan West
Unser Blvd. (NM 345)
Ladera Dr.
Upper St.
Middle St.
98th St.
Cross St.
Old 98th
118th St.
Lowery
Hannah St.
Hanover Rd.
Laurelwood Airport
Los Volcanes Rd.
Bluewater Rd.
Atrisco Rd.
Yucca Dr.
Trigleg
Sunset Rd.
Old Coors Dr.
Golf Blvd.
Bridge Blvd.
Bridge
Cesar Chavez Blvd.
Ridgecrest Dr.
Kathryn Ave.
Zuni Rd.
Copper Ave.
Central Ave.
Coal
Gibson Blvd.
Randolph Rd.
Sunport
Sunport Blvd.
Woodward Rd.
Arenal Rd.
Tapia Blvd.
Gibson West
Blake Rd.
Barcelona Rd.
Rio Bravo Blvd. (NM 500)
Sen. Dennis Chavez Blvd.
ALBUQUERQUE
See Inset
I-40
118th
106th St.
98th St.
90th St.
86th St.
74th St.
Eucariz Rd.
Tower Rd.
Sage Rd.
Central Ave
Gibson West
Gun Club
Gun Club Rd.
Pajarito
Pajarito Rd.
Don Felipe Rd.
Desert Rd.
Raymac Rd.
Los Padillas Rd.
Malpais Rd.
Southwest Transportation Corridor
Unser
Isleta Blvd.
Coors Blvd.
(NM 45)
2nd St. (NM 303)
Los Picaros
BN & SF RR (Amtrak)
Broadway (NM 47)
NM 47
Mesa Del Sol
Isleta Indian Reservation
0 1/2 1 2 3 Miles N

LONG RANGE ROADWAY SYSTEM

Albuquerque Metropolitan Planning Area

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

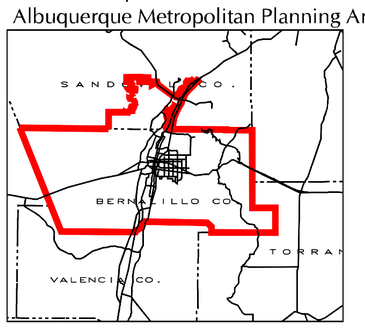
Adopted by the Metropolitan Transportation Board of the Mid-Region Council of Governments, February 12, 2004.

Ron Brown
Chair, MRCOG/MTB

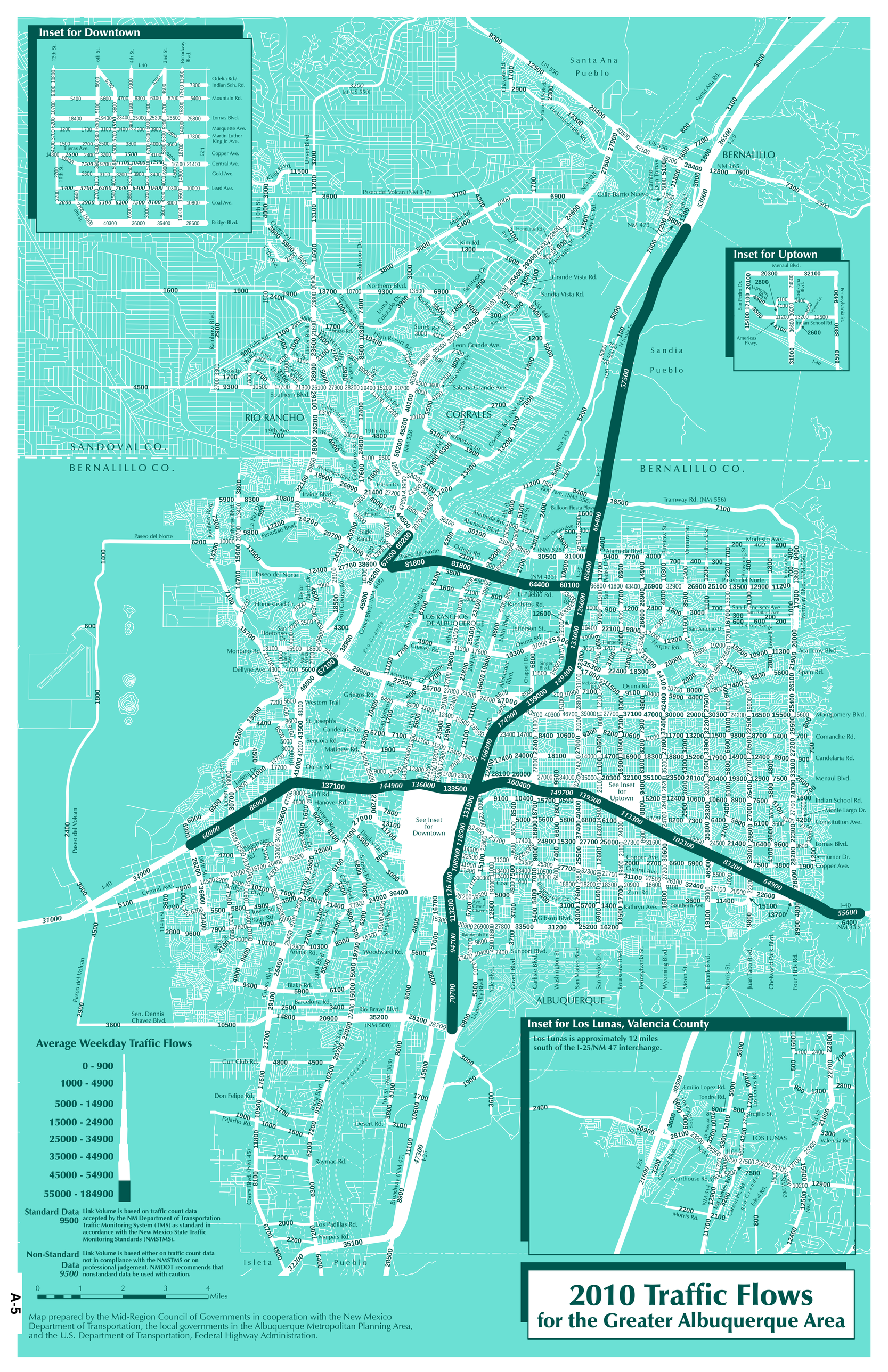
A-4

02/13/04

Location Map
Albuquerque Metropolitan Planning Area



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


Inset for Downtown
Inset for Uptown
Inset for Los Lunas, Valencia County
Los Lunas is approximately 12 miles south of the I-25/NM 47 interchange.
Average Weekday Traffic Flows
0 - 900
1000 - 4900
5000 - 14900
15000 - 24900
25000 - 34900
35000 - 44900
45000 - 54900
55000 - 184900
Standard Data 9500
Link Volume is based on traffic count data accepted by the NM Department of Transportation Traffic Monitoring System (TMS) as standard in accordance with the New Mexico State Traffic Monitoring Standards (NMSTMS).
Non-Standard Data 9500
Link Volume is based either on traffic count data not in compliance with the NMSTMS or on professional judgement. NMDOT recommends that nonstandard data be used with caution.
0 1 2 3 4 Miles
Map prepared by the Mid-Region Council of Governments in cooperation with the New Mexico Department of Transportation, the local governments in the Albuquerque Metropolitan Planning Area, and the U.S. Department of Transportation, Federal Highway Administration.
2010 Traffic Flows
for the Greater Albuquerque Area
A-5

Albuquerque Recycle Center (Edith Blvd. North of Comanche Rd.)

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

COMMENT	USE (ITE CODE) / DESCRIPTION	Units	24 HR VOL GROSS	A. M. PEAK HR. ENTER	A. M. PEAK HR. EXIT	P. M. PEAK HR. ENTER	P. M. PEAK HR. EXIT
	Summary Sheet						
(from owner)	Recycling Facility	N/A	200	8	3	14	5
Office / Ed.	General Office Building (710) - Less than 51,000 S.F.	12.00	177	22	3	5	24
	Subtotal		**377**	**30**	**6**	**19**	**29**

Albuquerque Recycle Center (Edith Blvd. North of Comanche Rd.)
Trip Generation Data (ITE Trip Generation Manual - 8th Edition)

USE (ITE CODE)		24 HOUR TWO-WAY VOLUME	A. M. PEAK HOUR		P. M. PEAK HOUR	
		GROSS	ENTER	EXIT	ENTER	EXIT
	Units					
General Office Building (710) - Less than 51,000 S.F.	*12.00*	177	22	3	5	24
	1,000 S.F.					

ITE Trip Generation Equations:

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

T = ***14.729*** **(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 = ***2.055*** **(X) +** ***0***
88% Enter, ***12%*** Exit

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

T = ***2.369*** **(X) +** ***0***
17% Enter, ***83%*** Exit

Comments:
Office / Ed.

Based on ITE Trip Generation Manual - 8th Edition

Terry O. Brown

'om: David Friedman <DFriedman@friedmanrecycling.com>
ent: Thursday, May 24, 2012 9:05 AM
To: Terry O. Brown
Subject: RE: Traffic Volume Projections

Our am peak hours will be between 6:00am and 8:00am. We estimate we'll receive between 5-6 inbound trucks per day.
Our pm peak hours will be between 1:00pm and 2:30pm. We estimate we'll receive between 11-12 inbound trucks per day.

Our outbound trucks will be evenly spread throughout the day. Generally beginning around 10:00am, we'll have approximately 1 to 2 per hour through 4:30pm.

This is based upon our experience in El Paso with a slight adjustment for the fact that our ABQ facility is located so close to ABQ's truck garage center.

Please let me know if you have any other questions or concerns.

Thanks,

David Friedman
Friedman Recycling Companies
'rect: (602) 484-4966

Official Sponsor of the Environment

From: Terry O. Brown [mailto:tobe@swcp.com]
Sent: Wednesday, May 23, 2012 4:54 PM
To: David Friedman
Subject: RE: Traffic Volume Projections

David,

Would you please send me the estimated hourly trips (entering and exiting) for the AM and PM Peak Hours for the truck deliveries.

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

Best Regards,

Terry O. Brown, P.E.
P. O. Box 92051
Albuquerque, NM 87199-2051
'05) 883-8807 – Office
(505) 270-6981 – Cell
(505) 212-0267 – FAX
e-mail: tobe@swcp.com

From: David Friedman [mailto:DFriedman@friedmanrecycling.com]
Sent: Friday, May 18, 2012 4:24 PM
To: tobe@swcp.com
Subject: Traffic Volume Projections

Terry:
Sorry we keep missing each other on the phone.

We estimate this facility will have approximately 80 to 100 route truck deliveries per week in-bound and 20 to 30 semi truck shipments outbound per week.

We'll have 35 full time employees and usually receive 5 to 10 vendor visits per week.

Please feel free to call me on my cell phone to discuss further at (602) 859-9162.

Sincerely,

David Friedman, CEO
Friedman Recycling Companies
3640 W. Lincoln Street
Phoenix, AZ 85009

Direct: (602) 484-4966
E-Mail: DFriedman@FriedmanRecycling.com

Recycling | Secure Data Destruction | Waste Removal

Official Sponsor of the Environment

Help us save our planet by not printing this email. If you must do so, please use recycled paper.
This email message is for the sole use of the intended recipient(s) and may contain confidential and privileged information. Any unauthorized review, use, disclosure or distribution is prohibited. If you are not the intended recipient, please contact the sender by reply email and destroy all copies of the original message.

No virus found in this message.
Checked by AVG - www.avg.com
Version: 2012.0.2171 / Virus Database: 2425/5007 - Release Date: 05/18/12

No virus found in this message.
Checked by AVG - www.avg.com
Version: 2012.0.2171 / Virus Database: 2425/5028 - Release Date: 05/28/12

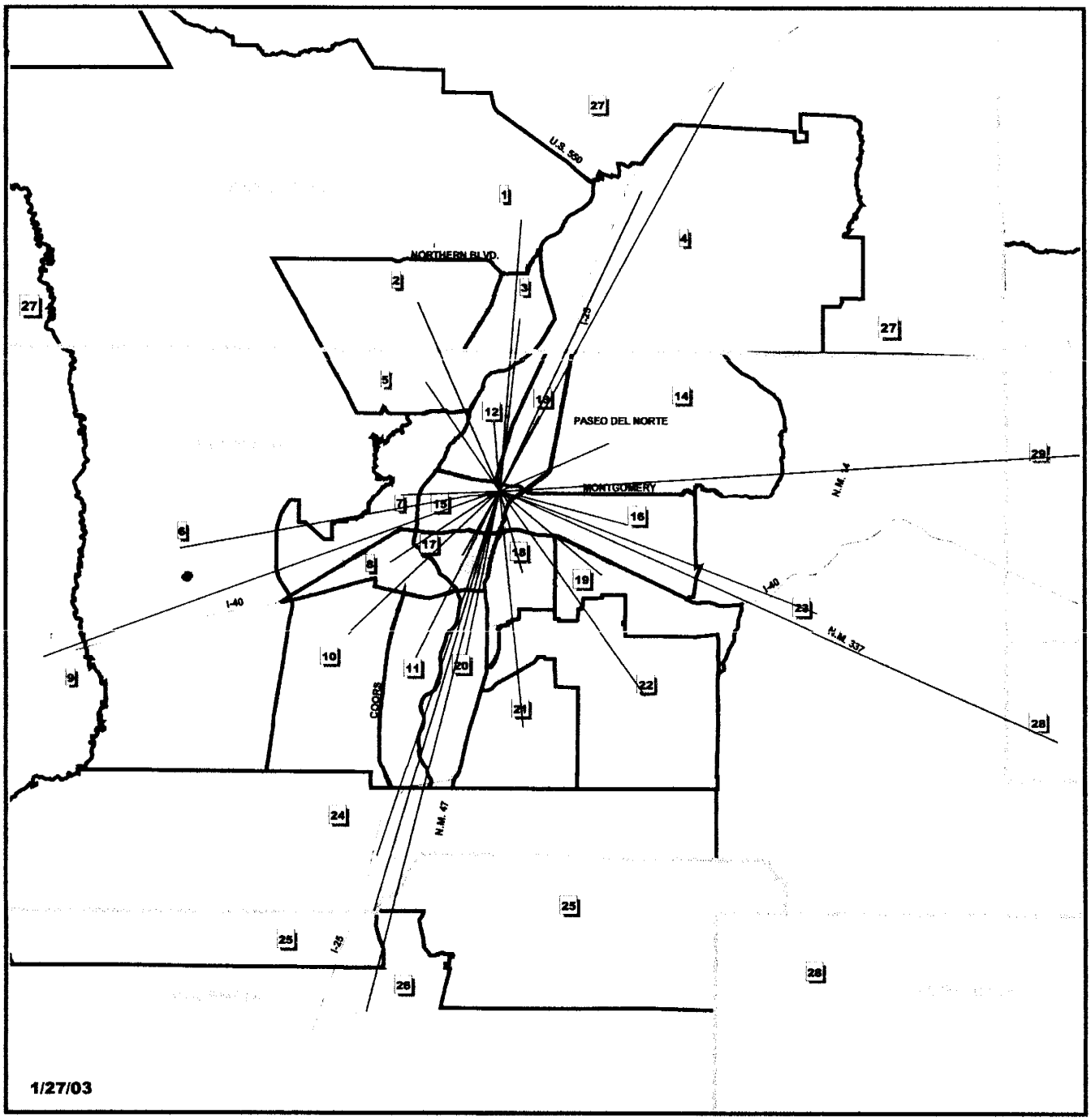


Figure 6

22 Subarea Identification Number

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.

Albuquerque Recycling Facility (5005 Edith Blvd NE) Trip Distribution Subarea Map

Trip Distribution Table

Albuquerque Recycling Facility

Sub Area Population Data:

For determination of Trip Distribution for Proposed **Office 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 Rd North			(ME) Montano Rd East			(CE) Comanche Rd East		
Sub Area I.D.#	**% Sub Area in Study**	**2015 Population**	**2025 Population**	**Interpolated Population for the Year**	**Population in Study**	**Dist. (Mi.)**	**Population / Distance**	**% Population / Distance**	**% Utilizing**	**% Population / Dist. Utilizing**	**Population**	**% Utilizing**	**% Population / Dist. Utilizing**	**Population**	**% Utilizing**	**% Population / Dist. Utilizing**	**Population**
		2015	**2025**	2015													
1	100%	58,191	127,178	58,191	58,191	11.5	**5,060**	**3.13%**	0%	**0.00%**	0	100%	**3.13%**	5,060	0%	**0.00%**	0
2	100%	51,766	65,774	51,766	51,766	8.7	**5,950**	**3.69%**	0%	**0.00%**	0	0%	**0.00%**	0	0%	**0.00%**	0
3	100%	8,277	10,139	8,277	8,277	7.3	**1,134**	**0.70%**	0%	**0.00%**	0	0%	**0.00%**	0	0%	**0.00%**	0
4	100%	14,557	16,645	14,557	14,557	14.1	**1,032**	**0.64%**	0%	**0.00%**	0	100%	**0.64%**	1,032	0%	**0.00%**	0
5	100%	62,713	67,834	62,713	62,713	5.6	**11,199**	**6.94%**	0%	**0.00%**	0	0%	**0.00%**	0	0%	**0.00%**	0
6	100%	14,282	52,588	14,282	14,282	13.9	**1,027**	**0.64%**	0%	**0.00%**	0	0%	**0.00%**	0	0%	**0.00%**	0
7	100%	60,860	79,163	60,860	60,860	4.2	**14,490**	**8.97%**	0%	**0.00%**	0	0%	**0.00%**	0	0%	**0.00%**	0
8	100%	30,322	30,045	30,322	30,322	5.6	**5,415**	**3.35%**	0%	**0.00%**	0	0%	**0.00%**	0	0%	**0.00%**	0
9	100%	1,878	2,156	1,878	1,878	20.7	**91**	**0.06%**	0%	**0.00%**	0	0%	**0.00%**	0	0%	**0.00%**	0
10	100%	65,364	67,358	65,364	65,364	8.9	**7,344**	**4.55%**	0%	**0.00%**	0	0%	**0.00%**	0	100%	**4.55%**	7,344
11	100%	33,469	34,155	33,469	33,469	7.9	**4,237**	**2.62%**	0%	**0.00%**	0	0%	**0.00%**	0	100%	**2.62%**	4,237
12	100%	17,724	17,964	17,724	17,724	3.0	**5,908**	**3.66%**	50%	**1.83%**	2,954	0%	**0.00%**	0	0%	**0.00%**	0
13	100%	10,624	9,340	10,624	10,624	3.6	**2,951**	**1.83%**	100%	**1.83%**	2,951	0%	**0.00%**	0	0%	**0.00%**	0
14	100%	103,826	102,925	103,826	103,826	5.1	**20,358**	**12.61%**	0%	**0.00%**	0	100%	**12.61%**	20,358	0%	**0.00%**	0
15*	100%	26,850	27,053	26,850	26,850	1.8	**14,917**	**9.24%**	0%	**0.00%**	0	1%	**0.09%**	149	1%	**0.09%**	149
16	100%	107,409	104,793	107,409	107,409	5.7	**18,844**	**11.67%**	0%	**0.00%**	0	50%	**5.84%**	9,422	50%	**5.84%**	9,422
17	100%	23,810	25,804	23,810	23,810	3.2	**7,441**	**4.61%**	0%	**0.00%**	0	0%	**0.00%**	0	0%	**0.00%**	0
18	100%	43,626	48,198	43,626	43,626	3.6	**12,118**	**7.51%**	0%	**0.00%**	0	0%	**0.00%**	0	100%	**7.51%**	12,118
19	100%	65,561	65,783	65,561	65,561	5.6	**11,707**	**7.25%**	0%	**0.00%**	0	0%	**0.00%**	0	100%	**7.25%**	11,707
20	100%	9,536	12,198	9,536	9,536	7.0	**1,362**	**0.84%**	0%	**0.00%**	0	0%	**0.00%**	0	100%	**0.84%**	1,362
21	100%	4,225	72,808	4,225	4,225	10.0	**423**	**0.26%**	0%	**0.00%**	0	0%	**0.00%**	0	100%	**0.26%**	423
22	100%	3,874	4,214	3,874	3,874	10.6	**365**	**0.23%**	0%	**0.00%**	0	0%	**0.00%**	0	100%	**0.23%**	365
23	100%	24,135	32,739	24,135	24,135	14.8	**1,653**	**1.02%**	0%	**0.00%**	0	0%	**0.00%**	0	100%	**1.02%**	1,653
24	100%	2,815	3,209	2,815	2,815	16.4	**172**	**0.11%**	0%	**0.00%**	0	0%	**0.00%**	0	100%	**0.11%**	172
25	100%	995	1,136	995	995	18.8	**53**	**0.03%**	0%	**0.00%**	0	0%	**0.00%**	0	100%	**0.03%**	53
26	100%	86,303	132,754	86,303	86,303	22.8	**3,785**	**2.34%**	0%	**0.00%**	0	0%	**0.00%**	0	100%	**2.34%**	3,785
27	100%	23,414	26,278	23,414	23,414	19.8	**1,183**	**0.73%**	0%	**0.00%**	0	100%	**0.73%**	1,183	0%	**0.00%**	0
28	100%	20,001	24,230	20,001	20,001	26.0	**769**	**0.48%**	0%	**0.00%**	0	0%	**0.00%**	0	100%	**0.48%**	769
29	100%	11,554	14,407	11,554	11,554	24.8	**466**	**0.29%**	0%	**0.00%**	0	0%	**0.00%**	0	100%	**0.29%**	466
		987,961	1,278,868	987,961	987,961		**161,455**	**100.00%**		**3.66%**	**5,905**		**23.04%**	**37,204**		**33.46%**	**54,026**
											3.66%			23.04%			33.46%

* - Subarea in which the site it located.

Trip Distribution Table

Albuquerque Recycling Facility

Sub Area Population Data:

For determination of Trip Distribution for Proposed **Office 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 Rd South			(CW) Comanche Rd West			(MW) Montano Rd West		
Sub Area I.D.#	**% Sub Area in Study**	**2015 Population**	**2025 Population**	**Interpolated Population for the Year**	**Population in Study**	**Dist. (Mi.)**	**Population / Distance**	**% Utilizing**	**% Population / Dist. Utilizing**	**Population**	**% Utilizing**	**% Population / Dist. Utilizing**	**Population**	**% Utilizing**	**% Population / Dist. Utilizing**	**Population**
		2015	**2025**	2015												
1	100%	58,191	127,178	58,191	58,191	11.5	**5,060**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
2	100%	51,766	65,774	51,766	51,766	8.7	**5,950**	0%	0.00%	0	0%	0.00%	0	100%	3.69%	5,950
3	100%	8,277	10,139	8,277	8,277	7.3	**1,134**	0%	0.00%	0	0%	0.00%	0	100%	0.70%	1,134
4	100%	14,557	16,645	14,557	14,557	14.1	**1,032**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
5	100%	62,713	67,834	62,713	62,713	5.6	**11,199**	0%	0.00%	0	0%	0.00%	0	100%	6.94%	11,199
6	100%	14,282	52,588	14,282	14,282	13.9	**1,027**	100%	0.64%	1,027	0%	0.00%	0	0%	0.00%	0
7	100%	60,860	79,163	60,860	60,860	4.2	**14,490**	50%	4.49%	7,245	0%	0.00%	0	50%	4.49%	7,245
8	100%	30,322	30,045	30,322	30,322	5.6	**5,415**	100%	3.35%	5,415	0%	0.00%	0	0%	0.00%	0
9	100%	1,878	2,156	1,878	1,878	20.7	**91**	100%	0.06%	91	0%	0.00%	0	0%	0.00%	0
10	100%	65,364	67,358	65,364	65,364	8.9	**7,344**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
11	100%	33,469	34,155	33,469	33,469	7.9	**4,237**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
12	100%	17,724	17,964	17,724	17,724	3.0	**5,908**	0%	0.00%	0	0%	0.00%	0	50%	1.83%	2,954
13	100%	10,624	9,340	10,624	10,624	3.6	**2,951**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
14	100%	103,826	102,925	103,826	103,826	5.1	**20,358**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
15*	100%	26,850	27,053	26,850	26,850	1.8	**14,917**	54%	4.99%	8,055	38%	3.51%	5,668	6%	0.55%	895
16	100%	107,409	104,793	107,409	107,409	5.7	**18,844**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
17	100%	23,810	25,804	23,810	23,810	3.2	**7,441**	100%	4.61%	7,441	0%	0.00%	0	0%	0.00%	0
18	100%	43,626	48,198	43,626	43,626	3.6	**12,118**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
19	100%	65,561	65,783	65,561	65,561	5.6	**11,707**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
20	100%	9,536	12,198	9,536	9,536	7.0	**1,362**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
21	100%	4,225	72,808	4,225	4,225	10.0	**423**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
22	100%	3,874	4,214	3,874	3,874	10.6	**365**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
23	100%	24,135	32,739	24,135	24,135	14.6	**1,653**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
24	100%	2,815	3,209	2,815	2,815	16.4	**172**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
25	100%	995	1,138	995	995	18.6	**53**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
26	100%	86,303	132,754	86,303	86,303	22.8	**3,785**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
27	100%	23,414	26,278	23,414	23,414	19.8	**1,183**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
28	100%	20,001	24,230	20,001	20,001	26.0	**769**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
29	100%	11,554	14,407	11,554	11,554	24.8	**466**	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
		987,961	1,278,868	987,961	987,961		**161,455**		18.13%	**29,274**		3.51%	**5,668**		18.20%	**29,377**
										18.13%			3.51%			18.20%

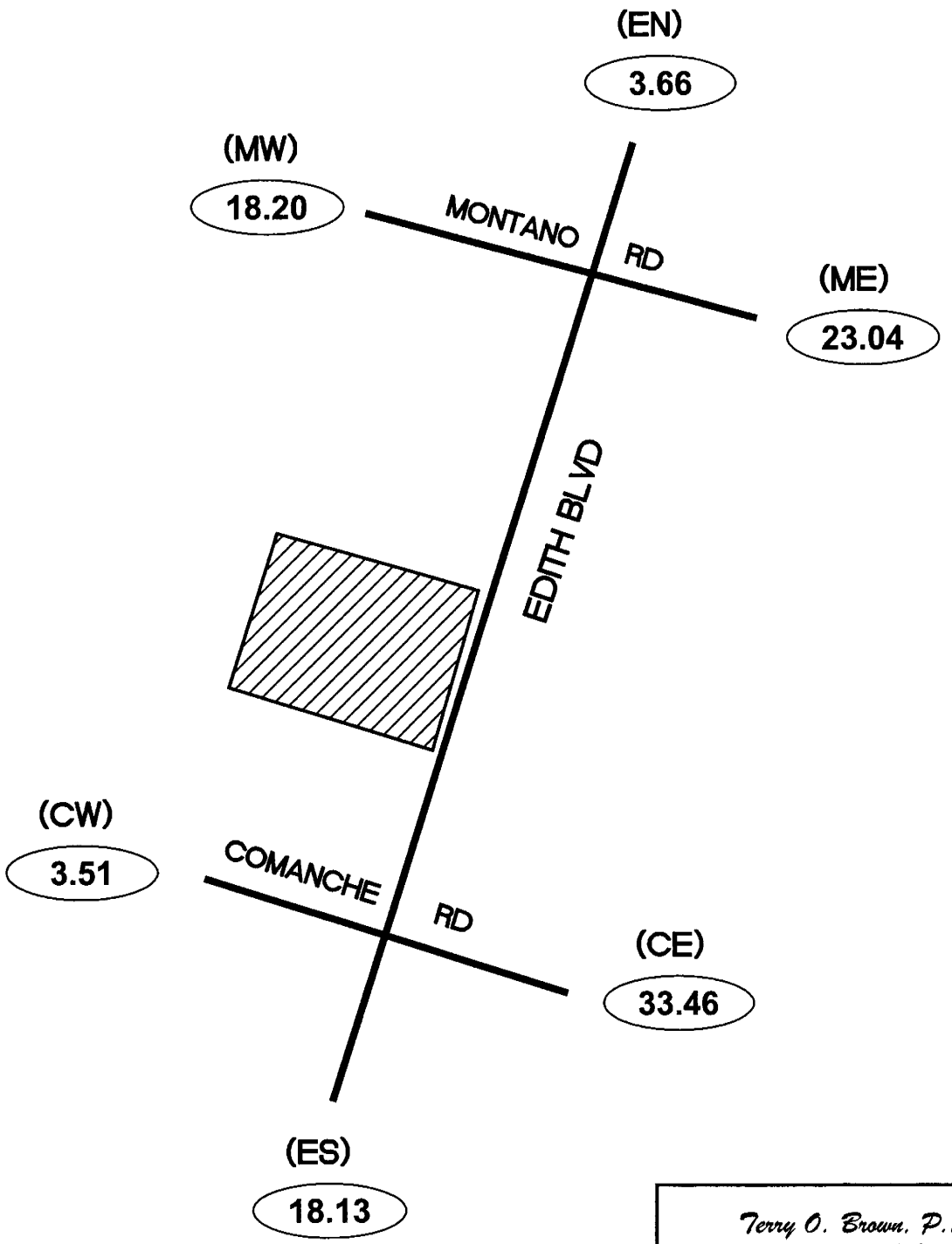
* - Subarea in which the site it located.

Albuquerque Recycling Facility

(Edith Blvd N of Comanche Rd)

Trip Distribution Map (%)

NTS



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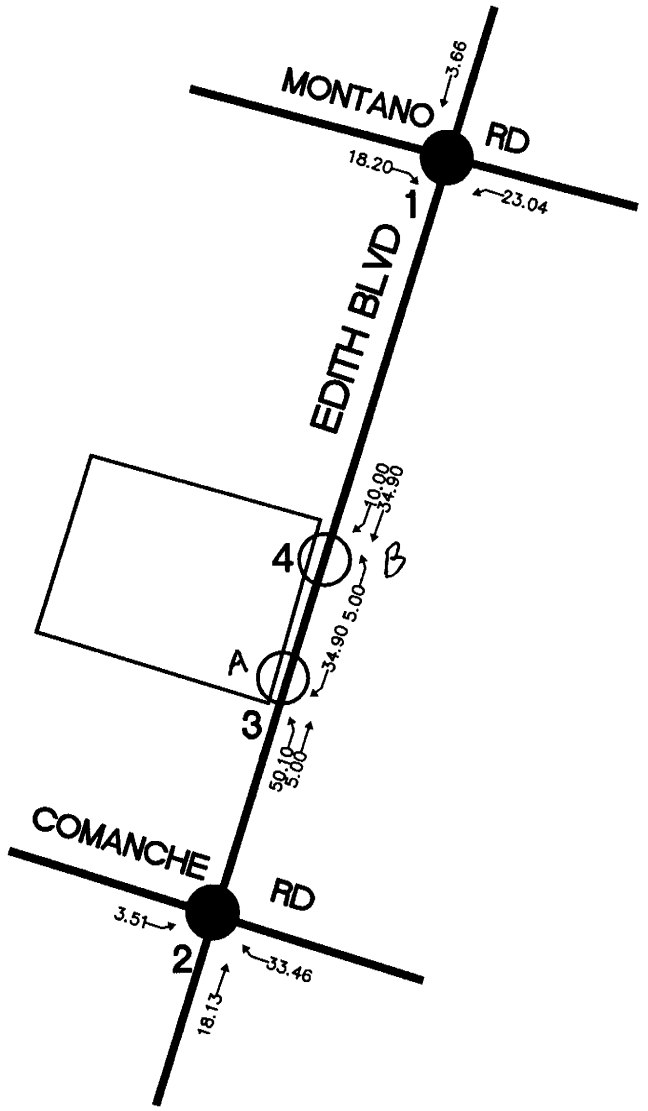
Albuquerque Recycling Facility

(Edith Blvd N. of Comanche Rd)

Trip Assignments (% Entering)

NTS



● SIGNALIZED INTERSECTION

○ UNSIGNALIZED INTERSECTION

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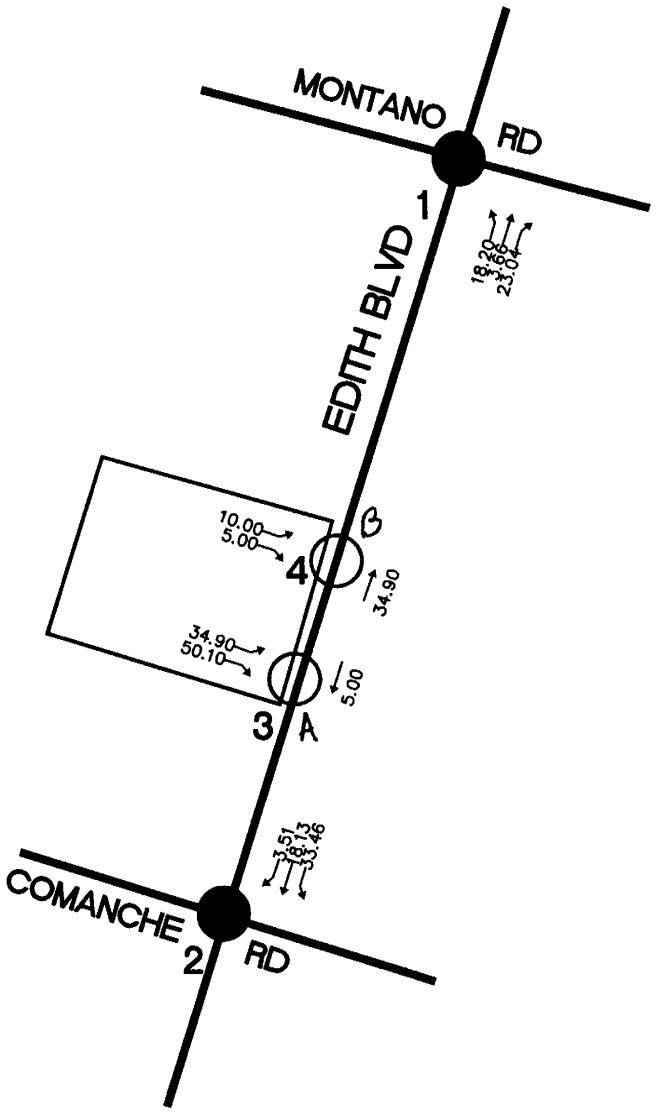
Albuquerque Recycling Facility

(5005 Edith Blvd)

Trip Assignments (% Exiting)

NTS



● SIGNALIZED INTERSECTION

○ UNSIGNALIZED INTERSECTION

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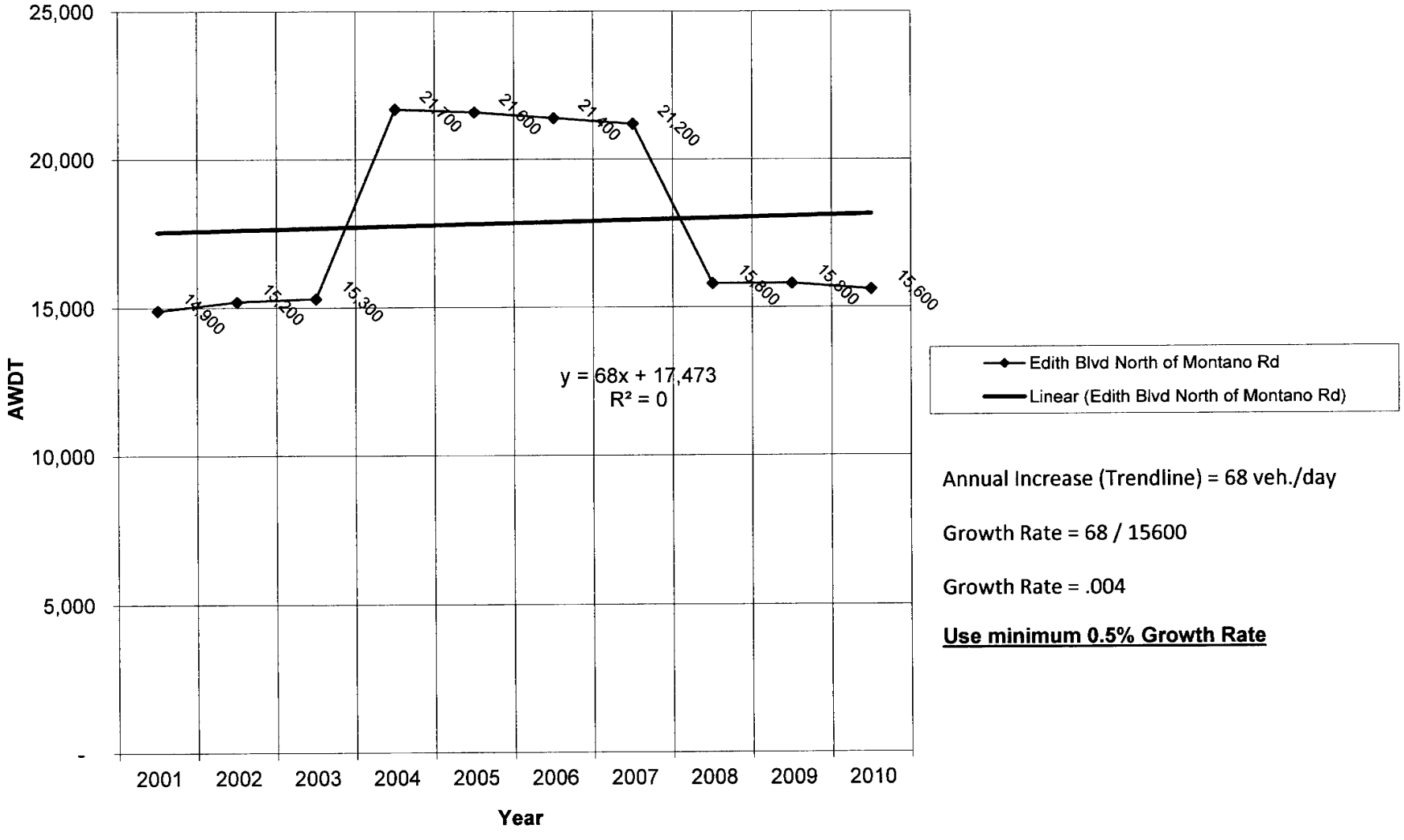
ABQ Recycling Facility (Edith Blvd N. of Comanche Rd)

Historic Growth Rate Table

Traffic Flows from MRCOG Map

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Edith Blvd North of Montano Rd	14,900	15,200	15,300	21,700	21,600	21,400	21,200	15,800	15,800	15,600
Montano Rd East of Edith Blvd	31,100	31,600	32,100	32,000	31,800	31,500	31,300	30,300	30,100	24,700
Edith Blvd btwn Montano & Comanche	11,700	11,900	12,000	13,600	13,500	13,400	13,300	13,300	11,200	11,100
Comanche Rd East of Edith Blvd	19,500	19,800	20,000	17,900	17,800	17,600	17,500	18,800	18,700	18,500
Edith Blvd South of Comanche Rd	17,900	18,100	12,100	12,100	10,800	10,700	10,700	10,600	10,600	12,100
Comanche Rd West of Edith Blvd	14,800	15,100	15,200	13,800	14,400	14,300	14,100	15,700	15,700	15,500
Montano Rd West of Edith Blvd	35,000	35,600	31,100	29,500	29,300	29,000	28,800	28,700	21,300	24,200

Historic Growth Chart Edith Blvd North of Montano Rd (2001-2010)



Annual Increase (Trendline) = 68 veh./day

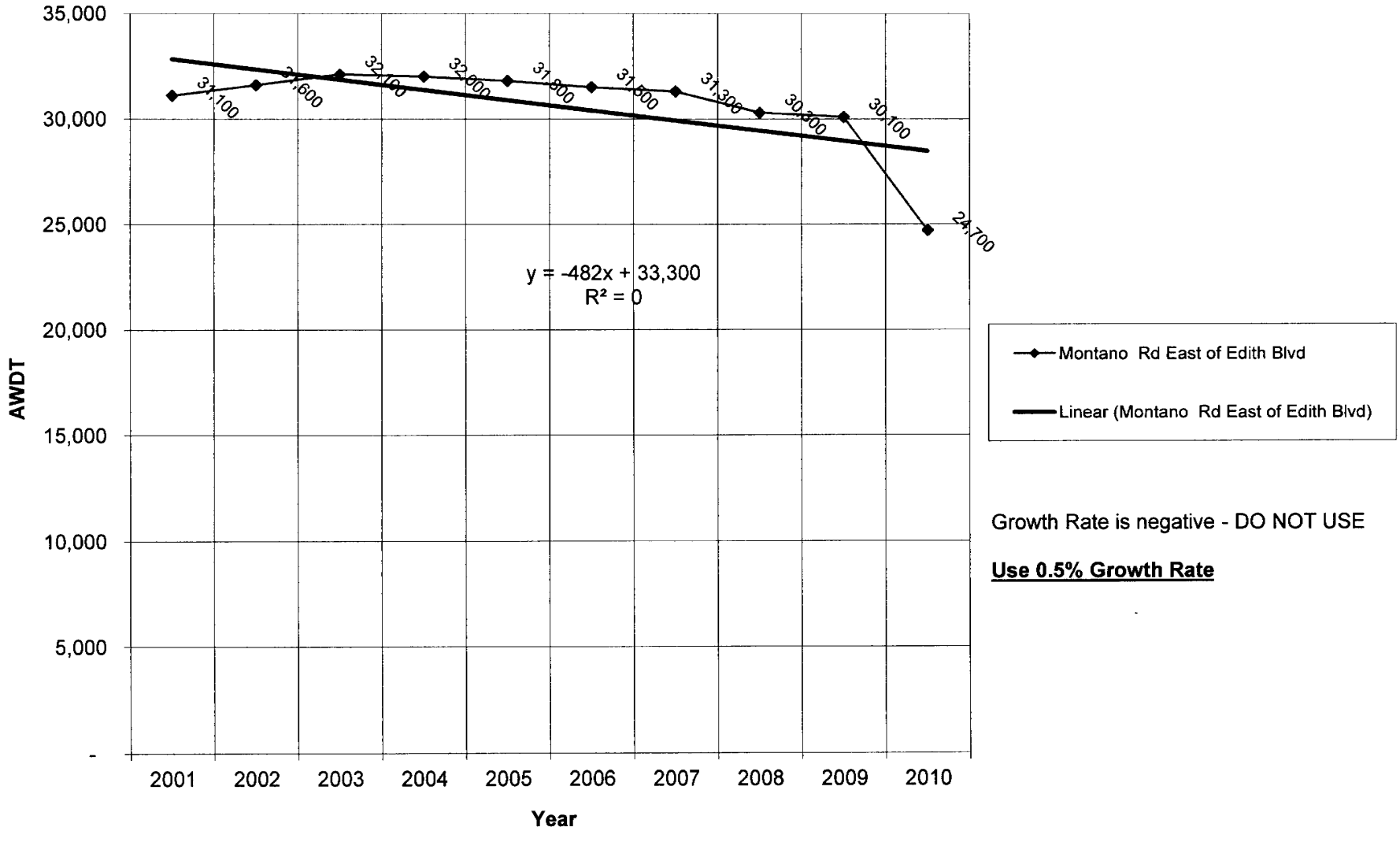
Growth Rate = 68 / 15600

Growth Rate = .004

Use minimum 0.5% Growth Rate

ABQRecycle_Growth.xls

Historic Growth Chart Montano Rd East of Edith Blvd (2001-2010)

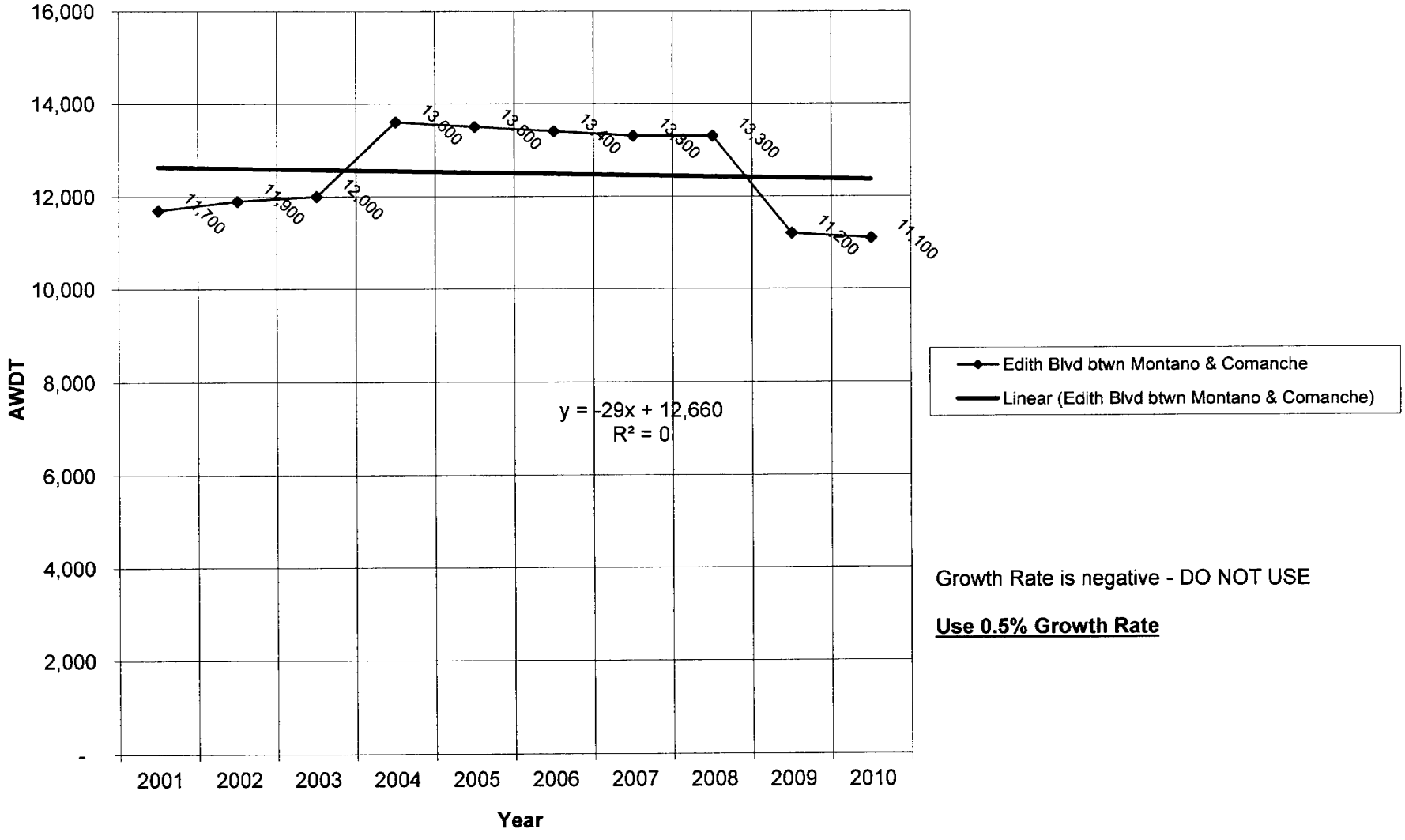


Growth Rate is negative - DO NOT USE

Use 0.5% Growth Rate

ABQRecycle_Growth.xls

Historic Growth Chart Edith Blvd btwn Montano & Comanche (2001-2010)

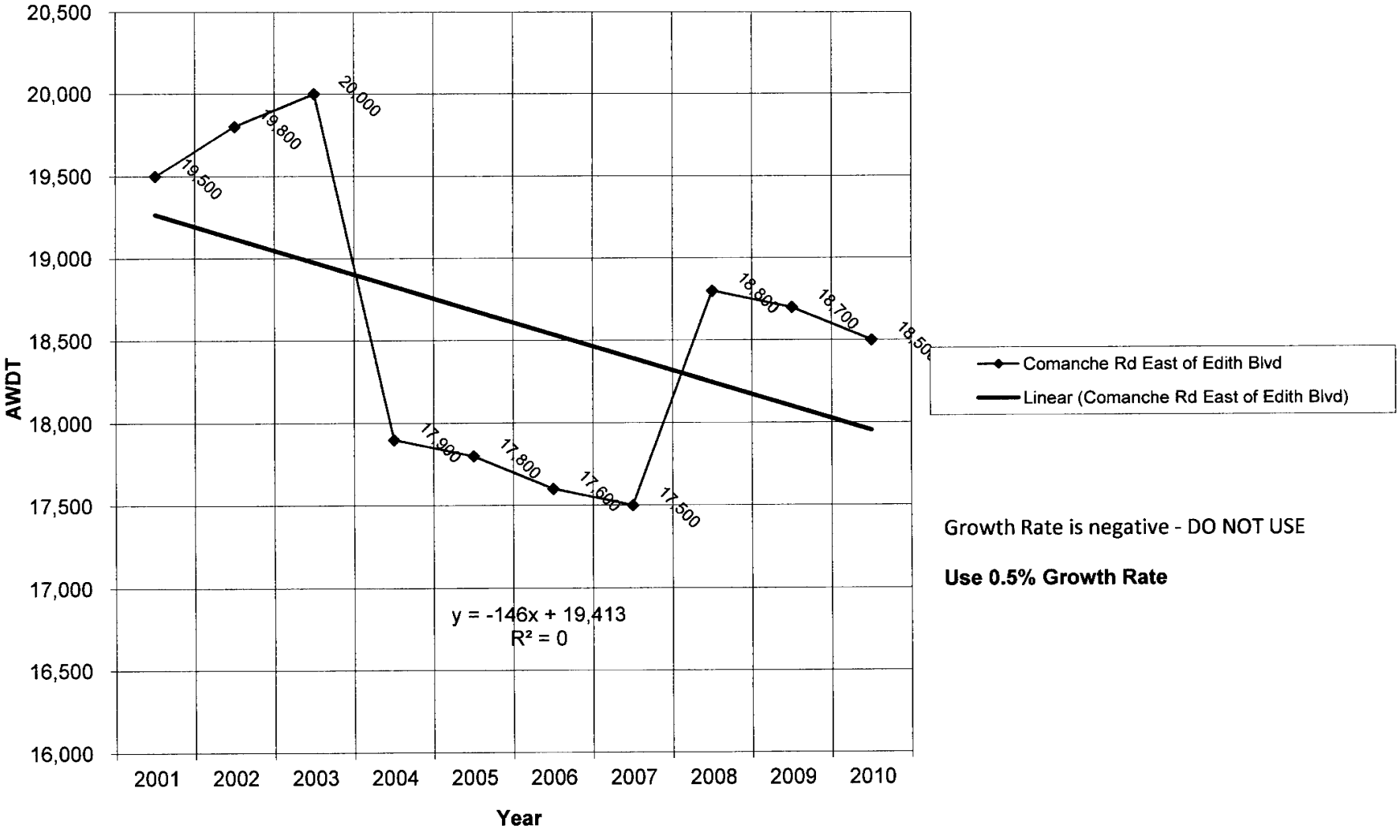


Growth Rate is negative - DO NOT USE

Use 0.5% Growth Rate

ABQRecycle_Growth.xls

Historic Growth Chart Comanche Rd East of Edith Blvd (2001-2010)

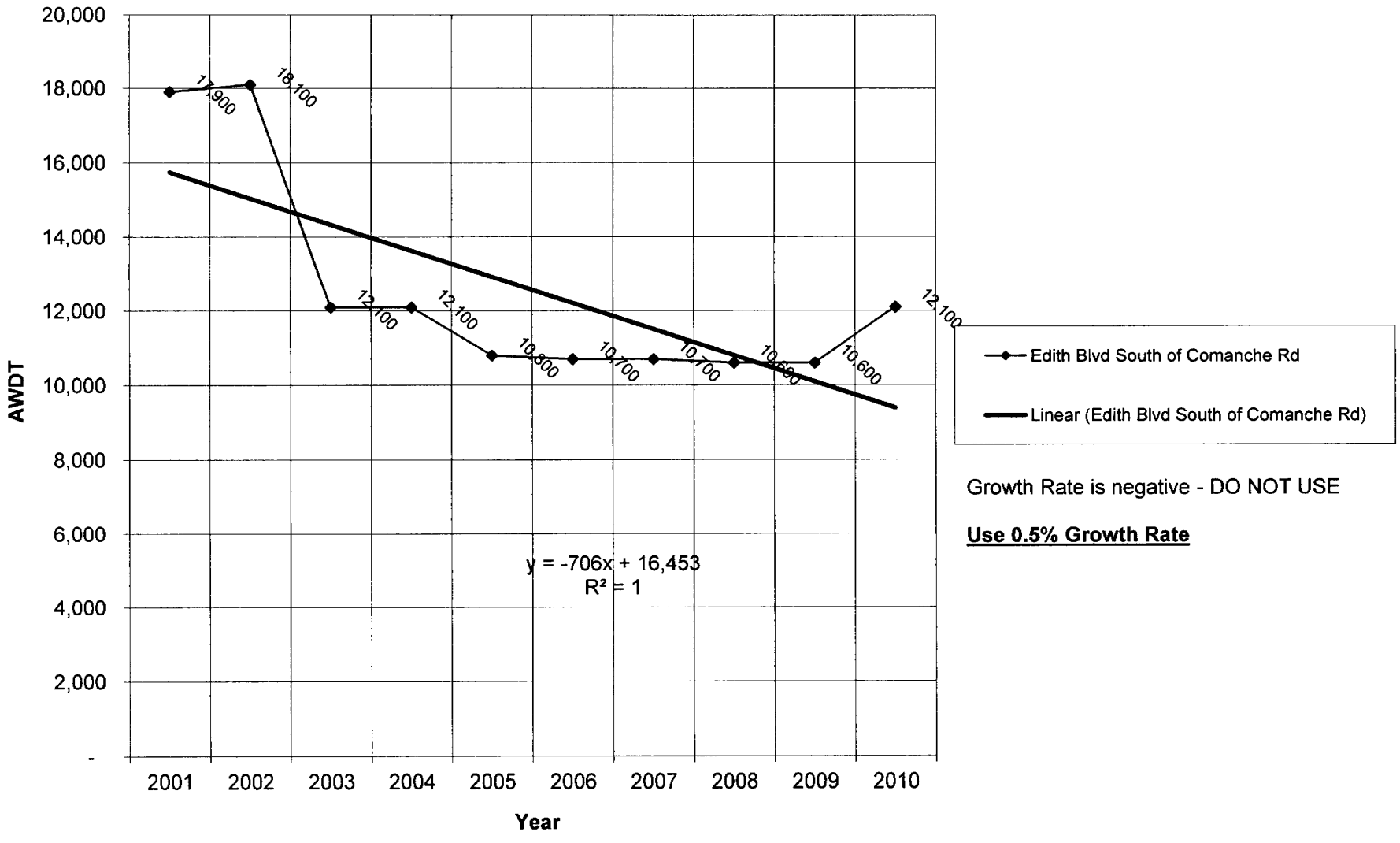


Growth Rate is negative - DO NOT USE

Use 0.5% Growth Rate

ABQRecycle_Growth.xls

Historic Growth Chart Edith Blvd South of Comanche Rd (2001-2010)

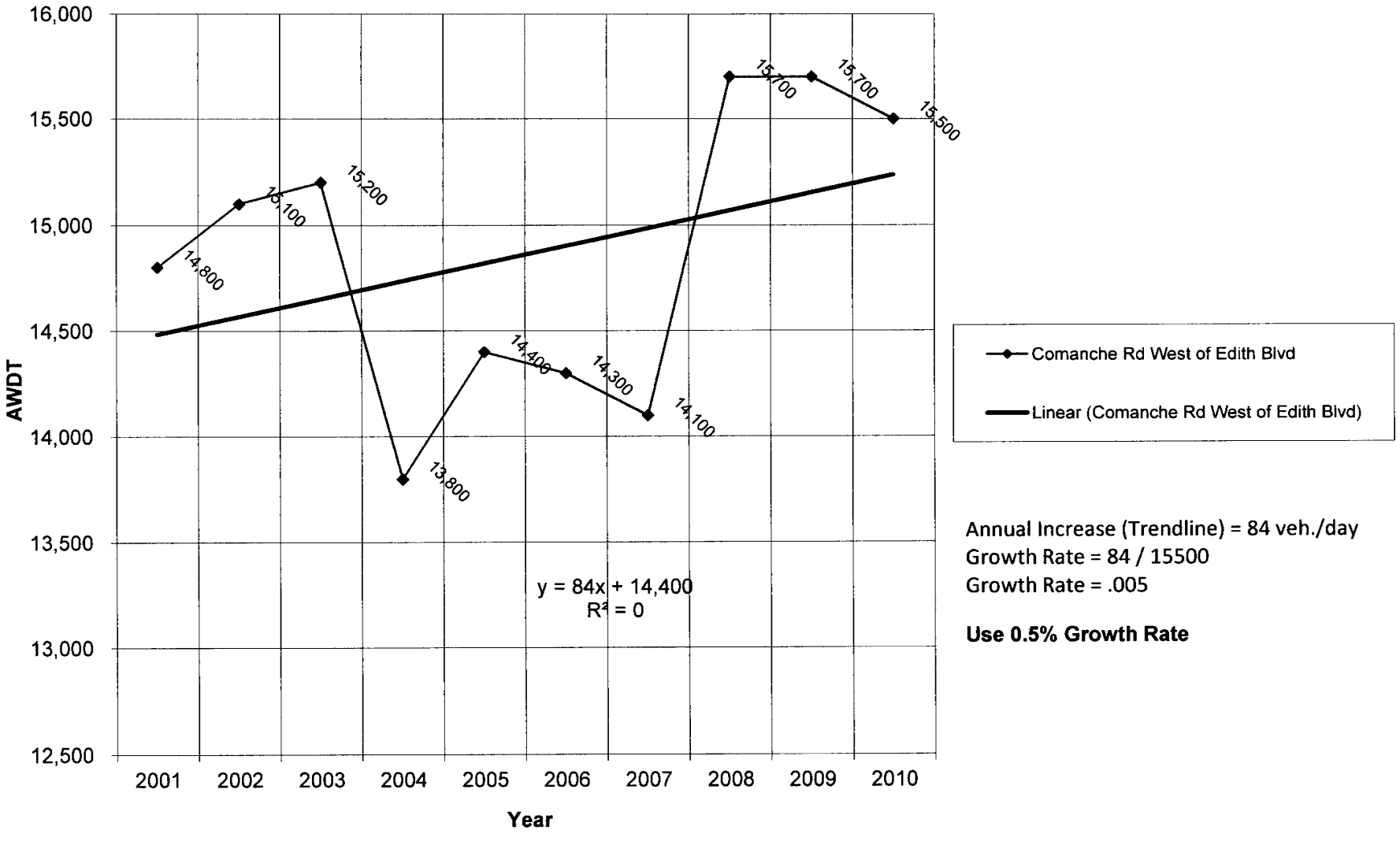


Growth Rate is negative - DO NOT USE

Use 0.5% Growth Rate

ABQRecycle_Growth.xls

Historic Growth Chart Comanche Rd West of Edith Blvd (2001-2010)

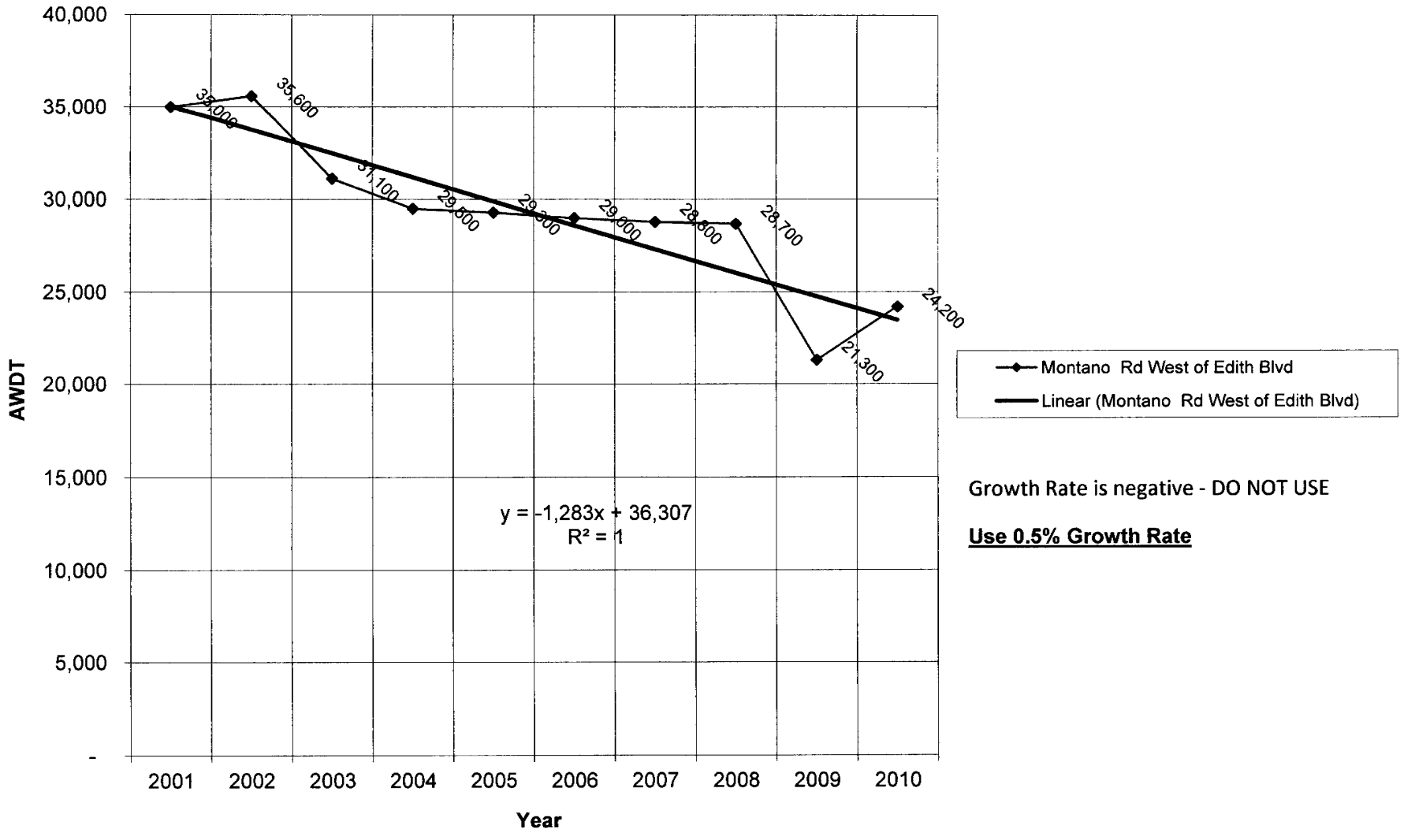


Annual Increase (Trendline) = 84 veh./day
Growth Rate = 84 / 15500
Growth Rate = .005

Use 0.5% Growth Rate

ABQRecycle_Growth.xls

Historic Growth Chart Montano Rd West of Edith Blvd (2001-2010)



Growth Rate is negative - DO NOT USE

Use 0.5% Growth Rate

A-22a

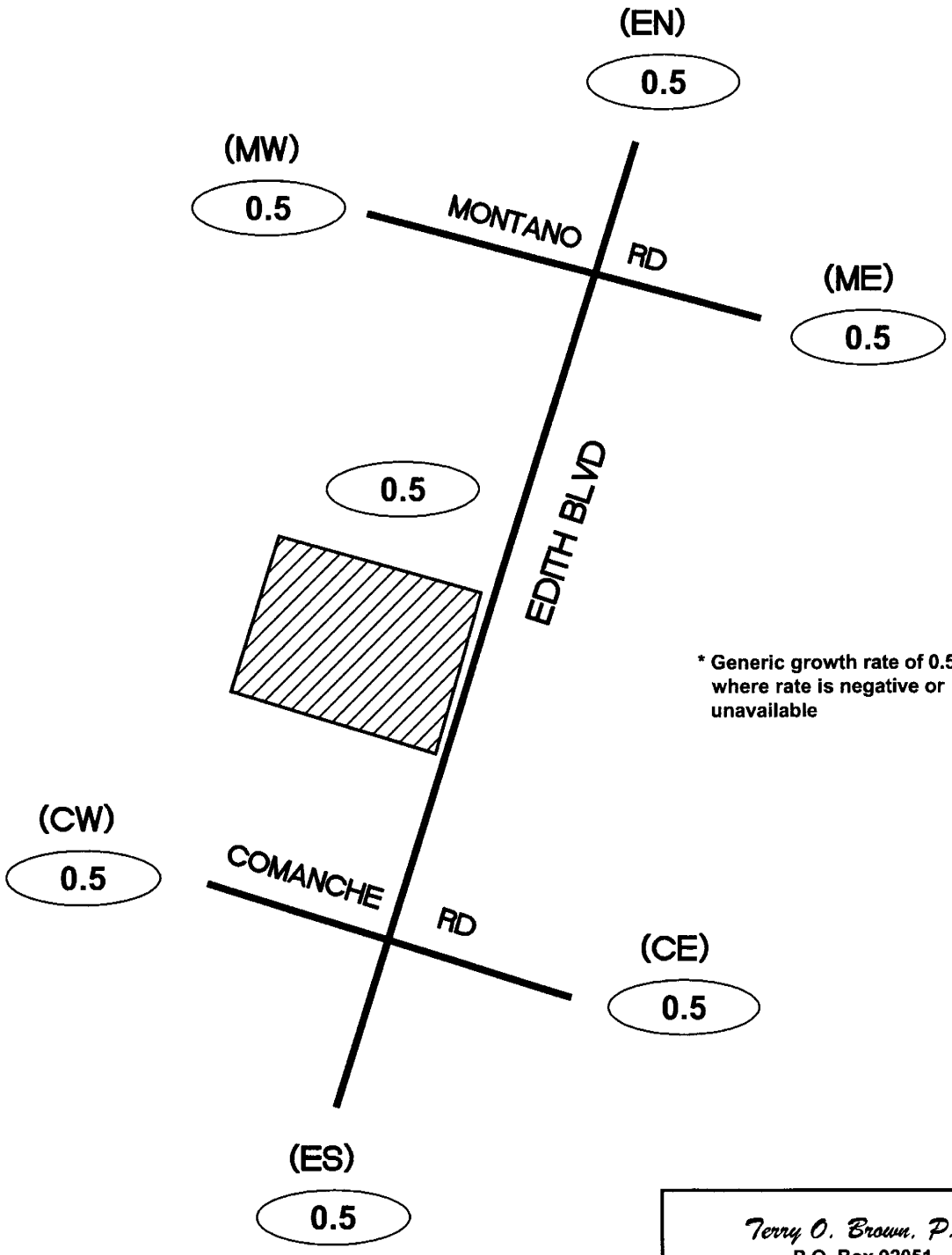
ABQRecycle_Growth.xls

Albuquerque Recycling Facility

(Edith Blvd N. of Comanche Rd)

Growth Rate Map (%)

NTS



* Generic growth rate of 0.5% used where rate is negative or unavailable

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Albuquerque Recycling Facility (Edith Blvd N. of Comanche Rd)

Projected Turning Movements SUMMARY

PROPOSED DEVELOPMENT (2015) - 100% Development

INTERSECTION: **Summary**

Montano Rd / Edith Blvd

(1)

10.0% Truck	0.96 Eastbound (Montano Rd)			0.90 Westbound (Montano Rd)			0.78 Northbound (Edith Blvd)			0.83 Southbound (Edith Blvd)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing (2012)	162	1,445	199	86	557	211	100	352	111	232	436	70
2015 (NO BUILD - A.M.)	*164*	*1,467*	*202*	*87*	*565*	*214*	*102*	*357*	*113*	*235*	*443*	*71*
2015 (BUILD - A.M.)	***164***	***1,467***	***207***	***94***	***565***	***214***	***103***	***357***	***114***	***235***	***444***	***71***

	0.91 Eastbound (Montano Rd)			0.88 Westbound (Montano Rd)			0.92 Northbound (Edith Blvd)			0.95 Southbound (Edith Blvd)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing (2012)	112	852	62	119	1,175	239	304	689	138	224	296	123
2015 (NO BUILD - P.M.)	*114*	*865*	*63*	*121*	*1,193*	*243*	*309*	*699*	*140*	*227*	*300*	*125*
2015 (BUILD - P.M.)	***114***	***865***	***66***	***125***	***1,193***	***243***	***314***	***700***	***147***	***227***	***301***	***125***

Comanche Rd / Edith Blvd

(2)

10.0% Truck	0.91 Eastbound (Comanche Rd)			0.93 Westbound (Comanche Rd)			0.75 Northbound (Edith Blvd)			0.78 Southbound (Edith Blvd)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing (2012)	126	570	123	123	371	213	41	379	110	145	472	43
2015 (NO BUILD - A.M.)	*128*	*579*	*125*	*125*	*377*	*216*	*42*	*385*	*112*	*147*	*479*	*44*
2015 (BUILD - A.M.)	***129***	***579***	***125***	***125***	***377***	***226***	***42***	***390***	***112***	***149***	***480***	***44***

	0.85 Eastbound (Comanche Rd)			0.92 Westbound (Comanche Rd)			0.89 Northbound (Edith Blvd)			0.96 Southbound (Edith Blvd)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing (2012)	66	463	31	97	540	288	125	671	213	181	311	101
2015 (NO BUILD - P.M.)	*67*	*470*	*31*	*98*	*548*	*292*	*127*	*681*	*216*	*184*	*316*	*103*
2015 (BUILD - P.M.)	***68***	***470***	***31***	***98***	***548***	***298***	***127***	***684***	***216***	***194***	***321***	***104***

Driveway 'A' / Edith Blvd

(3)

10.0% Truck	0.85 Eastbound (Driveway 'A')			0.85 Westbound (Driveway 'A')			0.78 Northbound (Edith Blvd)			0.78 Southbound (Edith Blvd)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing (2012)	0	0	0	0	0	0	0	718	0	0	660	0
2015 (NO BUILD - A.M.)	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*729*	*0*	*0*	*670*	*0*
2015 (BUILD - A.M.)	***2***	***0***	***3***	***0***	***0***	***0***	***15***	***731***	***0***	***0***	***670***	***10***

	0.85 Eastbound (Driveway 'A')			0.85 Westbound (Driveway 'A')			0.96 Northbound (Edith Blvd)			0.96 Southbound (Edith Blvd)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing (2012)	0	0	0	0	0	0	0	1,025	0	0	593	0
2015 (NO BUILD - P.M.)	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*1,040*	*0*	*0*	*602*	*0*
2015 (BUILD - P.M.)	***10***	***0***	***15***	***0***	***0***	***0***	***10***	***1,041***	***0***	***0***	***603***	***7***

Driveway 'B' / Edith Blvd

(4)

10.0% Truck	0.85 Eastbound (Driveway 'B')			0.85 Westbound (Driveway 'B')			0.78 Northbound (Edith Blvd)			0.78 Southbound (Edith Blvd)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing (2012)	0	0	0	0	0	0	0	718	0	0	660	0
2015 (NO BUILD - A.M.)	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*729*	*0*	*0*	*670*	*0*
2015 (BUILD - A.M.)	***1***	***0***	***0***	***0***	***0***	***0***	***2***	***731***	***0***	***0***	***680***	***3***

	0.85 Eastbound (Driveway 'B')			0.85 Westbound (Driveway 'B')			0.96 Northbound (Edith Blvd)			0.96 Southbound (Edith Blvd)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing (2012)	0	0	0	0	0	0	0	1,025	0	0	593	0
2015 (NO BUILD - P.M.)	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*1,040*	*0*	*0*	*602*	*0*
2015 (BUILD - P.M.)	***3***	***0***	***1***	***0***	***0***	***0***	***1***	***1,050***	***0***	***0***	***609***	***2***

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Albuquerque Recycling Facility (Edith Blvd N. of Comanche Rd)

Projected Turning Movements Worksheet

Montano Rd / Edith Blvd

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

N-S Street: **Edith Blvd**

Year of Existing Counts 2012

Implementation Year **2015**

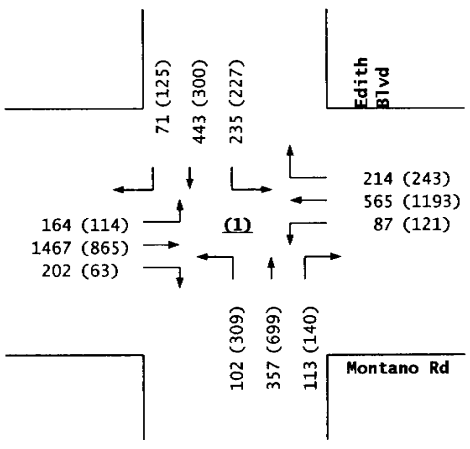
Growth Rates	**0.50%**			**0.50%**			**0.50%**			**0.50%**		
	Eastbound (Montano Rd)			**Westbound (Montano Rd)**			**Northbound (Edith Blvd)**			**Southbound (Edith Blvd)**		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	162	1,445	199	86	557	211	100	352	111	232	436	70
Background Traffic Growth	2	22	3	1	8	3	2	5	2	3	7	1
Subtotal (NO BUILD - A.M.)	***164***	***1,467***	***202***	***87***	***565***	***214***	***102***	***357***	***113***	***235***	***443***	***71***
Percent Office Trips Generated(Entering)	*0.00%*	*0.00%*	***18.20%***	***23.04%***	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	***3.66%***	*0.00%*
Percent Office Trips Generated(Exiting)	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	***18.20%***	***3.66%***	***23.04%***	*0.00%*	*0.00%*	*0.00%*
Total Trips Generated	0	0	5	7	0	0	1	0	1	0	1	0
Total AM Peak Hour BUILD Volumes	**164**	**1,467**	**207**	**94**	**565**	**214**	**103**	**357**	**114**	**235**	**444**	**71**

	Eastbound (Montano Rd)			**Westbound (Montano Rd)**			**Northbound (Edith Blvd)**			**Southbound (Edith Blvd)**		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	112	852	62	119	1,175	239	304	689	138	224	296	123
Background Traffic Growth	2	13	1	2	18	4	5	10	2	3	4	2
Subtotal (NO BUILD - P.M.)	***114***	***865***	***63***	***121***	***1,193***	***243***	***309***	***699***	***140***	***227***	***300***	***125***
Percent Office Trips Generated(Entering)	*0.00%*	*0.00%*	***18.20%***	***23.04%***	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	***3.66%***	*0.00%*
Percent Office Trips Generated(Exiting)	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	***18.20%***	***3.66%***	***23.04%***	*0.00%*	*0.00%*	*0.00%*
Total Trips Generated	0	0	3	4	0	0	5	1	7	0	1	0
Total PM Peak Hour BUILD Volumes	**114**	**865**	**66**	**125**	**1,193**	**243**	**314**	**700**	**147**	**227**	**301**	**125**

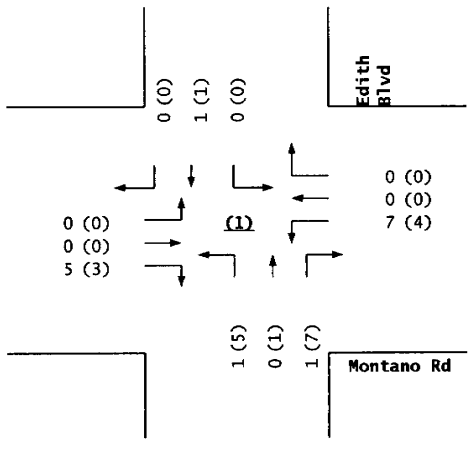
	Entering	Exiting		
Number of Office Trips Generated	**30**	**6**	A.M.	100% Office Development
	19	**29**	P.M.	

	Eastbound (Montano Rd)			**Westbound (Montano Rd)**			**Northbound (Edith Blvd)**			**Southbound (Edith Blvd)**		
2012 AM Peak Hr. Volumes	162	1445	199	86	557	211	100	352	111	232	436	70
2012 PM Peak Hr. Volumes	112	852	62	119	1,175	239	304	689	138	224	296	123

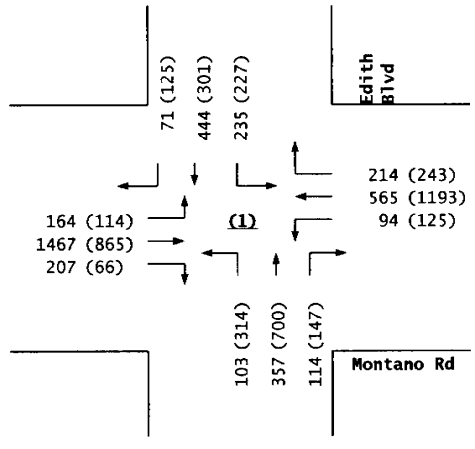
2015
NO BUILD



Trips



2015
BUILD



Montano Rd / Edith Blvd

Albuquerque Recycling Facility (Edith Blvd N. of Comanche Rd)

Projected Turning Movements Worksheet

Comanche Rd / Edith Blvd

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

N-S Street: **Edith Blvd**

Year of Existing Counts 2012

Implementation Year **2015**

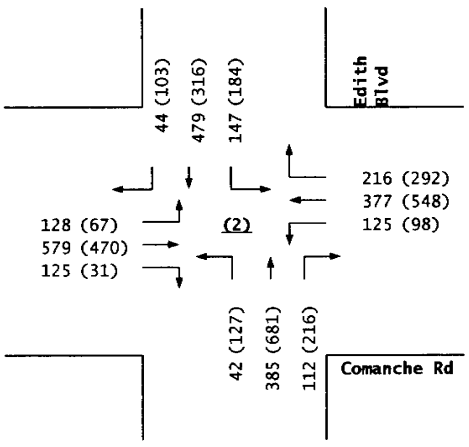
Growth Rates	0.50%			0.50%			0.50%			0.50%		
	Eastbound (Comanche Rd)			**Westbound (Comanche Rd)**			**Northbound (Edith Blvd)**			**Southbound (Edith Blvd)**		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	126	570	123	123	371	213	41	379	110	145	472	43
Background Traffic Growth	2	9	2	2	6	3	1	6	2	2	7	1
Subtotal (NO BUILD - A.M.)	***128***	***579***	***125***	***125***	***377***	***216***	***42***	***385***	***112***	***147***	***479***	***44***
Percent Office Trips Generated(Entering)	***3.51%***	*0.00%*	*0.00%*	*0.00%*	*0.00%*	***33.46%***	*0.00%*	***18.13%***	*0.00%*	*0.00%*	*0.00%*	*0.00%*
Percent Office Trips Generated(Exiting)	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	***33.46%***	***18.13%***	***3.51%***
Total Trips Generated	1	0	0	0	0	10	0	5	0	2	1	0
Total AM Peak Hour BUILD Volumes	**129**	**579**	**125**	**125**	**377**	**226**	**42**	**390**	**112**	**149**	**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	671	213	181	311	101
Background Traffic Growth	1	7	0	1	8	4	2	10	3	3	5	2
Subtotal (NO BUILD - P.M.)	***67***	***470***	***31***	***98***	***548***	***292***	***127***	***681***	***216***	***184***	***316***	***103***
Percent Office Trips Generated(Entering)	***3.51%***	*0.00%*	*0.00%*	*0.00%*	*0.00%*	***33.46%***	*0.00%*	***18.13%***	*0.00%*	*0.00%*	*0.00%*	*0.00%*
Percent Office Trips Generated(Exiting)	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	***33.46%***	***18.13%***	***3.51%***
Total Trips Generated	1	0	0	0	0	6	0	3	0	10	5	1
Total PM Peak Hour BUILD Volumes	**68**	**470**	**31**	**98**	**548**	**298**	**127**	**684**	**216**	**194**	**321**	**104**

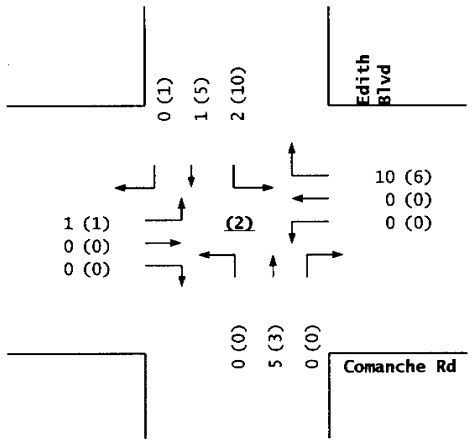
	Entering	Exiting		
Number of Office Trips Generated	**30**	**6**	A.M.	100% Office Development
	19	**29**	P.M.	

	Eastbound (Comanche Rd)			**Westbound (Comanche Rd)**			**Northbound (Edith Blvd)**			**Southbound (Edith Blvd)**		
2012 AM Peak Hr. Volumes	126	570	123	123	371	213	41	379	110	145	472	43
2012 PM Peak Hr. Volumes	66	463	31	97	540	288	125	671	213	181	311	101

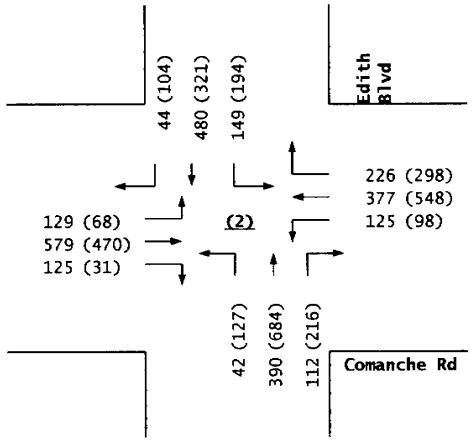
2015
NO BUILD



Trips



2015
BUILD



Comanche Rd / Edith Blvd

Albuquerque Recycling Facility (Edith Blvd N. of Comanche 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 2012

Implementation Year **2015**

Growth Rates 0.50% 0.50% 0.50% 0.50%

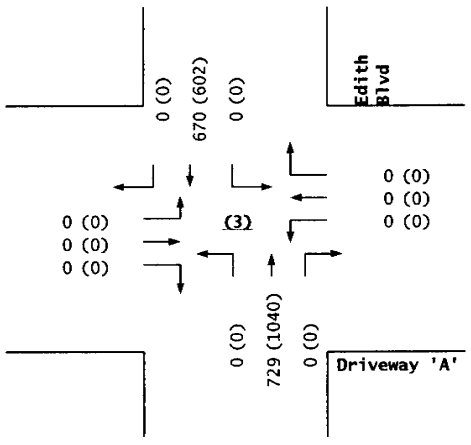
	Eastbound (Driveway 'A')			Westbound (Driveway 'A')			Northbound (Edith Blvd)			Southbound (Edith Blvd)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	0	0	0	0	0	0	0	718	0	0	660	0
Background Traffic Growth	0	0	0	0	0	0	0	11	0	0	10	0
Subtotal (NO BUILD - A.M.)	***0***	***0***	***0***	***0***	***0***	***0***	***0***	***729***	***0***	***0***	***670***	***0***
Percent Office Trips Generated(Entering)	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	***50.10%***	***5.00%***	*0.00%*	*0.00%*	*0.00%*	***34.90%***
Percent Office Trips Generated(Exiting)	***34.90%***	*0.00%*	***50.10%***	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	***5.00%***	*0.00%*
Total Trips Generated	2	0	3	0	0	0	15	2	0	0	0	10
Total AM Peak Hour BUILD Volumes	**2**	**0**	**3**	**0**	**0**	**0**	**15**	**731**	**0**	**0**	**670**	**10**

	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	1,025	0	0	593	0
Background Traffic Growth	0	0	0	0	0	0	0	15	0	0	9	0
Subtotal (NO BUILD - P.M.)	***0***	***0***	***0***	***0***	***0***	***0***	***0***	***1,040***	***0***	***0***	***602***	***0***
Percent Office Trips Generated(Entering)	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	***50.10%***	***5.00%***	*0.00%*	*0.00%*	*0.00%*	***34.90%***
Percent Office Trips Generated(Exiting)	***34.90%***	*0.00%*	***50.10%***	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	***5.00%***	*0.00%*
Total Trips Generated	10	0	15	0	0	0	10	1	0	0	1	7
Total PM Peak Hour BUILD Volumes	**10**	**0**	**15**	**0**	**0**	**0**	**10**	**1,041**	**0**	**0**	**603**	**7**

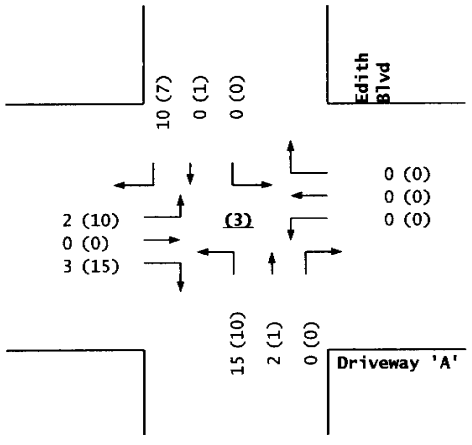
	Entering	Exiting		
Number of Office Trips Generated	**30**	**6**	A.M.	100% Office Development
	19	**29**	P.M.	

	Eastbound (Driveway 'A')			Westbound (Driveway 'A')			Northbound (Edith Blvd)			Southbound (Edith Blvd)		
2012 AM Peak Hr. Volumes	0	0	0	0	0	0	0	718	0	0	660	0
2012 PM Peak Hr. Volumes	0	0	0	0	0	0	0	1,025	0	0	593	0

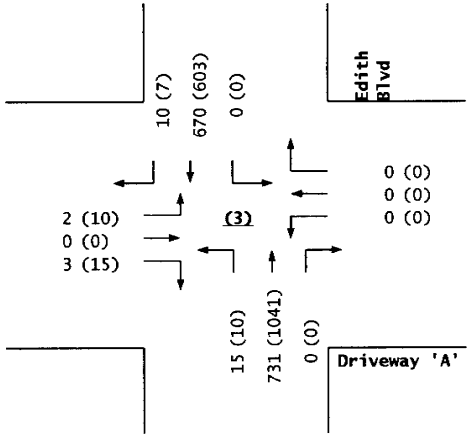
2015
NO BUILD



Trips



2015
BUILD



Driveway 'A' / Edith Blvd

Albuquerque Recycling Facility (Edith Blvd N. of Comanche Rd)

Projected Turning Movements Worksheet

Driveway 'B' / Edith Blvd

INTERSECTION: E-W Street: **Driveway 'B'** (4)

N-S Street: **Edith Blvd**

Year of Existing Counts 2012

Implementation Year **2015**

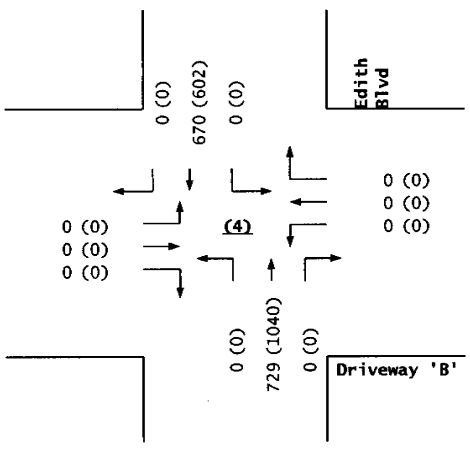
Growth Rates	**0.50%**			**0.50%**			**0.50%**			**0.50%**		
	Eastbound (Driveway 'B')			**Westbound (Driveway 'B')**			**Northbound (Edith Blvd)**			**Southbound (Edith Blvd)**		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	0	0	0	0	0	0	0	718	0	0	660	0
Background Traffic Growth	0	0	0	0	0	0	0	11	0	0	10	0
Subtotal (NO BUILD - A.M.)	***0***	***0***	***0***	***0***	***0***	***0***	***0***	***729***	***0***	***0***	***670***	***0***
Percent Office Trips Generated(Entering)	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	***5.00%***	*0.00%*	*0.00%*	*0.00%*	***34.90%***	***10.00%***
Percent Office Trips Generated(Exiting)	***10.00%***	*0.00%*	***5.00%***	*0.00%*	*0.00%*	*0.00%*	*0.00%*	***34.90%***	*0.00%*	*0.00%*	*0.00%*	*0.00%*
Total Trips Generated	1	0	0	0	0	0	2	2	0	0	10	3
Total AM Peak Hour BUILD Volumes	**1**	**0**	**0**	**0**	**0**	**0**	**2**	**731**	**0**	**0**	**680**	**3**

	Eastbound (Driveway 'B')			**Westbound (Driveway 'B')**			**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	1,025	0	0	593	0
Background Traffic Growth	0	0	0	0	0	0	0	15	0	0	9	0
Subtotal (NO BUILD - P.M.)	***0***	***0***	***0***	***0***	***0***	***0***	***0***	***1,040***	***0***	***0***	***602***	***0***
Percent Office Trips Generated(Entering)	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	*0.00%*	***5.00%***	*0.00%*	*0.00%*	*0.00%*	***34.90%***	***10.00%***
Percent Office Trips Generated(Exiting)	***10.00%***	*0.00%*	***5.00%***	*0.00%*	*0.00%*	*0.00%*	*0.00%*	***34.90%***	*0.00%*	*0.00%*	*0.00%*	*0.00%*
Total Trips Generated	3	0	1	0	0	0	1	10	0	0	7	2
Total PM Peak Hour BUILD Volumes	**3**	**0**	**1**	**0**	**0**	**0**	**1**	**1,050**	**0**	**0**	**609**	**2**

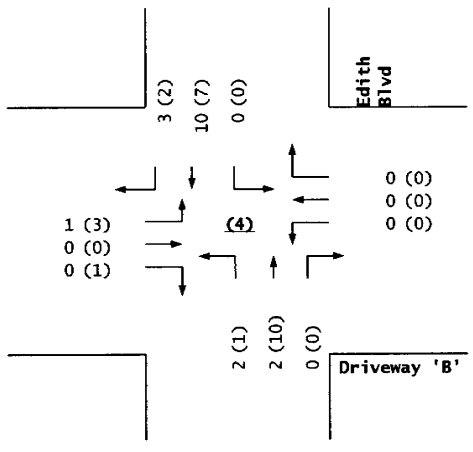
	Entering	Exiting		
Number of Office Trips Generated	**30**	**6**	A.M.	100% Office Development
	19	**29**	P.M.	

	Eastbound (Driveway 'B')			**Westbound (Driveway 'B')**			**Northbound (Edith Blvd)**			**Southbound (Edith Blvd)**		
2012 AM Peak Hr. Volumes	0	0	0	0	0	0	0	718	0	0	660	0
2012 PM Peak Hr. Volumes	0	0	0	0	0	0	0	1,025	0	0	593	0

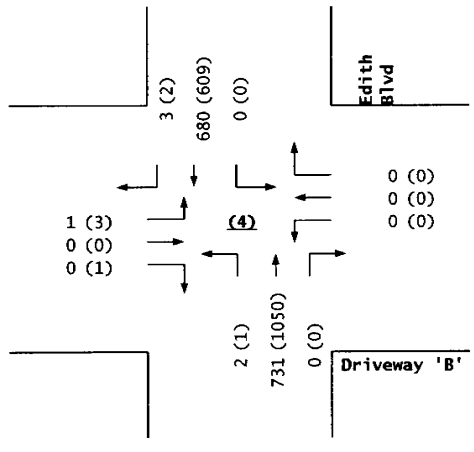
2015
NO BUILD



Trips



2015
BUILD



Driveway 'B' / Edith Blvd

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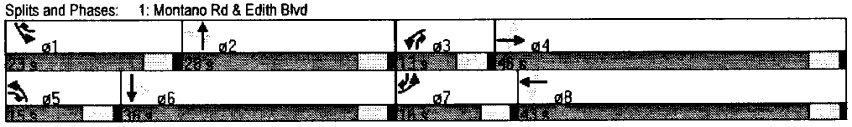
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	164	1467	202	87	565	214	102	357	113	235	443	71
Turn Type	pm+pt		pm+ov	pm+pt		pm+ov	pm+pt		pm+ov	pm+pt		pm+ov
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	7
Permitted Phases	4		4	8		8	2		2	6		6
Detector Phase	7	4	5	3	8	1	5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	21.0	10.0	10.0	21.0	10.0	10.0	21.0	10.0	10.0	21.0	10.0
Total Split (s)	16.0	46.0	15.0	13.0	43.0	23.0	15.0	28.0	13.0	23.0	36.0	16.0
Total Split (%)	14.5%	41.8%	13.6%	11.8%	39.1%	20.9%	13.6%	25.5%	11.8%	20.9%	32.7%	14.5%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	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	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	5.0	5.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?												
Recall Mode	Min	Min	Min	Min	Min	Min	Min	C-Min	Min	Min	C-Min	Min
Act Effct Green (s)	52.0	41.6	56.0	46.7	39.0	60.6	33.3	23.9	36.7	45.6	31.3	46.7
Actuated g/C Ratio	0.47	0.38	0.51	0.42	0.35	0.55	0.30	0.22	0.33	0.41	0.28	0.42
v/c Ratio	0.46	0.86	0.26	0.54	0.38	0.27	0.45	0.64	0.27	0.77	0.57	0.13
Control Delay	20.1	37.4	5.5	28.9	27.3	5.5	21.6	40.0	21.2	38.3	36.9	4.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	20.1	37.4	5.5	28.9	27.3	5.5	21.6	40.0	21.2	38.3	36.9	4.6
LOS	C	D	A	C	C	A	C	D	C	D	D	A
Approach Delay		32.3			22.1			33.0			34.3	
Approach LOS		C			C			C			C	

Intersection Summary

Cycle Length: 110
Actuated Cycle Length: 110
Offset: 8 (7%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 75
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.86
Intersection Signal Delay: 30.6 — Intersection LOS: C
Intersection Capacity Utilization 72.7% — ICU Level of Service C
Analysis Period (min) 15

Splits and Phases: 1: Montano Rd & Edith Blvd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	164	1467	202	87	565	214	102	357	113	235	443	71
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1641	4715	1468	1641	4715	1468	1641	3282	1468	1641	3282	1468
Flt Permitted	0.33	1.00	1.00	0.10	1.00	1.00	0.41	1.00	1.00	0.26	1.00	1.00
Satd. Flow (perm)	562	4715	1468	177	4715	1468	708	3282	1468	455	3282	1468
Peak-hour factor, PHF	0.96	0.96	0.96	0.90	0.90	0.90	0.78	0.78	0.78	0.83	0.83	0.83
Adj. Flow (vph)	171	1528	210	97	628	238	131	458	145	283	534	86
RTOR Reduction (vph)	0	0	80	0	0	74	0	0	43	0	0	53
Lane Group Flow (vph)	171	1528	130	97	628	164	131	458	102	283	534	33
Turn Type	pm+pt		pm+ov	pm+pt		pm+ov	pm+pt		pm+ov	pm+pt		pm+ov
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	7
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)	52.0	41.6	51.0	46.8	39.0	55.7	33.3	23.9	31.7	45.6	31.2	41.6
Effective Green, g (s)	52.0	41.6	51.0	46.8	39.0	55.7	33.3	23.9	31.7	45.6	31.2	41.6
Actuated g/C Ratio	0.47	0.38	0.46	0.43	0.35	0.51	0.30	0.22	0.29	0.41	0.28	0.38
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	368	1783	747	179	1672	810	294	713	490	369	931	622
v/s Ratio Prot	c0.04	c0.32	0.01	0.04	0.13	0.03	0.04	0.14	0.01	c0.12	0.16	0.00
v/s Ratio Perm	0.18		0.07	0.19		0.08	0.10		0.05	c0.20		0.02
v/c Ratio	0.46	0.86	0.17	0.54	0.38	0.20	0.45	0.64	0.21	0.77	0.57	0.05
Uniform Delay, d1	17.5	31.5	17.2	22.5	26.4	14.9	29.1	39.2	29.7	24.0	33.7	21.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.79	0.90	1.22	1.00	1.00	1.00
Incremental Delay, d2	0.9	4.3	0.1	3.3	0.1	0.1	0.9	3.9	0.2	9.2	2.6	0.0
Delay (s)	18.4	35.8	17.3	25.8	26.6	15.1	23.9	39.2	36.5	33.2	36.3	21.7
Level of Service	B	D	B	C	C	B	C	D	D	C	D	C
Approach Delay (s)		32.2			23.6			35.9			33.9	
Approach LOS		C			C			D			C	

Intersection Summary

HCM Average Control Delay	31.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	72.7%	ICU Level of Service	C
Analysis Period (min)	15		

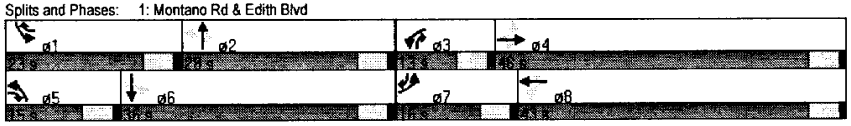
c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	164	1467	207	94	565	214	103	357	114	235	444	71
Turn Type	pm+pt		pm+ov	pm+pt		pm+ov	pm+pt		pm+ov	pm+pt		pm+ov
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	7
Permitted Phases	4		4	8		8	2		2	6		6
Detector Phase	7	4	5	3	8	1	5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	21.0	10.0	10.0	21.0	10.0	10.0	21.0	10.0	10.0	21.0	10.0
Total Split (s)	16.0	46.0	15.0	13.0	43.0	23.0	15.0	28.0	13.0	23.0	36.0	16.0
Total Split (%)	14.5%	41.8%	13.6%	11.8%	39.1%	20.9%	13.6%	25.5%	11.8%	20.9%	32.7%	14.5%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	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	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	5.0	5.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?												
Recall Mode	Min	Min	Min	Min	Min	Min	Min	C-Min	Min	Min	C-Min	Min
Act Effct Green (s)	51.4	41.0	55.3	46.4	38.5	60.1	33.8	24.5	37.4	46.1	31.7	47.2
Actuated g/C Ratio	0.47	0.37	0.50	0.42	0.35	0.55	0.31	0.22	0.34	0.42	0.29	0.43
v/c Ratio	0.47	0.87	0.27	0.57	0.38	0.27	0.44	0.63	0.27	0.76	0.56	0.13
Control Delay	20.3	38.5	6.2	30.9	27.7	5.5	28.3	42.1	11.5	37.3	36.5	4.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	20.3	38.5	6.2	30.9	27.7	5.5	28.3	42.1	11.5	37.3	36.5	4.6
LOS	C	D	A	C	C	A	C	D	B	D	D	A
Approach Delay		33.3			22.6			33.5			33.7	
Approach LOS		C			C			C			C	

Intersection Summary

Cycle Length: 110
Actuated Cycle Length: 110
Offset: 52 (47%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 75
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.87
Intersection Signal Delay: 31.1 Intersection LOS: C
Intersection Capacity Utilization 73.1% ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 1: Montano Rd & Edith Blvd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	164	1467	207	94	565	214	103	357	114	235	444	71
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1641	4715	1468	1641	4715	1468	1641	3282	1468	1641	3282	1468
Flt Permitted	0.32	1.00	1.00	0.10	1.00	1.00	0.41	1.00	1.00	0.27	1.00	1.00
Satd. Flow (perm)	560	4715	1468	179	4715	1468	708	3282	1468	465	3282	1468
Peak-hour factor, PHF	0.96	0.96	0.96	0.90	0.90	0.90	0.78	0.78	0.78	0.83	0.83	0.83
Adj. Flow (vph)	171	1528	216	104	628	238	132	458	146	283	535	86
RTOR Reduction (vph)	0	0	77	0	0	75	0	0	43	0	0	53
Lane Group Flow (vph)	171	1528	139	104	628	163	132	458	103	283	535	33
Turn Type	pm+pt		pm+ov	pm+pt		pm+ov	pm+pt		pm+ov	pm+pt		pm+ov
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	7
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)	51.4	41.0	50.4	46.4	38.5	55.1	33.9	24.5	32.4	46.1	31.7	42.1
Effective Green, g (s)	51.4	41.0	50.4	46.4	38.5	55.1	33.9	24.5	32.4	46.1	31.7	42.1
Actuated g/C Ratio	0.47	0.37	0.46	0.42	0.35	0.50	0.31	0.22	0.29	0.42	0.29	0.38
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	364	1757	739	181	1650	802	298	731	499	372	946	629
v/s Ratio Prot	c0.04	c0.32	0.02	0.04	0.13	0.03	0.04	0.14	0.01	c0.11	0.16	0.00
v/s Ratio Perm	0.18		0.08	0.20		0.08	0.10		0.06	c0.20		0.02
v/c Ratio	0.47	0.87	0.19	0.57	0.38	0.20	0.44	0.63	0.21	0.76	0.57	0.05
Uniform Delay, d1	17.8	32.0	17.7	22.9	26.8	15.3	28.7	38.6	29.1	23.6	33.3	21.4
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.10	0.97	0.64	1.00	1.00	1.00
Incremental Delay, d2	1.0	4.9	0.1	4.4	0.1	0.1	0.9	3.6	0.2	8.9	2.4	0.0
Delay (s)	18.8	36.9	17.8	27.3	27.0	15.4	32.5	40.9	18.9	32.5	35.7	21.4
Level of Service	B	D	B	C	C	B	C	D	B	C	D	C
Approach Delay (s)		33.1			24.1			35.1			33.4	
Approach LOS		C			C			D			C	

Intersection Summary

HCM Average Control Delay	31.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	73.1%	ICU Level of Service	D
Analysis Period (min)	15		

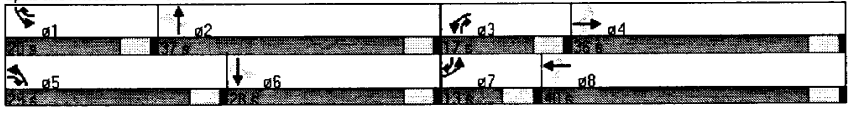
c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑			↑↑↑			↑↑			↑↑	
Volume (vph)	114	865	63	121	1193	243	309	699	140	227	300	125
Turn Type	pm+pt		pm+ov	pm+pt		pm+ov	pm+pt		pm+ov	pm+pt		pm+ov
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	7
Permitted Phases	4		4	8		8	2		2	6		6
Detector Phase	7	4	5	3	8	1	5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	21.0	10.0	10.0	21.0	10.0	10.0	21.0	10.0	10.0	21.0	10.0
Total Split (s)	13.0	36.0	29.0	17.0	40.0	20.0	29.0	37.0	17.0	20.0	28.0	13.0
Total Split (%)	11.8%	32.7%	26.4%	15.5%	36.4%	18.2%	26.4%	33.6%	15.5%	18.2%	25.5%	11.8%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	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	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	5.0	5.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?												
Recall Mode	Min	Min	Min	Min	Min	Min	Min	C-Min	Min	Min	C-Min	Min
Act Effct Green (s)	41.6	33.1	58.1	45.5	35.1	54.3	50.6	32.3	47.7	40.7	26.5	40.0
Actuated g/C Ratio	0.38	0.30	0.53	0.41	0.32	0.49	0.46	0.29	0.43	0.37	0.24	0.36
v/c Ratio	0.66	0.67	0.09	0.57	0.90	0.36	0.68	0.79	0.22	0.80	0.40	0.22
Control Delay	39.4	36.8	3.2	28.3	45.3	13.2	28.5	29.5	5.7	45.2	37.9	8.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.4	36.8	3.2	28.3	45.3	13.2	28.5	29.5	5.7	45.2	37.9	8.0
LOS	D	D	A	C	D	B	C	C	A	D	D	A
Approach Delay		35.0			38.9			26.3			34.7	
Approach LOS		D			D			C			C	

Intersection Summary

Cycle Length: 110
Actuated Cycle Length: 110
Offset: 70 (64%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.90
Intersection Signal Delay: 34.2 — Intersection LOS: C
Intersection Capacity Utilization 77.9% — ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 1: Montano Rd & Edith Blvd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑			↑↑↑			↑↑			↑↑	
Volume (vph)	114	865	63	121	1193	243	309	699	140	227	300	125
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1641	4715	1468	1641	4715	1468	1641	3282	1468	1641	3282	1468
Flt Permitted	0.12	1.00	1.00	0.16	1.00	1.00	0.41	1.00	1.00	0.21	1.00	1.00
Satd. Flow (perm)	209	4715	1468	279	4715	1468	707	3282	1468	356	3282	1468
Peak-hour factor, PHF	0.91	0.91	0.91	0.88	0.88	0.88	0.92	0.92	0.92	0.95	0.95	0.95
Adj. Flow (vph)	125	951	69	138	1356	276	336	760	152	239	316	132
RTOR Reduction (vph)	0	0	36	0	0	44	0	0	43	0	0	76
Lane Group Flow (vph)	125	951	33	138	1356	232	336	760	109	239	316	56
Turn Type	pm+pt		pm+ov	pm+pt		pm+ov	pm+pt		pm+ov	pm+pt		pm+ov
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	7
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)	41.5	33.1	53.0	45.5	35.1	49.3	51.5	32.3	42.7	40.8	26.6	35.0
Effective Green, g (s)	41.5	33.1	53.0	45.5	35.1	49.3	51.5	32.3	42.7	40.8	26.6	35.0
Actuated g/C Ratio	0.38	0.30	0.48	0.41	0.32	0.45	0.47	0.29	0.39	0.37	0.24	0.32
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	188	1419	774	244	1505	725	500	964	637	298	794	534
v/s Ratio Prot	0.05	0.20	0.01	c0.05	c0.29	0.04	c0.12	c0.23	0.02	c0.10	0.10	0.01
v/s Ratio Perm	0.20		0.01	0.18		0.12	0.19		0.06	0.19		0.03
v/c Ratio	0.66	0.67	0.04	0.57	0.90	0.32	0.67	0.79	0.17	0.80	0.40	0.11
Uniform Delay, d1	25.8	33.7	15.1	22.1	35.8	19.5	20.1	35.7	22.0	26.4	35.0	26.5
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.15	0.67	0.50	1.00	1.00	1.00
Incremental Delay, d2	8.6	1.3	0.0	3.0	7.8	0.3	2.7	4.9	0.1	14.3	1.5	0.1
Delay (s)	34.3	34.9	15.1	25.1	43.6	19.8	25.7	29.0	11.0	40.8	36.5	26.5
Level of Service	C	C	B	C	D	B	C	C	B	D	D	C
Approach Delay (s)		33.7			38.4			25.9			36.1	
Approach LOS		C			D			C			D	

Intersection Summary

HCM Average Control Delay	33.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	77.9%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

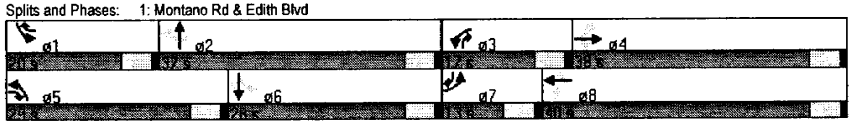
Timings
1: Montano Rd & Edith Blvd

Terry O. Brown, P.E.
6/7/2012 - Synchro 7

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	114	865	66	125	1193	243	314	700	147	227	301	125
Turn Type	pm+pt		pm+ov	pm+pt		pm+ov	pm+pt		pm+ov	pm+pt		pm+ov
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	7
Permitted Phases	4		4	8		8	2		2	6		6
Detector Phase	7	4	5	3	8	1	5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	10.0	21.0	10.0	10.0	21.0	10.0	10.0	21.0	10.0	10.0	21.0	10.0
Total Split (s)	13.0	36.0	29.0	17.0	40.0	20.0	29.0	37.0	17.0	20.0	28.0	13.0
Total Split (%)	11.8%	32.7%	26.4%	15.5%	36.4%	18.2%	26.4%	33.6%	15.5%	18.2%	25.5%	11.8%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	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	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	5.0	5.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?												
Recall Mode	Min	Min	Min	Min	Min	Min	Min	C-Min	Min	Min	C-Min	Min
Act Effct Green (s)	41.5	33.0	58.2	45.6	35.1	54.3	50.7	32.3	47.8	40.5	26.3	39.8
Actuated g/C Ratio	0.38	0.30	0.53	0.41	0.32	0.49	0.46	0.29	0.43	0.37	0.24	0.36
v/c Ratio	0.66	0.67	0.09	0.58	0.90	0.36	0.69	0.79	0.24	0.80	0.40	0.22
Control Delay	39.6	36.9	3.1	28.9	45.3	13.2	25.6	41.8	19.1	45.3	38.1	8.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.6	36.9	3.1	28.9	45.3	13.2	25.6	41.8	19.1	45.3	38.1	8.3
LOS	D	D	A	C	D	B	C	D	B	D	D	A
Approach Delay		35.0			39.0			34.5			34.9	
Approach LOS		D			D			C			C	

Intersection Summary
Cycle Length: 110
Actuated Cycle Length: 110
Offset: 12 (11%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 80
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.90
Intersection Signal Delay: 36.3 Intersection LOS: D
Intersection Capacity Utilization 78.0% ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 1: Montano Rd & Edith Blvd



HCM Signalized Intersection Capacity Analysis
1: Montano Rd & Edith Blvd

Terry O. Brown, P.E.
6/7/2012 - Synchro 7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	114	865	66	125	1193	243	314	700	147	227	301	125
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1641	4715	1468	1641	4715	1468	1641	3282	1468	1641	3282	1468
Flt Permitted	0.12	1.00	1.00	0.16	1.00	1.00	0.41	1.00	1.00	0.21	1.00	1.00
Satd. Flow (perm)	209	4715	1468	277	4715	1468	704	3282	1468	358	3282	1468
Peak-hour factor, PHF	0.91	0.91	0.91	0.88	0.88	0.88	0.92	0.92	0.92	0.95	0.95	0.95
Adj. Flow (vph)	125	951	73	142	1356	276	341	761	160	239	317	132
RTOR Reduction (vph)	0	0	38	0	0	44	0	0	43	0	0	75
Lane Group Flow (vph)	125	951	35	142	1356	232	341	761	117	239	317	57
Turn Type	pm+pt		pm+ov	pm+pt		pm+ov	pm+pt		pm+ov	pm+pt		pm+ov
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	7
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)	41.4	33.0	53.1	45.6	35.1	49.3	51.5	32.3	42.8	40.6	26.4	34.8
Effective Green, g (s)	41.4	33.0	53.1	45.6	35.1	49.3	51.5	32.3	42.8	40.6	26.4	34.8
Actuated g/C Ratio	0.38	0.30	0.48	0.41	0.32	0.45	0.47	0.29	0.39	0.37	0.24	0.32
Clearance Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	188	1415	775	245	1505	725	501	964	638	298	788	531
v/s Ratio Prot	0.05	0.20	0.01	c0.06	c0.29	0.04	c0.12	c0.23	0.02	c0.10	0.10	0.01
v/s Ratio Perm	0.20		0.02	0.18		0.12	0.19		0.06	0.19		0.03
v/c Ratio	0.66	0.67	0.05	0.58	0.90	0.32	0.68	0.79	0.18	0.80	0.40	0.11
Uniform Delay, d1	25.8	33.8	15.0	22.2	35.8	19.5	20.1	35.7	22.1	26.6	35.2	26.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.97	1.00	1.71	1.00	1.00	1.00
Incremental Delay, d2	8.6	1.3	0.0	3.3	7.8	0.3	3.0	5.3	0.1	14.3	1.5	0.1
Delay (s)	34.4	35.0	15.1	25.5	43.6	19.8	22.6	41.1	37.9	40.9	36.7	26.7
Level of Service	C	D	B	C	D	B	C	D	D	D	D	C
Approach Delay (s)		33.7			38.4			35.7			36.2	
Approach LOS		C			D			D			D	

Intersection Summary

HCM Average Control Delay	36.3	HCM Level of Service	D
HCM Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	78.0%	ICU Level of Service	D
Analysis Period (min)	15		

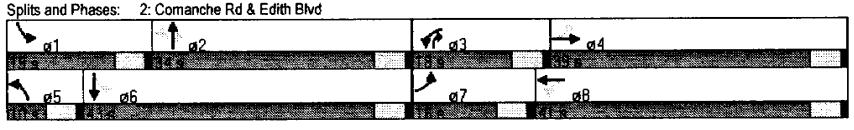
c Critical Lane Group

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations									
Volume (vph)	128	579	125	377	42	385	112	147	479
Turn Type	pm+pt		pm+pt		pm+pt		pm+ov	pm+pt	
Protected Phases	7	4	3	8	5	2	3	1	6
Permitted Phases	4		8		2		2	6	
Detector Phase	7	4	3	8	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
Minimum Split (s)	10.0	21.0	10.0	21.0	10.0	21.0	10.0	10.0	21.0
Total Split (s)	16.0	39.0	18.0	41.0	10.0	34.0	18.0	19.0	43.0
Total Split (%)	14.5%	35.5%	16.4%	37.3%	9.1%	30.9%	16.4%	17.3%	39.1%
Yellow Time (s)	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
Lost Time Adjust (s)	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
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lead	Lag
Lead-Lag Optimize?									
Recall Mode	Min	Min	Min	Min	Min	C-Min	Min	Min	C-Min
Act Effct Green (s)	42.0	31.4	42.4	31.6	42.1	35.5	51.3	52.2	41.2
Actuated g/C Ratio	0.38	0.29	0.39	0.29	0.38	0.32	0.47	0.47	0.37
v/c Ratio	0.51	0.83	0.57	0.66	0.20	0.48	0.20	0.50	0.55
Control Delay	25.3	44.1	28.1	31.2	20.1	33.7	5.0	12.7	19.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.3	44.1	28.1	31.2	20.1	33.7	5.0	12.7	19.6
LOS	C	D	C	C	C	C	A	B	B
Approach Delay		41.2		30.7		26.7			18.1
Approach LOS		D		C		C			B

Intersection Summary

Cycle Length: 110
Actuated Cycle Length: 110
Offset: 108 (98%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 65
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.83
Intersection Signal Delay: 29.4 Intersection LOS: C
Intersection Capacity Utilization 62.4% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 2: Comanche Rd & Edith Blvd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	128	579	125	125	377	216	42	385	112	147	479	44
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95	1.00	1.00	0.95	
Frt	1.00	0.97		1.00	0.95		1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1641	3195		1641	3103		1641	3282	1468	1641	3241	
Flt Permitted	0.24	1.00		0.15	1.00		0.33	1.00	1.00	0.31	1.00	
Satd. Flow (perm)	421	3195		264	3103		569	3282	1468	540	3241	
Peak-hour factor, PHF	0.91	0.91	0.91	0.93	0.93	0.93	0.75	0.75	0.75	0.78	0.78	0.78
Adj. Flow (vph)	141	636	137	134	405	232	56	513	149	188	614	56
RTOR Reduction (vph)	0	17	0	0	78	0	0	0	78	0	6	0
Lane Group Flow (vph)	141	756	0	134	559	0	56	513	71	188	664	0
Turn Type	pm+pt			pm+pt			pm+pt		pm+ov	pm+pt		
Protected Phases	7	4		3	8		5	2	3	1	6	
Permitted Phases	4			8			2		2	6		
Actuated Green, G (s)	42.0	31.4		42.4	31.6		42.1	35.5	46.3	52.8	41.2	
Effective Green, g (s)	42.0	31.4		42.4	31.6		42.1	35.5	46.3	52.8	41.2	
Actuated g/C Ratio	0.38	0.29		0.39	0.29		0.38	0.32	0.42	0.48	0.37	
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	278	912		237	891		282	1059	685	382	1214	
v/s Ratio Prot	0.05	c0.24		c0.06	0.18		0.01	0.16	0.01	c0.05	c0.21	
v/s Ratio Perm	0.14			0.16			0.06		0.04	0.18		
v/c Ratio	0.51	0.83		0.57	0.63		0.20	0.48	0.10	0.49	0.55	
Uniform Delay, d1	23.9	36.8		24.5	34.1		21.9	29.9	19.3	17.8	27.1	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	0.47	0.64	
Incremental Delay, d2	1.5	6.3		3.1	1.4		0.3	1.6	0.1	0.9	1.6	
Delay (s)	25.4	43.1		27.6	35.5		22.2	31.5	19.3	9.2	18.8	
Level of Service	C	D		C	D		C	C	B	A	B	
Approach Delay (s)		40.3			34.1			28.2			16.7	
Approach LOS		D			C			C			B	

Intersection Summary

HCM Average Control Delay	30.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	62.4%	ICU Level of Service	B
Analysis Period (min)	15		

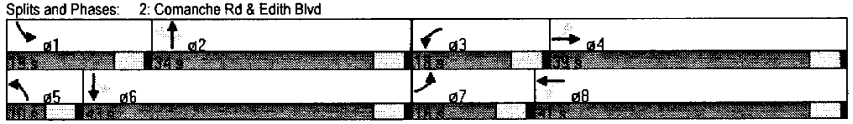
c Critical Lane Group

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations									
Volume (vph)	129	579	125	377	42	390	112	149	480
Turn Type	pm+pt		pm+pt		pm+pt		Perm	pm+pt	
Protected Phases	7	4	3	8	5	2		1	6
Permitted Phases	4		8		2		2	6	
Detector Phase	7	4	3	8	5	2	2	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
Minimum Split (s)	10.0	21.0	10.0	21.0	10.0	21.0	21.0	10.0	21.0
Total Split (s)	16.0	39.0	18.0	41.0	10.0	34.0	34.0	19.0	43.0
Total Split (%)	14.5%	35.5%	16.4%	37.3%	9.1%	30.9%	30.9%	17.3%	39.1%
Yellow Time (s)	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
Lost Time Adjust (s)	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
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?									
Recall Mode	Min	Min	Min	Min	Min	C-Min	C-Min	Min	C-Min
Act Effct Green (s)	41.9	31.4	42.2	31.5	41.9	35.5	35.5	52.3	41.6
Actuated g/C Ratio	0.38	0.29	0.38	0.29	0.38	0.32	0.32	0.48	0.38
v/c Ratio	0.52	0.83	0.57	0.67	0.20	0.49	0.26	0.51	0.55
Control Delay	25.9	44.1	28.5	30.9	20.0	33.8	6.6	26.3	17.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.9	44.1	28.5	30.9	20.0	33.8	6.6	26.3	17.6
LOS	C	D	C	C	C	C	A	C	B
Approach Delay		41.3		30.5		27.1			19.5
Approach LOS		D		C		C			B

Intersection Summary

Cycle Length: 110
Actuated Cycle Length: 110
Offset: 108 (98%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 65
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.83
Intersection Signal Delay: 29.9 Intersection LOS: C
Intersection Capacity Utilization 62.6% ICU Level of Service B
Analysis Period (min) 15

Splits and Phases: 2: Comanche Rd & Edith Blvd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	129	579	125	125	377	226	42	390	112	149	480	44
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95	1.00	1.00	0.95	
Frt	1.00	0.97		1.00	0.94		1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1641	3195		1641	3097		1641	3282	1468	1641	3241	
Flt Permitted	0.24	1.00		0.15	1.00		0.33	1.00	1.00	0.31	1.00	
Satd. Flow (perm)	408	3195		264	3097		575	3282	1468	532	3241	
Peak-hour factor, PHF	0.91	0.91	0.91	0.93	0.93	0.93	0.75	0.75	0.75	0.78	0.78	0.78
Adj. Flow (vph)	142	636	137	134	405	243	56	520	149	191	615	56
RTOR Reduction (vph)	0	17	0	0	86	0	0	0	101	0	6	0
Lane Group Flow (vph)	142	756	0	134	562	0	56	520	48	191	665	0
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		
Actuated Green, G (s)	41.9	31.4		42.3	31.6		41.9	35.5	35.5	52.9	41.5	
Effective Green, g (s)	41.9	31.4		42.3	31.6		41.9	35.5	35.5	52.9	41.5	
Actuated g/C Ratio	0.38	0.29		0.38	0.29		0.38	0.32	0.32	0.48	0.38	
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	273	912		235	890		281	1059	474	381	1223	
v/s Ratio Prot	0.05	c0.24		c0.06	0.18		0.01	0.16		c0.06	c0.21	
v/s Ratio Perm	0.15			0.16			0.06		0.03	0.18		
v/c Ratio	0.52	0.83		0.57	0.63		0.20	0.49	0.10	0.50	0.54	
Uniform Delay, d1	24.1	36.8		24.6	34.1		22.0	30.0	26.1	17.8	26.8	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.19	0.57	
Incremental Delay, d2	1.8	6.3		3.3	1.5		0.4	1.6	0.4	0.9	1.6	
Delay (s)	25.8	43.1		27.9	35.6		22.3	31.6	26.5	22.2	17.0	
Level of Service	C	D		C	D		C	C	C	C	B	
Approach Delay (s)		40.4			34.3			29.8			18.1	
Approach LOS		D			C			C			B	

Intersection Summary

HCM Average Control Delay	30.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	62.6%	ICU Level of Service	B
Analysis Period (min)	15		

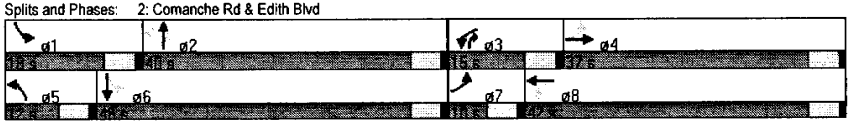
c Critical Lane Group

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations									
Volume (vph)	67	470	98	548	127	681	216	184	316
Turn Type	pm+pt		pm+pt		pm+pt		pm+ov	pm+pt	
Protected Phases	7	4	3	8	5	2	3	1	6
Permitted Phases	4		8		2		2	6	
Detector Phase	7	4	3	8	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
Minimum Split (s)	10.0	21.0	10.0	21.0	10.0	21.0	10.0	10.0	21.0
Total Split (s)	10.0	37.0	15.0	42.0	12.0	40.0	15.0	18.0	46.0
Total Split (%)	9.1%	33.6%	13.6%	38.2%	10.9%	36.4%	13.6%	16.4%	41.8%
Yellow Time (s)	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
Lost Time Adjust (s)	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
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lead	Lag
Lead-Lag Optimize?									
Recall Mode	Min	Min	Min	Min	Min	C-Min	Min	Min	C-Min
Act Effct Green (s)	38.6	32.2	43.8	34.8	44.6	37.1	51.1	52.4	41.3
Actuated g/C Ratio	0.35	0.29	0.40	0.32	0.41	0.34	0.46	0.48	0.38
v/c Ratio	0.50	0.62	0.39	0.87	0.36	0.69	0.32	0.66	0.36
Control Delay	32.4	36.4	23.7	41.5	20.4	36.3	10.2	22.8	19.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.4	36.4	23.7	41.5	20.4	36.3	10.2	22.8	19.1
LOS	C	D	C	D	C	D	B	C	B
Approach Delay		35.9		39.6		28.8			20.2
Approach LOS		D		D		C			C

Intersection Summary

Cycle Length: 110
Actuated Cycle Length: 110
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 70
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.87
Intersection Signal Delay: 31.8 Intersection LOS: C
Intersection Capacity Utilization 74.3% ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 2: Comanche Rd & Edith Blvd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	67	470	31	98	548	292	127	681	216	184	316	103
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95	1.00	1.00	0.95	
Frt	1.00	0.99		1.00	0.95		1.00	1.00	0.85	1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1641	3252		1641	3111		1641	3282	1468	1641	3161	
Flt Permitted	0.12	1.00		0.26	1.00		0.49	1.00	1.00	0.18	1.00	
Satd. Flow (perm)	215	3252		448	3111		842	3282	1468	319	3161	
Peak-hour factor, PHF	0.85	0.85	0.85	0.92	0.92	0.92	0.89	0.89	0.89	0.96	0.96	0.96
Adj. Flow (vph)	79	553	36	107	596	317	143	765	243	192	329	107
RTOR Reduction (vph)	0	4	0	0	65	0	0	0	74	0	29	0
Lane Group Flow (vph)	79	585	0	107	848	0	143	765	169	192	407	0
Turn Type	pm+pt			pm+pt			pm+pt		pm+ov	pm+pt		
Protected Phases	7	4		3	8		5	2	3	1	6	
Permitted Phases	4			8			2		2	6		
Actuated Green, G (s)	38.6	32.2		43.8	34.8		44.6	37.1	46.1	53.0	41.3	
Effective Green, g (s)	38.6	32.2		43.8	34.8		44.6	37.1	46.1	53.0	41.3	
Actuated g/C Ratio	0.35	0.29		0.40	0.32		0.41	0.34	0.42	0.48	0.38	
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	158	952		276	984		396	1107	682	294	1187	
v/s Ratio Prot	0.03	0.18		c0.03	c0.27		0.02	0.23	0.02	c0.07	0.13	
v/s Ratio Perm	0.15			0.12			0.12		0.09	c0.24		
v/c Ratio	0.50	0.61		0.39	0.86		0.36	0.69	0.25	0.65	0.34	
Uniform Delay, d1	26.4	33.5		22.3	35.3		21.3	31.5	20.7	19.4	24.6	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	0.72	0.81	
Incremental Delay, d2	2.5	1.2		0.9	7.9		0.6	3.5	0.2	4.9	0.8	
Delay (s)	28.9	34.7		23.2	43.2		21.9	35.0	20.9	18.8	20.8	
Level of Service	C	C		C	D		C	D	C	B	C	
Approach Delay (s)		34.0			41.1			30.4			20.2	
Approach LOS		C			D			C			C	

Intersection Summary

HCM Average Control Delay	32.4	HCM Level of Service		C	
HCM Volume to Capacity ratio	0.75				
Actuated Cycle Length (s)	110.0	Sum of lost time (s)		20.0	
Intersection Capacity Utilization	74.3%	ICU Level of Service		D	
Analysis Period (min)	15				

c Critical Lane Group

Timings
2: Comanche Rd & Edith Blvd

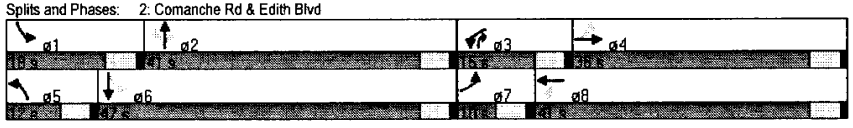
Terry O. Brown, P.E.
6/7/2012 - Synchro 7

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations									
Volume (vph)	68	470	98	548	127	684	216	194	321
Turn Type	pm+pt		pm+pt		pm+pt		pm+ov	pm+pt	
Protected Phases	7	4	3	8	5	2	3	1	6
Permitted Phases	4		8		2		2	6	
Detector Phase	7	4	3	8	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
Minimum Split (s)	10.0	21.0	10.0	21.0	10.0	21.0	10.0	10.0	21.0
Total Split (s)	10.0	36.0	15.0	41.0	12.0	41.0	15.0	18.0	47.0
Total Split (%)	9.1%	32.7%	13.6%	37.3%	10.9%	37.3%	13.6%	16.4%	42.7%
Yellow Time (s)	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
Lost Time Adjust (s)	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
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lead	Lag
Lead-Lag Optimize?									
Recall Mode	Min	Min	Min	Min	Min	C-Min	Min	Min	C-Min
Act Effct Green (s)	38.6	31.9	43.4	34.3	44.7	37.1	51.2	52.7	41.5
Actuated g/C Ratio	0.35	0.29	0.39	0.31	0.41	0.34	0.47	0.48	0.38
v/c Ratio	0.49	0.62	0.39	0.89	0.36	0.69	0.32	0.69	0.36
Control Delay	32.4	36.9	23.9	43.2	20.1	36.2	10.6	23.8	18.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.4	36.9	23.9	43.2	20.1	36.2	10.6	23.8	18.2
LOS	C	D	C	D	C	D	B	C	B
Approach Delay		36.3		41.2		28.8			20.0
Approach LOS		D		D		C			B

Intersection Summary

Cycle Length: 110
Actuated Cycle Length: 110
Offset: 108 (98%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 75
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.89
Intersection Signal Delay: 32.3 — Intersection LOS: C
Intersection Capacity Utilization 75.2% — ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 2: Comanche Rd & Edith Blvd



HCM Signalized Intersection Capacity Analysis
2: Comanche Rd & Edith Blvd

Terry O. Brown, P.E.
6/7/2012 - Synchro 7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	68	470	31	98	548	298	127	684	216	194	321	104
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95	1.00	1.00	0.95	
Frt	1.00	0.99		1.00	0.95		1.00	1.00	0.85	1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1641	3252		1641	3108		1641	3282	1468	1641	3162	
Flt Permitted	0.13	1.00		0.26	1.00		0.49	1.00	1.00	0.18	1.00	
Satd. Flow (perm)	217	3252		447	3108		839	3282	1468	314	3162	
Peak-hour factor, PHF	0.85	0.85	0.85	0.92	0.92	0.92	0.89	0.89	0.89	0.96	0.96	0.96
Adj. Flow (vph)	80	553	36	107	596	324	143	769	243	202	334	108
RTOR Reduction (vph)	0	4	0	0	68	0	0	0	70	0	29	0
Lane Group Flow (vph)	80	585	0	107	852	0	143	769	173	202	413	0
Turn Type	pm+pt			pm+pt			pm+pt		pm+ov	pm+pt		
Protected Phases	7	4		3	8		5	2	3	1	6	
Permitted Phases	4			8			2		2	6		
Actuated Green, G (s)	38.6	31.9		43.4	34.3		44.6	37.1	46.2	53.4	41.5	
Effective Green, g (s)	38.6	31.9		43.4	34.3		44.6	37.1	46.2	53.4	41.5	
Actuated g/C Ratio	0.35	0.29		0.39	0.31		0.41	0.34	0.42	0.49	0.38	
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0	5.0	5.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	163	943		275	969		395	1107	683	296	1193	
v/s Ratio Prot	0.03	0.18		c0.03	c0.27		0.02	0.23	0.02	c0.07	0.13	
v/s Ratio Perm	0.14			0.12			0.12		0.10	c0.26		
v/c Ratio	0.49	0.62		0.39	0.88		0.36	0.69	0.25	0.68	0.35	
Uniform Delay, d1	26.6	33.8		22.6	35.9		21.3	31.5	20.7	19.4	24.5	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	0.70	0.78	
Incremental Delay, d2	2.3	1.3		0.9	9.2		0.6	3.6	0.2	6.1	0.8	
Delay (s)	28.9	35.1		23.5	45.0		21.9	35.2	20.9	19.7	19.9	
Level of Service	C	D		C	D		C	D	C	B	B	
Approach Delay (s)		34.3			42.8			30.5			19.8	
Approach LOS		C			D			C			B	

Intersection Summary

HCM Average Control Delay	32.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	75.2%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	2	3	15	731	670	10
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.85	0.85	0.78	0.78	0.78	0.78
Hourly flow rate (vph)	2	4	19	937	859	13
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				TWLTL	TWLTL	
Median storage veh)				2	2	
Upstream signal (ft)				985		
pX, platoon unblocked	0.90					
vC, conflicting volume	1372	436	872			
vC1, stage 1 conf vol	865					
vC2, stage 2 conf vol	507					
vCu, unblocked vol	1183	436	872			
tC, single (s)	7.0	7.1	4.3			
tC, 2 stage (s)	6.0					
tF (s)	3.6	3.4	2.3			
p0 queue free %	99	99	97			
cM capacity (veh/h)	325	547	721			

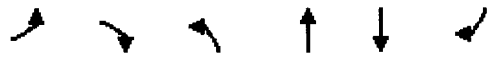
Direction, Lane #	EB 1	NB 1	NB 2	NB 3	SB 1	SB 2
Volume Total	6	19	469	469	573	299
Volume Left	2	19	0	0	0	0
Volume Right	4	0	0	0	0	13
cSH	430	721	1700	1700	1700	1700
Volume to Capacity	0.01	0.03	0.28	0.28	0.34	0.18
Queue Length 95th (ft)	1	2	0	0	0	0
Control Delay (s)	13.5	10.1	0.0	0.0	0.0	0.0
Lane LOS	B	B				
Approach Delay (s)	13.5	0.2			0.0	
Approach LOS	B					

Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	30.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	10	15	10	1041	603	7
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.85	0.85	0.96	0.96	0.96	0.96
Hourly flow rate (vph)	12	18	10	1084	628	7
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				TWLTL	TWLTL	
Median storage veh)				2	2	
Upstream signal (ft)				985		
pX, platoon unblocked	0.82					
vC, conflicting volume	1195	318	635			
vC1, stage 1 conf vol	632					
vC2, stage 2 conf vol	563					
vCu, unblocked vol	805	318	635			
tC, single (s)	7.0	7.1	4.3			
tC, 2 stage (s)	6.0					
tF (s)	3.6	3.4	2.3			
p0 queue free %	97	97	99			
cM capacity (veh/h)	435	655	892			

Direction, Lane #	EB 1	NB 1	NB 2	NB 3	SB 1	SB 2
Volume Total	29	10	542	542	419	217
Volume Left	12	10	0	0	0	0
Volume Right	18	0	0	0	0	7
cSH	545	892	1700	1700	1700	1700
Volume to Capacity	0.05	0.01	0.32	0.32	0.25	0.13
Queue Length 95th (ft)	4	1	0	0	0	0
Control Delay (s)	12.0	9.1	0.0	0.0	0.0	0.0
Lane LOS	B	A				
Approach Delay (s)	12.0	0.1			0.0	
Approach LOS	B					

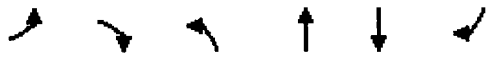
Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	38.8%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	1	1	2	731	680	3
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.85	0.85	0.78	0.78	0.78	0.78
Hourly flow rate (vph)	1	1	3	937	872	4
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				TWLTL	TWLTL	
Median storage veh)				2	2	
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1347	438	876			
vC1, stage 1 conf vol	874					
vC2, stage 2 conf vol	474					
vCu, unblocked vol	1347	438	876			
tC, single (s)	7.0	7.1	4.3			
tC, 2 stage (s)	6.0					
tF (s)	3.6	3.4	2.3			
p0 queue free %	100	100	100			
cM capacity (veh/h)	311	545	718			

Direction, Lane #	EB 1	NB 1	NB 2	NB 3	SB 1	SB 2
Volume Total	2	3	469	469	581	294
Volume Left	1	3	0	0	0	0
Volume Right	1	0	0	0	0	4
cSH	396	718	1700	1700	1700	1700
Volume to Capacity	0.01	0.00	0.28	0.28	0.34	0.17
Queue Length 95th (ft)	0	0	0	0	0	0
Control Delay (s)	14.1	10.0	0.0	0.0	0.0	0.0
Lane LOS	B	B				
Approach Delay (s)	14.1	0.0			0.0	
Approach LOS	B					

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	30.2%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	3	1	1	1050	609	2
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.85	0.85	0.96	0.96	0.96	0.96
Hourly flow rate (vph)	4	1	1	1094	634	2
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				TWLTL	TWLTL	
Median storage veh)				2	2	
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1184	318	636			
vC1, stage 1 conf vol	635					
vC2, stage 2 conf vol	549					
vCu, unblocked vol	1184	318	636			
tC, single (s)	7.0	7.1	4.3			
tC, 2 stage (s)	6.0					
tF (s)	3.6	3.4	2.3			
p0 queue free %	99	100	100			
cM capacity (veh/h)	375	654	891			

Direction, Lane #	EB 1	NB 1	NB 2	NB 3	SB 1	SB 2
Volume Total	5	1	547	547	423	214
Volume Left	4	1	0	0	0	0
Volume Right	1	0	0	0	0	2
cSH	420	891	1700	1700	1700	1700
Volume to Capacity	0.01	0.00	0.32	0.32	0.25	0.13
Queue Length 95th (ft)	1	0	0	0	0	0
Control Delay (s)	13.7	9.0	0.0	0.0	0.0	0.0
Lane LOS	B	A				
Approach Delay (s)	13.7	0.0			0.0	
Approach LOS	B					

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	39.0%	ICU Level of Service	A
Analysis Period (min)	15		

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NORTH

SEE SHEET A401 FOR ENLARGED PARTIAL SITE PLAN OF THIS AREA

TRUCK SCALE

10'-0" HIGH CHAIN LINK FENCING SYSTEM WITH OPAQUE SLATS

10'-0" HIGH CHAIN LINK FENCING SYSTEM WITH OPAQUE SLATS

EXISTING BUILDING

TEA HOUSE

EXISTING BUILDING

DRIVEWAY

EXISTING BUILDING

EXISTING BUILDING

DRIVEWAY

BALE INVENTORY
20,010 SQUARE FEET

MATERIAL RECOVERY FACILITY
87,106 SQUARE FEET

4'-0" DEEP TRUCK LOADING DOCK

CONTAINER STORAGE & BALE STORAGE

TIPPING POSITION TRUCK ENTRY

2" DEEP 3/4" GRAVEL OVER COMPACTED SUBGRADE

TYPE I PAVING

10'-0" HIGH CHAIN LINK FENCING SYSTEM WITH OPAQUE SLATS

TRUCK SCALE

DRIVEWAY

SOUTH

SEE SHEET A402 FOR ENLARGED PARTIAL SITE PLAN OF THIS AREA

WEST

EAST

SITE WALL & FENCING LEGEND

INDICATES 10'-0" HIGH CHAIN LINK FENCING SYSTEM WITH OPAGUE SLATS.

PLAN NORTH

TRUE NORTH

Data SIO, NOAA, U.S. Navy, NGA, GEBCO
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DRIVEWAY EXHIBIT

A1 SCALE: 1" = 40'-0"

MASTER SITE PLAN

0 10' 40' 60' 80'

CLAUDIO VIGIL ARCHITECTS

1801 Rio Grande Boulevard, N.W.
Albuquerque, New Mexico
Phone: (505) 842-1113
Fax: (505) 842-1330

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CITY OF ALBUQUERQUE RECYCLING CENTER
NEW RECYCLING FACILITY
5049 EDITH BOULEVARD, N.E.
ALBUQUERQUE, NEW MEXICO

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DATE:	AUGUST 7, 2012

SHEET TITLE
MASTER SITE PLAN

SHEET NUMBER
C101

Traffic Count Data Sheet

Year Counts Taken: **2012**

E-W Street **Montano Rd**

N-S Street: **Edith Blvd**

Speed Limit (Montano Rd)= **45** MPH

Speed Limit (Edith Blvd)= **35** MPH

Date of Count: **4/19/12**

Begin Time	End Time	Eastbound (Montano Rd)			Westbound (Montano Rd)			Northbound (Edith Blvd)			Southbound (Edith Blvd)		
		L	T	R	L	T	R	L	T	R	L	T	R
7:00 AM	7:15 AM	~~37~~	~~256~~	~~54~~	~~18~~	~~80~~	~~34~~	~~17~~	~~49~~	~~12~~	~~31~~	~~55~~	~~10~~
7:15 AM	7:30 AM	~~30~~	~~267~~	~~53~~	~~12~~	~~87~~	~~37~~	~~16~~	~~74~~	~~27~~	~~64~~	~~94~~	~~22~~
7:30 AM	7:45 AM	**41**	**359**	**63**	**23**	**156**	**55**	**22**	**89**	**15**	**44**	**88**	**22**
7:45 AM	8:00 AM	**49**	**374**	**49**	**19**	**143**	**74**	**30**	**115**	**36**	**60**	**150**	**13**
8:00 AM	8:15 AM	**43**	**370**	**46**	**18**	**134**	**57**	**21**	**98**	**29**	**71**	**130**	**20**
8:15 AM	8:30 AM	**29**	**342**	**41**	**26**	**124**	**25**	**27**	**50**	**31**	**57**	**68**	**15**
8:30 AM	8:45 AM	~~30~~	~~262~~	~~26~~	~~17~~	~~138~~	~~36~~	~~16~~	~~52~~	~~25~~	~~54~~	~~86~~	~~12~~
8:45 AM	9:00 AM	~~25~~	~~284~~	~~35~~	~~21~~	~~154~~	~~30~~	~~28~~	~~57~~	~~17~~	~~42~~	~~75~~	~~20~~
AM Peak Hour Volumes		**162**	**1445**	**199**	**86**	**557**	**211**	**100**	**352**	**111**	**232**	**436**	**70**
% of Total Traffic		4.1%	36.5%	5.0%	2.2%	14.1%	5.3%	2.5%	8.9%	2.8%	5.9%	11.0%	1.8%
% Directional			45.6%			21.6%			14.2%			18.6%	
AM Peak Hour Factor			*0.96*			*0.90*			*0.78*			*0.83*	

Begin Time	End Time	Eastbound (Montano Rd)			Westbound (Montano Rd)			Northbound (Edith Blvd)			Southbound (Edith Blvd)		
		L	T	R	L	T	R	L	T	R	L	T	R
4:00 PM	4:15 PM	~~25~~	~~183~~	~~12~~	~~24~~	~~244~~	~~54~~	~~77~~	~~166~~	~~39~~	~~57~~	~~86~~	~~32~~
4:15 PM	4:30 PM	~~20~~	~~208~~	~~19~~	~~39~~	~~302~~	~~46~~	~~65~~	~~153~~	~~36~~	~~57~~	~~86~~	~~28~~
4:30 PM	4:45 PM	**20**	**205**	**17**	**34**	**277**	**59**	**65**	**155**	**36**	**55**	**82**	**33**
4:45 PM	5:00 PM	**33**	**233**	**17**	**28**	**258**	**57**	**83**	**169**	**37**	**59**	**73**	**28**
5:00 PM	5:15 PM	**32**	**221**	**11**	**29**	**290**	**63**	**82**	**161**	**36**	**61**	**72**	**32**
5:15 PM	5:30 PM	**27**	**193**	**17**	**28**	**350**	**60**	**74**	**204**	**29**	**49**	**69**	**30**
5:30 PM	5:45 PM	~~23~~	~~178~~	~~13~~	~~22~~	~~275~~	~~45~~	~~51~~	~~142~~	~~30~~	~~43~~	~~63~~	~~21~~
5:45 PM	6:00 PM	~~20~~	~~148~~	~~12~~	~~17~~	~~212~~	~~39~~	~~51~~	~~109~~	~~30~~	~~42~~	~~53~~	~~26~~
PM Peak Hour Volumes		**112**	**852**	**62**	**119**	**1175**	**239**	**304**	**689**	**138**	**224**	**296**	**123**
% of Total Traffic		2.6%	19.7%	1.4%	2.7%	27.1%	5.5%	7.0%	15.9%	3.2%	5.2%	6.8%	2.8%
% Directional			23.7%			35.4%			26.1%			14.8%	
PM Peak Hour Factor			*0.91*			*0.88*			*0.92*			*0.95*	

Traffic Count Data Sheet

Year Counts Taken: **2012**

E-W Street **Comanche Rd**

N-S Street: **Edith Blvd**

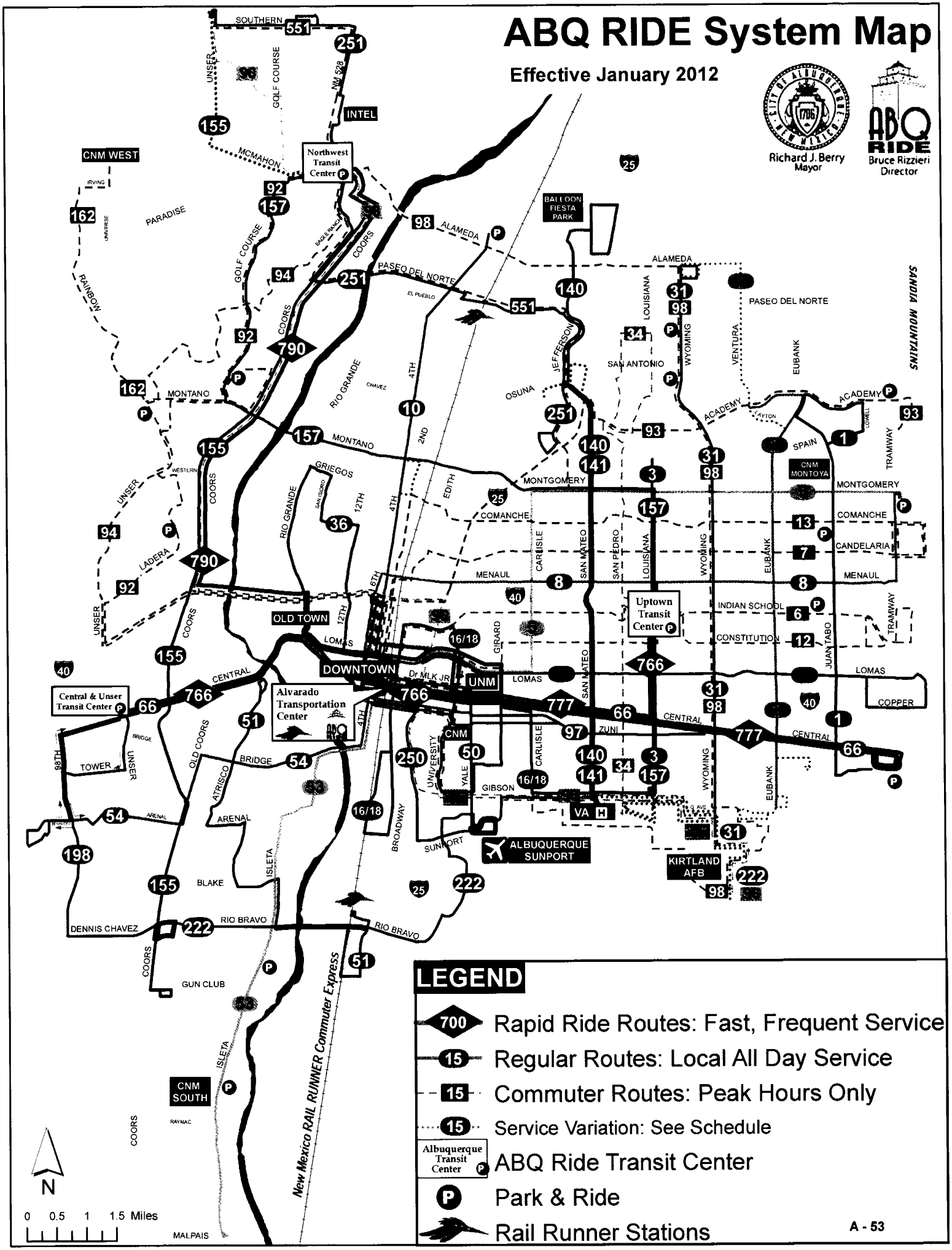
Speed Limit (Comanche Rd)= **40** MPH

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)		
		L	T	R	L	T	R	L	T	R	L	T	R
7:00 AM	7:15 AM	~~14~~	~~103~~	~~25~~	~~38~~	~~64~~	~~60~~	~~6~~	~~50~~	~~23~~	~~36~~	~~75~~	~~10~~
7:15 AM	7:30 AM	**24**	**123**	**24**	**27**	**88**	**67**	**9**	**71**	**17**	**31**	**94**	**6**
7:30 AM	7:45 AM	**34**	**160**	**19**	**29**	**77**	**48**	**10**	**91**	**22**	**29**	**123**	**11**
7:45 AM	8:00 AM	**31**	**154**	**40**	**34**	**108**	**49**	**13**	**138**	**28**	**45**	**151**	**15**
8:00 AM	8:15 AM	**37**	**133**	**40**	**33**	**98**	**49**	**9**	**79**	**43**	**40**	**104**	**11**
8:15 AM	8:30 AM	~~21~~	~~134~~	~~21~~	~~16~~	~~90~~	~~33~~	~~9~~	~~82~~	~~20~~	~~37~~	~~84~~	~~9~~
8:30 AM	8:45 AM	~~10~~	~~142~~	~~18~~	~~21~~	~~64~~	~~24~~	~~11~~	~~49~~	~~16~~	~~30~~	~~83~~	~~15~~
8:45 AM	9:00 AM	~~15~~	~~82~~	~~25~~	~~14~~	~~95~~	~~24~~	~~9~~	~~76~~	~~15~~	~~27~~	~~62~~	~~13~~
AM Peak Hour Volumes		**126**	**570**	**123**	**123**	**371**	**213**	**41**	**379**	**110**	**145**	**472**	**43**
% 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%
% 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)		
		L	T	R	L	T	R	L	T	R	L	T	R
4:00 PM	4:15 PM	~~11~~	~~112~~	~~17~~	~~18~~	~~118~~	~~68~~	~~32~~	~~132~~	~~39~~	~~44~~	~~85~~	~~24~~
4:15 PM	4:30 PM	~~19~~	~~90~~	~~13~~	~~23~~	~~122~~	~~63~~	~~12~~	~~152~~	~~38~~	~~56~~	~~79~~	~~20~~
4:30 PM	4:45 PM	**7**	**112**	**11**	**29**	**116**	**74**	**31**	**147**	**57**	**43**	**86**	**24**
4:45 PM	5:00 PM	**21**	**112**	**6**	**19**	**130**	**71**	**31**	**166**	**48**	**50**	**68**	**17**
5:00 PM	5:15 PM	**22**	**134**	**9**	**25**	**154**	**73**	**29**	**159**	**58**	**42**	**76**	**36**
5:15 PM	5:30 PM	**16**	**105**	**5**	**24**	**140**	**70**	**34**	**199**	**50**	**46**	**81**	**24**
5:30 PM	5:45 PM	~~18~~	~~109~~	~~1~~	~~15~~	~~129~~	~~68~~	~~25~~	~~161~~	~~35~~	~~25~~	~~61~~	~~25~~
5:45 PM	6:00 PM	~~21~~	~~83~~	~~9~~	~~9~~	~~145~~	~~75~~	~~15~~	~~114~~	~~36~~	~~21~~	~~48~~	~~17~~
PM Peak Hour Volumes		**66**	**463**	**31**	**97**	**540**	**288**	**125**	**671**	**213**	**181**	**311**	**101**
% 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%
% Directional			18.1%			30.0%			32.7%			19.2%	
PM Peak Hour Factor			*0.85*			*0.92*			*0.89*			*0.96*	



For more detailed information visit www.myabqride.com or call 243-7433 (TTY 724-3138)

Route / Ruta 3 & 157 — Effective January 2012
Louisiana - Montaño - Uptown - Northwest Transit Center

Route 3 & 157 - Weekday Southbound

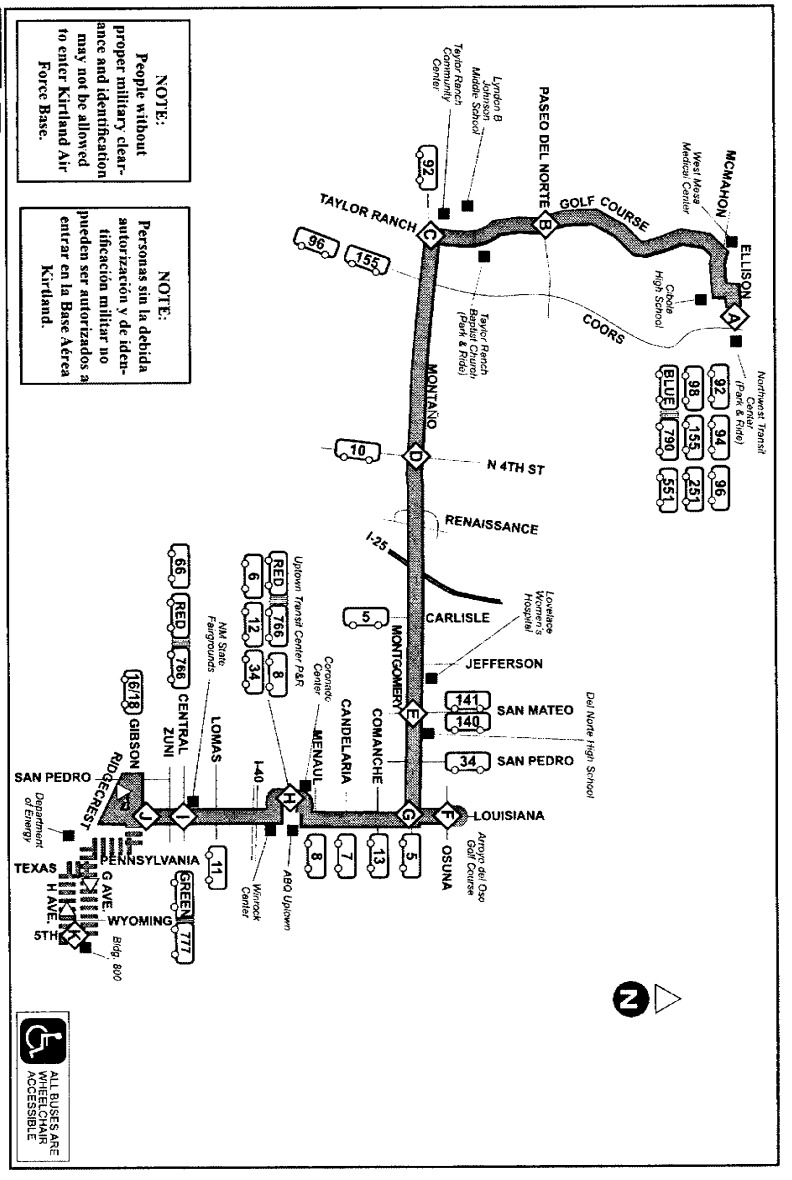
ROUTE	NORTHWEST TRANSIT CENTER P&R (A)	GOLF COURSE & PASEO DEL NORTE (B)	MONTAÑO & TAYLOR RANCH (C)	MONTAÑO & 4TH ST (D)	MONTGOMERY & SAN MATEO (E)	LOUISIANA & OSUNA (F)	LOUISIANA & MONTGOMERY (G)	UPTOWN TRANSIT CENTER P&R (H)	LOUISIANA & CENTRAL (I)	LOUISIANA & GIBSON (J)	BLDG. 800 (K)
3	.....	.....	.....	.....	.....	5:50a	5:52a	5:58a	6:07a	6:10a	6:18a
157	5:34a	5:43a	5:49a	5:56a	6:07a	.....	6:10a	6:16a	6:25a	6:29a	6:37a
3	.....	.....	.....	.....	.....	6:32a	6:34a	6:40a	6:49a	6:52a	7:00a
157	6:12a	6:24a	6:29a	6:37a	6:49a	.....	6:52a	7:00a	7:09a	7:12a	7:21a
3	.....	.....	.....	.....	.....	7:14a	7:16a	7:22a	7:31a	7:34a	7:42a
157	6:52a	7:04a	7:09a	7:19a	7:31a	.....	7:35a	7:43a	7:51a	7:54a	8:03a
3	.....	.....	.....	.....	.....	7:52a	7:54a	8:02a	8:11a	8:16a	8:24a
157	7:25a	7:36a	7:42a	7:56a	8:09a	.....	8:13a	8:20a	8:29a	8:33a	8:42a
3	.....	.....	.....	.....	.....	8:32a	8:34a	8:42a	8:51a	8:56a	9:04a
157	8:18a	8:28a	8:34a	8:42a	8:53a	.....	8:57a	9:04a	9:13a	9:16a	.....
3	.....	.....	.....	.....	.....	9:12a	9:15a	9:23a	9:33a	9:37a	.....
157	8:56a	9:06a	9:12a	9:20a	9:31a	.....	9:35a	9:42a	9:51a	9:54a	.....
3	.....	.....	.....	.....	.....	9:51a	9:54a	10:02a	10:12a	10:16a	.....
157	9:38a	9:48a	9:52a	9:59a	10:10a	.....	10:14a	10:23a	10:32a	10:35a	.....
3	.....	.....	.....	.....	.....	10:36a	10:39a	10:47a	10:57a	11:01a	.....
157	10:23a	10:33a	10:38a	10:46a	10:57a	.....	11:01a	11:10a	11:19a	11:23a	11:33a
3	.....	.....	.....	.....	.....	11:22a	11:24a	11:33a	11:43a	11:47a	.....
157	11:08a	11:18a	11:23a	11:31a	11:43a	.....	11:47a	11:56a	12:05p	12:09p	.....
3	.....	.....	.....	.....	.....	12:05p	12:07p	12:16p	12:26p	12:30p	.....
157	11:50a	12:00p	12:05p	12:13p	12:25p	.....	12:29p	12:36p	12:47p	12:52p	.....
3	.....	.....	.....	.....	.....	12:50p	12:52p	1:01p	1:11p	1:15p	.....
157	12:33p	12:44p	12:49p	12:57p	1:10p	.....	1:15p	1:25p	1:35p	1:40p	.....
3	.....	.....	.....	.....	.....	1:36p	1:38p	1:47p	1:57p	2:01p	.....
157	1:17p	1:28p	1:33p	1:41p	1:54p	.....	1:59p	2:09p	2:19p	2:24p	.....
3	.....	.....	.....	.....	.....	2:21p	2:23p	2:32p	2:42p	2:46p	2:56p
157	2:04p	2:14p	2:19p	2:26p	2:39p	.....	2:43p	2:54p	3:04p	3:08p	3:18p
3	.....	.....	.....	.....	.....	3:06p	3:08p	3:17p	3:27p	3:31p	3:41p
157	2:50p	3:00p	3:05p	3:12p	3:25p	.....	3:29p	3:40p	3:50p	3:54p	4:04p
3	.....	.....	.....	.....	.....	3:48p	3:50p	3:59p	4:09p	4:13p	4:23p
157	3:29p	3:39p	3:44p	3:51p	4:04p	.....	4:08p	4:19p	4:29p	4:33p	4:43p
3	.....	.....	.....	.....	.....	4:31p	4:33p	4:42p	4:52p	4:56p	5:06p
157	4:15p	4:25p	4:30p	4:37p	4:50p	.....	4:54p	5:05p	5:15p	5:19p	5:29p
3	.....	.....	.....	.....	.....	5:16p	5:18p	5:27p	5:37p	5:41p	5:51p
157	5:01p	5:12p	5:17p	5:24p	5:36p	.....	5:40p	5:50p	6:00p	6:05p	.....
3	.....	.....	.....	.....	.....	5:57p	5:59p	6:07p	6:17p	6:21p	.....
157	5:39p	5:50p	5:55p	6:02p	6:14p	.....	6:18p	6:28p	6:38p	6:43p	.....
3	.....	.....	.....	.....	.....	6:39p	6:41p	6:49p	6:59p	7:03p	.....
157	6:26p	6:37p	6:42p	6:49p	6:59p	.....	7:03p	7:11p	7:20p	7:25p	.....
3	.....	.....	.....	.....	.....	7:23p	7:25p	7:33p	7:42p	7:46p	.....
157	7:33p	7:44p	7:49p	7:56p	8:06p	.....	8:10p	8:18p	8:27p	8:32p	.....
3	.....	.....	.....	.....	.....	.....	9:47p	9:55p	10:04p	10:08p	.....
157	8:23p	8:34p	8:39p	8:46p	8:56p	.....	9:00p	9:08p	9:17p	9:22p	.....

Route 3 & 157 - Weekday Northbound

ROUTE	BLDG. 800 (K)	LOUISIANA & GIBSON (J)	LOUISIANA & CENTRAL (I)	UPTOWN TRANSIT CENTER P&R (H)	LOUISIANA & MONTGOMERY (G)	LOUISIANA & OSUNA (F)	MONTGOMERY & SAN MATEO (E)	MONTAÑO & 4TH ST (D)	MONTAÑO & TAYLOR RANCH (C)	GOLF COURSE & PASEO DEL NORTE (B)	NORTHWEST TRANSIT CENTER P&R (A)
3	.....	5:28a	5:34a	5:41a	5:48a	5:49a	.....	.....	.....	.....	.....
3	.....	5:58a	6:04a	6:11a	6:18a	6:19a	.....	.....	.....	.....	.....
157	.....	6:20a	6:25a	6:33a	6:41a	.....	6:45a	6:55a	7:03a	7:07a	7:19a
3	6:33a	6:39a	6:45a	6:54a	7:02a	7:03a	.....	.....	.....	.....	.....
157	6:53a	7:00a	7:04a	7:12a	7:23a	.....	7:28a	7:39a	7:47a	7:51a	8:03a
3	7:11a	7:17a	7:23a	7:32a	7:40a	7:41a	.....	.....	.....	.....	.....
157	7:32a	7:39a	7:45a	7:53a	8:04a	.....	8:08a	8:19a	8:27a	8:31a	8:41a
3	7:52a	7:58a	8:04a	8:13a	8:21a	8:23a	.....	.....	.....	.....	.....
157	8:14a	8:20a	8:25a	8:33a	8:42a	.....	8:46a	8:56a	9:04a	9:08a	9:19a
3	8:32a	8:38a	8:44a	8:53a	9:01a	9:03a	.....	.....	.....	.....	.....
157	8:54a	9:00a	9:05a	9:13a	9:22a	.....	9:26a	9:36a	9:44a	9:48a	9:59a
3	9:13a	9:19a	9:25a	9:34a	9:42a	9:44a	.....	.....	.....	.....	.....
157	.....	9:47a	9:52a	10:00a	10:09a	.....	10:13a	10:23a	10:31a	10:35a	10:46a
3	.....	10:06a	10:12a	10:21a	10:31a	10:33a	.....	.....	.....	.....	.....
157	.....	10:31a	10:36a	10:44a	10:53a	.....	10:57a	11:07a	11:15a	11:19a	11:30a
3	.....	10:52a	10:58a	11:07a	11:17a	11:19a	.....	.....	.....	.....	.....
157	.....	11:16a	11:21a	11:30a	11:40a	.....	11:44a	11:55a	12:03p	12:07p	12:18p
3	.....	11:36a	11:42a	11:51a	12:01p	12:03p	.....	.....	.....	.....	.....
157	.....	11:59a	12:04p	12:13p	12:23p	....12:27p	12:39p	12:47p	12:51p	1:02p	
3	.....	12:20p	12:26p	12:35p	12:45p	12:47p	.....	.....	.....	.....	.....
157	.....	12:44p	12:49p	12:58p	1:08p	.....	1:12p	1:24p	1:32p	1:36p	1:47p
3		1:04p	1:10p	1:19p	1:29p	1:31p	.....	.....	.....	.....	.....
157	1:20p	1:27p	1:33p	1:42p	1:52p	.....	1:57p	2:10p	2:19p	2:23p	2:34p
3	.....	1:50p	1:56p	2:05p	2:15p	2:17p	.....	.....	.....	.....	.....
157	.....	2:16p	2:21p	2:30p	2:40p	.....	2:45p	2:58p	3:07p	3:11p	3:22p
3	.....	2:36p	2:42p	2:51p	3:01p	3:03p	.....	.....	.....	.....	.....
157	2:48p	2:55p	3:01p	3:11p	3:22p	.....	3:27p	3:40p	3:52p	3:56p	4:07p
3	3:08p	3:15p	3:21p	3:29p	3:41p	3:43p	.....	.....	.....	.....	.....
157	3:29p	3:36p	3:42p	3:52p	4:03p	.....	4:08p	4:21p	4:33p	4:37p	4:48p
3	3:51p	3:58p	4:04p	4:12p	4:24p	4:26p	.....	.....	.....	.....	.....
157	4:10p	4:17p	4:23p	4:33p	4:44p	.....	4:49p	5:02p	5:14p	5:19p	5:32p
3	4:31p	4:38p	4:44p	4:52p	5:04p	5:06p	.....	.....	.....	.....	.....
157	4:50p	4:57p	5:03p	5:12p	5:23p	.....	5:28p	5:40p	5:54p	5:59p	6:12p
3	5:12p	5:18p	5:24p	5:33p	5:43p	5:45p	.....	.....	.....	.....	.....
157	5:37p	5:43p	5:49p	5:58p	6:09p	.....	6:14p	6:25p	6:36p	6:41p	6:53p
3	5:57p	6:03p	6:09p	6:18p	6:28p	6:30p	.....	.....	.....	.....	.....
157	.....	6:31p	6:36p	6:44p	6:53p	.....	6:57p	7:07p	7:14p	7:18p	7:30p
3	.....	6:50p	6:56p	7:05p	7:13p	7:14p	.....	.....	.....	.....	.....
157	.....	7:14p	7:19p	7:27p	7:36p	.....	7:40p	7:50p	7:57p	8:01p	8:13p
3	.....	7:44p	7:50p	7:59p	8:07p	8:08p	.....	.....	.....	.....	.....
157	.....	8:42p	8:47p	8:55p	9:04p	.....	9:08p	9:18p	9:25p	9:29p	9:38p
3	.....	9:33p	9:39p	9:48p	9:56p	9:57p	.....	.....	.....	.....	.....

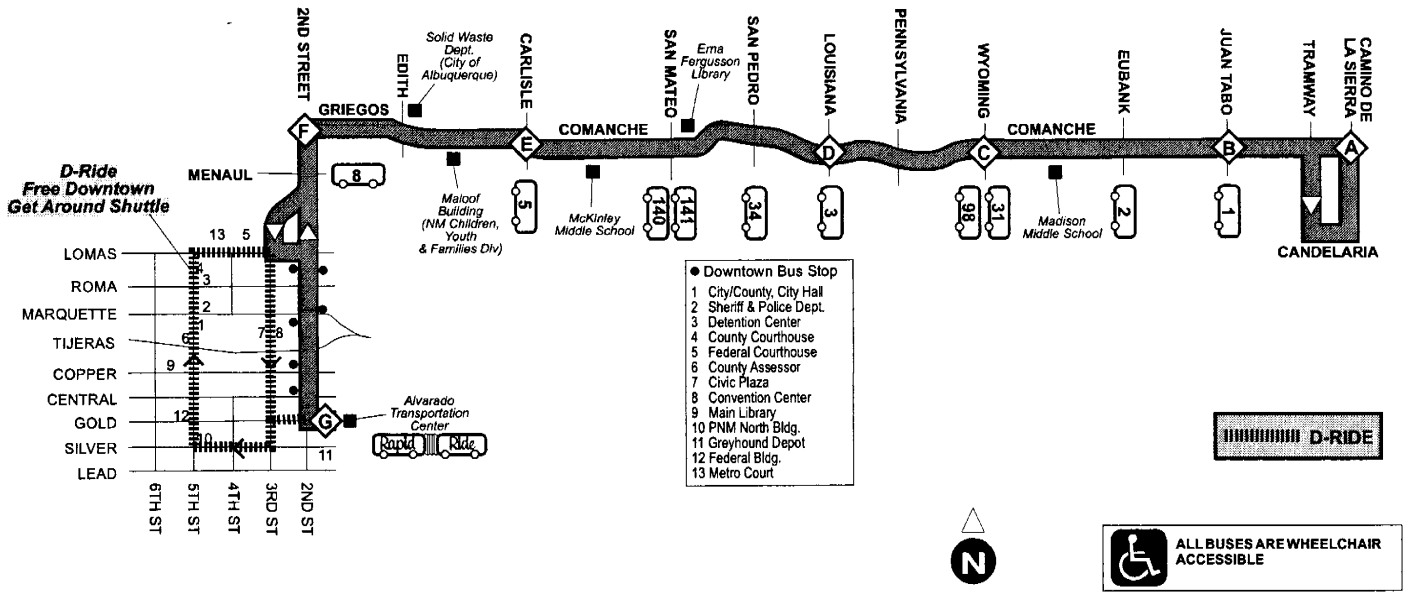
NOTE:
People without proper military clearance and identification may not be allowed to enter Kirtland Air Force Base.

NOTE:
Personas sin la debida autorización y de identificación militar no pueden ser autorizados a entrar en la Base Aérea Kirtland.



A-53a

Route 13 / Ruta 13 - Comanche — Effective 12/19/2009



Route 13 - Weekday Westbound

CAMINO DE LA SIERRA & COMANCHE (A)	COMANCHE & JUAN TABO (B)	COMANCHE & WYOMING (C)	COMANCHE & LOUISIANA (D)	COMANCHE & CARLISLE (E)	2ND STREET & GRIEGOS (F)	ALVARADO TRANSPORTATION CENTER (G)
600a	606a	612a	615a	622a	628a	638a
710a	716a	722a	725a	732a	738a	748a

Route 13 - Weekday Eastbound

ALVARADO TRANSPORTATION CENTER (G)	2ND STREET & GRIEGOS (F)	COMANCHE & CARLISLE (E)	COMANCHE & LOUISIANA (D)	COMANCHE & WYOMING (C)	COMANCHE & JUAN TABO (B)	CAMINO DE LA SIERRA & COMANCHE (A)
442p	451p	456p	503p	507p	513p	516p
512p	521p	526p	533p	537p	543p	546p