

Terry O. Brown P.E.

Sandia Area FCU Development
(Montgomery Blvd. / Cairo Dr.)

Traffic Impact Study

April 27, 2015

FINAL

Presented to:

City of Albuquerque
Transportation Development Section

Prepared for:

Sandia Area Federal Credit Union
c/o Joe Slagle
412 Second St. SW
Albuquerque, NM 87102



A handwritten signature in blue ink that reads "Terry O. Brown".

Terry O. Brown P.E.
P.O. Box 92051
Albuquerque, NM 87199
505 · 883 · 8807

Sandia Area FCU Development (Montgomery Blvd. / Cairo Dr.)

TRAFFIC IMPACT STUDY

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- 8) Provide signalized and unsignalized intersection analyses for the following intersections:

INTERSECTION	TYPE CONTROL	NO BUILD	BUILD
Montgomery Blvd. / Juan Tabo Blvd. (1)	Traffic Signal	2017	2017
Montgomery Blvd. / Cairo Dr. (2)	Traffic Signal	2017	2017
Holiday Breeze Pl. / Cairo Dr. (3)	Stop Sign	2017	2017
Montgomery Blvd. / Driveway "A" (4)	Stop Sign	N/A	2017
Driveway "B" / Cairo Dr. (5)	Stop Sign	N/A	2017

PREVIOUS RELATED TRAFFIC IMPACT STUDIES

There were no previously approved Traffic Impact Studies to be added to this study.

GENERAL AREA CHARACTERISTICS

Surrounding land uses include commercial along Montgomery Blvd. and residential uses to the north and south. El Dorado High School is located to the south of the site on Cairo Dr. The project is at the northwest corner of Montgomery Blvd. / Cairo Dr. The properties along Montgomery east of Juan Tabo Blvd. is characterized by a mix of residential and commercial uses. Also, there is a high school on the south side of Montgomery Blvd. at Cairo.

AREA STREET NETWORK

Montgomery Blvd. and Juan Tabo Blvd. are classified as Urban Principal Arterial roadways on the Current Roadway Functional Classification System for the Albuquerque Metropolitan Planning Area. They are currently paved urban six-lane facilities with raised medians and curb and gutter on both sides of the street. The posted speed limit on both roadways is 40 M.P.H.

Cairo Dr. is not classified on the Current Roadway Functional Classification System for the Albuquerque Metropolitan Planning Area.

There are two ABQ Ride bus routes in the area, specifically Routes 1 and 5. Route 1 runs north / south on Juan Tabo Blvd. and Route 5 runs east / west on Montgomery Blvd. and north / south on Carlisle Blvd. to downtown. See the complete route information on Appendix Pages. A-56 thru A-57.

There are no exiting bike routes, lanes and multi-use trails in the area.

EXISTING TRAFFIC VOLUMES

2013 Average Weekday Traffic Volumes (AWDT) for major streets in the site plan area are shown on Page A-4 in the Appendix.

significantly exceed that projected in this study, the City of Albuquerque may require an updated Traffic Impact Study.

Access is provided into the proposed facility via two driveways – one accessing Montgomery Blvd. and one accessing Cairo Dr. The overall access to the project is as depicted on the Conceptual Site Development Plan on Page A-3 of this study. One access onto Montgomery Blvd. (Driveway "A") is a right-in, right-out only unsignalized driveway. The second driveway is a proposed full access unsignalized driveway just south of Holiday Breeze Pl. / Cairo Dr.

TRIP GENERATION

Projected trips were calculated from data in the Institute of Transportation Engineers Trip Generation report (9th Edition, 2012). Trips for the development were determined based on land uses projected to be associated with the site plan for this property.

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

Sandia Area Federal Credit Union (Montgomery Blvd. / Cairo Dr.) **Trip Generation Data (ITE Trip Generation Manual - 9th Edition)**

COMMENT	USE (ITE CODE)	24 HR VOL	A. M. PEAK HR.			P. M. PEAK HR.	
	DESCRIPTION		GROSS	ENTER	EXIT	ENTER	EXIT
Summary Sheet		Units					
Sandia Area FCU	Drive-In Bank (912)	4	557	22	15	65	68
Starbuck's	Coffee/Donut Shop w/ Drive Thru Window (937)	2.00	1,637	103	99	43	43
Future	Shopping Center (820)	6.50	1,149	18	11	46	50
Future	General Office Building (710) - Less than 51,000 S.F.	6.50	96	12	2	3	13
Subtotal (Unadjusted Trips)			3,439	155	127	157	174
Subtotal - Retail Commercial Trips			3,343	143	125	154	161
Pass-By Trips		30%		-47	-38	-47	-52
Subtotal Primary Trips - Commercial				96	87	107	109
Subtotal Primary Trips - Office				12	2	3	13
Total Primary Trips				108	89	110	122

See Pages A-6 thru A-10 in the Appendix of this report for Trip Generation Summary Table and Worksheets.

A-24. 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-25 thru A-36).

PROJECTED PEAK HOUR TURNING MOVEMENTS FOR 2017 BUILDOUT

The calculated annual growth rates were applied to the existing (2015) peak hour traffic counts furnished by the consultant to establish the 2017 NO BUILD volumes. To these volumes, the generated trips based on implementation of the proposed land uses for this project were added to obtain the 2017 BUILD volumes for the intersection analyses. See Appendix Pages A-25 thru A-36 for further information regarding turning movement counts.

INTERSECTION CAPACITY ANALYSIS

Intersection capacity analyses were performed in accordance with the procedures for signalized and unsignalized intersections in the Highway Capacity Manual, Special Report 209, Transportation Research Board, 2010, using Synchro Version 8 Software (Build 806, Revision 61) for signalized and unsignalized intersections.

Capacity analyses were performed for the following traffic conditions.

- ⇒ 2017 without development of the subject property (NO BUILD)
- ⇒ 2017 with development as per the assumed land uses considering total implementation of the plan.

The results of the 2017 NO BUILD and the 2017 BUILD capacity analyses are summarized in the following sections.

Queueing Analysis Summary Sheet

Project: Sandia Area Federal Credit Union Development (Montgomery Blvd. / Cairo Dr.)
 Intersection: Montgomery Blvd. / Juan Tabo Blvd.

2017

Approach	Left Turns			Thru Movements			Right Turns		
Eastbound	# Lanes	Vol.	Length	# Lanes	Vol.	Length	# Lanes	Vol.	Length
Existing Lane Length	1	83	145	3	243	Cont	0	175	0
AM NO BUILD Queue	1	85	100	3	248	100	0	179	175
AM BUILD Queue	1	85	100	3	279	125	0	179	175
Existing Lane Length	1	226	145	3	599	Cont	0	342	0
PM NO BUILD Queue	1	231	225	3	611	225	0	349	325
PM BUILD Queue	1	231	225	3	642	250	0	349	325
Westbound	# Lanes	Vol.	Length	# Lanes	Vol.	Length	# Lanes	Vol.	Length
Existing Lane Length	1	188	210	3	529	Cont	0	93	0
AM NO BUILD Queue	1	192	175	3	540	200	0	95	100
AM BUILD Queue	1	214	200	3	565	200	0	116	125
Existing Lane Length	1	224	210	3	513	Cont	0	102	0
PM NO BUILD Queue	1	228	225	3	523	200	0	104	125
PM BUILD Queue	1	258	250	3	558	225	0	133	150
Northbound	# Lanes	Vol.	Length	# Lanes	Vol.	Length	# Lanes	Vol.	Length
Existing Lane Length	1	308	135	2	599	Cont	1	130	275
AM NO BUILD Queue	1	314	250	2	611	275	1	133	125
AM BUILD Queue	1	314	250	2	611	275	1	159	150
Existing Lane Length	1	324	135	2	935	Cont	1	268	275
PM NO BUILD Queue	1	330	300	2	954	450	1	273	250
PM BUILD Queue	1	330	300	2	954	450	1	300	275
Southbound	# Lanes	Vol.	Length	# Lanes	Vol.	Length	# Lanes	Vol.	Length
Existing Lane Length	1	90	165	3	626	Cont	0	139	0
AM NO BUILD Queue	1	92	100	3	639	225	0	142	150
AM BUILD Queue	1	118	125	3	639	225	0	142	150
Existing Lane Length	1	130	165	3	622	Cont	0	133	0
PM NO BUILD Queue	1	133	150	3	634	225	0	136	150
PM BUILD Queue	1	159	175	3	634	225	0	136	150

Cycle Length: AM PM
70 80

NOTE: Queue lengths are in feet.

Calculated Right Turn Queue Lengths can be reduced by 50%
 to account for right-turns-on-red and right turn overlaps.

The queuing analysis recommends lengthening the eastbound left turn lane from 145 feet to 225 feet plus transition, lengthening the westbound left turn from 210 feet to 250 feet plus transition and lengthening the northbound left turn lane from 135 feet to 300 feet plus transition. According to aerial photographs, it appears that none of these lanes can be lengthened without adversely impacting the adjacent driveways. This project does not

Queueing Analysis Summary Sheet

Project: Sandia Area Federal Credit Union Development (Montgomery Blvd. / Cairo Dr.)
 Intersection: Montgomery Blvd. / Cairo Dr.

2017

Approach	Left Turns			Thru Movements			Right Turns		
Eastbound	# Lanes	Vol.	Length	# Lanes	Vol.	Length	# Lanes	Vol.	Length
Existing Lane Length	1	20	110	3	201	Cont	0	181	0
AM NO BUILD Queue	1	57	75	3	205	100	0	185	175
AM BUILD Queue	1	144	150	3	201	100	0	185	175
Existing Lane Length	1	72	110	3	925	Cont	0	19	0
PM NO BUILD Queue	1	73	100	3	944	325	0	19	50
PM BUILD Queue	1	172	175	3	931	325	0	19	50
Westbound	# Lanes	Vol.	Length	# Lanes	Vol.	Length	# Lanes	Vol.	Length
Existing Lane Length	1	119	175	3	670	Cont	0	21	0
AM NO BUILD Queue	1	121	125	3	683	225	0	58	75
AM BUILD Queue	1	121	125	3	694	225	0	69	75
Existing Lane Length	1	22	175	3	623	Cont	0	18	0
PM NO BUILD Queue	1	22	50	3	635	225	0	18	50
PM BUILD Queue	1	22	50	3	646	250	0	29	50
Northbound	# Lanes	Vol.	Length	# Lanes	Vol.	Length	# Lanes	Vol.	Length
Existing Lane Length	1	45	75	1	1	Cont	0	16	0
AM NO BUILD Queue	1	46	75	1	3	0	0	16	25
AM BUILD Queue	1	46	75	1	3	0	0	16	25
Existing Lane Length	1	19	75	1	2	Cont	0	3	0
PM NO BUILD Queue	1	19	50	1	2	0	0	3	0
PM BUILD Queue	1	19	50	1	2	0	0	3	0
Southbound	# Lanes	Vol.	Length	# Lanes	Vol.	Length	# Lanes	Vol.	Length
Existing Lane Length	1	13	85	2	55	Cont	0	95	0
AM NO BUILD Queue	1	14	25	2	64	50	0	109	125
AM BUILD Queue	1	32	50	2	64	50	0	146	150
Existing Lane Length	1	24	85	2	4	Cont	0	66	0
PM NO BUILD Queue	1	28	50	2	6	0	0	72	100
PM BUILD Queue	1	65	100	2	7	0	0	120	150

Cycle Length: AM 70 PM 80

NOTE: Queue lengths are in feet.

Calculated Right Turn Queue Lengths can be reduced by 50% to account for right-turns-on-red and right turn overlaps.

The queueing analysis recommends lengthening the eastbound left turn lane from 110 feet to 175 feet plus transition. According to aerial photographs, it appears that this lengthening cannot be accomplished without adversely impacting the driveway to the west. That is, if the eastbound left turn lane on Montgomery Blvd. at Cairo were to be lengthened, it would reduce the length of the complementary westbound left turn lane into

Intersection #4 – Montgomery Blvd. / Driveway “A” – Page A-51 thru A-52

Driveway “A” is a right-in, right-out only driveway on Montgomery Blvd west of Cairo. The results of the analysis of the unsignalized intersection of Montgomery Blvd. / Driveway “A” are summarized in the following table:

Intersection: 4 - MONTGOMERY BLVD. / DRIVEWAY “A”

2017 AM Peak Hour BUILD					2017 PM Peak Hour BUILD				
(EXIST. GEOM.)					(EXIST. GEOM.)				
		NO BUILD		BUILD			NO BUILD		BUILD
		Lanes	LOS-Delay	Lanes LOS-Delay			Lanes	LOS-Delay	Lanes LOS-Delay
WB	T	3	A - 0.0	3 A - 0.0	WB	T	3	A - 0.0	3 A - 0.0
	R	3	A - 0.0	3 A - 0.0		R	3	A - 0.0	3 A - 0.0
	R	1	A - 0.0	1 A - 0.0		R	1	A - 0.0	1 A - 0.0
	R	1	A - 0.0	1 B - 15.0		R	1	A - 0.0	1 B - 12.8
Intersection:		u - 0.0		u - 0.3			u - 0.0		u - 0.3

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

The implementation year analysis of the intersection of Montgomery Blvd. / Driveway “A” demonstrates that the level-of-service will be acceptable for both the AM Peak Hour and PM Peak Hour BUILD conditions. Therefore, no recommendations are made for the intersection of Montgomery Blvd. / Driveway “A”.

Intersection #5 – Driveway “B” / Cairo Dr. – Page A-53 thru A-54

Driveway “B” is a full access driveway. The results of the analysis of the unsignalized intersection of Driveway “B” / Cairo Dr. are summarized in the following table:

Intersection: 5 - DRIVEWAY “B” / CAIRO DR.

2017 AM Peak Hour BUILD					2017 PM Peak Hour BUILD				
(EXIST. GEOM.)					(EXIST. GEOM.)				
		NO BUILD		BUILD			NO BUILD		BUILD
		Lanes	LOS-Delay	Lanes LOS-Delay			Lanes	LOS-Delay	Lanes LOS-Delay
EB	L	1	A - 0.0	1 B - 10.2	EB	L	1	A - 0.0	1 A - 9.5
	R	>	A - 0.0	> B - 10.2		R	>	A - 0.0	> A - 9.5
NB	L	>	A - 0.0	> A - 7.8	NB	L	>	A - 0.0	> A - 7.5
	T	1	A - 0.0	1 A - 0.0		T	1	A - 0.0	1 A - 0.0
SB	T	1	A - 0.0	1 A - 0.0	SB	T	1	A - 0.0	1 A - 0.0
	R	>	A - 0.0	> A - 0.0		R	>	A - 0.0	> A - 0.0
Intersection:		u - 0.0		u - 1.8			u - 0.0		u - 3.2

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

The implementation year analysis of the intersection of Driveway “B” / Cairo Dr. demonstrates that the level-of-service will be acceptable for both the AM Peak Hour and PM Peak Hour BUILD conditions. Therefore, no recommendations are made for the intersection of Driveway “B” / Cairo Dr.

RECOMMENDATIONS

FROM IMPLEMENTATION YEAR (2017) ANALYSIS

- ◆ Design and construction of the proposed development should be such that adequate site distances are maintained at all proposed driveways and intersections, and at existing intersections contingent to this site.
- ◆ Access to the project should be via two unsignalized driveways - one on Montgomery Blvd. (Driveway "A") and one on Cairo Dr. (Driveway "B") as depicted on the preliminary site development plan on Page A-3 in the Appendix of this report. Driveway "A" should be constructed as a right-in, right-out only driveway with one entering lane and one exiting lane. Driveway "B" should be constructed as a full access driveway with one entering lane and one exiting lane. All driveways accessing this development should be constructed in compliance with City of Albuquerque D.P.M. requirements.

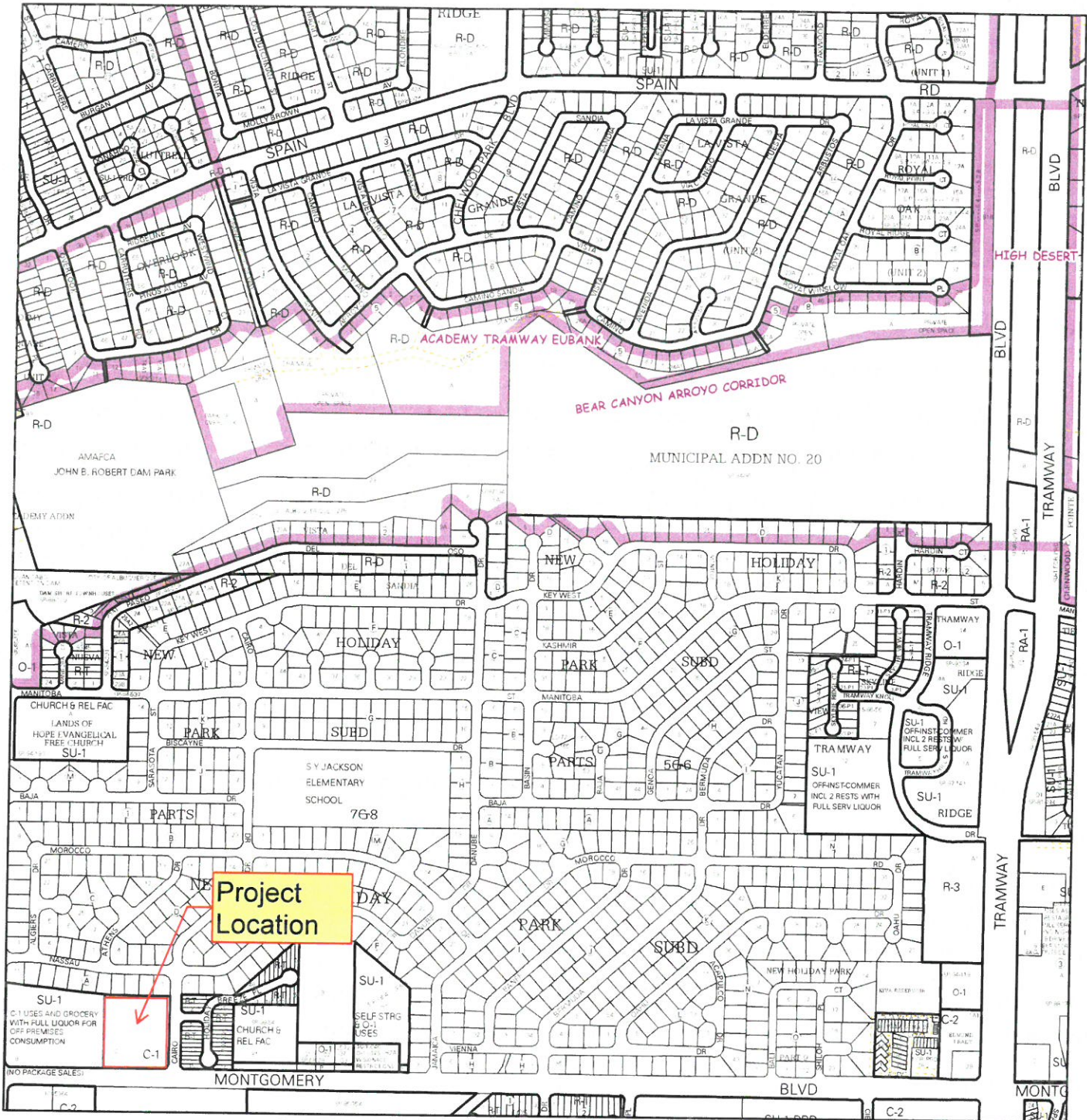
APPENDIX



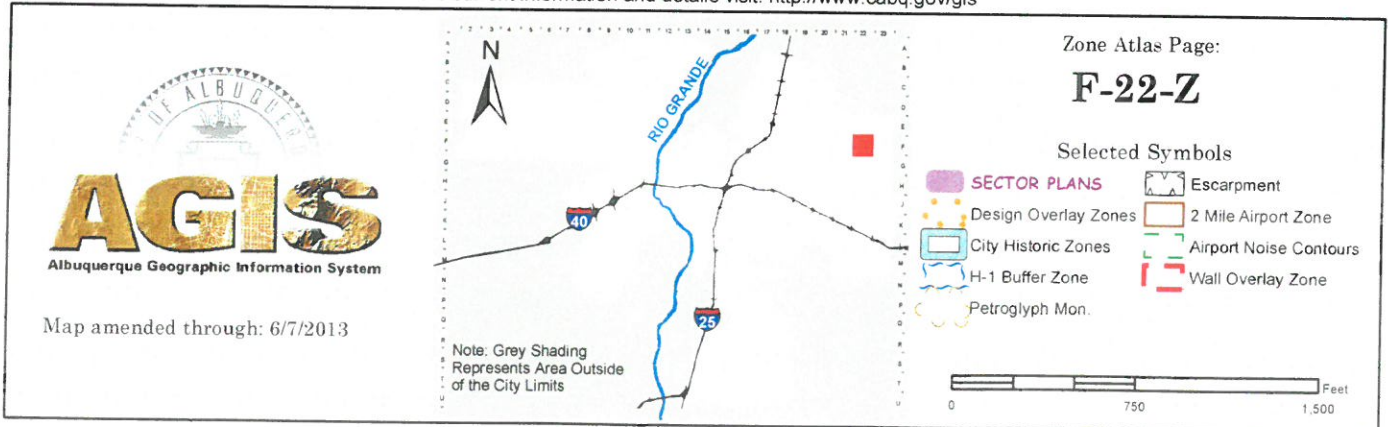
Sandia Area Federal Credit Union Development

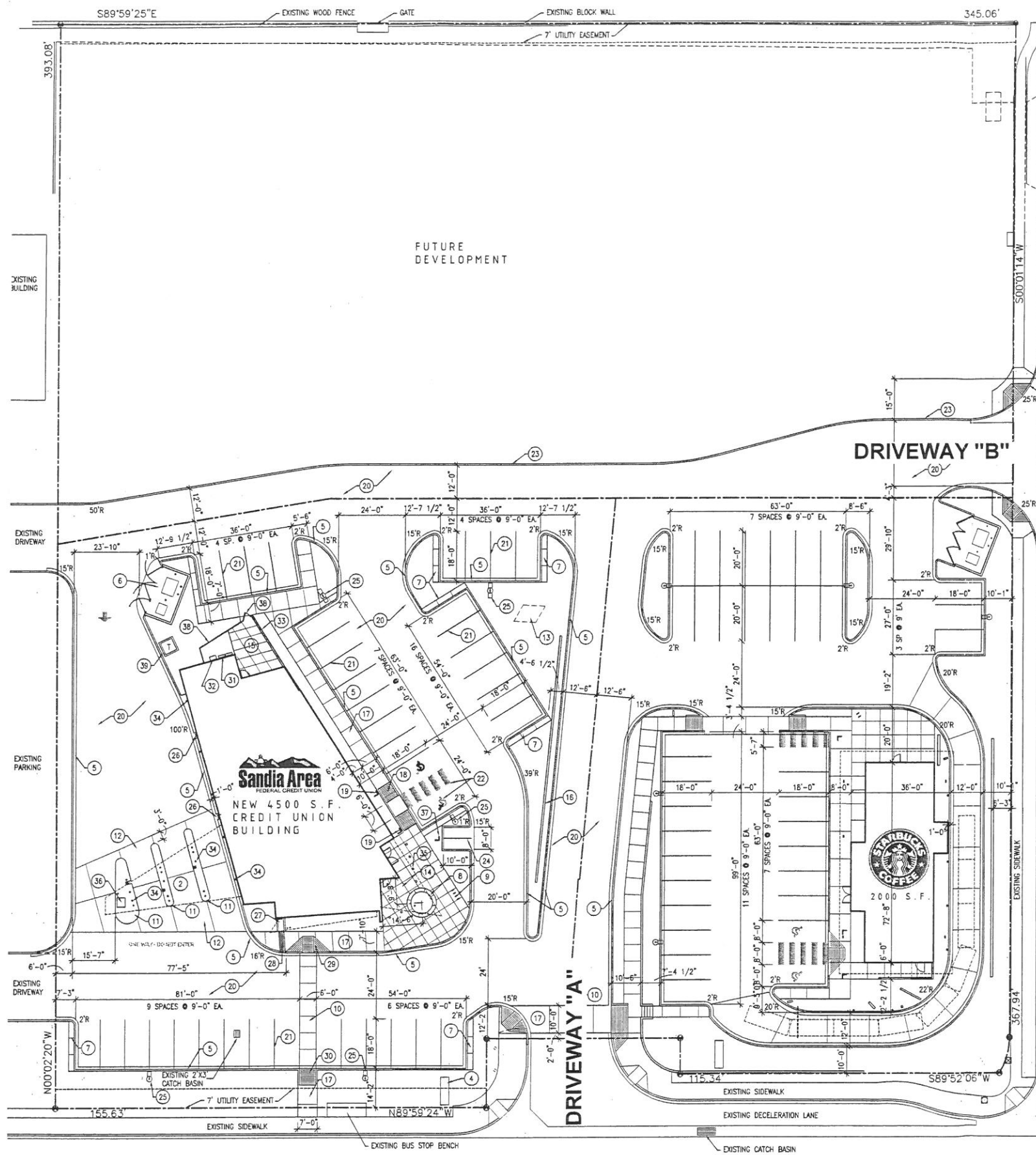
Montgomery Blvd. / Cairo Dr.

Aerial Map



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





keyed notes:

- 1 REMOVE EXISTING CURB AND SIDEWALK AND INSTALL NEW DRIVEWAY AND SIDEWALK PER C.O.A. STD.
- 2 SEE FLOOR PLAN FOR TYP. DIMENSIONS AT DRIVE THROUGH LANES
- 3 NEW RADIUSED DRIVEWAY, APRON, HCP RAMPS, SIDEWALKS AND CURBS PER C.O.A. STD.
- 4 NEW MONUMENT SIGN
- 5 NEW COLORED CONCRETE CURB AND GUTTER: SEE 118 1187
- 6 DUMPSTER ENCLOSURE: SEE 115 1187
- 7 24" WIDE X 4" THK. COLORED CONCRETE APRON
- 8 PLANTER AND BENCH: SEE 116 1187
- 9 BIKE RACK: SEE 118 1187
- 10 COLORED CONC. WALK FLUSH WITH ASPHALT: SEE 111 1187
- 11 CONC. ISLANDS: SEE 112 1187
- 12 6" THK. CONC. APRON FLUSH WITH ASPHALT OVER 6" COMPACTED BASECOURSE. PROVIDE #4 REBAR @ 24" O.C. E.W.
- 13 FUTURE CLOCK TOWER
- 14 4" THK. COLORED CONCRETE PLAZA WITH SAWCUT JOINTS @ 4'-0" O.C. E.W.

HOLIDAY BREEZE

- 15 NEW HCP. RAMP: SEE 116 1187
- 16 NEW HCP. PARKING SIGN: SEE 113 1187
- 17 ASPHALT PAVING SECTION PER SOILS INVESTIGATION REPORT RECOMMENDATION
- 18 4" WIDE WHITE STRIPING
- 19 HCP AISLE MARKING: 24" X 6" WHITE BLOCKS AS SHOWN WITH INTERNATIONAL ADA SYMBOL @ EA. HCP. SPACE
- 20 TEMPORARY ASPHALT CURB
- 21 MOTORCYCLE PARKING: PAINT LETTERS AT EA. SPACE: "MOTORCYCLE PARKING"
- 22 LIGHT POLE ON CONCRETE BASE: SEE 111 1187
- 23 24" WIDE OPENING IN CURB FOR ROOF DRAIN AND OVERFLOW DRAIN SCUPPERS. CENTER OPNG ON DRAINS
- 24 24" WIDE CONC. CULVERT @ ROOF DRAIN LOCATION: SEE 113 1187
- 25 24" WIDE CONC. CULVERT @ ROOF DRAIN LOCATION WITH GALV. CHECKERPLATE COVER: SEE 116 1187
- 26 NEW HCP. RAMP: SEE 115 1187
- 27 NEW HCP. RAMP: SEE 117 1187
- 28 ELEC. METER AND MDP
- 29 GAS METER
- 30 YARD WALL AND STEEL PALISADE FENCE: SEE 111 1187
- 31 8" DIA. COLORED CONCRETE BOLLARD (14 LOCATIONS): SEE 113 1187
- 32 12" DIA. COLORED CONCRETE BOLLARD (6 LOCATIONS): SEE 114 1187
- 33 ATM BY PROVIDER. COORDINATE INSTALLATION AS REQUIRED
- 34 MOTORCYCLE PARKING SIGN: SEE 116 1187
- 35 METAL PANEL FENCE AND GATE: SEE 118 1187
- 36 TRANSFORMER LOCATION ON CONC. PAD PER PNM SPEC.

site data:

11301 MONTGOMERY AVE NE
ALBUQUERQUE, NM 87111
LEGAL DESCRIPTION: TRACT C
NEW HOLIDAY PARK SUBD
NOTE: SUBDIVISION AS SHOWN ON PLAN IS IN PROCESS.
UPC: 102206107502630102
OWNER: SANDIA AREA FEDERAL CREDIT UNION
CURRENT ZONING: C-3
ZONE ATLAS PAGE: G-21
SETBACK REQUIREMENTS: 15' REAR YARD SETBACK
TOTAL LAND AREA: (2.97 AC) 38,617 S.F.
APPLICABLE CODES: 2009 IBC
C.O.A. ZONING ORDINANCE
SECTOR PLAN: NONE

CASE HISTORY:
CONDITIONAL USE FOR RESTAURANT DRIVE THRU LANES
PROJECT NO 1010038 APPROVAL DATE 6-5-14

CREDIT UNION SITE DATA:
LAND AREA: (PENDING) 40,859 S.F. (.937 AC.)
BUILDING FOOTPRINT AREA: 4500 S.F.
BUILDING CONSTRUCTION: 5B (NON-SPRINKLED)
FLOOR AREA RATIO (GROSS BLD. AREA/LOT AREA): 11.0 #
REQUIRED PARKING: 1 SPACE PER 200 S.F.
OFFICE: 4500 SF. / 200 = 23 SPACES
PARKING PROVIDED: 38 SPACES
REQUIRED H.C. PARKING: 1 SPACE
H.C. PARKING PROVIDED: 2 SPACES
BICYCLE PARKING PROVIDED: 5 SPACES
REQUIRED MOTORCYCLE PARKING: 2 SPACES
MOTORCYCLE PARKING PROVIDED: 2 SPACES

COFFEE SHOP SITE DATA:
LAND AREA: (PENDING) 31,582 S.F. (.725 AC.)
BUILDING FOOTPRINT AREA: 2000 S.F.
BUILDING CONSTRUCTION: 5B (NON-SPRINKLED)
FLOOR AREA RATIO (GROSS BLD. AREA/LOT AREA): 6.3 #
REQUIRED PARKING: 1 SPACE PER 4 SEATS
RESTAURANT: 60 SEATS (INCLUDING PATIO) 15 SPACES
PARKING PROVIDED: 37 SPACES
REQUIRED H.C. PARKING: 1 SPACE
H.C. PARKING PROVIDED: 2 SPACES
BICYCLE PARKING PROVIDED: 3 SPACES
REQUIRED MOTORCYCLE PARKING: 1 SPACE
MOTORCYCLE PARKING PROVIDED: 1 SPACE

project description:

THIS PROPERTY WAS PREVIOUSLY DEVELOPED AS A FURRS CAFETERIA. THE EXISTING BUILDING WAS DEMOLISHED SEVERAL YEARS AGO AND THE LAND HAS REMAINED VACANT. STUDENTS FROM EL DORADO HIGH SCHOOL ACROSS THE STREET HAVE BEEN USING THE LOT FOR OFF CAMPUS PARKING. THIS DEVELOPMENT INCLUDES SUBDIVISION OF THE EXISTING PARCEL INTO THREE SEPARATE PARCELS AND DEVELOPMENT OF THE TWO SOUTHERNMOST PARCELS AS A CREDIT UNION BRANCH WITH DRIVE THRU AND A COFFEE RESTAURANT WITH A DRIVE UP WINDOW. THE NORTHERNMOST PARCEL IS UNDETERMINED AT THIS TIME AS OF THIS DATE. THE SUBDIVISION OF THE PROPERTY IS IN PROCESS. THE REPEAT WILL INCLUDE NEW PROPERTY LINES AS SHOWN ON THIS PLAN AS WELL AS CROSS ACCESS EASEMENTS AT THE MAIN DRIVEWAYS. A BLANKET DRAINAGE EASEMENT WILL ALSO BE INCLUDED AS PART OF THE REPEAT.

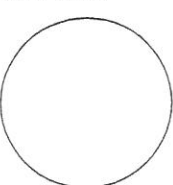
a new credit union
branch development for:



11301 montgomery ne
albuquerque, new mexico

slagleherrarchitects
413 second st sw
albuquerque nm
87102
505 246 0870
slagleherr.com

TRAFFIC
CIRCULATION
LAYOUT

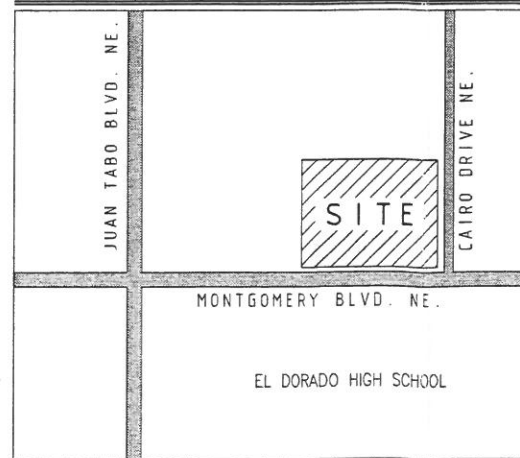


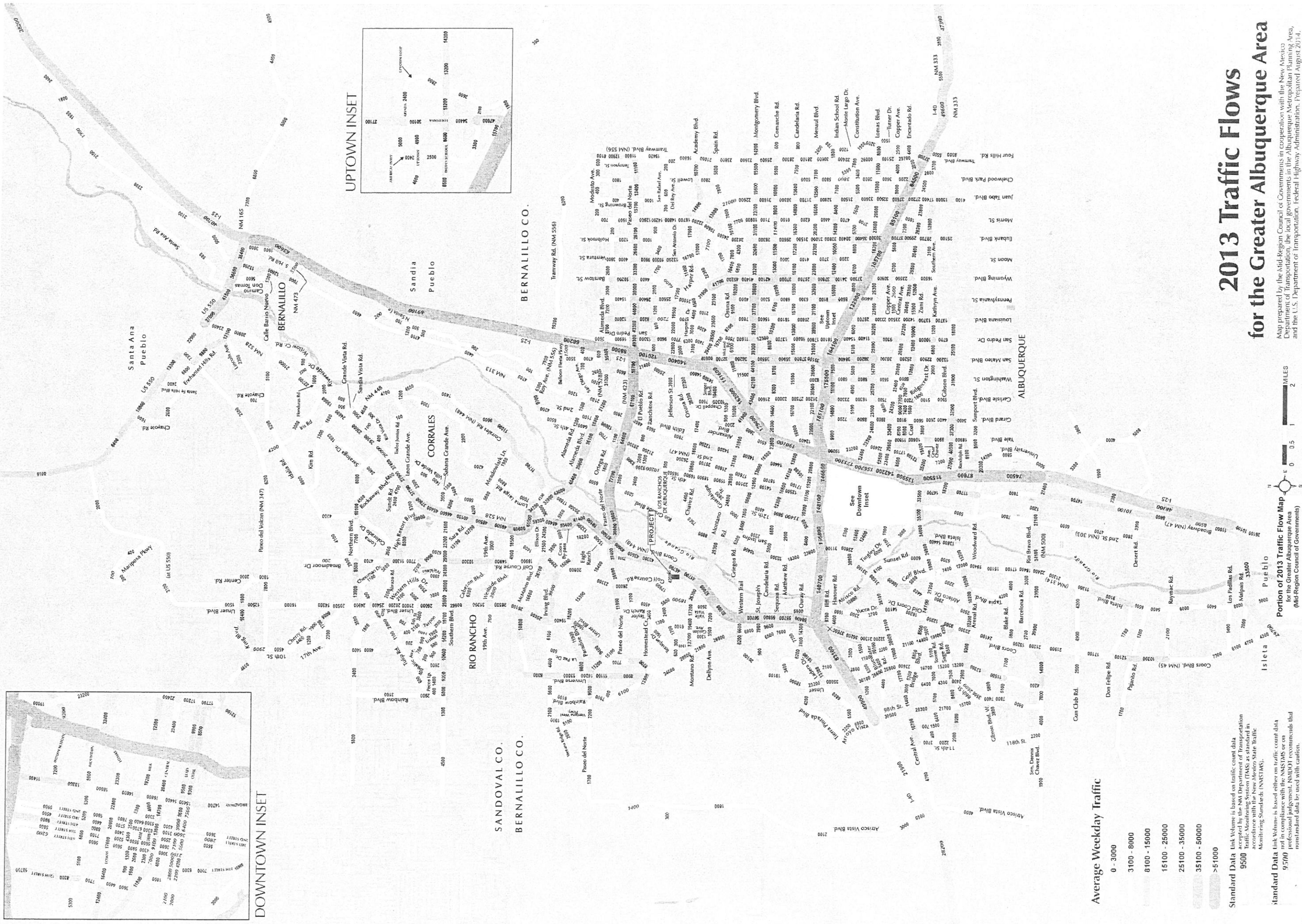
revisions

date
2-4-15
sheet
A001

A-3

vicinity map





2013 Traffic Flows for the Greater Albuquerque Area

Map prepared by the Mid-Region Council of Governments in cooperation with the New Mexico Department of Transportation, the local governments in the Albuquerque Metropolitan Planning Area, and the U.S. Department of Transportation, Federal Highway Administration. Prepared August 2014.

- Average Weekday Traffic**
- 0 - 3000
 - 3100 - 8000
 - 8100 - 15000
 - 15100 - 25000
 - 25100 - 35000
 - 35100 - 50000
 - >51000

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

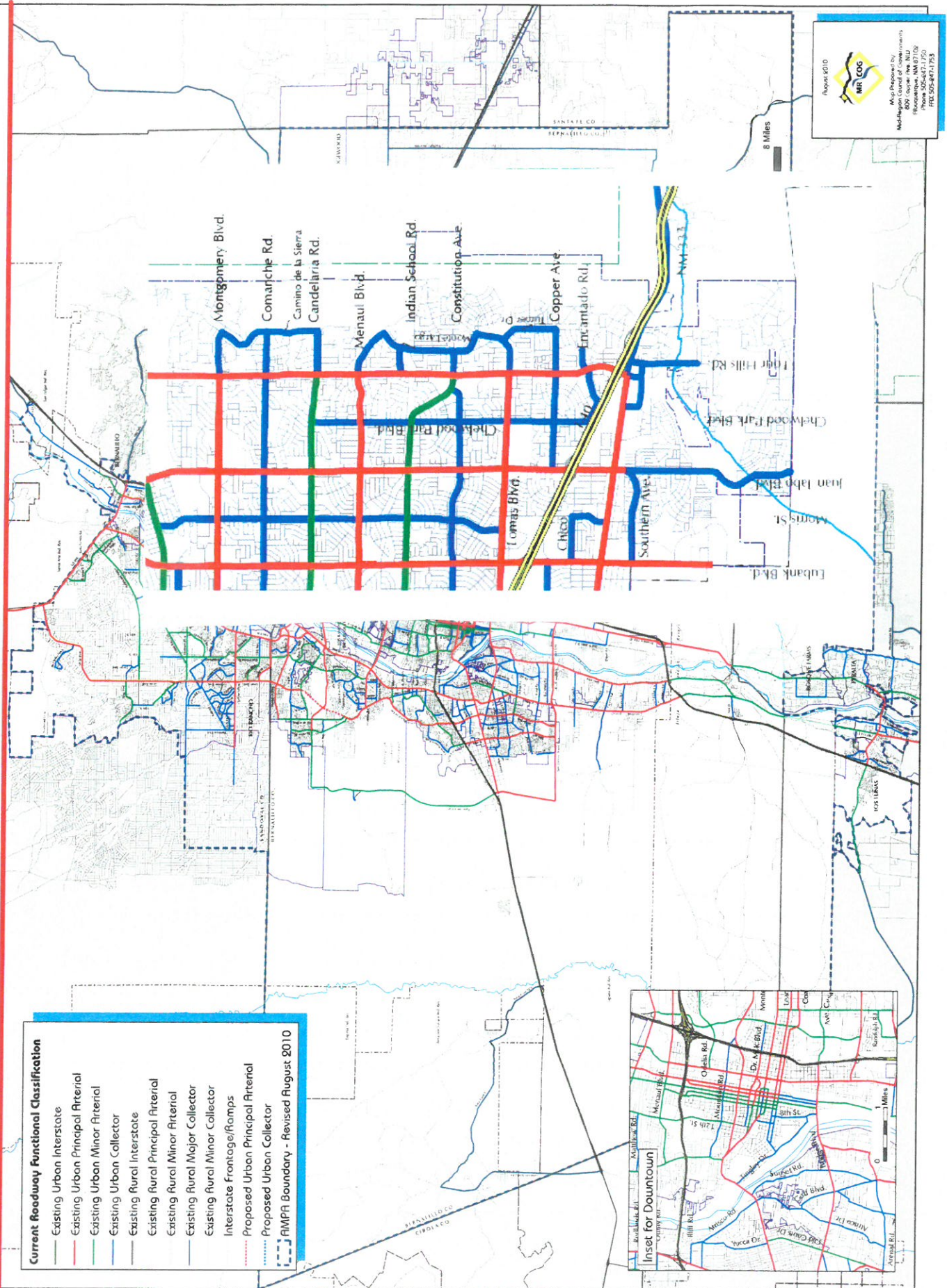
Standard Data Link Volume is based on traffic count data not in compliance with the NMSTMS or on professional judgment. NMSTMS data is used with caution.

Portion of 2013 Traffic Flow Map
for the Greater Albuquerque Area
(Mid-Region Council of Governments)

Current Roadway Functional Classification System

for the Albuquerque Metropolitan Planning Area

Adopted by Resolution R-10-03, Metropolitan Transportation Board
March 25, 2010



Sandia Area Federal Credit Union (Montgomery Blvd. / Cairo Dr.)
Trip Generation Data (ITE Trip Generation Manual - 9th Edition)

COMMENT	USE (ITE CODE)	DESCRIPTION	24 HR VOL		A. M. PEAK HR.		P. M. PEAK HR.	
			GROSS	ENTER	EXIT	ENTER	EXIT	
Summary Sheet								
		Units						
Sandia Area FCU		Drive-In Bank (912)	557	22	15	65	68	
Starbuck's		Coffee/Donut Shop w/ Drive Thru Window (937)	1,637	103	99	43	43	
Future		Shopping Center (820)	1,149	18	11	46	50	
Future		General Office Building (710) - Less than 51,000 S.F.	96	12	2	3	13	
		Subtotal (Unadjusted Trips)	3,439	155	127	157	174	
		Subtotal - Retail Commercial Trips	3,343	143	125	154	161	
		Pass-By Trips		-47	-38	-47	-52	
		Subtotal Primary Trips - Commercial		96	87	107	109	
		Subtotal Primary Trips - Office		12	2	3	13	
		Total Primary Trips		108	89	110	122	

*Sandia Area Federal Credit Union (Montgomery Blvd. / Cairo Dr.)
Trip Generation Data (ITE Trip Generation Manual - 9th Edition)*

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

ITE Trip Generation Equations:

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

$$T = \frac{139.25 (X) + 0}{50\% \text{ Enter, } 50\% \text{ Exit}}$$

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

$$T = \frac{9.29 (X) + 0}{60\% \text{ Enter, } 40\% \text{ Exit}}$$

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

$$T = \frac{33.24 (X) + 0}{49\% \text{ Enter, } 51\% \text{ Exit}}$$

Comments:

Sandia Area FCU

Based on ITE Trip Generation Manual - 9th Edition

Sandia Area Federal Credit Union (Montgomery Blvd. / Cairo Dr.) Trip Generation Data (ITE Trip Generation Manual - 9th Edition)

USE (ITE CODE)	24 HOUR TWO-WAY VOLUME		A.M. PEAK HOUR		P.M. PEAK HOUR	
	GROSS	ENTER	EXIT	ENTER	EXIT	EXIT
Coffee/Donut Shop w/ Drive Thru Window (937)	1,637	103	99	43	43	43
Units						
	2.00					
	1,000 S.F.					

ITE Trip Generation Equations:

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

$$T = \frac{818.58 (X) + 0}{50\% \text{ Enter, } 50\% \text{ Exit}}$$

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

$$T = \frac{100.58 (X) + 0}{51\% \text{ Enter, } 49\% \text{ Exit}}$$

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

$$T = \frac{42.8 (X) + 0}{50\% \text{ Enter, } 50\% \text{ Exit}}$$

Comments:
Starbuck's

Based on ITE Trip Generation Manual - 9th Edition

*Sandia Area Federal Credit Union (Montgomery Blvd. / Cairo Dr.)
Trip Generation Data (ITE Trip Generation Manual - 9th Edition)*

USE (ITE CODE)	24 HOUR TWO-WAY VOLUME		A. M. PEAK HOUR		P. M. PEAK HOUR	
	GROSS	ENTER	EXIT	ENTER	EXIT	EXIT
Units						
6.50						
1,149						
18						
11						
46						
50						
1,000 S.F.						

Shopping Center (820)

ITE Trip Generation Equations:

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

$$\ln(T) = 0.65 \ln(X) + 5.83$$

50% Enter, 50% Exit

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

$$\ln(T) = 0.61 \ln(X) + 2.24$$

62% Enter, 38% Exit

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

$$\ln(T) = 0.67 \ln(X) + 3.31$$

48% Enter, 52% Exit

Comments:
Future

Based on ITE Trip Generation Manual - 9th Edition

*Sandia Area Federal Credit Union (Montgomery Blvd. / Cairo Dr.)
Trip Generation Data (ITE Trip Generation Manual - 9th Edition)*

USE (ITE CODE)	24 HOUR TWO-WAY VOLUME	A. M. PEAK HOUR		P. M. PEAK HOUR		
		ENTER	EXIT	ENTER	EXIT	
Units						
		96	12	2	3	13

General Office Building (710) - Less than 51,000 S.F.

6.50

1,000 S.F.

ITE Trip Generation Equations:

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

$$T = \frac{14.729 (X) + 0}{50\% \text{ Enter, } 50\% \text{ Exit}}$$

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

$$T = \frac{2.055 (X) + 0}{88\% \text{ Enter, } 12\% \text{ Exit}}$$

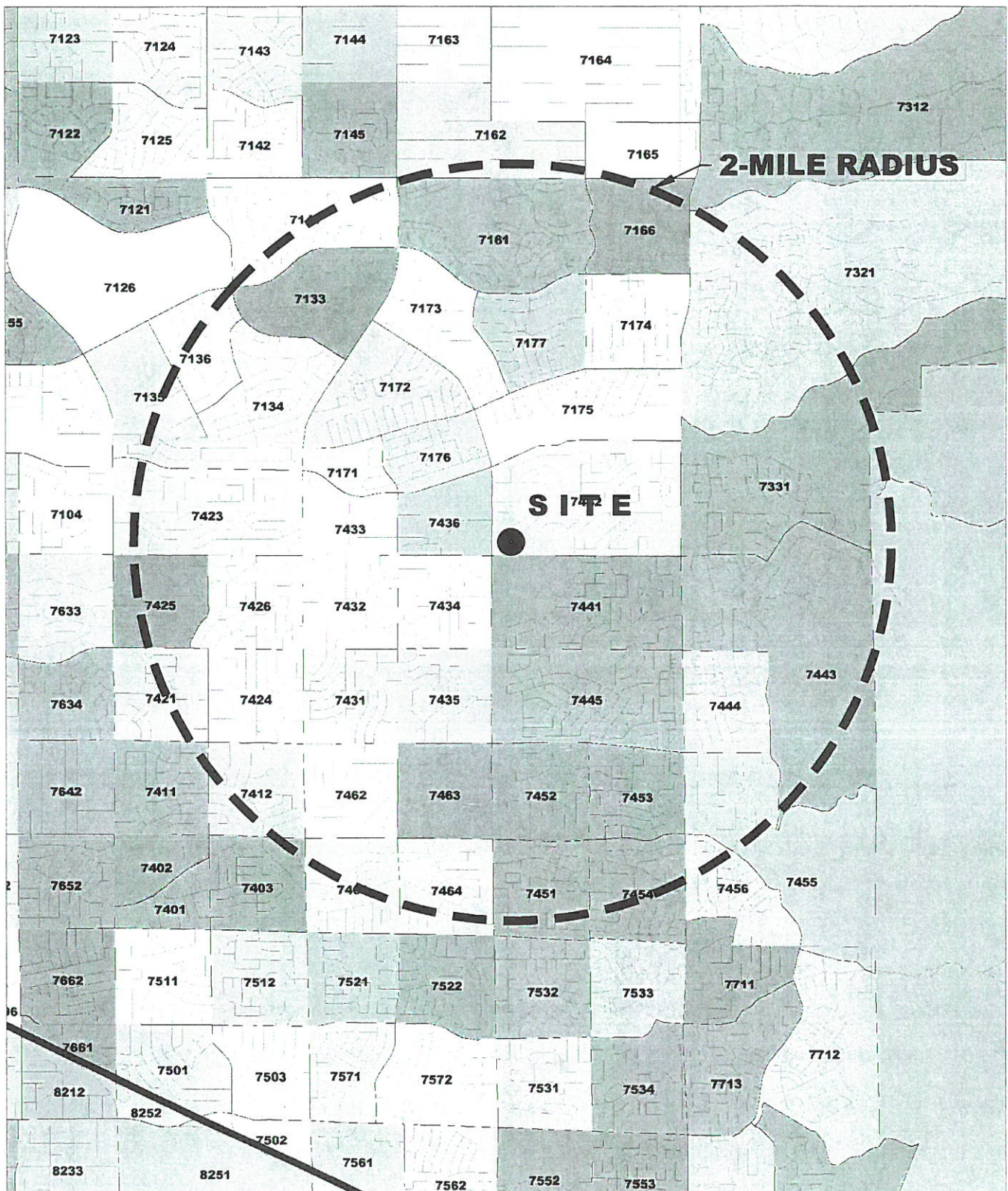
Average Vehicle Trip Ends on a Weekday, Peak Hour of Adjacent Street Traffic, One Hour Between 4pm and 6pm (P.M. PEAK HOUR)

$$T = \frac{2.369 (X) + 0}{17\% \text{ Enter, } 83\% \text{ Exit}}$$

Comments:

Future

Based on ITE Trip Generation Manual - 9th Edition



DATA ANALYSIS SUBZONE (DASZ) MAP

Sandia Area Federal Credit Union Dev (Montgomery Blvd. / Cairo Dr.)

Trip Distribution Table

Sandia Area Federal Credit Union Development

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

DASZ #	% Sub Area in Study	2015 Population		2025 Population	Interpolated Population for the Year 2017	Population in Study	Percent Population	(JN)		CN		(HE)				
		2015 Population	2025 Population	% Utilizing				% Population Utilizing	Population	% Utilizing	% Population Utilizing	Population	% Utilizing	% Population Utilizing		
Boundary Specified on DASZ Map																
7133	100%	1973	1916	1962	1,962	1,962	3.24%	100%	3.24%	1,962	0%	0.00%	0	0%	0.00%	0
7134	100%	1967	1905	1955	1,955	1,955	3.23%	50%	1.61%	978	0%	0.00%	0	0%	0.00%	0
7135	30%	2347	2283	2,334	2,334	700	1.16%	50%	0.58%	350	0%	0.00%	0	0%	0.00%	0
7136	70%	880	857	875	875	613	1.01%	50%	0.51%	307	0%	0.00%	0	0%	0.00%	0
7141	45%	1447	1399	1,437	1,437	647	1.07%	50%	0.53%	324	0%	0.00%	0	0%	0.00%	0
7161	100%	1707	1761	1,696	1,696	1,696	2.80%	100%	2.80%	1,696	0%	0.00%	0	0%	0.00%	0
7162	5%	576	620	585	585	29	0.05%	100%	0.05%	29	0%	0.00%	0	0%	0.00%	0
7166	90%	877	849	871	871	784	1.29%	50%	0.65%	392	0%	0.00%	0	0%	0.00%	0
7171	100%	811	785	806	806	806	1.33%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
7172	100%	2535	2469	2,522	2,522	2,522	4.16%	50%	2.08%	1,261	0%	0.00%	0	0%	0.00%	0
7173	100%	2852	2821	2,846	2,846	2,846	4.70%	100%	4.70%	2,846	0%	0.00%	0	0%	0.00%	0
7174	100%	1629	1591	1,621	1,621	1,621	2.68%	50%	1.34%	811	0%	0.00%	0	0%	0.00%	0
7175	100%	1369	1325	1,360	1,360	1,360	2.25%	50%	1.12%	680	0%	0.00%	0	0%	0.00%	0
7176	100%	1127	1189	1,139	1,139	1,139	1.88%	50%	0.94%	570	0%	0.00%	0	0%	0.00%	0
7177	100%	1881	1818	1,868	1,868	1,868	3.08%	100%	3.08%	1,868	0%	0.00%	0	0%	0.00%	0
7321	35%	3489	3429	3,477	3,477	1,217	2.01%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
7331	70%	1865	1843	1,861	1,861	1,303	2.15%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
7412	85%	1411	1364	1,402	1,402	1,192	1.97%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
7421	45%	1383	1337	1,374	1,374	618	1.02%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
7423	90%	2382	2341	2,374	2,374	2,137	3.53%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
7424	100%	1262	1242	1,254	1,254	1,254	2.07%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
7425	80%	1103	1073	1,097	1,097	878	1.45%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
7426	100%	1204	1167	1,197	1,197	1,197	1.98%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
7431	100%	1541	1487	1,530	1,530	1,530	2.53%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
7432	100%	1327	1282	1,318	1,318	1,318	2.18%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
7433	100%	1567	1563	1,566	1,566	1,566	2.59%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
7434	100%	1184	1168	1,181	1,181	1,181	1.95%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
7435	100%	1875	1821	1,864	1,864	1,864	3.08%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
7436	100%	680	800	704	704	422	1.16%	60%	0.70%	422	0%	0.00%	0	0%	0.00%	0
7441	100%	2679	2625	2,668	2,668	2,668	4.41%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
7442	100%	3039	2995	3,030	3,030	3,030	5.00%	0%	0.00%	0	50%	2.50%	1,515	5%	0.25%	152
7443	90%	1745	1709	1,738	1,738	1,564	2.58%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
7444	100%	1034	1023	1,032	1,032	1,032	1.70%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
7445	100%	2868	2774	2,849	2,849	2,849	4.70%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
7451	90%	1550	1500	1,540	1,540	1,386	2.29%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
7452	100%	1388	1344	1,379	1,379	1,379	2.28%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
7453	100%	1698	1644	1,687	1,687	1,687	2.79%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
7454	55%	1472	1427	1,463	1,463	805	1.33%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
7455	40%	1236	1194	1,228	1,228	491	0.81%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
7456	10%	865	835	859	859	86	0.14%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
7461	50%	1658	1605	1,647	1,647	824	1.36%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
7462	100%	1587	1537	1,577	1,577	1,577	2.60%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
7463	100%	1603	1554	1,593	1,593	1,593	2.63%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
7464	85%	1283	1243	1,275	1,275	1,084	1.79%	0%	0.00%	0	0%	0.00%	0	0%	0.00%	0
							100.00%			14,494	0%	1,515				152
										23.93%	0%	2.50%				0.25%

Trip Distribution Table

Sandia Area Federal Credit Union Development

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

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

DASZ #	% Sub Area in Study	2015		Interpolated Population for the Year 2017	Population In Study	Percent Population	(ME)		(CS)	
		2015 Population	2025 Population				Montgomery Blvd. East		Cairo Dr. South	
							% Utilizing	% Population Utilizing	Population	% Population Utilizing
Boundary Specified on DASZ Map										
7133	100%	1973	1916	1,962	1,962	3.24%	0%	0.00%	0	0
7134	100%	1967	1905	1,955	1,955	3.23%	0%	0.00%	0	0
7135	30%	2347	2283	2,334	700	1.16%	0%	0.00%	0	0
7136	70%	880	857	875	613	1.01%	0%	0.00%	0	0
7141	45%	1447	1399	1,437	647	1.07%	0%	0.00%	0	0
7161	100%	1707	1650	1,696	1,696	2.80%	0%	0.00%	0	0
7162	5%	576	620	585	29	0.05%	0%	0.00%	0	0
7166	90%	877	849	871	784	1.29%	50%	0.65%	392	0
7171	100%	811	785	806	806	1.33%	0%	0.00%	0	0
7172	100%	2535	2469	2,522	2,522	4.16%	0%	0.00%	0	0
7173	100%	2852	2821	2,846	2,846	4.70%	0%	0.00%	0	0
7174	100%	1629	1591	1,621	1,621	2.68%	50%	1.34%	811	0
7175	100%	1369	1325	1,360	1,360	2.25%	50%	1.12%	680	0
7176	100%	1127	1189	1,139	1,139	1.88%	0%	0.00%	0	0
7177	100%	1881	1818	1,868	1,868	3.08%	0%	0.00%	0	0
7321	35%	3489	3429	3,477	1,217	2.01%	100%	2.01%	1,217	0
7331	70%	1865	1843	1,861	1,303	2.15%	100%	2.15%	1,303	0
7412	85%	1411	1364	1,402	1,192	1.97%	0%	0.00%	0	0
7421	45%	1383	1337	1,374	618	1.02%	0%	0.00%	0	0
7423	90%	2382	2341	2,374	2,137	3.53%	0%	0.00%	0	0
7424	100%	1282	1222	1,254	1,254	2.07%	0%	0.00%	0	0
7425	80%	1103	1073	1,097	878	1.45%	0%	0.00%	0	0
7426	100%	1204	1167	1,197	1,197	1.98%	0%	0.00%	0	0
7431	100%	1541	1487	1,530	1,530	2.53%	0%	0.00%	0	0
7432	100%	1327	1282	1,318	1,318	2.18%	0%	0.00%	0	0
7433	100%	1567	1563	1,566	1,566	2.59%	0%	0.00%	0	0
7434	100%	1184	1168	1,181	1,181	1.95%	0%	0.00%	0	0
7435	100%	1875	1821	1,864	1,864	3.08%	0%	0.00%	0	0
7436	100%	680	800	704	704	1.16%	0%	0.00%	0	0
7441	100%	2679	2625	2,668	2,668	4.41%	45%	1.98%	1,201	267
7442	100%	3039	2995	3,030	3,030	5.00%	45%	2.25%	1,364	0
7443	90%	1745	1709	1,738	1,564	2.58%	100%	2.58%	1,564	0
7444	100%	1034	1023	1,032	1,032	1.70%	50%	0.85%	516	0
7445	100%	2868	2774	2,849	2,849	4.70%	50%	2.35%	1,425	0
7451	90%	1550	1500	1,540	1,386	2.29%	0%	0.00%	0	0
7452	100%	1388	1344	1,379	1,379	2.28%	0%	0.00%	0	0
7453	100%	1698	1644	1,687	1,687	2.79%	50%	1.39%	844	0
7454	55%	1472	1427	1,463	805	1.33%	50%	0.66%	403	0
7455	40%	1236	1194	1,228	491	0.81%	100%	0.81%	491	0
7456	10%	865	835	859	86	0.14%	100%	0.14%	86	0
7461	50%	1658	1605	1,647	824	1.36%	0%	0.00%	0	0
7462	100%	1587	1537	1,577	1,577	2.60%	0%	0.00%	0	0
7463	100%	1603	1554	1,593	1,593	2.63%	0%	0.00%	0	0
7464	85%	1283	1243	1,275	1,084	1.79%	0%	0.00%	0	0
						100.00%	0%	0.00%	12,294	267
									20.30%	0.44%

Trip Distribution Table

Sandia Area Federal Credit Union Development

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

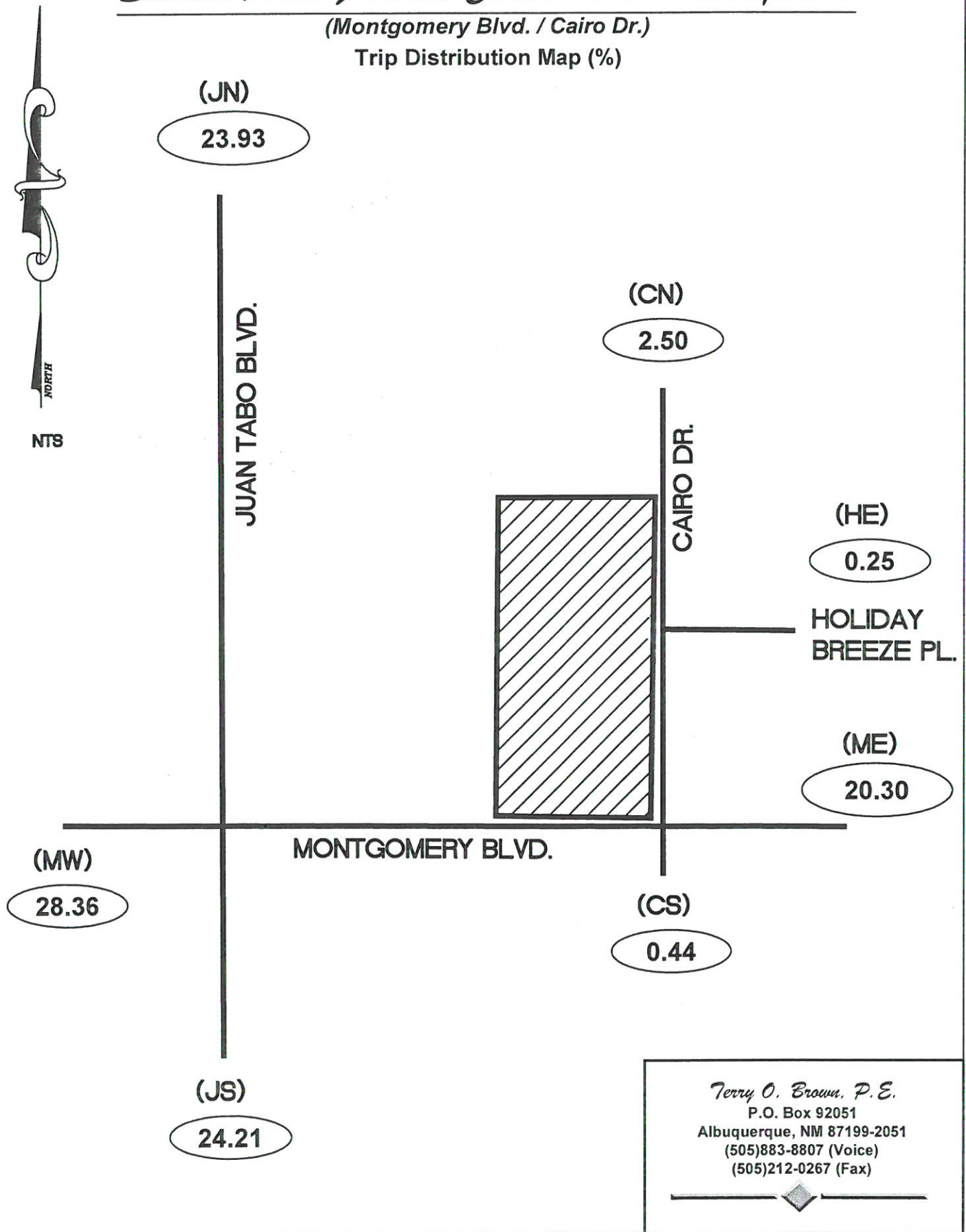
2015 and 2025 Data Taken from Mid-Region Council of Governments' 2035 Socioeconomic Forecasts by Data Analysis Subzones for the Mid-Region of New Mexico

DASZ #	% Sub Area in Study	2015		2025 Population	Interpolated Population for the Year 2017	Population in Study	Percent Population	(JS)		(MW)	
		2015 Population	2015 Map					% Utilizing	Population Utilizing	% Utilizing	Population Utilizing
Boundary Specified on DASZ Map											
7133	100%	1973		1916	1,962	1,962	3.24%	0%	0.00%	0	0.00%
7134	100%	1967		1905	1,955	1,955	3.23%	0%	0.00%	0	0.00%
7135	30%	2347		2283	2,334	700	1.16%	0%	0.00%	0	0.00%
7136	70%	880		857	875	613	1.01%	0%	0.00%	0	0.00%
7141	45%	1447		1399	1,437	647	1.07%	0%	0.00%	0	0.00%
7161	100%	1707		1650	1,696	1,696	2.80%	0%	0.00%	0	0.00%
7162	5%	576		529	585	29	0.05%	0%	0.00%	0	0.00%
7166	90%	877		849	871	784	1.29%	0%	0.00%	0	0.00%
7171	100%	811		785	806	806	1.33%	0%	0.00%	0	0.00%
7172	100%	2535		2469	2,522	2,522	4.16%	0%	0.00%	0	0.00%
7173	100%	2852		2821	2,846	2,846	4.70%	0%	0.00%	0	0.00%
7174	100%	1629		1591	1,621	1,621	2.68%	0%	0.00%	0	0.00%
7175	100%	1369		1325	1,360	1,360	2.25%	0%	0.00%	0	0.00%
7176	100%	1127		1189	1,139	1,139	1.88%	0%	0.00%	0	0.00%
7177	100%	1881		1818	1,868	1,868	3.08%	0%	0.00%	0	0.00%
7321	35%	3489		3429	3,477	1,217	2.01%	0%	0.00%	0	0.00%
7331	70%	1865		1843	1,861	1,303	2.15%	0%	0.00%	0	0.00%
7412	85%	1411		1364	1,402	1,192	1.97%	50%	0.98%	596	0.98%
7421	45%	1383		1337	1,374	618	1.02%	50%	0.51%	309	0.51%
7423	90%	2382		2341	2,374	2,137	3.53%	0%	0.00%	0	0.00%
7424	100%	1262		1222	1,254	1,254	2.07%	50%	1.04%	627	1.04%
7425	80%	1103		1073	1,097	878	1.45%	0%	0.00%	0	0.00%
7426	100%	1204		1167	1,197	1,197	1.98%	0%	0.00%	0	0.00%
7431	100%	1541		1487	1,530	1,530	2.53%	50%	1.26%	765	1.26%
7432	100%	1327		1282	1,318	1,318	2.18%	0%	0.00%	0	0.00%
7433	100%	1567		1563	1,566	1,566	2.59%	0%	0.00%	0	0.00%
7434	100%	1184		1168	1,181	1,181	1.95%	50%	0.98%	591	0.98%
7435	100%	1875		1821	1,864	1,864	3.08%	40%	1.23%	746	1.18%
7436	100%	680		800	704	704	1.16%	0%	0.00%	0	0.00%
7441	100%	2679		2625	2,668	2,668	4.41%	45%	1.98%	1,201	0.00%
7442	100%	3039		2995	3,030	3,030	5.00%	0%	0.00%	0	0.00%
7443	90%	1745		1709	1,738	1,564	2.58%	0%	0.00%	0	0.00%
7444	100%	1034		1023	1,032	1,032	1.70%	50%	0.85%	516	0.00%
7445	100%	2868		2774	2,849	2,849	4.70%	50%	2.35%	1,425	0.00%
7451	90%	1550		1500	1,540	1,386	2.29%	100%	2.29%	1,386	0.00%
7452	100%	1388		1344	1,379	1,379	2.28%	100%	2.28%	1,379	0.00%
7453	100%	1698		1644	1,687	1,687	2.79%	50%	1.39%	844	0.00%
7454	55%	1472		1427	1,463	805	1.33%	50%	0.66%	403	0.00%
7455	40%	1236		1194	1,228	491	0.81%	0%	0.00%	0	0.00%
7456	10%	865		835	859	86	0.14%	0%	0.00%	0	0.00%
7461	50%	1658		1605	1,647	824	1.36%	50%	0.68%	412	0.68%
7462	100%	1587		1537	1,577	1,577	2.60%	50%	1.30%	789	1.30%
7463	100%	1603		1554	1,593	1,593	2.63%	100%	2.63%	1,593	0.00%
7464	85%	1283		1243	1,275	1,084	1.79%	100%	1.79%	1,084	0.00%
71,641							60,562	100.00%	14,663		17,178
									24.21%		28.36%

Sandia Area Federal Credit Union Development

(Montgomery Blvd. / Cairo Dr.)

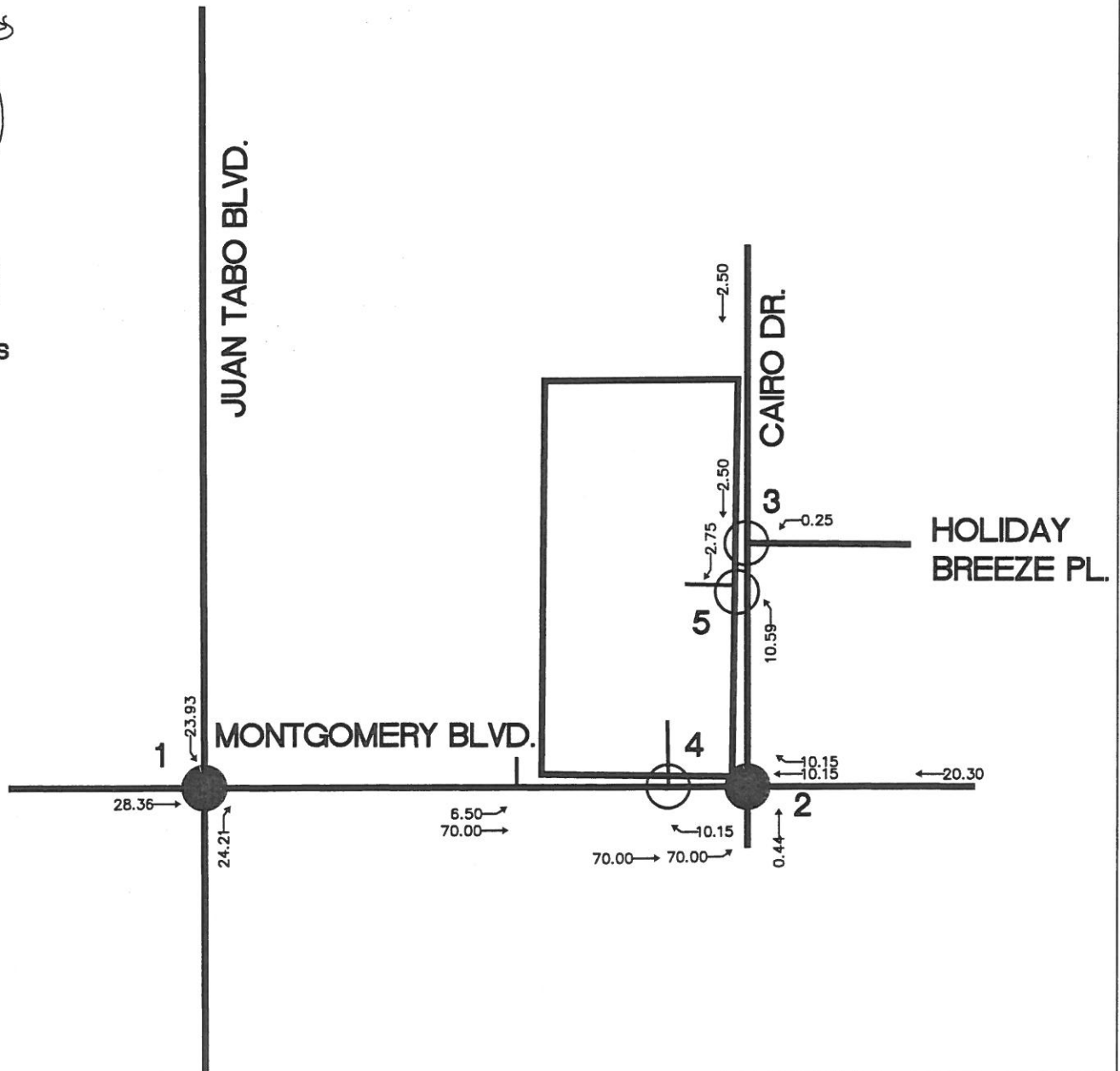
Trip Distribution Map (%)



Sandia Area Federal Credit Union Development

(Montgomery Blvd. / Cairo Dr.)

Trip Assignments (% Entering)



SIGNALIZED INTERSECTION



UNSIGNALIZED INTERSECTION

Terry O. Brown, P.E.

P.O. Box 92051

Albuquerque, NM 87199-2051

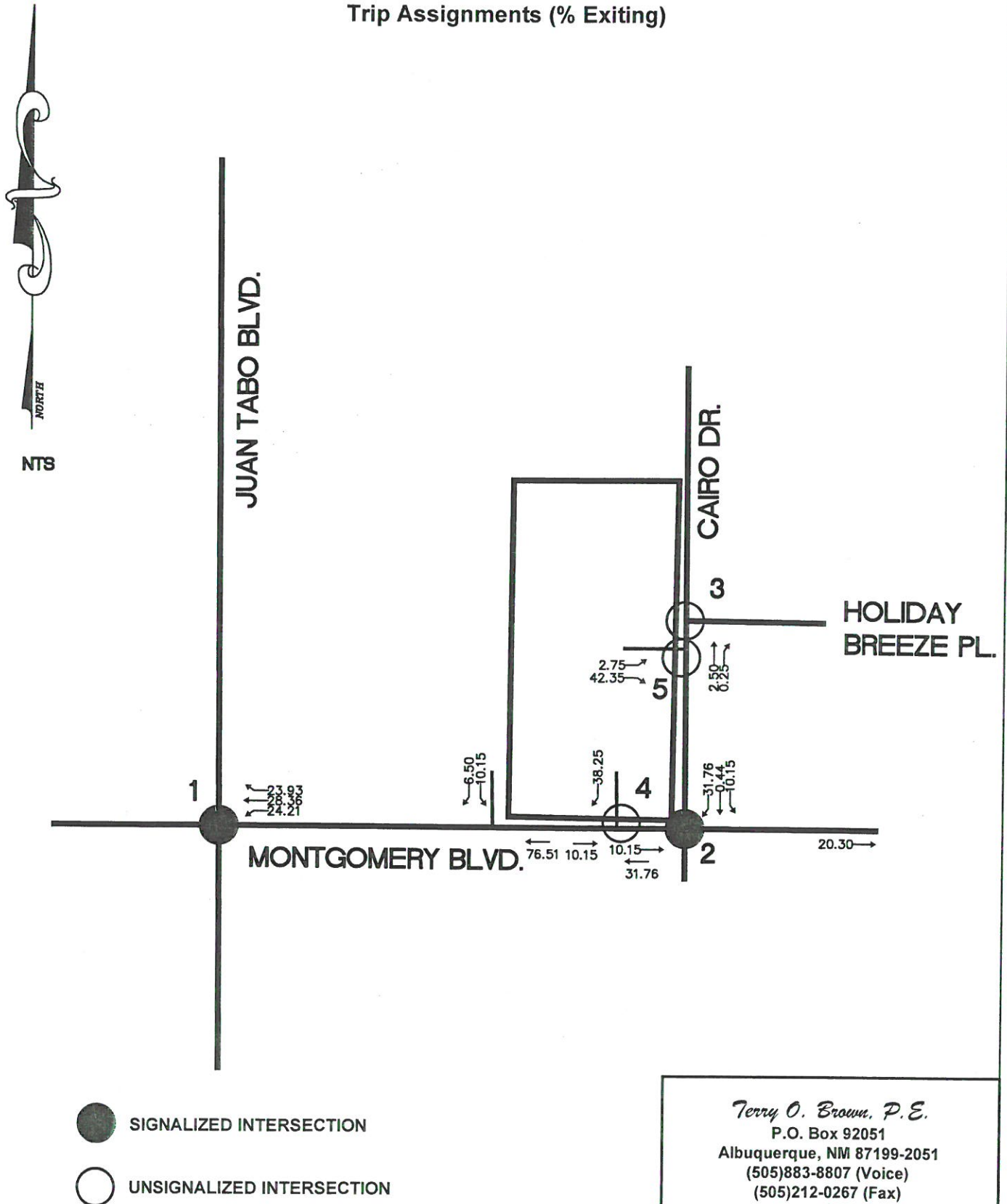
(505)883-8807 (Voice)

(505)212-0267 (Fax)

Sandia Area Federal Credit Union Development

(Montgomery Blvd. / Cairo Dr.)

Trip Assignments (% Exiting)



Terry O. Brown, P.E.

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Albuquerque, NM 87199-2051

(505)883-8807 (Voice)

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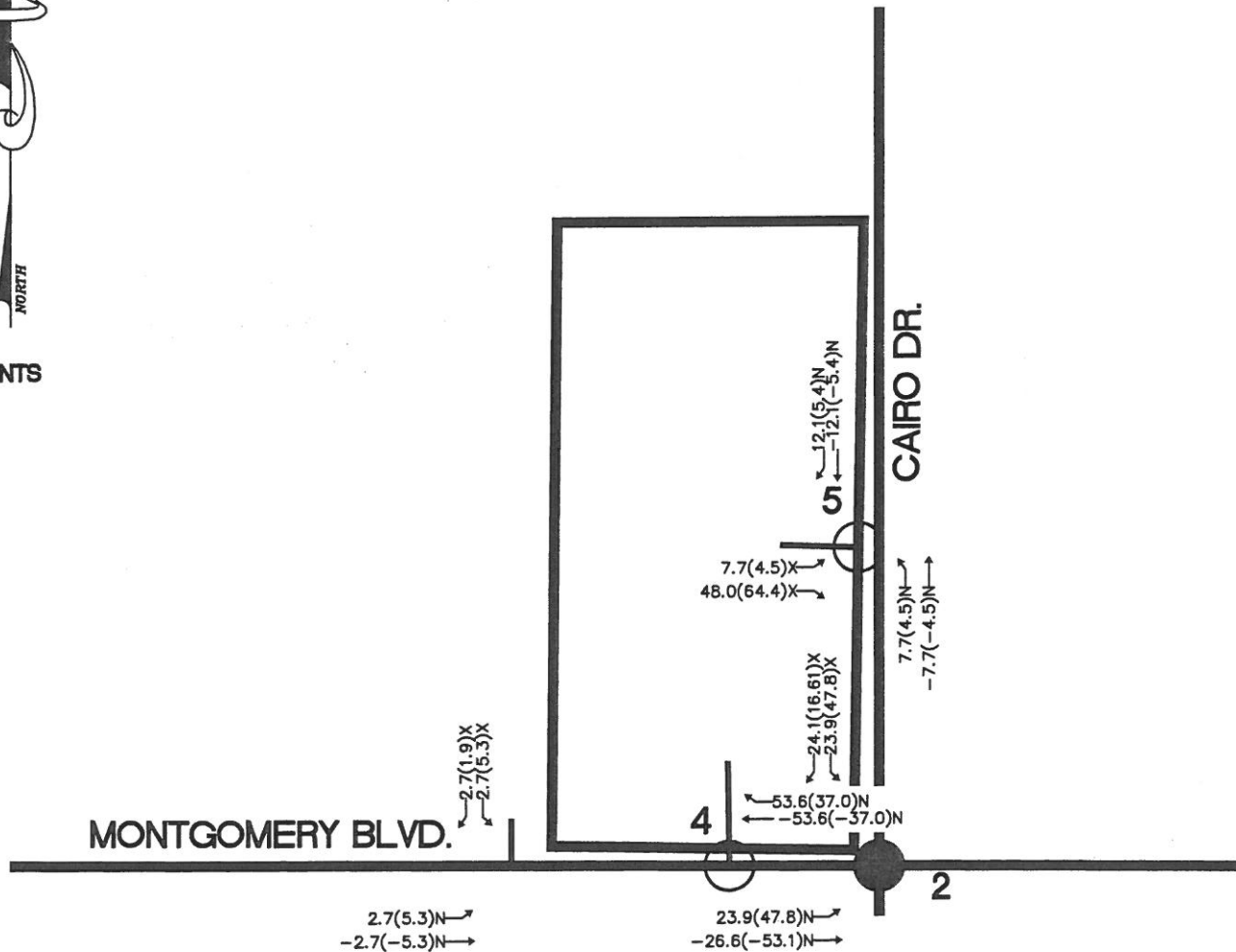
Sandia Area Federal Credit Union Development

(Montgomery Blvd. / Cairo Dr.)

Passby Trips



NTS



SIGNALIZED INTERSECTION



UNSIGNALIZED INTERSECTION

Terry O. Brown, P.E.

P.O. Box 92051

Albuquerque, NM 87199-2051

(505)883-8807 (Voice)

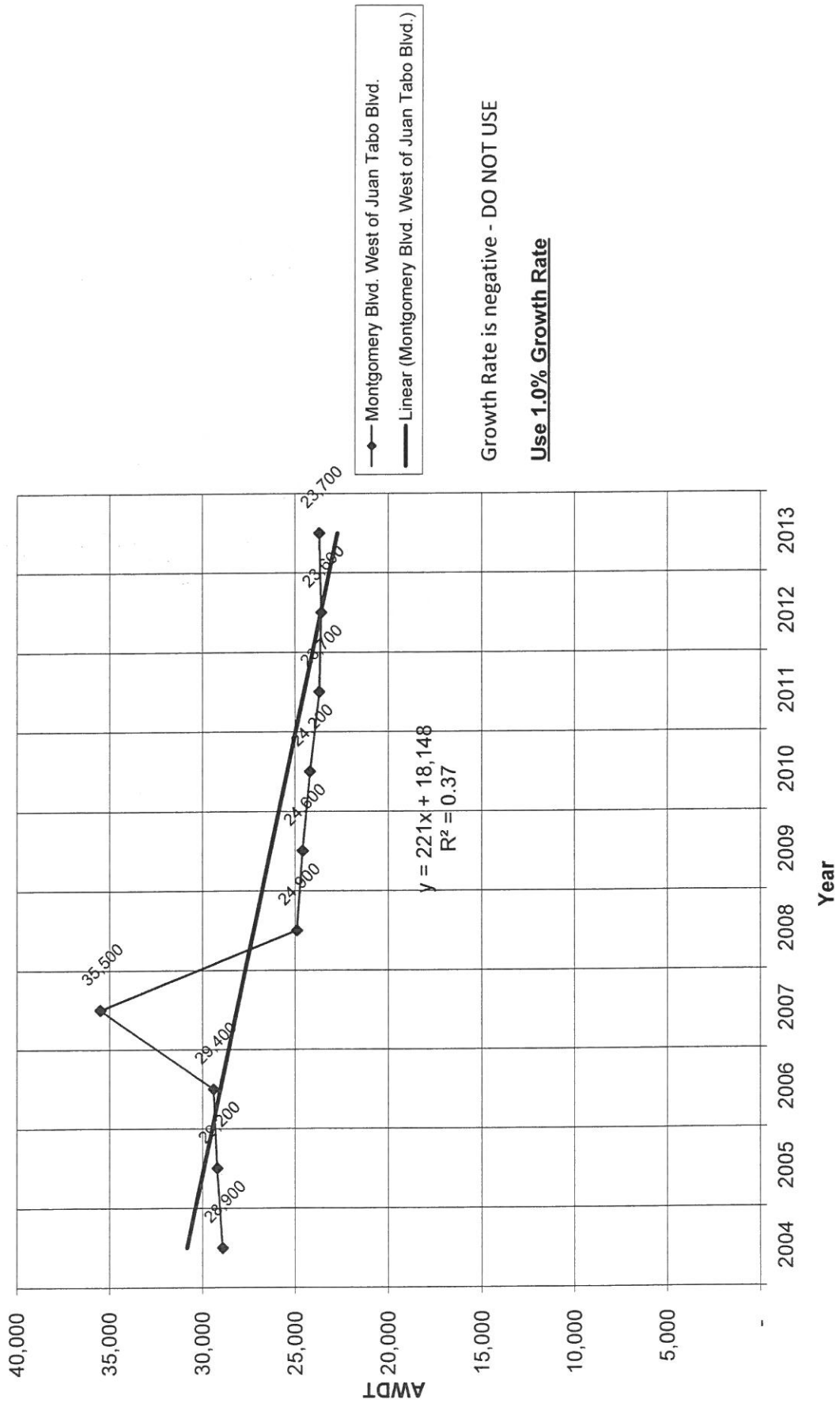
(505)212-0267 (Fax)

Sandia Area Federal Credit Union Development (Montgomery Blvd. / Cairo Dr.)
Historic Growth Rate Table

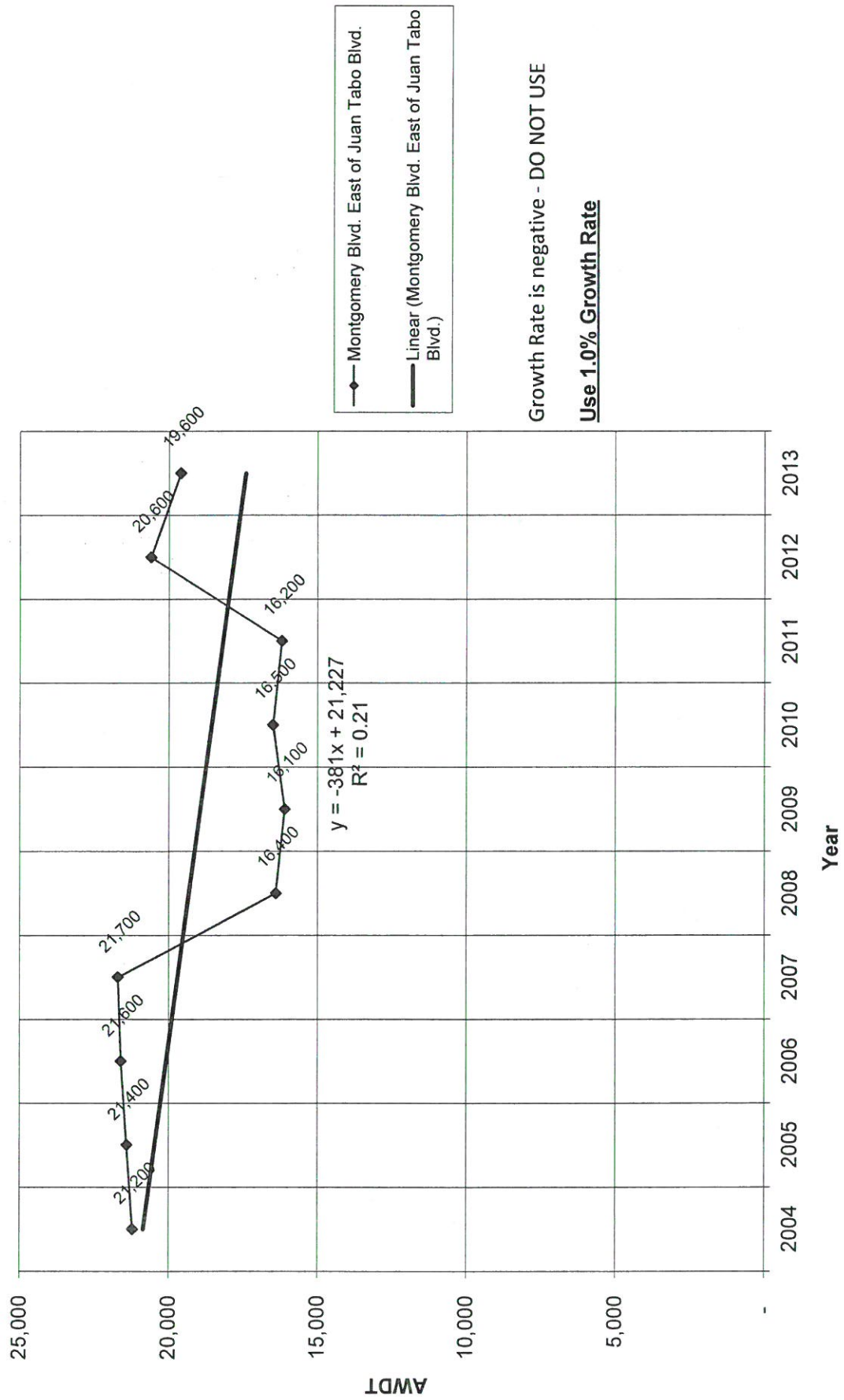
Traffic Flows from MRCOG Map

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Montgomery Blvd. West of Juan Tabo Blvd	28,900	29,200	29,400	35,500	24,900	24,600	24,200	23,700	23,600	23,700
Montgomery Blvd. East of Juan Tabo Blvd	21,200	21,400	21,600	21,700	16,400	16,100	16,500	16,200	20,600	19,600
Juan Tabo Blvd. North of Montgomery Blvd	25,100	24,400	24,500	24,600	20,200	20,000	19,600	22,600	22,600	22,600
Juan Tabo Blvd. South of Montgomery Blvd	34,800	34,400	34,000	22,200	21,900	21,500	22,500	22,400	22,400	31,600

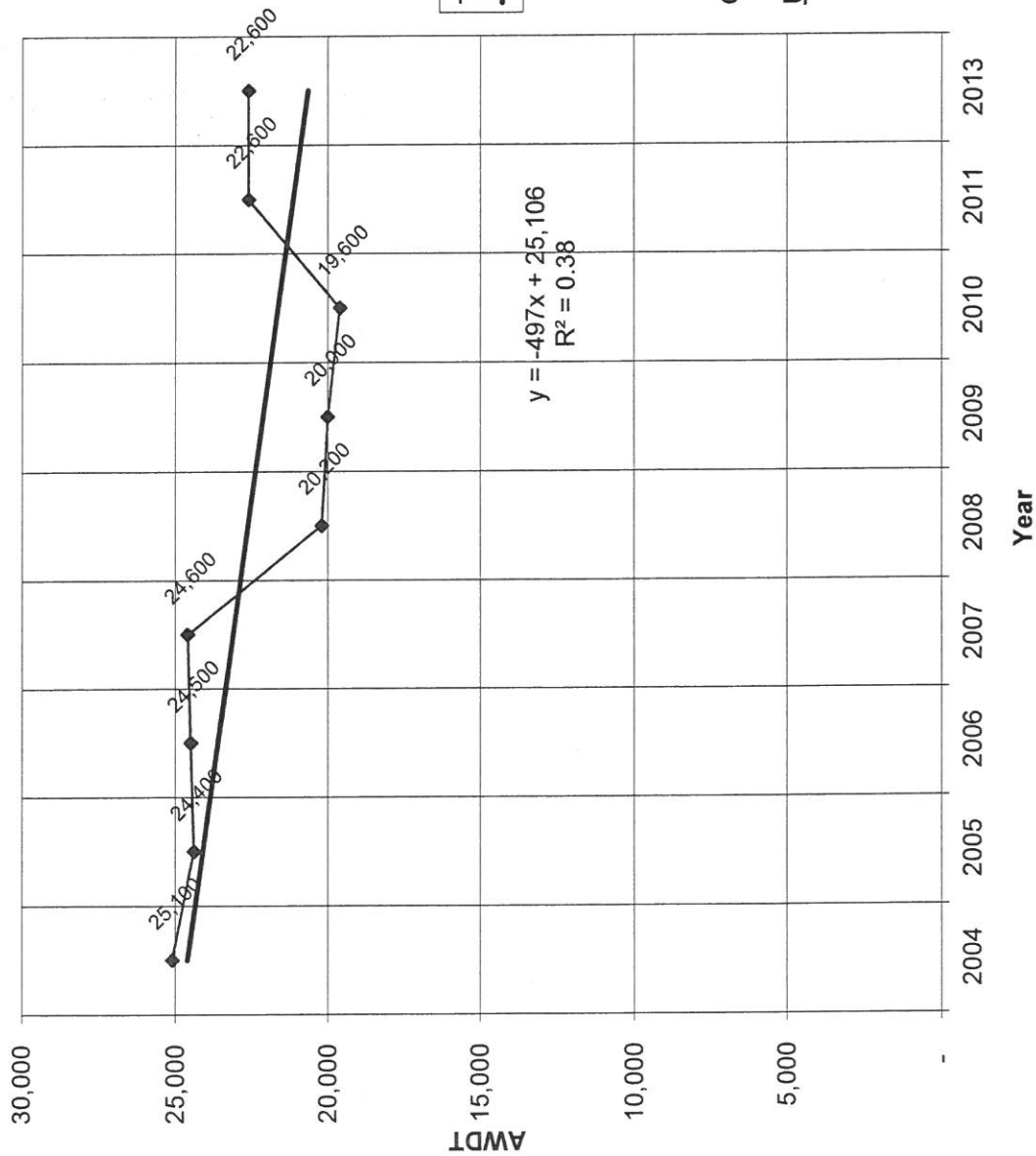
Historic Growth Chart Montgomery Blvd. West of Juan Tabo Blvd. (2004-2013)



Historic Growth Chart Montgomery Blvd. East of Juan Tabo Blvd. (2004-2013)



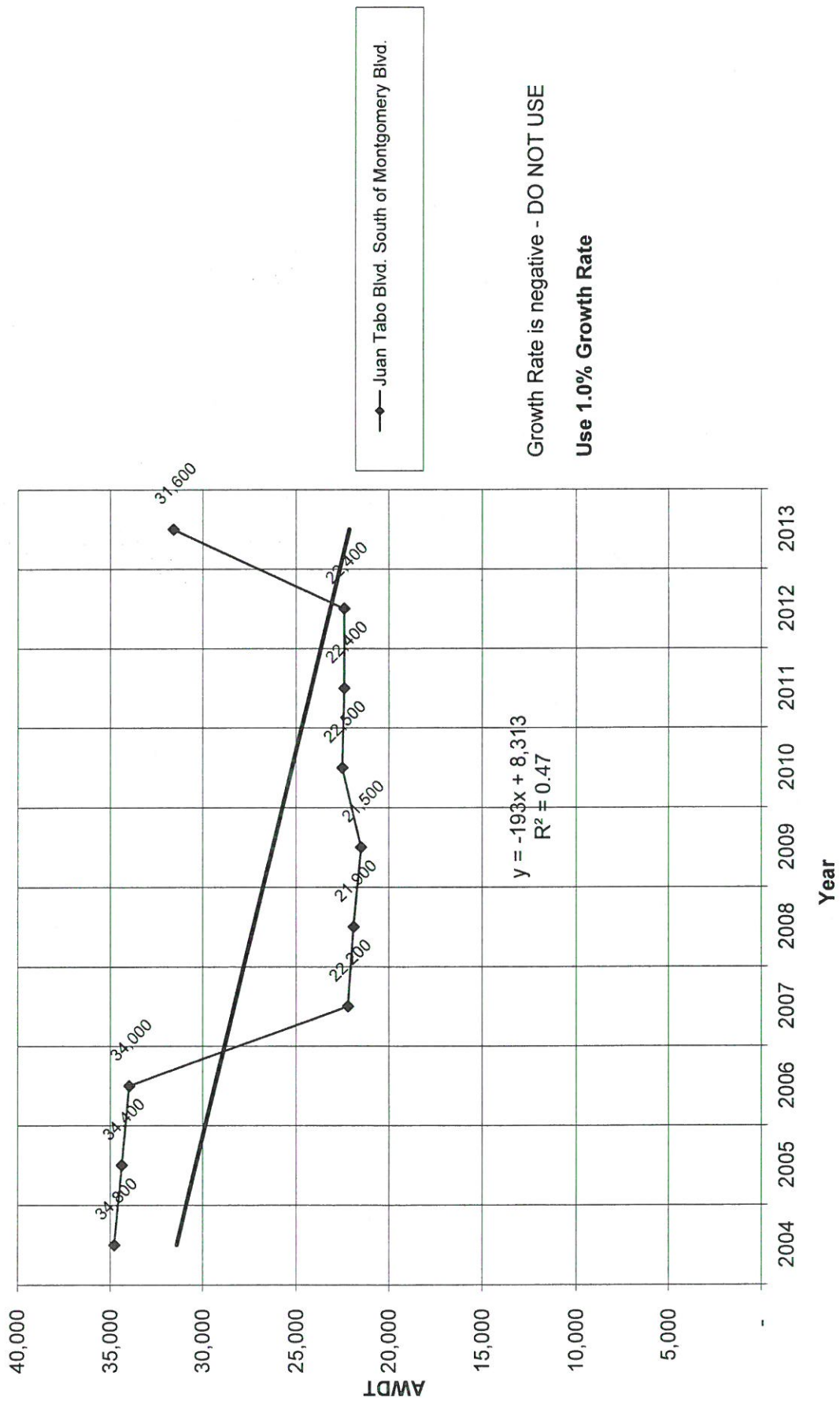
Historic Growth Chart Juan Tabo Blvd. North of Montgomery Blvd. (2004-2013)



Growth Rate is negative - DO NOT USE

Use 1.0% Growth Rate

Historic Growth Chart Juan Tabo Blvd. South of Montgomery Blvd. (2004-2013)



Sandia Area Federal Credit Union Development

(Montgomery Blvd. / Cairo Dr.)

Growth Rate Map (%)



NTS

(JN)

1*

* Generic growth rate of 1% used
where rate is negative or
unavailable

JUAN TABO BLVD.

CAIRO DR.

HOLIDAY
BREEZE PL.

(ME)

1*

(MW)

1*

MONTGOMERY BLVD.

(JS)

1*

Terry O. Brown, P.E.

P.O. Box 92051

Albuquerque, NM 87199-2051

(505)883-8807 (Voice)

(505)212-0267 (Fax)

Sandia Area Federal Credit Union Development (Montgomery Blvd. / Cairo Dr.)

Projected Turning Movements SUMMARY
PROPOSED DEVELOPMENT (2017) - 100% Development

INTERSECTION: Summary

Montgomery Blvd. / Juan Tabo Blvd. 0.95 0.95 0.95 0.95 PHF												
(1) 3.0% Truck Existing (2015) 2017 (NO BUILD - A.M.) 2017 (BUILD - A.M.)	Eastbound (Montgomery Blvd.)			Westbound (Montgomery Blvd.)			Northbound (Juan Tabo Blvd.)			Southbound (Juan Tabo Blvd.)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
	83	243	175	188	529	93	308	599	130	90	626	139
	85	248	179	192	540	95	314	611	133	92	639	142
	85	279	179	214	565	116	314	611	159	118	639	142

0.87 0.87 0.87 0.87 PHF												
Existing (2015) 2017 (NO BUILD - P.M.) 2017 (BUILD - P.M.)	Eastbound (Montgomery Blvd.)			Westbound (Montgomery Blvd.)			Northbound (Juan Tabo Blvd.)			Southbound (Juan Tabo Blvd.)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
	226	599	342	224	513	102	324	935	268	130	622	133
	231	611	349	228	523	104	330	954	273	133	634	136
	231	642	349	258	558	133	330	954	300	159	634	136

Montgomery Blvd. / Cairo Dr. 0.75 0.75 0.75 0.75 PHF												
(2) 3.0% Truck Existing (2015) 2017 (NO BUILD - A.M.) 2017 (BUILD - A.M.)	Eastbound (Montgomery Blvd.)			Westbound (Montgomery Blvd.)			Northbound (Cairo Dr.)			Southbound (Cairo Dr.)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
	20	201	181	119	670	21	45	1	16	13	55	95
	57	205	185	121	683	58	46	3	16	14	64	109
	144	201	185	121	694	69	46	3	16	32	64	146

0.96 0.96 0.96 0.96 PHF												
Existing (2015) 2017 (NO BUILD - P.M.) 2017 (BUILD - P.M.)	Eastbound (Montgomery Blvd.)			Westbound (Montgomery Blvd.)			Northbound (Cairo Dr.)			Southbound (Cairo Dr.)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
	72	925	19	22	623	18	19	2	3	24	4	66
	73	944	19	22	635	18	19	2	3	28	6	72
	172	931	19	22	646	29	19	2	3	65	7	120

Holiday Breeze / Cairo Dr. 0.75 0.75 0.75 0.75 PHF												
(3) 3.0% Truck Existing (2015) 2017 (NO BUILD - A.M.) 2017 (BUILD - A.M.)	Eastbound (Holiday Breeze)			Westbound (Holiday Breeze)			Northbound (Cairo Dr.)			Southbound (Cairo Dr.)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
	0	0	0	8	0	6	0	112	4	3	175	0
	0	0	0	8	0	6	0	114	4	3	179	0
	0	0	0	8	0	6	0	116	4	3	182	0

0.83 0.83 0.83 0.83 PHF												
Existing (2015) 2017 (NO BUILD - P.M.) 2017 (BUILD - P.M.)	Eastbound (Holiday Breeze)			Westbound (Holiday Breeze)			Northbound (Cairo Dr.)			Southbound (Cairo Dr.)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
	0	0	0	14	0	1	0	65	19	10	90	0
	0	0	0	14	0	1	0	72	21	10	92	0
	0	0	0	14	0	1	0	75	21	10	95	0

Sandia Area Federal Credit Union Development (Montgomery Blvd. / Cairo Dr.)

Projected Turning Movements SUMMARY **PROPOSED DEVELOPMENT (2017) - 100% Development**

INTERSECTION: Summary

Montgomery Blvd. / Driveway "A"												
0.75			0.75			0.85			0.85			PHF
(4)	Eastbound (Montgomery Blvd.)			Westbound (Montgomery Blvd.)			Northbound (Driveway "A")			Southbound (Driveway "A")		
3.0% Truck	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing (2015)	0	402	0	0	810	0	0	0	0	0	0	0
2017 (NO BUILD - A.M.)	0	447	0	0	838	0	0	0	0	0	0	0
2017 (BUILD - A.M.)	0	532	0	0	841	36	0	0	0	0	0	34
0.96			0.96			0.85			0.85			PHF
	Eastbound (Montgomery Blvd.)			Westbound (Montgomery Blvd.)			Northbound (Driveway "A")			Southbound (Driveway "A")		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing (2015)	0	1,016	0	0	708	0	0	0	0	0	0	0
2017 (NO BUILD - P.M.)	0	1,036	0	0	726	0	0	0	0	0	0	0
2017 (BUILD - P.M.)	0	1,125	0	0	748	28	0	0	0	0	0	47
Driveway "B" / Cairo Dr.												
0.85			0.85			0.75			0.75			PHF
(5)	Eastbound (Driveway "B")			Westbound (Driveway "B")			Northbound (Cairo Dr.)			Southbound (Cairo Dr.)		
3.0% Truck	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing (2015)	0	0	0	0	0	0	0	116	0	0	183	0
2017 (NO BUILD - A.M.)	0	0	0	0	0	0	0	118	0	0	187	0
2017 (BUILD - A.M.)	5	0	56	0	0	0	15	114	0	0	181	9
0.85			0.85			0.83			0.83			PHF
	Eastbound (Driveway "B")			Westbound (Driveway "B")			Northbound (Cairo Dr.)			Southbound (Cairo Dr.)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing (2015)	0	0	0	0	0	0	0	84	0	0	104	0
2017 (NO BUILD - P.M.)	0	0	0	0	0	0	0	86	0	0	106	0
2017 (BUILD - P.M.)	5	0	85	0	0	0	14	84	0	0	103	6

Sandia Area Federal Credit Union Development (Montgomery Blvd. / Cairo Dr.)
Projected Turning Movements Worksheet
Montgomery Blvd. / Juan Tabo Blvd.

INTERSECTION: E-W Street: **Montgomery Blvd.** (1)

N-S Street: **Juan Tabo Blvd.**

Year of Existing Counts **2015**

Implementation Year **2017**

Growth Rates

	1.00%			1.00%			1.00%			1.00%		
	Eastbound (Montgomery Blvd.)			Westbound (Montgomery Blvd.)			Northbound (Juan Tabo Blvd.)			Southbound (Juan Tabo Blvd.)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	83	243	175	188	529	93	308	599	130	90	626	139
Background Traffic Growth	2	5	4	4	11	2	6	12	3	2	13	3
Subtotal (NO BUILD - A.M.)	85	248	179	192	540	95	314	611	133	92	639	142
Percent Commercial Trips Generated(Entering)	0.00%	28.36%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	24.21%	23.93%	0.00%	0.00%
Percent Commercial Trips Generated(Exiting)	0.00%	0.00%	0.00%	24.21%	28.36%	23.93%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Total Trips Generated	0	31	0	22	25	21	0	0	26	26	0	0
Total AM Peak Hour BUILD Volumes	85	279	179	214	565	116	314	611	159	118	639	142

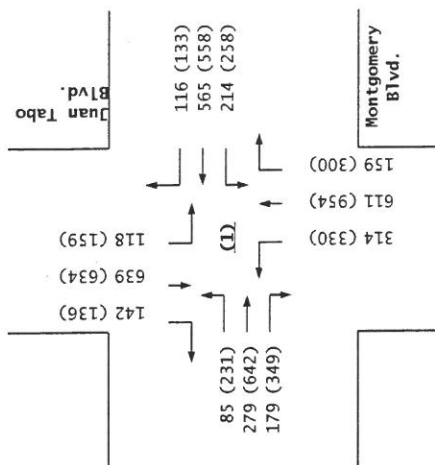
	Eastbound (Montgomery Blvd.)			Westbound (Montgomery Blvd.)			Northbound (Juan Tabo Blvd.)			Southbound (Juan Tabo Blvd.)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	226	599	342	224	513	102	324	935	268	130	622	133
Background Traffic Growth	5	12	7	4	10	2	6	19	5	3	12	3
Subtotal (NO BUILD - P.M.)	231	611	349	228	523	104	330	954	273	133	634	136
Percent Commercial Trips Generated(Entering)	0.00%	28.36%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	24.21%	23.93%	0.00%	0.00%
Percent Commercial Trips Generated(Exiting)	0.00%	0.00%	0.00%	24.21%	28.36%	23.93%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Total Trips Generated	0	31	0	30	35	29	0	0	27	26	0	0
Total PM Peak Hour BUILD Volumes	231	642	349	258	558	133	330	954	300	159	634	136

Number of Commercial Trips Generated

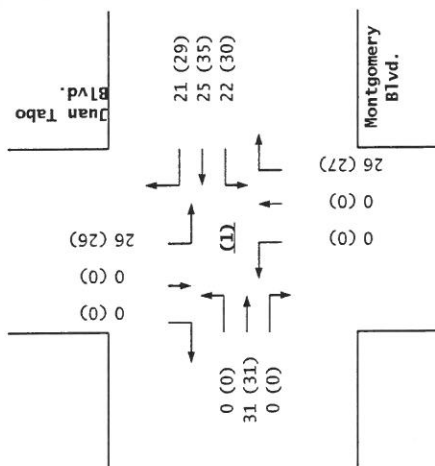
Entering	Exiting	A.M.	100% Commercial Development
108	89		
110	122	P.M.	

	Eastbound (Montgomery Blvd.)			Westbound (Montgomery Blvd.)			Northbound (Juan Tabo Blvd.)			Southbound (Juan Tabo Blvd.)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
2015 AM Peak Hr. Volumes	83	243	175	188	529	93	308	599	130	90	626	139
2015 PM Peak Hr. Volumes	226	599	342	224	513	102	324	935	268	130	622	133

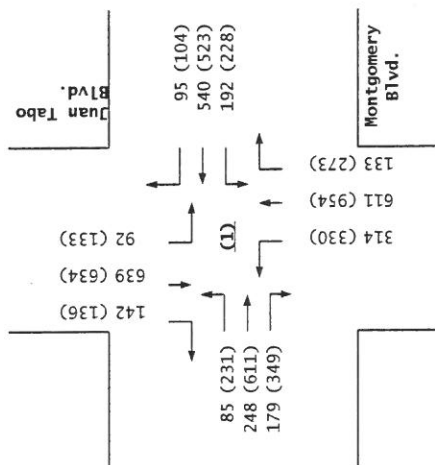
2017
BUILD



Trips



2017
NO BUILD



Montgomery Blvd. / Juan Tabo Blvd.

Sandia Area Federal Credit Union Development (Montgomery Blvd. / Cairo Dr.)

Projected Turning Movements Worksheet

Montgomery Blvd. / Cairo Dr.

INTERSECTION :

E-W Street: **Montgomery Blvd.** (2)

Due to the close proximity of intersections 2 & 3,

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

some of the NOBUILD volumes were balanced

Year of Existing Counts 2015

and will not match existing + growth

Implementation Year 2017

Growth Rates

1.00%

1.00%

1.00%

1.00%

Existing Volumes

Background Traffic Growth

Subtotal (NO BUILD - A.M.)

Percent Commercial Trips Generated(Entering)

Percent Commercial Trips Generated(Exiting)

Total Trips Generated

Subtotal AM Pk Hr. BUILD Volumes

Pass-by Trip Adjustments

Total AM Peak Hour BUILD Volumes

Eastbound (Montgomery Blvd.)			Westbound (Montgomery Blvd.)			Northbound (Cairo Dr.)			Southbound (Cairo Dr.)		
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
20	201	181	119	670	21	45	1	16	13	55	95
0	4	4	2	13	0	1	0	0	0	1	2
57	205	185	121	683	58	46	3	16	14	64	109
70.00%	0.00%	0.00%	0.00%	10.15%	10.15%	0.00%	0.44%	0.00%	0.00%	0.00%	0.00%
0.00%	10.15%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	10.15%	0.44%	31.76%
76	9	0	0	11	11	0	0	0	9	0	28
133	214	185	121	694	69	46	3	16	23	64	137
11	-13	0	0	0	0	0	0	0	9	0	9
144	201	185	121	694	69	46	3	16	32	64	146

Existing Volumes

Background Traffic Growth

Subtotal (NO BUILD - P.M.)

Percent Commercial Trips Generated(Entering)

Percent Commercial Trips Generated(Exiting)

Total Trips Generated

Subtotal PM Pk Hr. BUILD Volumes

Pass-by Trip Adjustments

Total PM Peak Hour BUILD Volumes

Eastbound (Montgomery Blvd.)			Westbound (Montgomery Blvd.)			Northbound (Cairo Dr.)			Southbound (Cairo Dr.)		
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
72	925	19	22	623	18	19	2	3	24	4	66
1	19	0	0	12	0	0	0	0	0	0	1
73	944	19	22	635	18	19	2	3	28	6	72
70.00%	0.00%	0.00%	0.00%	10.15%	10.15%	0.00%	0.44%	0.00%	0.00%	0.00%	0.00%
0.00%	10.15%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	10.15%	0.44%	31.76%
77	12	0	0	11	11	0	0	0	12	1	39
150	956	19	22	646	29	19	2	3	40	7	111
22	-25	0	0	0	0	0	0	0	25	0	9
172	931	19	22	646	29	19	2	3	65	7	120

Number of Commercial Trips Generated

Entering Exiting

108 89

A.M.

100% Commercial Development

110 122

P.M.

2015 AM Peak Hr. Volumes

2015 PM Peak Hr. Volumes

Eastbound (Montgomery Blvd.)			Westbound (Montgomery Blvd.)			Northbound (Cairo Dr.)			Southbound (Cairo Dr.)		
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
20	201	181	119	670	21	45	1	16	13	55	95
72	925	19	22	623	18	19	2	3	24	4	66

Pass-by Trip Calculations:

AM Pass-by Trips

Percent Entering

Volume Entering

Percent Exiting

Volume Exiting

Net AM Passby Trips

Eastbound (Montgomery Blvd.)			Westbound (Montgomery Blvd.)			Northbound (Cairo Dr.)			Southbound (Cairo Dr.)		
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
23.90%	-26.60%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
11	-13	0	0	0	0	0	0	0	0	0	0
0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	23.90%	0.00%	24.10%
0	0	0	0	0	0	0	0	0	9	0	9
11	-13	0	0	0	0	0	0	0	9	0	9

PM Pass-by Trips

Percent Entering

Volume Entering

Percent Exiting

Volume Exiting

Net PM Passby Trips

Eastbound (Montgomery Blvd.)			Westbound (Montgomery Blvd.)			Northbound (Cairo Dr.)			Southbound (Cairo Dr.)		
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
47.80%	-53.10%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
22	-25	0	0	0	0	0	0	0	0	0	0
0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	47.80%	0.00%	16.60%
0	0	0	0	0	0	0	0	0	25	0	9
22	-25	0	0	0	0	0	0	0	25	0	9

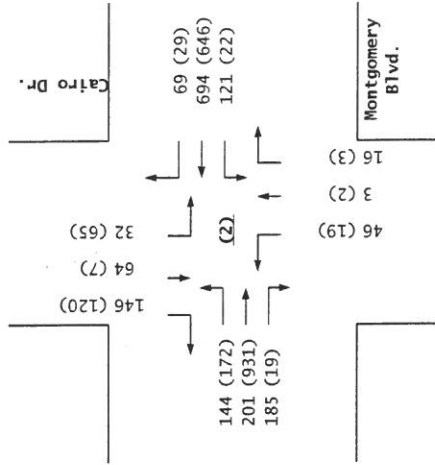
Entering Exiting

47 38 AM

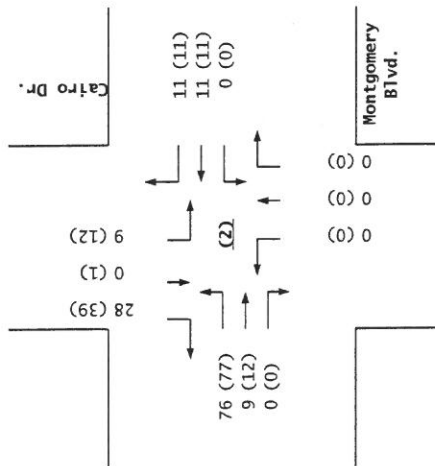
47 52 PM

Pass-by Trips

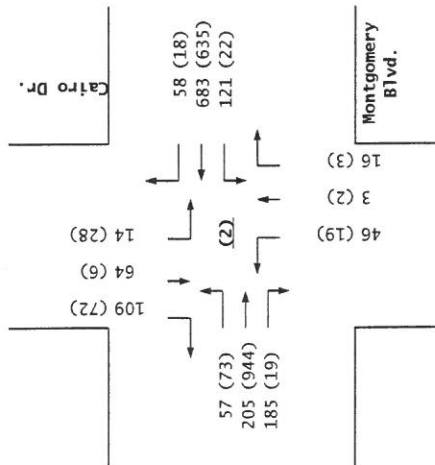
2017
BUILD



Trips



2017
NO BUILD



Montgomery Blvd. / Cairo Dr.

Sandia Area Federal Credit Union Development (Montgomery Blvd. / Cairo Dr.)
Projected Turning Movements Worksheet
Holiday Breeze / Cairo Dr.

INTERSECTION: E-W Street: **Holiday Breeze** (3) Due to the close proximity of intersections 2 & 3,
 N-S Street: **Cairo Dr.** some of the NOBUILD volumes were balanced
 Year of Existing Counts: **2015** and will not match existing + growth
 Implementation Year: **2017**

	1.00%			1.00%			1.00%			1.00%		
	Eastbound (Holiday Breeze)			Westbound (Holiday Breeze)			Northbound (Cairo Dr.)			Southbound (Cairo Dr.)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	0	0	0	8	0	6	0	112	4	3	175	0
Background Traffic Growth	0	0	0	0	0	0	0	2	0	0	4	0
Subtotal (NO BUILD - A.M.)	0	0	0	8	0	6	0	114	4	3	179	0
Percent Commercial Trips Generated(Entering)	0.00%	0.00%	0.00%	0.25%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.50%	0.00%
Percent Commercial Trips Generated(Exiting)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.50%	0.25%	0.00%	0.00%	0.00%
Total Trips Generated	0	0	0	0	0	0	0	2	0	0	3	0
Total AM Peak Hour BUILD Volumes	0	0	0	8	0	6	0	116	4	3	182	0

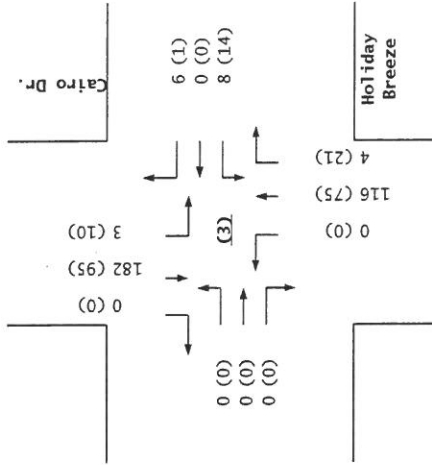
	Eastbound (Holiday Breeze)			Westbound (Holiday Breeze)			Northbound (Cairo Dr.)			Southbound (Cairo Dr.)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	0	0	0	14	0	1	0	65	19	10	90	0
Background Traffic Growth	0	0	0	0	0	0	0	1	0	0	2	0
Subtotal (NO BUILD - P.M.)	0	0	0	14	0	1	0	72	21	10	92	0
Percent Commercial Trips Generated(Entering)	0.00%	0.00%	0.00%	0.25%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.50%	0.00%
Percent Commercial Trips Generated(Exiting)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	2.50%	0.25%	0.00%	0.00%	0.00%
Total Trips Generated	0	0	0	0	0	0	0	3	0	0	3	0
Total PM Peak Hour BUILD Volumes	0	0	0	14	0	1	0	75	21	10	95	0

Number of Commercial Trips Generated

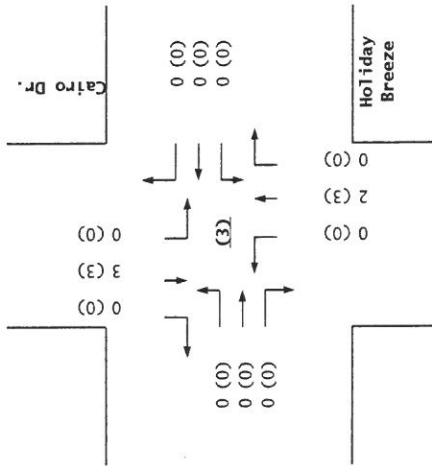
Entering	Exiting		
108	89	A.M.	100% Commercial Development
110	122	P.M.	

	Eastbound (Holiday Breeze)			Westbound (Holiday Breeze)			Northbound (Cairo Dr.)			Southbound (Cairo Dr.)		
2015 AM Peak Hr. Volumes	0	0	0	8	0	6	0	112	4	3	175	0
2015 PM Peak Hr. Volumes	0	0	0	14	0	1	0	65	19	10	90	0

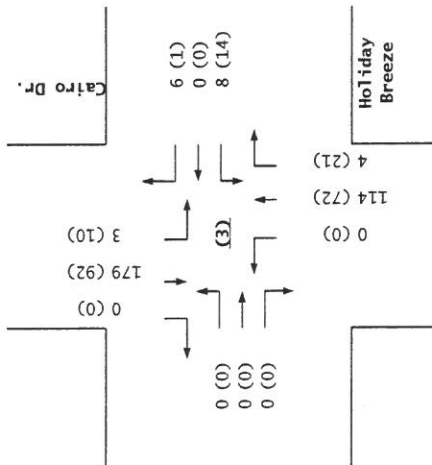
2017
BUILD



Trips



2017
NO BUILD



Holiday Breeze / Cairo Dr.

Sandia Area Federal Credit Union Development (Montgomery Blvd. / Cairo Dr.)

Projected Turning Movements Worksheet

Montgomery Blvd. / Driveway "A"

INTERSECTION:

E-W Street: **Montgomery Blvd.** (4)
N-S Street: **Driveway "A"**

Due to the close proximity of intersections 2 & 3,
some of the NOBUILD volumes were balanced
and will not match existing + growth

Year of Existing Counts: 2015
Implementation Year: 2017

Growth Rates

1.00%

1.00%

1.00%

1.00%

Existing Volumes

Background Traffic Growth

Subtotal (NO BUILD - A.M.)

Percent Commercial Trips Generated(Entering)

Percent Commercial Trips Generated(Exiting)

Total Trips Generated

Subtotal AM Pk Hr. BUILD Volumes

Pass-by Trip Adjustments

Total AM Peak Hour BUILD Volumes

Eastbound (Montgomery Blvd.)			Westbound (Montgomery Blvd.)			Northbound (Driveway "A")			Southbound (Driveway "A")		
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
0	402	0	0	810	0	0	0	0	0	0	0
0	8	0	0	16	0	0	0	0	0	0	0
0	447	0	0	838	0	0	0	0	0	0	0
0.00%	70.00%	0.00%	0.00%	0.00%	10.15%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
0.00%	10.15%	0.00%	0.00%	31.76%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	38.25%
0	85	0	0	28	11	0	0	0	0	0	34
0	532	0	0	866	11	0	0	0	0	0	34
0	0	0	0	-25	25	0	0	0	0	0	0
0	532	0	0	841	36	0	0	0	0	0	34

Existing Volumes

Background Traffic Growth

Subtotal (NO BUILD - P.M.)

Percent Commercial Trips Generated(Entering)

Percent Commercial Trips Generated(Exiting)

Total Trips Generated

Subtotal PM Pk Hr. BUILD Volumes

Pass-by Trip Adjustments

Total PM Peak Hour BUILD Volumes

Eastbound (Montgomery Blvd.)			Westbound (Montgomery Blvd.)			Northbound (Driveway "A")			Southbound (Driveway "A")		
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
0	1,016	0	0	708	0	0	0	0	0	0	0
0	20	0	0	14	0	0	0	0	0	0	0
0	1,036	0	0	726	0	0	0	0	0	0	0
0.00%	70.00%	0.00%	0.00%	0.00%	10.15%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
0.00%	10.15%	0.00%	0.00%	31.76%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	38.25%
0	89	0	0	39	11	0	0	0	0	0	47
0	1,125	0	0	765	11	0	0	0	0	0	47
0	0	0	0	-17	17	0	0	0	0	0	0
0	1,125	0	0	748	28	0	0	0	0	0	47

Number of Commercial Trips Generated

Entering Exiting

108 89

110 122

A.M.

P.M.

100% Commercial Development

2015 AM Peak Hr. Volumes

2015 PM Peak Hr. Volumes

Eastbound (Montgomery Blvd.)			Westbound (Montgomery Blvd.)			Northbound (Driveway "A")			Southbound (Driveway "A")		
Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
0	402	0	0	810	0	0	0	0	0	0	0
0	1,016	0	0	708	0	0	0	0	0	0	0

Pass-by Trip Calculations:

AM Pass-by Trips

Percent Entering

Volume Entering

Percent Exiting

Volume Exiting

Net AM Passby Trips

Eastbound (Montgomery Blvd.)			Westbound (Montgomery Blvd.)			Northbound (Driveway "A")			Southbound (Driveway "A")		
0.00%	0.00%	0.00%	0.00%	-53.60%	53.60%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
0	0	0	0	-25	25	0	0	0	0	0	0
0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	-25	25	0	0	0	0	0	0

PM Pass-by Trips

Percent Entering

Volume Entering

Percent Exiting

Volume Exiting

Net PM Passby Trips

Eastbound (Montgomery Blvd.)			Westbound (Montgomery Blvd.)			Northbound (Driveway "A")			Southbound (Driveway "A")		
0.00%	0.00%	0.00%	0.00%	-37.00%	37.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
0	0	0	0	-17	17	0	0	0	0	0	0
0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	-17	17	0	0	0	0	0	0

Entering Exiting

47

38

AM

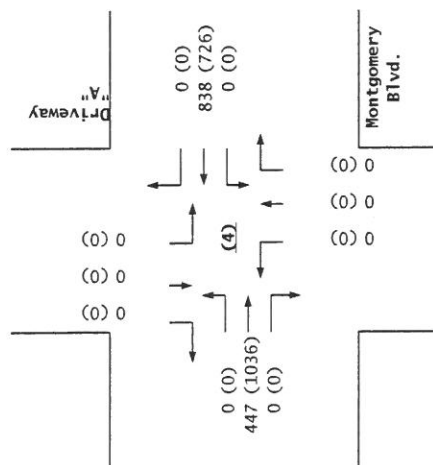
47

52

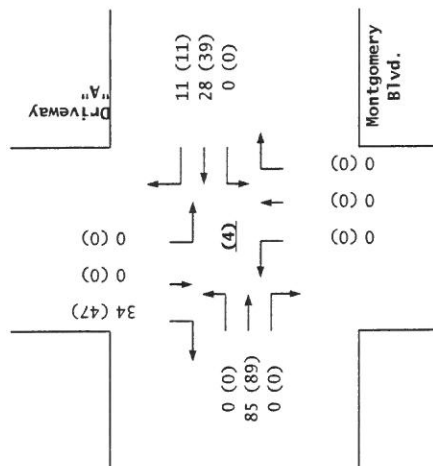
PM

Pass-by Trips

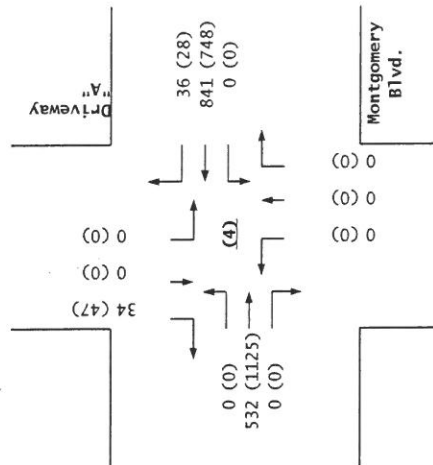
2017
NO BUILD



Trips



2017
BUILD



Montgomery Blvd. / Driveway "A"

Sandia Area Federal Credit Union Development (Montgomery Blvd. / Cairo Dr.)

Projected Turning Movements Worksheet

Driveway "B" / Cairo Dr.

INTERSECTION:

E-W Street: Driveway "B" (5)

N-S Street: Cairo Dr.

Year of Existing Counts 2015

Implementation Year 2017

Growth Rates

	1.00%			1.00%			1.00%			1.00%		
	Eastbound (Driveway "B")			Westbound (Driveway "B")			Northbound (Cairo Dr.)			Southbound (Cairo Dr.)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	0	0	0	0	0	0	0	116	0	0	183	0
Background Traffic Growth	0	0	0	0	0	0	0	2	0	0	4	0
Subtotal (NO BUILD - A.M.)	0	0	0	0	0	0	0	118	0	0	187	0
Percent Commercial Trips Generated(Entering)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	10.59%	0.00%	0.00%	0.00%	0.00%	2.75%
Percent Commercial Trips Generated(Exiting)	2.75%	0.00%	42.35%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Total Trips Generated	2	0	38	0	0	0	11	0	0	0	0	3
Subtotal AM Pk Hr. BUILD Volumes	2	0	38	0	0	0	11	118	0	0	187	3
Pass-by Trip Adjustments	3	0	18	0	0	0	4	-4	0	0	-6	6
Total AM Peak Hour BUILD Volumes	5	0	56	0	0	0	15	114	0	0	181	9

	1.00%			1.00%			1.00%			1.00%		
	Eastbound (Driveway "B")			Westbound (Driveway "B")			Northbound (Cairo Dr.)			Southbound (Cairo Dr.)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volumes	0	0	0	0	0	0	0	84	0	0	104	0
Background Traffic Growth	0	0	0	0	0	0	0	2	0	0	2	0
Subtotal (NO BUILD - P.M.)	0	0	0	0	0	0	0	86	0	0	106	0
Percent Commercial Trips Generated(Entering)	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	10.59%	0.00%	0.00%	0.00%	0.00%	2.75%
Percent Commercial Trips Generated(Exiting)	2.75%	0.00%	42.35%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Total Trips Generated	3	0	52	0	0	0	12	0	0	0	0	3
Subtotal PM Pk Hr. BUILD Volumes	3	0	52	0	0	0	12	86	0	0	106	3
Pass-by Trip Adjustments	2	0	33	0	0	0	2	-2	0	0	-3	3
Total PM Peak Hour BUILD Volumes	5	0	85	0	0	0	14	84	0	0	103	6

Number of Commercial Trips Generated

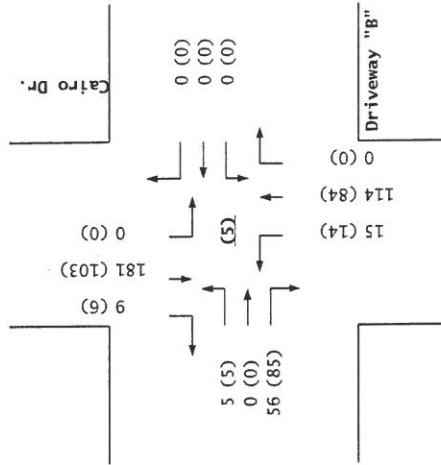
Entering	108	89	A.M.	100% Commercial Development
Exiting	110	122	P.M.	

	1.00%			1.00%			1.00%			1.00%		
	Eastbound (Driveway "B")			Westbound (Driveway "B")			Northbound (Cairo Dr.)			Southbound (Cairo Dr.)		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
2015 AM Peak Hr. Volumes	0	0	0	0	0	0	0	116	0	0	183	0
2015 PM Peak Hr. Volumes	0	0	0	0	0	0	0	84	0	0	104	0

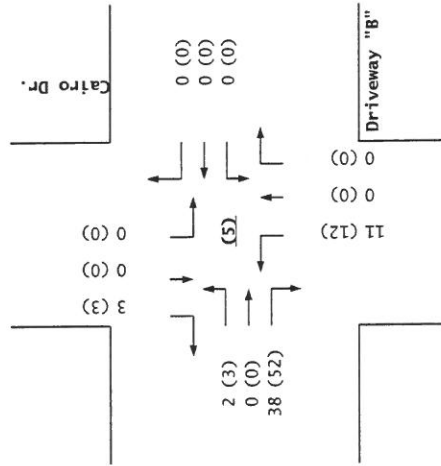
Pass-by Trip Calculations:

AM Pass-by Trips												
	Eastbound (Driveway "B")			Westbound (Driveway "B")			Northbound (Cairo Dr.)			Southbound (Cairo Dr.)		
	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	7.70%	-7.70%	0.00%	0.00%	-12.10%	12.10%
Percent Entering	0	0	0	0	0	0	4	-4	0	0	-6	6
Volume Entering	7.70%	0.00%	48.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Percent Exiting	3	0	18	0	0	0	0	0	0	0	0	0
Volume Exiting	3	0	18	0	0	0	4	-4	0	0	-6	6
Net AM Passby Trips	3	0	18	0	0	0	4	-4	0	0	-6	6
PM Pass-by Trips												
	Eastbound (Driveway "B")			Westbound (Driveway "B")			Northbound (Cairo Dr.)			Southbound (Cairo Dr.)		
	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	4.50%	-4.50%	0.00%	0.00%	-5.40%	5.40%
Percent Entering	0	0	0	0	0	0	2	-2	0	0	-3	3
Volume Entering	4.50%	0.00%	64.40%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Percent Exiting	2	0	33	0	0	0	0	0	0	0	0	0
Volume Exiting	2	0	33	0	0	0	2	-2	0	0	-3	3
Net PM Passby Trips	2	0	33	0	0	0	2	-2	0	0	-3	3
Entering	47	38	AM									
Exiting	47	52	PM									

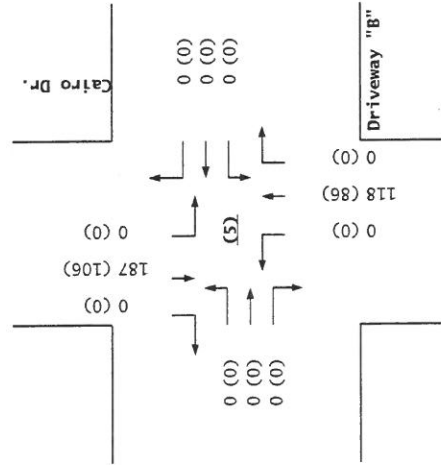
2017
BUILD



Trips



2017
NO BUILD



Driveway "B" / Cairo Dr.

Traffic Count Data Sheet

Year Counts Taken:

2015

E-W Street:
N-S Street:Montgomery Blvd.
Juan Tabo Blvd.Speed Limit (Montgomery Blvd.)= 40 MPH
Speed Limit (Juan Tabo Blvd.)= 40 MPH

3/19/15

UN SIGNALIZED

Begin Time	End Time	Eastbound (Montgomery Blvd.)			Westbound (Montgomery Blvd.)			Northbound (Juan Tabo Blvd.)			Southbound (Juan Tabo Blvd.)		
		L	T	R	L	T	R	L	T	R	L	T	R
7:00 AM	7:15 AM	8	38	30	45	86	8	58	88	30	24	86	48
7:15 AM	7:30 AM	11	80	36	57	125	35	72	118	55	44	142	29
7:30 AM	7:45 AM	22	52	40	46	148	20	81	171	29	12	137	38
7:45 AM	8:00 AM	23	44	44	40	133	22	75	168	17	12	146	39
8:00 AM	8:15 AM	27	67	55	45	123	16	80	142	29	22	201	33
8:15 AM	8:30 AM	26	74	52	38	113	49	65	110	34	49	169	34
8:30 AM	8:45 AM	24	59	35	60	124	49	70	129	39	47	125	49
8:45 AM	9:00 AM	33	74	44	54	148	30	54	156	24	22	149	34
AM Peak Hour Volumes		83	243	175	188	529	93	308	599	130	90	626	139
% of Total Traffic		2.6%	7.5%	5.4%	5.8%	16.4%	2.9%	9.6%	18.6%	4.0%	2.8%	19.4%	0.0%
% Directional			15.5%			25.1%			32.2%			22.2%	
AM Peak Hour Factor			0.84			0.93			0.92			0.83	
		Intersection			Intersection			Intersection			Intersection		
		0.95			0.95			0.95			0.95		

Begin Time	End Time	Eastbound (Montgomery Blvd.)			Westbound (Montgomery Blvd.)			Northbound (Juan Tabo Blvd.)			Southbound (Juan Tabo Blvd.)		
		L	T	R	L	T	R	L	T	R	L	T	R
4:00 PM	4:15 PM	43	438	68	62	444	43	73	481	44	24	425	38
4:15 PM	4:30 PM	53	429	79	59	415	20	79	468	61	28	459	36
4:30 PM	4:45 PM	55	449	79	56	426	44	75	470	50	31	464	34
4:45 PM	5:00 PM	66	454	69	50	412	49	75	215	47	25	447	32
5:00 PM	5:15 PM	56	128	82	56	123	20	76	194	62	38	148	36
5:15 PM	5:30 PM	59	174	77	51	101	17	71	226	63	35	151	42
5:30 PM	5:45 PM	53	152	97	62	177	39	108	282	83	24	166	25
5:45 PM	6:00 PM	58	145	86	55	112	26	69	233	60	33	157	30
PM Peak Hour Volumes		226	599	342	224	513	102	324	935	268	130	622	133
% of Total Traffic		5.1%	13.5%	7.7%	5.1%	11.6%	2.3%	7.3%	21.1%	6.1%	2.9%	14.1%	3.0%
% Directional			26.4%			19.0%			34.5%			20.0%	
PM Peak Hour Factor			0.94			0.75			0.87			0.97	
		Intersection			Intersection			Intersection			Intersection		
		0.87			0.87			0.87			0.87		

Traffic Count Data Sheet

Year Counts Taken: **2015** E-W Street: **Montgomery Blvd.** Speed Limit (Montgomery Blvd.)= **40** MPH
 N-S Street: **Cairo Dr.** Speed Limit (Cairo Dr.)= **25** MPH
 3/19/15

UNSIGNALIZED

Begin Time	End Time	Eastbound (Montgomery Blvd.)			Westbound (Montgomery Blvd.)			Northbound (Cairo Dr.)			Southbound (Cairo Dr.)		
		L	T	R	L	T	R	L	T	R	L	T	R
7:00 AM	7:15 AM	0	27	73	46	145	1	14	0	4	2	11	21
7:15 AM	7:30 AM	7	49	100	65	174	7	27	1	8	0	42	27
7:30 AM	7:45 AM	4	53	8	5	175	8	4	0	2	0	0	18
7:45 AM	8:00 AM	9	72	0	3	176	5	0	0	2	0	2	29
8:00 AM	8:15 AM	44	93	2	3	122	4	2	0	0	2	2	29
8:15 AM	8:30 AM	48	98	2	0	162	10	2	0	0	8	4	21
8:30 AM	8:45 AM	29	93	0	4	155	26	0	0	4	40	0	59
8:45 AM	9:00 AM	8	93	0	4	164	0	0	0	0	44	0	39
AM Peak Hour Volumes		20	201	181	119	670	21	45	1	16	2	55	95
% of Total Traffic		1.3%	13.2%	11.9%	7.8%	43.9%	1.4%	3.0%	0.1%	1.0%	0.9%	3.6%	5.4%
% Directional			26.4%			53.1%			4.1%			9.9%	
AM Peak Hour Factor			0.64			0.82			0.43			0.82	
		Intersection 0.74											

Begin Time	End Time	Eastbound (Montgomery Blvd.)			Westbound (Montgomery Blvd.)			Northbound (Cairo Dr.)			Southbound (Cairo Dr.)		
		L	T	R	L	T	R	L	T	R	L	T	R
4:00 PM	4:15 PM	9	497	5	2	459	7	4	4	3	5	4	49
4:15 PM	4:30 PM	40	215	5	2	444	5	6	0	2	5	0	42
4:30 PM	4:45 PM	9	483	8	3	453	5	2	0	4	4	0	48
4:45 PM	5:00 PM	45	496	3	2	449	0	4	4	4	8	4	43
5:00 PM	5:15 PM	15	247	9	4	152	4	9	0	1	8	2	17
5:15 PM	5:30 PM	25	218	5	10	143	5	6	1	1	8	0	16
5:30 PM	5:45 PM	16	234	3	5	171	2	2	1	1	6	2	17
5:45 PM	6:00 PM	16	226	2	3	157	7	2	0	0	2	0	16
PM Peak Hour Volumes		72	925	19	22	623	18	19	2	3	0	4	66
% of Total Traffic		4.0%	51.4%	1.1%	1.2%	34.6%	1.0%	1.1%	0.1%	0.2%	1.3%	0.2%	3.7%
% Directional			56.5%			36.9%			1.3%			5.2%	
PM Peak Hour Factor			0.94			0.93			0.60			0.87	
		Intersection 0.96											

Traffic Count Data Sheet

Year Counts Taken: 2015 E-W Street: Holiday Breeze Pl. Speed Limit (Holiday Breeze Pl.)= 25 MPH
 N-S Street: Cairo Dr. Speed Limit (Cairo Dr.)= 25 MPH
 3/19/15

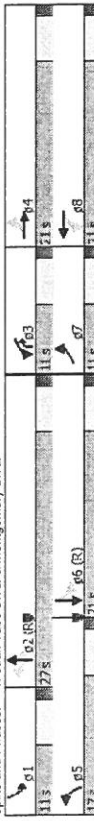
UNSIGNALIZED

Begin Time	End Time	Eastbound (Holiday Breeze Pl.)			Westbound (Holiday Breeze Pl.)			Northbound (Cairo Dr.)			Southbound (Cairo Dr.)		
		L	T	R	Pedestrians	L	T	R	Pedestrians	L	T	R	Pedestrians
7:00 AM	7:15 AM	0	0	0	0	3	0	0	0	4	35	0	4
7:15 AM	7:30 AM	0	0	0	0	6	0	0	0	0	60	0	0
7:30 AM	7:45 AM	0	0	0	0	7	0	0	0	0	44	0	2
7:45 AM	8:00 AM	0	0	0	0	3	0	2	1	1	31	0	1
8:00 AM	8:15 AM	0	0	0	0	2	0	2	0	0	30	0	1
8:15 AM	8:30 AM	0	0	0	0	2	0	1	0	0	39	0	0
8:30 AM	8:45 AM	0	0	0	0	1	0	1	0	2	75	0	0
8:45 AM	9:00 AM	0	0	0	0	2	0	0	0	0	25	0	0
AM Peak Hour Volumes		0	0	0	0	8	0	6	1	0	112	4	2
% of Total Traffic		0.0%	0.0%	0.0%	0.0%	2.6%	0.0%	1.9%	0.0%	0.0%	35.8%	1.3%	1.0%
% Directional		0.0%	0.0%	0.0%	0.0%	4.5%	0.0%	0.0%	0.0%	0.0%	55.9%	0.6%	0.6%
AM Peak Hour Factor		#DIV/0!			Intersection 0.64			0.67			0.58		

Begin Time	End Time	Eastbound (Holiday Breeze Pl.)			Westbound (Holiday Breeze Pl.)			Northbound (Cairo Dr.)			Southbound (Cairo Dr.)		
		L	T	R	Pedestrians	L	T	R	Pedestrians	L	T	R	Pedestrians
4:00 PM	4:15 PM	0	0	0	0	3	0	0	0	4	49	0	0
4:15 PM	4:30 PM	0	0	0	0	2	0	0	0	2	40	0	4
4:30 PM	4:45 PM	0	0	0	0	3	0	0	0	1	30	0	4
4:45 PM	5:00 PM	0	0	0	0	1	0	0	0	0	15	0	1
5:00 PM	5:15 PM	0	0	0	0	6	0	0	0	2	22	0	0
5:15 PM	5:30 PM	0	0	0	0	4	0	1	0	6	23	0	1
5:30 PM	5:45 PM	0	0	0	0	3	0	0	0	4	24	0	0
5:45 PM	6:00 PM	0	0	0	0	3	0	0	0	4	44	0	0
PM Peak Hour Volumes		0	0	0	0	14	0	1	0	0	65	19	4
% of Total Traffic		0.0%	0.0%	0.0%	0.0%	6.9%	0.0%	0.5%	0.0%	0.0%	32.0%	9.4%	4.9%
% Directional		0.0%	0.0%	0.0%	0.0%	7.4%	0.0%	0.0%	0.0%	0.0%	44.3%	0.0%	0.0%
PM Peak Hour Factor		#DIV/0!			Intersection 0.83			0.81			0.78		

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	85	248	192	540	314	611	133	92
Volume (vph)	85	248	192	540	314	611	133	92
Turn Type	pm-pt	NA	pm-pt	NA	pm-pt	NA	pm-pt	NA
Protected Phases	4	4	3	8	5	2	3	1
Permitted Phases	7	4	8	8	2	2	6	6
Detector Phase	7	4	3	8	5	2	3	1
Switch Phase								
Minimum Initial (s)	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	21.0
Total Split (s)	11.0	21.0	11.0	21.0	11.0	21.0	11.0	21.0
Total Split (%)	15.7%	30.0%	15.7%	30.0%	15.7%	30.0%	15.7%	30.0%
Yellow Time (s)	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
Lost Time Adjust (s)	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
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?								
Recall Mode	Min	Min	Min	Min	Min	Min	Min	Min
Act Eff Green (s)	19.9	14.0	20.7	14.4	34.5	23.5	34.9	23.9
Act Eff Green Ratio	0.28	0.20	0.30	0.21	0.49	0.34	0.50	0.34
v/c Ratio	0.35	0.41	0.62	0.64	0.82	0.55	0.16	0.28
Control Delay	18.4	14.6	18.6	11.8	32.9	21.5	27	13.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.4	14.6	18.6	11.8	32.9	21.5	27	13.5
LOS	B	B	B	B	C	C	A	B
Approach Delay	15.2		13.4		22.5		23.3	
Approach LOS	B		B		C		C	
Intersection Summary								
Cycle Length: 70								
Actuated Cycle Length: 70								
Offset: 24 (34%) Referenced to phase 2 NBT and 6 SBT, Start of Green								
Natural Cycle: 65								
Control Type: Actuated-Coordinated								
Maximum v/c Ratio: 0.82								
Intersection Signal Delay: 19.3								
Intersection Capacity Utilization 69.0%								
Analysis Period (min) 15								

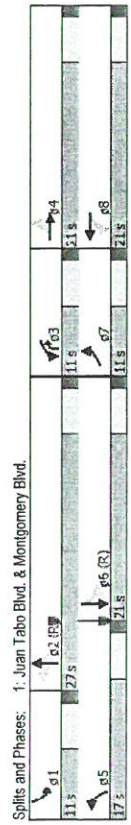
Splits and Phases: 1: Juan Tabo Blvd. & Montgomery Blvd.



Movement	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	85	248	192	540	314	611	133	92
Volume (veh/h)	85	248	192	540	314	611	133	92
Number	7	4	14	3	8	5	2	1
Initial Q (Qb), veh	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h	1845	1900	1845	1900	1845	1900	1845	1900
Adj Flow Rate, veh/h	89	261	188	202	568	100	331	643
Adj No. of Lanes	1	3	0	1	3	0	1	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh. %	3	3	3	3	3	3	3	3
Cap. veh/h	301	638	298	327	882	153	468	1287
Arrive On Green	0.07	0.19	0.19	0.41	0.41	0.15	0.37	0.07
Sat Flow, veh/h	1757	3357	1568	1757	4321	748	1757	3505
Grp Volume(v), veh/h	89	261	188	202	439	331	643	140
Grp Sat Flow(s), veh/h	1757	1679	1568	1757	1713	1757	1568	1757
Q Serve(g.s), s	2.8	4.8	7.7	6.0	7.3	7.6	8.7	10.0
Cycle Q Clear(g.c), s	2.8	4.8	7.7	6.0	7.3	7.6	8.7	10.0
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	301	638	298	327	882	153	468	1287
V/C Ratio(X)	0.30	0.41	0.63	0.62	0.64	0.65	0.71	0.50
Avail Cap(c), veh/h	326	767	358	327	767	391	498	1287
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(f)	1.00	1.00	1.00	0.71	0.71	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.5	24.9	26.1	20.2	18.6	18.7	14.2	17.2
Intr Delay (d2), s/veh	0.5	0.4	2.6	2.5	1.1	2.4	4.3	0.6
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfJ(50%), veh/h	1.4	2.2	3.6	1.1	3.4	3.7	4.7	5.1
LnGrp Delay(d), s/veh	21.0	25.3	28.7	22.7	19.7	21.1	18.5	12.1
LnGrp LOS	C	C	C	C	B	B	B	C
Approach Vol. veh/h	538		870		1114		919	
Approach Delay, s/veh	25.8		20.8		17.7		23.8	
Approach LOS	C		C		B		C	
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.0	30.7	11.0	18.3	15.8	24.9	10.0	19.3
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Max Green Setting (Gmax), s	6.0	22.0	6.0	16.0	12.0	16.0	6.0	16.0
Max Q Clear Time (g_c+H), s	4.6	12.0	8.0	9.7	10.7	11.9	4.8	9.6
Green Ext Time (g_c), s	0.0	6.7	0.0	3.6	0.2	3.1	0.0	3.6
Intersection Summary								
HCM 2010 Ctrl Delay					21.4			
HCM 2010 LOS					C			

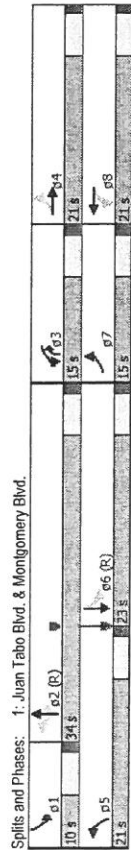
1: Juan Tabo Blvd. & Montgomery Blvd.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations	85	279	214	565	314	611	159	118	639
Volume (vph)	pm-pt	NA	pm-pt	NA	pm-pt	NA	pm-pt	pm-pt	NA
Turn Type	7	4	3	8	5	2	3	1	6
Protected Phases	4	8	3	8	2	2	2	6	
Permitted Phases	7	4	3	8	5	2	3	1	6
Detector Phase	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Switch Phase	10.0	21.0	10.0	21.0	10.0	21.0	10.0	21.0	10.0
Minimum Split (s)	11.0	21.0	11.0	21.0	17.0	27.0	11.0	11.0	21.0
Minimum Split (%)	15.7%	30.0%	15.7%	30.0%	24.3%	38.6%	15.7%	15.7%	30.0%
Total Split (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Yellow Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
All-Red Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lost Time Adjust (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Total Lost Time (s)	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead
Lead/Lag	Min	Min	Min	Min	Min	Min	Min	Min	Min
Lead-Lag Optimize?	Min	Min	Min	Min	Min	Min	Min	Min	Min
Recall Mode	20.2	14.3	21.3	14.8	34.1	23.0	34.5	23.7	17.4
Act Effct Green (s)	0.29	0.20	0.30	0.21	0.49	0.33	0.49	0.34	0.25
Actuated g/C Ratio	0.35	0.43	0.69	0.66	0.83	0.56	0.19	0.36	0.65
v/c Ratio	18.5	15.4	23.7	11.9	33.9	21.9	2.6	14.7	24.8
Control Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Queue Delay	18.5	15.4	23.7	11.9	33.9	21.9	2.6	14.7	24.8
Total Delay	B	B	C	B	C	C	A	B	C
LOS	B	B	C	B	C	C	A	B	C
Approach Delay	15.8	14.7	22.6	11.9	33.9	21.9	2.6	14.7	24.8
Approach LOS	B	B	C	B	C	C	A	B	C



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations	231	611	228	523	330	954	273	133	634
Volume (vph)	231	611	228	523	330	954	273	133	634
Turn Type	pm-pt	NA	pm-pt	NA	pm-pt	NA	pm-pt	pm-pt	NA
Protected Phases	7	4	3	8	5	2	2	2	6
Permitted Phases	4	8	8	2	2	2	2	6	6
Detector Phase	7	4	3	8	5	2	2	3	1
Switch Phase	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Initial (s)	10.0	21.0	10.0	21.0	10.0	21.0	10.0	21.0	10.0
Minimum Split (s)	15.0	21.0	15.0	21.0	15.0	21.0	15.0	21.0	15.0
Total Split (s)	18.8%	26.3%	18.8%	26.3%	18.8%	26.3%	18.8%	26.3%	18.8%
Total Split (%)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Yellow Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
All-Red Time (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Last Time Adjust (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
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	Lag	Lead
Lead-Lag Optimize?	Min	Min	Min	Min	Min	Min	Min	Min	Min
Recall Mode	26.6	16.4	26.6	16.4	26.6	16.4	26.6	16.4	26.6
Act Effct Green (s)	0.33	0.20	0.33	0.20	0.33	0.20	0.33	0.20	0.33
Actuated g/C Ratio	0.85	1.00	0.83	0.69	0.88	0.88	0.85	0.76	0.77
v/c Ratio	45.4	55.9	35.0	23.7	40.9	33.9	8.1	41.7	32.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay	45.4	55.9	35.0	23.7	40.9	33.9	8.1	41.7	32.7
Total Delay	45.4	55.9	35.0	23.7	40.9	33.9	8.1	41.7	32.7
LOS	D	E	D	C	D	C	A	D	C
Approach Delay	53.9	26.7	30.9	30.9	30.9	30.9	30.9	30.9	30.9
Approach LOS	D	C	C	C	C	C	C	C	C

Intersection Summary	
Cycle Length: 80	
Offset: 27 (34%) Referenced to phase 2 NBT and 6 SBT, Start of Green	
Natural Cycle: 75	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.00	
Intersection Signal Delay: 36.8	
Intersection Capacity Utilization: 82.7%	
Analysis Period (min): 15	

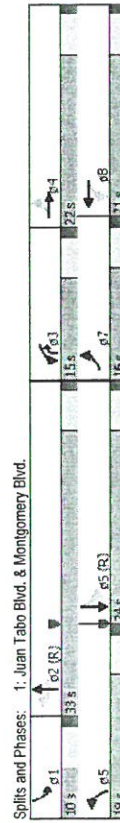


Movement	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations	231	611	228	523	330	954	273	133	634
Volume (veh/h)	231	611	228	523	330	954	273	133	634
Number	7	4	3	8	5	2	2	2	6
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1845	1845	1845	1845	1845	1900
Adj Flow Rate, veh/h	266	702	401	262	601	120	379	1097	314
Adj No. of Lanes	1	3	0	1	3	0	1	2	1
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh. %	3	3	3	3	3	3	3	3	3
Cap. veh/h	359	671	314	310	845	166	457	1271	764
Arrive On Green	0.13	0.20	0.20	0.17	0.27	0.18	0.36	0.36	0.06
Sat Flow, veh/h	1757	3357	1568	1757	4225	830	1757	3505	1568
Grp Volume(v), veh/h	266	702	401	262	475	246	379	1097	314
Grp Sat Flow(s), veh/h/ln	1757	1679	1568	1757	1679	1698	1757	1568	1757
Q Serve(g/s), s	9.6	16.0	16.0	9.6	10.2	10.5	12.1	23.2	10.3
Cycle Q Clear(g_c/s)	9.6	16.0	16.0	9.6	10.2	10.5	12.1	23.2	10.3
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	359	671	314	310	845	166	457	1271	764
V/C Ratio(X)	0.74	1.05	1.28	0.85	0.71	0.72	0.83	0.86	0.41
Avail Cap(c), veh/h	359	671	314	310	845	166	457	1271	764
HCN Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(f)	1.00	1.00	1.00	0.89	0.89	0.89	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.6	32.0	32.0	22.0	27.2	27.3	17.9	23.7	13.1
Incr Delay (d2), s/veh	8.0	47.2	147.8	17.3	3.1	6.6	10.7	7.9	1.6
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%) veh/h	5.4	11.8	19.8	6.0	5.0	5.5	7.1	12.5	4.8
LnGrp Delay(d), s/veh	30.5	79.2	179.8	39.3	30.3	34.0	28.6	31.6	14.8
LnGrp LOS	C	F	F	D	C	C	C	B	C
Approach Vol, veh/h	1369	992	336	983	1790	280	1038	34.1	C
Approach Delay, s/veh	99.2	33.6	33.6	33.6	28.0	28.0	28.0	34.1	C
Approach LOS	F	C	C	C	C	C	C	C	C
Time	1	2	3	4	5	6	7	8	
Assigned Phs	1	2	3	4	5	6	7	8	
Phs Duration (G+Y+R), s	10.0	34.0	15.0	21.0	19.4	24.6	15.0	21.0	
Change Period (Y+R), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Max Green Setting (Gmax), s	5.0	29.0	10.0	16.0	16.0	18.0	10.0	16.0	
Max Q Clear Time (g_c+1), s	7.0	25.2	11.6	18.0	14.1	15.0	11.6	12.5	
Green Ext Time (p_c), s	0.0	3.4	0.0	0.0	0.3	2.7	0.0	2.9	
Intersection Summary									
HCN 2010 Ctrl Delay	49.1								
HCN 2010 LOS	D								

Timings
1: Juan Tabo Blvd. & Montgomery Blvd.

Terry O. Brown, P.E.
3/30/2015

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations	231	642	258	558	330	954	300	159	634
Volume (vph)	231	642	258	558	330	954	300	159	634
Turn Type	pm+pt	NA	pm+pt	NA	pm+pt	NA	pm+ov	pm+pt	NA
Protected Phases	7	4	3	8	5	2	3	1	6
Permitted Phases	4	8	8	5	2	2	2	6	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	21.0	21.0
Total Split (s)	16.0	22.0	15.0	21.0	13.0	33.0	15.0	10.0	24.0
Total Split (%)	20.0%	27.5%	18.8%	26.3%	15.8%	41.3%	18.8%	12.5%	30.0%
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	Lag	Lag
Lead-Lag Optimize?									
Recall Mode	Min	Min	Min	Min	Min	Min	Min	Min	Min
Act Effct Green (s)	27.8	17.0	26.7	16.4	37.8	27.8	43.0	23.8	18.8
Actuated g/C Ratio	0.35	0.21	0.33	0.20	0.47	0.35	0.54	0.30	0.24
v/c Ratio	0.81	1.00	0.94	0.75	0.95	0.90	0.39	0.91	0.74
Control Delay	38.9	56.1	55.3	25.0	55.9	36.7	9.1	65.3	30.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	38.9	56.1	55.3	25.0	55.9	36.7	9.1	65.3	30.9
LOS	D	E	E	C	E	D	A	E	C
Approach Delay	52.8								
Approach LOS	D								
Intersection Summary									
Cycle Length: 80									
Offset: 28 (35%), Referenced to phase 2 NBT, and 6 SBT, Start of Green									
Natural Cycle: 80									
Control Type: Actuated-Coordinated									
Maximum v/c Ratio: 1.00									
Intersection Signal Delay: 39.8									
Intersection Capacity Utilization 86.4%									
Analysis Period (min) 15									



2017 PM Peak BUILD Conditions Existing Geometry
Synchro 8 Report
2017PBX.syn

HCM 2010 Signalized Intersection Summary
1: Juan Tabo Blvd. & Montgomery Blvd.

Terry O. Brown, P.E.
3/30/2015

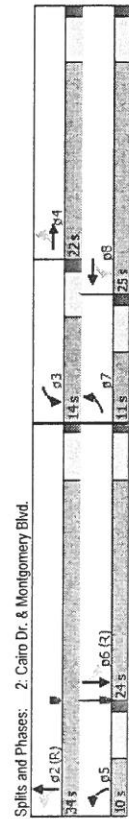
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	231	642	349	258	558	133	330	954	300	159	634	136
Volume (veh/h)	231	642	349	258	558	133	330	954	300	159	634	136
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Per-Bike Adj (A _{bpt})	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h	1845	1845	1900	1845	1845	1900	1845	1845	1845	1845	1845	1900
Adj Flow Rate, veh/h	266	738	401	297	641	153	379	1097	345	183	729	156
Adj No. of Lanes	1	3	0	1	3	0	1	2	1	1	3	0
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	364	713	333	310	815	192	443	1227	745	219	989	209
Arrive On Green	0.14	0.21	0.21	0.13	0.20	0.20	0.17	0.35	0.35	0.06	0.24	0.24
Sat Flow, veh/h	1757	3357	1558	1757	4075	958	1757	3505	1568	1757	4165	882
Grp Volume (v), veh/h	266	738	401	297	641	153	379	1097	345	183	586	299
Grp Sat Flow (s), veh/h	1757	1679	1558	1679	1679	1679	1679	1752	1568	1757	1679	1689
Q Serve (g, s)	9.5	17.0	17.0	10.0	11.9	12.2	12.4	23.7	11.8	5.0	12.9	13.1
Cycle Q Clear (g, s)	9.5	17.0	17.0	10.0	11.9	12.2	12.4	23.7	11.8	5.0	12.9	13.1
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap (c), veh/h	364	713	333	310	815	192	443	1227	745	219	989	401
V/C Ratio (X)	0.73	1.03	1.20	0.96	0.78	0.80	0.86	0.89	0.46	0.83	0.74	0.74
Avail Cap (c, a), veh/h	364	713	333	310	815	192	443	1227	745	219	989	401
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter (f)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.1	31.5	31.5	24.5	30.4	30.5	18.5	24.6	14.1	26.9	28.2	28.3
Incr Delay (d2), s/veh	7.3	42.9	116.7	40.2	6.0	12.8	15.1	10.2	2.1	23.2	6.0	11.9
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back (Qd3), s/veh	5.2	12.1	18.1	5.2	6.0	6.8	7.8	13.2	5.5	4.4	6.6	7.4
LnGrp Delay (d), s/veh	29.4	74.4	148.2	64.6	36.4	43.3	33.6	34.8	16.2	50.1	34.1	40.1
LnGrp LOS	C	F	F	E	D	D	C	C	B	D	C	D
Approach Vol, veh/h	1405			1091				1821			1088	
Approach Delay, s/veh	86.9			45.8				31.0			38.6	
Approach LOS	F			D				C			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.0	33.0	15.0	22.0	19.0	24.0	16.0	21.0				
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0				
Max Green Setting (G _{max}), s	5.0	28.0	10.0	17.0	14.0	19.0	11.0	16.0				
Max Q Clear Time (g _c +t ₁), s	7.0	25.7	12.0	19.0	14.4	15.1	11.5	14.2				
Green Ext Time (g _e), s	0.0	2.1	0.0	0.0	0.0	3.5	0.0	1.6				
Intersection Summary												
HCM 2010 Ctrl Delay												
HCM 2010 LOS												

2017 PM Peak BUILD Conditions Existing Geometry
Synchro 8 Report
2017PBX.syn

Timings
2: Cairo Dr. & Montgomery Blvd.

Terry O. Brown, P.E.
3/30/2015

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	57	205	121	683	46	3	14	64
Volume (vph)	pm+pt	NA	pm+pt	NA	pm+pt	NA	Perm	NA
Turn Type	7	4	3	8	5	2	6	6
Protected Phases	4	8	2	2	6			
Permitted Phases	7	4	3	8	5	2	6	6
Detector Phase	7	4	3	8	5	2	6	6
Switch Phase								
Minimum Initial (s)	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	21.0
Total Split (s)	11.0	22.0	14.0	25.0	10.0	34.0	24.0	24.0
Total Split (%)	15.7%	31.4%	20.0%	35.7%	14.3%	48.6%	34.3%	34.3%
Yellow Time (s)	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
Lost Time Adjust (s)	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
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	Min	Min	Min	Min	Min	Min	Min	Min
Act Effct Green (s)	25.9	18.6	29.4	20.3	27.3	16.6	16.6	16.6
Actuated g/C Ratio	0.37	0.27	0.42	0.29	0.39	0.24	0.24	0.24
v/c Ratio	0.26	0.37	0.37	0.68	0.17	0.04	0.06	0.47
Control Delay	10.9	10.0	13.0	24.1	16.0	7.8	22.8	15.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	10.9	10.0	13.0	24.1	16.0	7.8	22.8	15.6
LOS	B	B	B	C	B	A	C	B
Approach Delay	10.1	22.5	13.6	16.2				
Approach LOS	B	C	B	B				



2017 AM Peak NOBUILD Conditions Existing Geometry
Synchro 8 Report
2017ANX.syn

HCM 2010 Signalized Intersection Summary
2: Cairo Dr. & Montgomery Blvd.

Terry O. Brown, P.E.
3/30/2015

Movement	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	57	205	121	683	46	3	14	64
Volume (veh/h)	7	4	14	3	8	5	2	12
Number	7	4	14	3	8	5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0
Ped-Bike Adj(A, pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/hln	1845	1845	1845	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	76	273	247	161	911	77	61	4
Adj No. of Lanes	1	3	0	1	3	0	1	1
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Percent Heavy Veh. %	3	3	3	3	3	3	3	3
Cap. veh/h	277	797	372	356	1245	105	452	116
Arrive On Green	0.07	0.24	0.24	0.10	0.26	0.07	0.45	0.31
Sat Flow, veh/h	1757	3357	1568	1757	4733	399	1757	257
Grp Volume(v), veh/h	76	273	247	161	911	77	61	4
Grp Sat Flow(s), veh/hln	1757	1679	1568	1757	1679	1774	1757	0
Q Serve(g.s), s	2.2	4.7	10.0	4.7	12.3	1.5	0.6	0.7
Cycle Q Clear(g.c), s	2.2	4.7	10.0	4.7	12.3	1.5	0.6	0.7
Prop In Lane	1.00	1.00	1.00	1.00	1.00	0.84	1.00	0.63
Lane Grp Cap(c), veh/h	277	797	372	356	883	467	452	0
v/c Ratio(X)	0.27	0.34	0.66	0.45	0.73	0.13	0.03	0.04
Avail Cap(c.s), veh/h	302	815	381	411	959	507	452	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(f)	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.4	22.1	24.2	17.9	23.5	13.4	0.0	10.7
Incr Delay (d2), s/veh	0.5	0.2	4.0	0.9	2.6	5.0	0.1	0.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%)/veh/h	1.1	2.2	4.7	2.3	6.0	6.6	0.7	0.3
LnGrp Delay(d), s/veh	18.9	22.4	28.1	18.8	26.2	13.5	0.0	10.8
LnGrp LOS	B	C	C	B	C	C	B	B
Approach Vol. veh/h	586			1149		86		249
Approach Delay, s/veh	24.3			25.9		12.7		21.9
Approach LOS	C			C		B		C

2017 AM Peak NOBUILD Conditions Existing Geometry
Synchro 8 Report
2017ANX.syn

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBT	SBT
Lane Configurations	144	201	121	694	46	3	32	54
Volume (vph)	pm-pt	NA	pm-pt	NA	pm-pt	NA	Perm	NA
Turn Type	7	4	3	8	5	2	6	6
Protected Phases	4	8	3	8	2	2	6	6
Permitted Phases	7	4	3	8	5	2	6	6
Detector Phase	7	4	3	8	5	2	6	6
Switch Phase	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Initial (s)	10.0	21.0	10.0	21.0	10.0	21.0	21.0	21.0
Minimum Split (s)	15.0	24.0	13.0	22.0	10.0	33.0	23.0	23.0
Total Split (%)	21.4%	34.3%	18.6%	31.4%	14.3%	47.1%	32.9%	32.9%
Yellow Time (s)	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
Lost Time Adjust (s)	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
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Min	Min	Min	Min	Min	C-Min	C-Min
Recall Mode	31.4	21.2	27.4	19.2	25.6	25.6	15.2	15.2
Act Eff Green (s)	0.45	0.30	0.39	0.27	0.37	0.37	0.22	0.22
Actuated g/C Ratio	0.53	0.32	0.37	0.74	0.21	0.04	0.15	0.58
Control Delay	15.2	8.5	13.0	26.9	16.9	7.5	23.8	16.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	15.2	8.5	13.0	26.9	16.9	7.5	23.8	16.4
LOS	B	A	B	C	B	A	C	B
Approach Delay	10.3	25.0	14.2	17.4				
Approach LOS	B	C	B	B				
Intersection Summary								
Cycle Length: 70								
Offset: 0 (0%), Referenced to phase 2 NBT and 6 SBT, Start of Green								
Natural Cycle: 65								
Control Type: Actuated-Coordinated								
Maximum v/c Ratio: 0.74								
Intersection Signal Delay: 19.0								
Intersection Capacity Utilization 56.1%								
Analysis Period (min) 15								
Splits and Phases: 2: Cairo Dr. & Montgomery Blvd.								
33 s	42 (R)	13 s	43	24 s	44	22 s	45	22 s
30 s	45	15 s	47	15 s	48	15 s	49	15 s

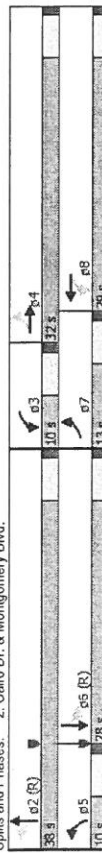
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBT	SBT	SBT
Lane Configurations	144	201	185	121	694	59	46	3	16	32	54	146
Volume (veh/h)	7	4	14	3	8	18	5	2	12	1	6	16
Number	0	0	0	0	0	0	0	0	0	0	0	0
Initial Q (Qb), veh	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Post-Bike Adj(A, pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/m	1845	1845	1900	1845	1845	1900	1845	1845	1900	1845	1845	1900
Adj Flow Rate, veh/h	192	268	247	161	925	92	61	4	21	43	85	195
Adj No. of Lanes	1	3	0	1	3	0	1	1	0	1	1	0
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Percent Heavy Veh. %	3	3	3	3	3	3	3	3	3	3	3	3
Cap. veh/h	323	845	395	370	1108	110	391	112	590	506	147	337
Arrive On Green	0.11	0.25	0.25	0.10	0.24	0.24	0.07	0.44	0.44	0.29	0.29	0.29
Sat Flow, veh/h	1757	3357	1568	1757	4658	462	1757	257	1349	1357	499	1144
Grp Volume(v), veh/h	192	268	247	161	666	351	61	0	25	43	0	280
Grp Sat Flow(s), veh/h/m	1757	1679	1568	1757	1679	1763	1757	0	1607	1357	0	1643
Q Serve(g.s.), s	5.6	4.5	9.8	4.7	13.2	13.3	1.5	0.0	0.6	1.6	0.0	10.1
Cycle Q Clear(g.c.), s	5.6	4.5	9.8	4.7	13.2	13.3	1.5	0.0	0.6	1.6	0.0	10.1
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.84	1.00	0.70	0.70
Lane Grp Cap(c), veh/h	323	845	395	370	799	420	391	0	703	506	0	484
V/C Ratio(X)	0.59	0.32	0.63	0.44	0.83	0.84	0.16	0.00	0.04	0.09	0.00	0.58
Avail Cap(c.a), veh/h	380	911	426	401	815	428	391	0	703	506	0	484
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(f)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.4	21.3	23.3	17.8	25.4	25.4	14.4	0.0	11.2	18.0	0.0	21.0
Incr Delay (d2), s/veh	1.8	0.2	2.6	0.8	7.3	13.4	0.2	0.0	0.1	0.3	0.0	5.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackQ(50%), veh/h	2.8	2.1	4.5	2.3	6.9	8.0	0.7	0.0	0.3	0.5	0.0	5.3
LnGrp Delay(d), s/veh	20.2	21.5	25.8	18.6	32.7	38.8	14.6	0.0	11.3	18.3	0.0	26.0
LnGrp LOS	C	C	C	B	C	D	B	B	B	B	C	C
Approach Vol, veh/h	707	1178	1178	32.5	13.6	24.9						
Approach Delay, s/veh	22.7	22.7	22.7	32.5	13.6	24.9						
Approach LOS	C	C	C	C	B	C						
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	2	3	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	35.6	11.8	22.6	10.0	25.6	12.7	21.7					
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0					
Max Green Setting (Gmax), s	28.0	8.0	19.0	5.0	18.0	10.0	17.0					
Max Q Clear Time (g_c+1), s	2.6	6.7	11.8	3.5	12.1	7.6	15.3					
Green Ext Time (g_c), s	2.1	0.1	5.1	0.0	1.0	0.1	1.4					
Intersection Summary												
HCM 2010 Ctrl Delay	27.7											
HCM 2010 LOS	C											

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	73	944	22	635	19	2	28	6
Volume (vph)	73	944	22	635	19	2	28	6
Turn Type	pm+pt	NA	pm+pt	NA	pm+pt	NA	Perm	NA
Protected Phases	7	4	3	8	5	2	6	6
Permitted Phases	4	8	8	8	5	2	6	6
Deflector Phase	7	4	3	8	5	2	6	6
Switch Phase	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Initial (s)	10.0	21.0	10.0	21.0	10.0	21.0	21.0	21.0
Minimum Split (s)	13.0	32.0	10.0	29.0	10.0	38.0	28.0	28.0
Total Split (%)	16.3%	40.0%	12.5%	36.3%	12.5%	47.5%	35.0%	35.0%
Yellow Time (s)	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
Lost Time Adjust (s)	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
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	Min	Min	Min	Min	Min	Min	Min	Min
Act/Elct Green (s)	31.9	24.6	29.4	23.3	34.3	23.2	23.2	23.2
Actuated G/C Ratio	0.40	0.31	0.37	0.29	0.43	0.43	0.29	0.29
v/c Ratio	0.23	0.65	0.10	0.46	0.04	0.01	0.07	0.16
Control Delay	7.6	19.8	11.7	23.6	16.1	12.8	24.8	8.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	7.6	19.8	11.7	23.6	16.1	12.8	24.8	8.8
LOS	A	B	B	C	B	B	C	A
Approach Delay	18.9							
Approach LOS	B							

Intersection Summary

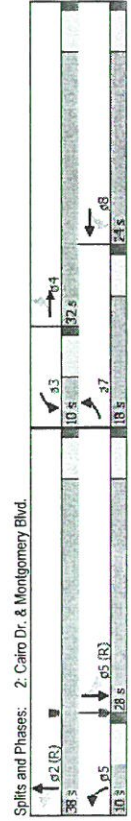
Cycle Length: 80	Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
Natural Cycle: 65	Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.65	Intersection LOS: C
Intersection Signal Delay: 20.1	ICU Level of Service A
Intersection Capacity Utilization 43.5%	
Analysis Period (min) 15	

Splits and Phases: 2: Cairo Dr. & Montgomery Blvd.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBT
Lane Configurations	73	944	19	22	635	18	19	2	3	28	6	72
Volume (veh/h)	73	944	19	22	635	18	19	2	3	28	6	72
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbt)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h	1845	1845	1900	1845	1845	1900	1845	1845	1900	1845	1845	1900
Adj Flow Rate, veh/h	76	983	20	23	661	19	20	2	3	29	6	75
Adj No. of Lanes	1	3	0	1	3	0	1	1	0	1	1	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	344	1519	31	262	1504	43	576	301	451	544	38	479
Arrive On Green	0.02	0.10	0.10	0.06	0.30	0.30	0.06	0.45	0.45	0.33	0.33	0.33
Sat Flow, veh/h	1757	5080	103	1757	5032	144	1757	667	1001	1392	117	1468
Grp Volume(v), veh/h	76	649	354	23	440	240	20	0	5	29	0	81
Grp Sat Flow(s), veh/h	1757	1679	1826	1757	1679	1819	1757	0	1668	1392	0	1586
Q Serve(g, s), s	2.3	14.9	14.9	0.7	8.5	8.5	0.5	0.0	0.1	1.1	0.0	2.9
Cycle Q Clear(g, s), s	2.3	14.9	14.9	0.7	8.5	8.5	0.5	0.0	0.1	1.1	0.0	2.9
Prop In Lane	1.00	0.06	0.06	1.00	1.00	0.08	1.00	0.50	1.00	0.50	0.93	0.93
Lane Grp Cap(c), veh/h	344	1003	546	262	1003	544	576	0	752	544	0	517
V/C Ratio(X)	0.22	0.65	0.65	0.09	0.44	0.44	0.03	0.00	0.01	0.05	0.00	0.16
Avail Cap(c, a), veh/h	410	1133	616	262	1007	546	576	0	752	544	0	517
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.42	0.42	0.42	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.4	32.0	32.0	18.0	22.6	22.6	14.1	0.0	12.1	18.5	0.0	19.1
Incr Delay (d2), s/veh	0.1	0.5	0.8	0.1	0.3	0.6	0.0	0.0	0.0	0.2	0.0	0.6
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), s/veh	1.1	7.0	7.7	0.3	4.0	4.3	0.3	0.0	0.1	0.5	0.0	1.4
LnGrp Delay(d), s/veh	18.5	32.4	32.8	18.1	22.9	23.2	14.1	0.0	12.1	18.7	0.0	19.8
LnGrp LOS	B	C	C	B	C	C	B	B	B	B	B	B
Approach Vol, veh/h	1079			703			25					110
Approach Delay, s/veh	31.6			22.9			13.7					19.5
Approach LOS	C			C			B					B
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	2	3	4	5	6	7	8					
Phs Duration (G+Y+Rc), s	41.1	10.0	28.9	10.0	31.1	10.0	28.9					
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0					
Max Green Setting (Gmax), s	33.0	5.0	27.0	5.0	23.0	8.0	24.0					
Max Q Clear Time (g_c+H), s	2.1	2.7	16.9	2.5	4.9	4.3	10.5					
Green Ext Time (p_c), s	0.6	0.0	7.0	0.0	0.5	0.0	8.7					
Intersection Summary												
HCM 2010 Ctrl Delay				27.5								
HCM 2010 LOS				C								

Movement	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	172	931	22	646	19	2	65	7
Volume (veh/h)	172	931	22	646	19	2	65	7
Turn Type	pm+pt	NA	pm+pt	NA	pm+pt	NA	pm	NA
Protected Phases	7	4	3	8	5	2	6	6
Permitted Phases	4	8	8	8	2	2	6	6
Detector Phase	7	4	3	8	5	2	6	6
Switch Phase	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Initial (s)	10.0	21.0	10.0	21.0	10.0	21.0	21.0	21.0
Minimum Split (s)	18.0	32.0	10.0	24.0	10.0	38.0	28.0	28.0
Total Split (%)	22.5%	40.0%	12.5%	30.0%	12.5%	47.5%	35.0%	35.0%
Yellow Time (s)	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
Lost Time Adjust (s)	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
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	Min	Min	Min	Min	Min	Min	Min	Min
Act Effct Green (s)	34.4	24.3	26.1	20.0	34.6	34.6	23.5	23.5
Actuated g/C Ratio	0.43	0.30	0.33	0.25	0.43	0.43	0.29	0.29
v/c Ratio	0.50	0.65	0.10	0.56	0.04	0.01	0.17	0.24
Control Delay	10.8	20.0	12.3	27.4	15.9	12.8	25.5	7.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	10.8	20.0	12.3	27.4	15.9	12.8	25.5	7.4
LOS	B	B	B	C	B	B	C	A
Approach Delay	18.6	26.9	26.9	26.9	15.3	15.3	13.5	13.5
Approach LOS	B	C	C	C	B	B	B	B



Movement	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations	172	931	22	646	19	2	65	7
Volume (veh/h)	172	931	22	646	19	2	65	7
Number	7	4	3	8	5	2	6	6
Initial Q (Qb), veh	0	0	0	0	0	0	0	0
Ped-Bike Adj(A, pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h	1845	1845	1900	1845	1845	1845	1845	1845
Adj Flow Rate, veh/h	179	970	20	673	30	20	68	7
Adj No. of Lanes	1	3	0	1	3	0	1	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	3	3	3	3	3	3	3	3
Cap. veh/h	364	1489	30	259	541	307	461	557
Arrive On Green	0.03	0.10	0.10	0.06	0.25	0.06	0.46	0.34
Sat Flow, veh/h	1757	5079	105	1757	4944	220	1757	84
Gp Volume(v), veh/h	179	641	349	23	456	247	20	5
Gp Sat Flow(s), veh/h	1757	1679	1828	1757	1806	1757	0	1581
Q Serve(g.s.), s	5.9	14.7	14.8	0.7	9.4	9.5	0.5	0.1
Cycle Q Clear(g.c.), s	5.9	14.7	14.8	0.7	9.4	9.5	0.5	0.1
Prop In Lane	1.00	0.06	1.00	0.12	1.00	0.80	1.00	0.95
Lane Gp Cap(c), veh/h	364	971	528	259	842	453	541	0
V/C Ratio(X)	0.49	0.66	0.66	0.09	0.54	0.55	0.04	0.12
Avail Cap(c.a), veh/h	472	1133	616	259	842	453	541	0
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00
Upstream Filter(f)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.9	32.4	32.4	20.0	26.0	26.0	13.8	0.0
Incr Delay (d2), s/veh	1.0	1.1	2.1	0.1	0.7	1.4	0.0	0.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOf(50%), veh/h	2.9	7.0	7.8	0.4	4.5	4.9	0.3	0.1
LnGp Delay(d), s/veh	21.9	33.5	34.5	20.2	26.7	27.4	13.8	0.0
LnGp LOS	C	C	C	C	C	C	B	C
Approach Vol, veh/h	1169	726	726	26.7	13.4	13.4	19.9	19.9
Approach Delay, s/veh	32.0	26.7	26.7	26.7	13.4	13.4	19.9	19.9
Approach LOS	C	C	C	C	B	B	B	B
Timer	1	2	3	4	5	6	7	8
Assigned Phs	2	3	4	5	6	7	8	8
Phs Duration (G+Y+Rc), s	41.9	10.0	28.1	10.0	31.9	13.1	25.1	25.1
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Max Green Setting (Gmax), s	33.0	5.0	27.0	5.0	23.0	13.0	19.0	19.0
Max Q Clear Time (g_c+1), s	2.1	2.7	16.8	2.5	6.8	7.9	11.5	11.5
Green Ext Time (g_c), s	1.1	0.0	6.4	0.0	0.8	0.2	5.5	5.5
Intersection Summary	28.9							
HCM 2010 Ctrl Delay	C							
HCM 2010 LOS	C							

Lanes, Volumes, Timings
3: Cairo Dr. & Holiday Breeze

Terry O. Brown, P.E.
3/30/2015

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	8	6	114	4	3	179
Volume (vph)	1900	1900	1900	1900	1900	1900
Max Flow (vphpl)	1.00	1.00	1.00	1.00	1.00	1.00
Lane Util. Factor	0.943	0.996				
Flt Protected	0.972	0	1837	0	0	0.999
Satd. Flow (prot)	1691	0	1837	0	0	1843
Flt Permitted	0.972	0	1837	0	0	0.999
Satd. Flow (perm)	1691	0	1837	0	0	1843
Link Speed (mph)	30	30	30	30	30	30
Link Distance (ft)	226	351	8.0	436	9.9	436
Travel Time (s)	5.1	0.75	0.75	0.75	0.75	0.75
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75
Adj. Flow (vph)	11	8	152	5	4	239
Shared Lane Traffic (%)						
Lane Group Flow (vph)	19	0	157	0	0	243
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width (ft)	12	12	12	12	12	12
Link Offset (ft)	0	0	0	0	0	0
Crosswalk Width (ft)	16	16	16	16	16	16
Two way Left Turn Lane	1.00	1.00	1.00	1.00	1.00	1.00
Headway Factor	15	9	9	9	15	15
Turning Speed (mph)	Stop	Free	Free	Free	Free	Free
Sign Control	Stop	Free	Free	Free	Free	Free
Intersection Summary						
Area Type	Other					
Control Type: Unsignalized	ICU Level of Service A					
Intersection Capacity Utilization	21.8%					
Analysis Period (min)	15					

2017 AM Peak NOBUILD Conditions Existing Geometry
Synchro 8 Report
2017ANX.syn

HCM 2010 TWSC
3: Cairo Dr. & Holiday Breeze

Terry O. Brown, P.E.
3/30/2015

Intersection	0.5					
Int Delay, s/veh	0.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	8	6	114	4	3	179
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	75	75	75	75	75	75
Heavy Vehicles, %	3	3	3	3	3	3
Mmnt Flow	11	8	152	5	4	239
Major/Minor	Minor1	Minor2	Major1	Major2	Major1	Major2
Conflicting Flow All	402	155	0	0	157	0
Stage 1	155	-	-	-	-	-
Stage 2	247	-	-	-	-	-
Critical Hdwy	6.43	6.23	-	-	4.13	-
Critical Hdwy Sig 1	5.43	-	-	-	-	-
Critical Hdwy Sig 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	-	-	2.227	-
Pot Cap-1 Maneuver	602	888	-	-	1417	-
Stage 1	871	-	-	-	-	-
Stage 2	792	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	600	888	-	-	1417	-
Mov Cap-2 Maneuver	600	-	-	-	-	-
Stage 1	871	-	-	-	-	-
Stage 2	790	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	10.3	0	0.1			
HCM LOS	B					
Minor Lane/Minor Mmnt	NBT	NBR	WBL	WBR	SBL	SBT
Capacity (veh/h)	-	-	697	1417	-	-
HCM Lane V/C Ratio	-	-	0.027	0.003	-	-
HCM Control Delay (s)	-	-	10.3	7.5	-	-
HCM Lane LOS	-	-	B	A	-	-
HCM 95th %ile Q(veh)	-	-	0.1	0	-	-

2017 AM Peak NOBUILD Conditions Existing Geometry
Synchro 8 Report
2017ANX.syn

Lane Group	WBL	WBR	NBT	NBR	SEL	SBT
Lane Configurations	W	P	P	P	4	4
Volume (vph)	8	6	116	4	3	182
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Flt	0.943		0.996			
Flt Protected	0.972					0.999
Satd. Flow (prot)	1691	0	1837	0	0	1843
Flt Permitted	0.972					0.999
Satd. Flow (perm)	1691	0	1837	0	0	1843
Link Speed (mph)	30		30			30
Link Distance (ft)	226		60			436
Travel Time (s)	5.1		1.4			9.9
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75
Adj. Flow (vph)	11	8	155	5	4	243
Shared Lane Traffic (%)						
Lane Group Flow (vph)	19	0	160	0	0	247
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width (ft)	12		0			0
Link Offset (ft)	0		0			0
Crosswalk Width (ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9			15	
Sign Control	Stop	Free	Free			Free
Intersection Summary	Other					
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	22.0%					
Analysis Period (min)	15					
	ICU Level of Service A					

Intersection	WBL	WBR	NBT	NBR	SEL	SBT
Int Delay, s/veh	0.5					
Movement	WBL	WBR	NBT	NBR	SEL	SBT
Vol, veh/h	8	6	116	4	3	182
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	-
Grade, %	0	-	0	-	-	0
Peak Hour Factor	75	75	75	75	75	75
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	11	8	155	5	4	243
Major/Minor	Minor1	Minor1	Major1	Major2		
Conflicting Flow All	408	157	0	0	160	0
Stage 1	157	-	-	-	-	-
Stage 2	251	-	-	-	-	-
Critical Hdwy	6.43	6.23	-	-	4.13	-
Critical Hdwy Sig 1	5.43	-	-	-	-	-
Critical Hdwy Sig 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	-	-	2.227	-
Pot Cap-1 Maneuver	597	866	-	-	1413	-
Stage 1	869	-	-	-	-	-
Stage 2	788	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	595	866	-	-	1413	-
Mov Cap-2 Maneuver	595	-	-	-	-	-
Stage 1	869	-	-	-	-	-
Stage 2	786	-	-	-	-	-
Approach	WB		NB		SB	
HCM Control Delay, s	10.3		0		0.1	
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBRWBLnt	SEL	SBT		
Capacity (veh/h)	-	-	692	1413	-	-
HCM Lane V/C Ratio	-	-	0.027	0.003	-	-
HCM Control Delay (s)	-	-	10.3	7.6	-	-
HCM Lane LOS	-	-	B	A	-	-
HCM 95th %ile Q(veh)	-	-	0.1	0	-	-

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	W	W	W	W	W
Volume (vph)	14	1	72	21	10	92
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Flt	0.992		0.970			
Flt Protected	0.955					0.956
Satd. Flow (prot)	1748	0	1789	0	0	1837
Flt Permitted	0.955					0.956
Satd. Flow (perm)	1748	0	1789	0	0	1837
Link Speed (mph)	30		30			30
Link Distance (ft)	226		351			436
Travel Time (s)	5.1		8.0			9.9
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.75
Adj. Flow (vph)	17	1	87	25	12	123
Shared Lane Traffic (%)						
Lane Group Flow (vph)	18	0	112	0	0	135
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop	Free	Free	Free	Free	Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	22.1%					
Analysis Period (min)	15					
ICU Level of Service A						

Intersection	WBL	WBR	NBT	NBR	SBL	SBT
Int Delay, s/veh	1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol. veh/h	14	1	72	21	10	92
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	83	83	83	83	83	75
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	17	1	87	25	12	123
Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	246	99	0	0	112	0
Stage 1	99	-	-	-	-	-
Stage 2	147	-	-	-	-	-
Critical Hdwy	6.43	6.23	-	-	4.13	-
Critical Hdwy Sig 1	5.43	-	-	-	-	-
Critical Hdwy Sig 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	-	-	2.227	-
Pot Cap-1 Maneuver	740	954	-	-	1471	-
Stage 1	922	-	-	-	-	-
Stage 2	878	-	-	-	-	-
Platoon blocked, %						
Mov Cap-1 Maneuver	733	954	-	-	1471	-
Mov Cap-2 Maneuver	733	-	-	-	-	-
Stage 1	922	-	-	-	-	-
Stage 2	870	-	-	-	-	-
Approach	WB		NB		SB	
HCM Control Delay, s	10		0		0.7	
HCM LOS	B					

Minor Lane/Major Mvmt	NBT	NBR	WBL	WBR	SBL	SBT
Capacity (veh/h)	-	-	744	1471	-	-
HCM Lane V/C Ratio	-	-	0.024	0.008	-	-
HCM Control Delay (s)	-	-	10	7.5	0	-
HCM Lane LOS	-	-	B	A	A	-
HCM 95th %ile Q(veh)	-	-	0.1	0	-	-

Lane Group	WBL	WBR	NBT	NBR	SBT	SBT
Lane Configurations	1	1	1	1	1	1
Volume (vph)	14	1	75	21	10	95
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Flt	0.992	0.971				
Flt Protected	0.955					0.995
Satd. Flow (prot)	1748	0	1791	0	0	1835
Flt Permitted	0.955					0.995
Satd. Flow (perm)	1748	0	1791	0	0	1835
Link Speed (mph)	30	30	30	30	30	30
Link Distance (ft)	226	60	60	60	60	436
Travel Time (s)	5.1	1.4	1.4	1.4	1.4	9.9
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83
Adj. Flow (vph)	17	1	90	25	12	114
Shared Lane Traffic (%)						
Lane Group Flow (vph)	18	0	115	0	0	126
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12	0	0	0	0	0
Link Offset(ft)	0	0	0	0	0	0
Crosswalk Width(ft)	16	16	16	16	16	16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop	Free	Free		Free	Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	22.2%					
Analysis Period (min)	15					
	ICU Level of Service A					

Intersection	WBL	WBR	NBT	NBR	SBT	SBT
Int Delay, s/veh	1					
Movement	1	1	1	1	1	1
Vol, veh/h	14	1	75	21	10	95
Conflicting Peds. #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	-
Grade, %	0	-	0	-	-	-
Peak Hour Factor	83	83	83	83	83	83
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	17	1	90	25	12	114
Major/Minor	Minor1	Minor1	Major1	Major1	Major2	Major2
Conflicting Flow All	242	103	0	0	116	0
Stage 1	103	-	-	-	-	-
Stage 2	139	-	-	-	-	-
Critical Hdwy	6.43	6.23	-	-	4.13	-
Critical Hdwy Sig 1	5.43	-	-	-	-	-
Critical Hdwy Sig 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	-	-	2.227	-
Pot Cap-1 Maneuver	744	949	-	-	1466	-
Stage 1	919	-	-	-	-	-
Stage 2	885	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	737	949	-	-	1466	-
Mov Cap-2 Maneuver	737	-	-	-	-	-
Stage 1	919	-	-	-	-	-
Stage 2	877	-	-	-	-	-
Approach	WB	WB	NB	SB	SB	SB
HCM Control Delay, s	9.9	9.9	0	0	0.7	0.7
HCM LOS	A	A				
Minor Lane/Major Mvmt	NBT	NBRWBLN1	SBT	SBT		
Capacity (veh/h)	-	-	748	1466	-	-
HCM Lane V/C Ratio	-	-	0.024	0.008	-	-
HCM Control Delay (s)	-	-	9.9	7.5	0	0
HCM Lane LOS	-	-	A	A	A	A
HCM 95th %ile Q(veh)	-	-	0.1	0	-	-

Lanes, Volumes, Timings
4: Montgomery Blvd. & "A"

Terry O. Brown, P.E.
3/30/2015

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	←←←	←←←	←←←	←←←	←←←	←←←
Volume (vph)	0	532	841	36	0	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	125	0	0	0	0
Storage Lanes	0	1	0	1	0	1
Taper Length (ft)	25	0	0	25	0	0
Lane Util. Factor	1.00	0.91	0.91	1.00	1.00	0.865
Fr				0.850		0.865
Flt Protected	0	5036	5036	1568	0	1566
Flt Permitted	0	5036	5036	1568	0	1566
Satd. Flow (vph)	0	5036	5036	1568	0	1566
Link Speed (mph)	30	30	30	30	30	30
Link Distance (ft)	742	213	198	198	213	742
Travel Time (s)	16.9	4.8	4.8	4.8	4.5	16.9
Peak Hour Factor	0.75	0.75	0.75	0.75	0.85	0.85
Adj. Flow (vph)	0	709	1121	48	0	40
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	709	1121	48	0	40
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width (ft)	12	12	12	0	0	0
Link Offset (ft)	0	0	0	0	0	0
Crosswalk Width (ft)	16	16	16	16	16	16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	Free	Free	9	15	9
Sign Control		Free	Free	Stop	Stop	Stop
Intersection Summary						
Area Type	Other					
Control Type	Unsignalized					
Intersection Capacity Utilization	26.2%					
Analysis Period (min)	15					
ICU Level of Service A						

2017 AM Peak BUILD Conditions Existing Geometry

Synchro 8 Report
2017ABX.syn

HCM 2010 TWSC
4: Montgomery Blvd. & "A"

Terry O. Brown, P.E.
3/30/2015

Intersection	EBL	EBT	WBT	WBR	SBL	SBR
Int Delay, s/veh	0.3					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Vol veh/h	0	532	841	36	0	34
Conflicting Peds. #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	125	-	0
Veh in Median Storage, #	-	0	0	0	0	-
Grade, %	-	0	0	0	0	-
Peak Hour Factor	75	75	75	75	85	85
Heavy Vehicles, %	3	3	3	3	3	3
Mgmt Flow	0	709	1121	48	0	40
Major/Minor	Major1	Major1	Major2	Major2	Minor2	Minor2
Conflicting Flow All	1121	0	-	0	1405	561
Stage 1	-	-	-	-	1121	-
Stage 2	-	-	-	-	284	-
Critical Hwy	5.36	-	-	-	5.76	7.16
Critical Hwy Sig 1	-	-	-	-	6.66	-
Critical Hwy Sig 2	-	-	-	-	6.06	-
Follow-up Hdwy	3.13	-	-	-	3.83	3.93
Pot Cap-1 Maneuver	339	-	-	-	191	401
Stage 1	-	-	-	-	202	-
Stage 2	-	-	-	-	675	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	339	-	-	-	191	401
Mov Cap-2 Maneuver	-	-	-	-	191	-
Stage 1	-	-	-	-	202	-
Stage 2	-	-	-	-	675	-
Approach	EB	EBT	WBT	WBR	SBL	SBR
HCM Control Delay, s	0				15	
HCM LOS					C	
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBL	SBR
Capacity (veh/h)	339	-	-	-	401	-
HCM Lane V/C Ratio	-	-	-	-	0.1	-
HCM Control Delay (s)	0	-	-	-	15	-
HCM Lane LOS	A	-	-	-	C	-
HCM 95th %ile Q(veh)	0	-	-	-	0.3	-

2017 AM Peak BUILD Conditions Existing Geometry

Synchro 8 Report
2017ABX.syn

Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	←←←	←←←	→→→	→→→	←←←	←←←
Volume (vph)	0	1125	748	28	0	47
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	125	0	0	0
Storage Lanes	0	0	1	0	0	1
Taper Length (ft)	25	0	0	0	25	0
Lane Util. Factor	1.00	0.91	0.91	1.00	1.00	1.00
Flt Protected	0	5036	5036	1588	0	1596
Satd. Flow (prot)	0	5036	5036	1588	0	1596
Flt Permitted	0	5036	5036	1588	0	1596
Satd. Flow (perm)	0	5036	5036	1588	0	1596
Link Speed (mph)	30	30	30	30	30	30
Link Distance (ft)	742	213	196	196	4.5	4.5
Travel Time (s)	16.9	4.8	0.96	0.96	0.85	0.85
Peak Hour Factor	0.96	0.96	0.96	0.96	0.85	0.85
Adj. Flow (vph)	0	1172	779	29	0	55
Shared Lane Traffic (%)	0	1172	779	29	0	55
Lane Group Flow (vph)	No	No	No	No	No	No
Enter Blocked Intersection	Left	Left	Left	Right	Left	Right
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width (ft)	12	12	12	12	0	0
Link Offset (ft)	0	0	0	0	0	0
Crosswalk Width (ft)	16	16	16	16	16	16
Two way Left Turn Lane	1.00	1.00	1.00	1.00	1.00	1.00
Headway Factor	15	15	15	15	15	15
Turning Speed (mph)	Free	Free	Free	Free	Stop	Stop
Sign Control	Free	Free	Free	Free	Stop	Stop
Intersection Summary	ICU Level of Service A					
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	25.1%					
Analysis Period (min)	15					

Intersection	EBL	EBT	WBT	WBR	SBL	SBR
Int Delay, s/veh	0.3					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Vol, veh/h	0	1125	748	28	0	47
Conflicting Peds. #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	125	-	0
Veh in Median Storage, #	-	0	0	0	0	-
Grade, %	-	0	-	0	-	-
Peak Hour Factor	96	96	96	96	85	85
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	0	1172	779	29	0	55
Major/Minor	Major1					
Conflicting Flow All	779	0	-	0	1248	390
Stage 1	-	-	-	-	779	-
Stage 2	-	-	-	-	468	-
Critical Hdwy	5.36	-	-	-	5.76	7.16
Critical Hdwy Sig 1	-	-	-	-	6.66	-
Critical Hdwy Sig 2	-	-	-	-	6.06	-
Follow-up Hdwy	3.13	-	-	-	3.83	3.93
Pot Cap-1 Maneuver	496	-	-	-	231	518
Stage 1	-	-	-	-	327	-
Stage 2	-	-	-	-	542	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	496	-	-	-	231	518
Mov Cap-2 Maneuver	-	-	-	-	231	-
Stage 1	-	-	-	-	327	-
Stage 2	-	-	-	-	542	-
Approach	EB	-	WB	-	SB	-
HCM Control Delay, s	0	-	0	-	12.8	-
HCM LOS	-	-	-	-	B	-
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBL	SBR
Capacity (veh/h)	496	-	-	-	518	-
HCM Lane V/C Ratio	-	-	-	-	0.107	-
HCM Control Delay (s)	0	-	-	-	12.8	-
HCM Lane LOS	A	-	-	-	B	-
HCM 95th %ile Q(veh)	0	-	-	-	0.4	-

Lanes, Volumes, Timings

5: Cairo Dr. & "B"

Terry O. Brown, P.E.
3/30/2015



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	5	5	15	114	181	9
Volume (vph)	1900	1900	1900	1900	1900	1900
Ideal Flow (vphpl)	1.00	1.00	1.00	1.00	1.00	1.00
Lane Util. Factor	0.876	0.996	0.994	0.994	0.994	0.994
Flt Protected	1609	0	0	1834	1834	0
Satd. Flow (prot)	0.996	0	0	0.994	0.994	0
Flt Permitted	1609	0	0	1834	1834	0
Satd. Flow (perm)	30	30	30	30	30	30
Link Speed (mph)	224	291	291	60	60	60
Travel Time (s)	5.1	6.6	6.6	1.4	1.4	1.4
Peak Hour Factor	0.85	0.85	0.75	0.75	0.75	0.75
Adj. Flow (vph)	6	66	20	152	241	12
Shared Lane Traffic (%)						
Lane Group Flow (vph)	72	0	0	172	253	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12	12	12	12	12	12
Link Offset(ft)	0	0	0	0	0	0
Crosswalk Width(ft)	16	16	16	16	16	16
Two Way Left Turn Lane	1.00	1.00	1.00	1.00	1.00	1.00
Headway Factor	15	9	15	15	15	9
Turning Speed (mph)	Stop	Stop	Free	Free	Free	Free
Sign Control	Stop	Stop	Free	Free	Free	Free
Intersection Summary						
Area Type	Other					
Control Type: Unsignalized	ICU Level of Service A					
Intersection Capacity Utilization	29.0%					
Analysis Period (min)	15					

2017 AM Peak BUILD Conditions Existing Geometry

Synchro 8 Report
2017ABX.syn

HCM 2010 TWSC

5: Cairo Dr. & "B"

Terry O. Brown, P.E.
3/30/2015

Intersection	1.8					
Int Delay, s/veh	5	56	15	114	181	9
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Vol, veh/h	0	0	0	0	0	0
Conflicting Peds. #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	-	-	-
Peak Hour Factor	85	85	75	75	75	75
Heavy Vehicles, %	3	3	3	3	3	3
Mgmt Flow	6	66	20	152	241	12
Major/Minor	Minor2	Major1	Major1	Major2	Major2	Major2
Conflicting Flow All	439	247	253	0	-	0
Stage 1	247	-	-	-	-	-
Stage 2	192	-	-	-	-	-
Critical Hdwy	6.43	6.23	4.13	-	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	2.227	-	-	-
Pot Cap-1 Maneuver	573	789	1306	-	-	-
Stage 1	792	-	-	-	-	-
Stage 2	838	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	563	789	1306	-	-	-
Mov Cap-2 Maneuver	563	-	-	-	-	-
Stage 1	792	-	-	-	-	-
Stage 2	824	-	-	-	-	-
Approach	EB	NB	SB			
HCM Control Delay, s	10.2	0.9	0			
HCM LOS	B	B	0			
Minor Lane/Major Mvmt	NBL	NBT	EBL	EBR	SBT	SBR
Capacity (veh/h)	1306	-	764	-	-	-
HCM Lane V/C Ratio	0.015	-	0.094	-	-	-
HCM Control Delay (s)	7.8	0	10.2	-	-	-
HCM Lane LOS	A	A	B	-	-	-
HCM 95th %ile Q(veh)	0	-	0.3	-	-	-

2017 AM Peak BUILD Conditions Existing Geometry

Synchro 8 Report
2017ABX.syn

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	5	85	14	84	103	6
Volume (vph)	1900	1900	1900	1900	1900	1900
Ideal Flow (vphpl)	1.00	1.00	1.00	1.00	1.00	1.00
Lane Util. Factor	0.873				0.993	
Flt Protected	0.997			0.993		
Satd. Flow (prot)	1606	0	0	1832	1832	0
Flt Permitted	0.997			0.993		
Satd. Flow (perm)	1606	0	0	1832	1832	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	224			291	60	
Travel Time (s)	5.1			6.6	1.4	
Peak Hour Factor	0.85	0.85	0.83	0.83	0.83	0.83
Adj. Flow (vph)	6	100	17	101	124	7
Shared Lane Traffic (%)						
Lane Group Flow (vph)	106	0	0	118	131	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15	Free	Free	9
Sign Control	Stop			Free	Free	
Intersection Summary	Other					
Area Type:	Unsignalized					
Control Type:	ICU Level of Service A					
Intersection Capacity Utilization	24.1%					
Analysis Period (min)	15					

Intersection	EBL	EBR	NBL	NBT	SBT	SBR
Int Delay, s/veh	3.2					
Movement	5	85	14	84	103	6
Vol. veh/h	0	0	0	0	0	0
Conflicting Peds. #/hr	Stop	None	Free	Free	Free	Free
Sign Control	Stop	None	Free	Free	Free	Free
RT Channelized	0	0	0	0	0	0
Storage Length	0	0	0	0	0	0
Veh in Median Storage, #	0	0	0	0	0	0
Grade, %	0	0	0	0	0	0
Peak Hour Factor	85	85	83	83	83	83
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	6	100	17	101	124	7
Major/Minor	Minor2	Major1	Major1	Minor2	Major2	Minor1
Conflicting Flow All	263	128	131	0	0	0
Stage 1	128	-	-	-	-	-
Stage 2	135	-	-	-	-	-
Critical Hdwy	6.43	6.23	4.13	-	-	-
Critical Hdwy Sig 1	5.43	-	-	-	-	-
Critical Hdwy Sig 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	2.227	-	-	-
Pot Cap-1 Maneuver	724	919	1448	-	-	-
Stage 1	895	-	-	-	-	-
Stage 2	889	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	715	919	1448	-	-	-
Mov Cap-2 Maneuver	715	-	-	-	-	-
Stage 1	895	-	-	-	-	-
Stage 2	878	-	-	-	-	-
Approach	EB	NB	SB	EB	NB	SB
HCM Control Delay, s	9.5	1.1	0	9.5	1.1	0
HCM LOS	A	-	-	A	-	-
Minor Lane/Major Mvmt	NBL	NBT	EBL	NBL	NBT	EBL
Capacity (veh/h)	1448	-	905	1448	-	905
HCM Lane V/C Ratio	0.012	-	0.117	0.012	-	0.117
HCM Control Delay (s)	7.5	0	9.5	7.5	0	9.5
HCM Lane LOS	A	A	A	A	A	A
HCM 95th %ile Q(veh)	0	-	0.4	0	-	0.4

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Route / Ruta 1 Juan Tabo Blvd.

Effective: 5/17/2014



Route 1 - Weekday Southbound

WENONAH & TRAMWAY	JUAN TABO & CENTRAL	JUAN TABO & LOMAS	JUAN TABO & MENAUL	JUAN TABO & MONTGOMERY	LOWELL & SPAIN	EUBANK & ACADEMY
G	F	E	D	C	B	A
6:07a	6:11a	6:15a	6:20a	6:25a	6:30a	6:38a
6:25a	6:29a	6:33a	6:38a	6:43a	6:48a	6:56a
6:50a	6:54a	6:58a	7:03a	7:08a	7:13a	7:21a
7:22a	7:26a	7:30a	7:35a	7:40a	7:45a	7:53a
7:47a	7:51a	7:55a	8:00a	8:05a	8:10a	8:18a
8:12a	8:16a	8:20a	8:25a	8:30a	8:35a	8:43a
8:37a	8:41a	8:45a	8:50a	8:55a	9:00a	9:08a
9:27a	9:31a	9:35a	9:40a	9:45a	9:50a	9:58a
10:34a	10:39a	10:43a	10:49a	10:55a	11:00a	11:08a
11:48a	11:53a	11:57a	12:03p	12:09p	12:14p	12:22p
12:59p	1:04p	1:08p	1:14p	1:20p	1:25p	1:33p
2:06p	2:11p	2:15p	2:21p	2:27p	2:32p	2:40p
2:31p	2:36p	2:41p	2:47p	2:53p	2:59p	3:08p
2:56p	3:01p	3:06p	3:12p	3:18p	3:24p	3:33p
3:19p	3:24p	3:29p	3:35p	3:41p	3:47p	3:56p
3:46p	3:51p	3:56p	4:02p	4:08p	4:14p	4:23p
4:12p	4:17p	4:22p	4:28p	4:34p	4:39p	4:47p
4:36p	4:41p	4:46p	4:52p	4:58p	5:03p	5:11p
5:01p	5:06p	5:10p	5:16p	5:22p	5:27p	5:35p
5:27p	5:32p	5:36p	5:41p	5:47p	5:52p	6:00p
5:52p	5:57p	6:01p	6:06p	6:12p	6:17p	6:25p

Route 1 - Weekday Northbound

EUBANK & ACADEMY	JUAN TABO & MONTGOMERY	JUAN TABO & MENAUL	JUAN TABO & LOMAS	JUAN TABO & CENTRAL	WENONAH & TRAMWAY
A	C	D	E	F	G
6:20a	6:14a	6:09a	6:05a	6:02a	5:56a
6:45a	6:39a	6:34a	6:30a	6:27a	6:21a
7:13a	7:07a	7:02a	6:56a	6:52a	6:46a
7:38a	7:32a	7:27a	7:21a	7:17a	7:11a
8:03a	7:57a	7:52a	7:46a	7:42a	7:36a
8:28a	8:22a	8:17a	8:11a	8:07a	8:01a
8:53a	8:47a	8:42a	8:36a	8:32a	8:26a
9:23a	9:17a	9:12a	9:06a	9:02a	8:56a
10:32a	10:26a	10:20a	10:14a	10:09a	10:03a
11:45a	11:39a	11:33a	11:27a	11:22a	11:16a
12:57p	12:51p	12:45p	12:39p	12:34p	12:28p
2:04p	1:58p	1:51p	1:45p	1:40p	1:34p
3:15p	3:09p	3:02p	2:56p	2:51p	2:45p
3:43p	3:37p	3:32p	3:26p	3:22p	3:16p
4:08p	4:02p	3:57p	3:51p	3:47p	3:41p
4:33p	4:27p	4:22p	4:16p	4:12p	4:06p
4:58p	4:52p	4:47p	4:41p	4:37p	4:31p
5:21p	5:15p	5:10p	5:04p	5:00p	4:54p
5:45p	5:39p	5:34p	5:29p	5:25p	5:19p
6:10p	6:04p	5:59p	5:54p	5:50p	5:44p

Route 1 - Saturday Southbound

10:39a	10:43a	10:47a	10:52a	10:58a	11:03a	11:11a
11:49a	11:53a	11:57a	12:02p	12:08p	12:13p	12:21p
12:59p	1:03p	1:07p	1:12p	1:18p	1:23p	1:31p
2:09p	2:13p	2:17p	2:22p	2:28p	2:33p	2:41p
3:18p	3:22p	3:26p	3:31p	3:37p	3:42p	3:50p
4:28p	4:32p	4:36p	4:41p	4:47p	4:52p	5:00p

Route 1 - Saturday Northbound

10:11a	10:17a	10:21a	10:26a	10:31a	10:37a
11:21a	11:27a	11:31a	11:36a	11:41a	11:47a
12:31p	12:37p	12:41p	12:46p	12:51p	12:57p
1:41p	1:47p	1:51p	1:56p	2:01p	2:07p
2:51p	2:57p	3:00p	3:05p	3:10p	3:16p
4:01p	4:07p	4:10p	4:15p	4:20p	4:26p
5:11p	5:17p	5:20p	5:25p	5:30p	5:36p

Route 1 - Sunday Southbound

10:38a	10:42a	10:46a	10:51a	10:57a	11:02a	11:10a
11:48a	11:52a	11:56a	12:01p	12:07p	12:12p	12:20p
12:58p	1:02p	1:06p	1:11p	1:17p	1:22p	1:30p
2:08p	2:12p	2:16p	2:21p	2:27p	2:32p	2:40p
3:18p	3:22p	3:26p	3:31p	3:37p	3:42p	3:50p
4:28p	4:32p	4:36p	4:41p	4:47p	4:52p	5:00p

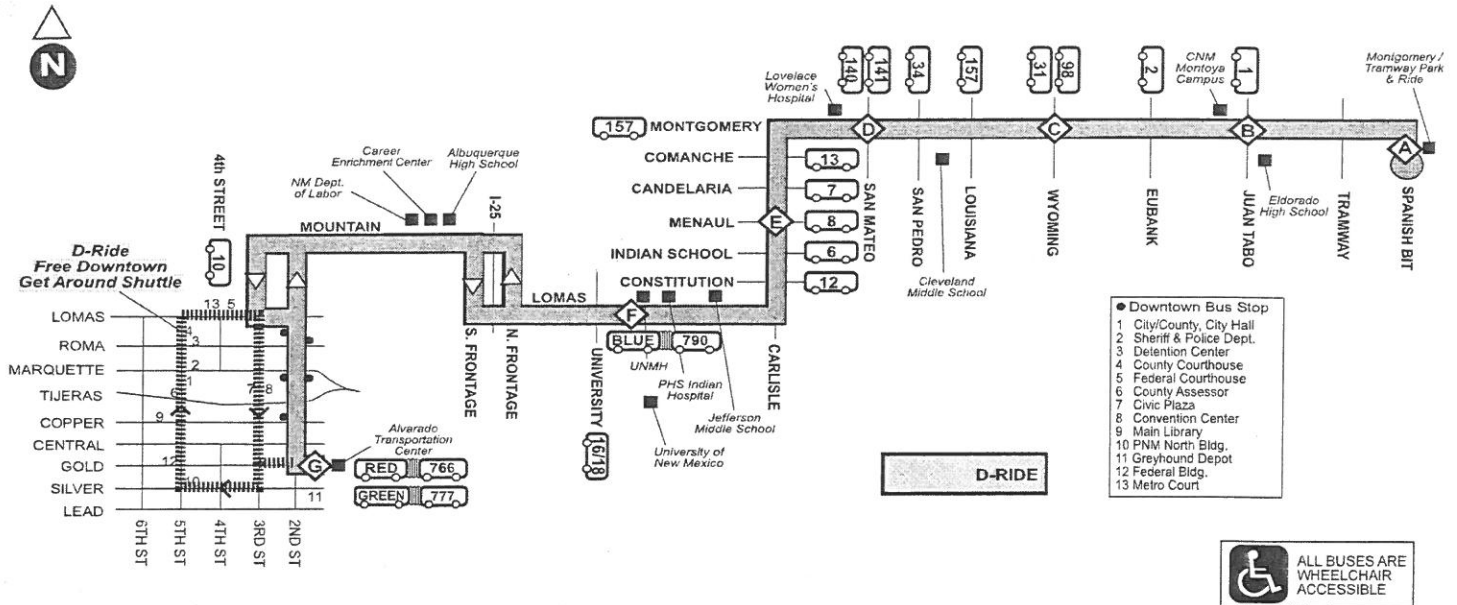
Route 1 - Sunday Northbound

10:12a	10:18a	10:21a	10:26a	10:31a	10:36a
11:22a	11:28a	11:31a	11:36a	11:41a	11:46a
12:32p	12:38p	12:41p	12:46p	12:51p	12:56p
1:42p	1:48p	1:51p	1:56p	2:01p	2:06p
2:52p	2:58p	3:01p	3:06p	3:11p	3:16p
4:02p	4:08p	4:11p	4:16p	4:21p	4:26p

Route 5 / Ruta 5

Montgomery Blvd. / Carlisle Blvd.

Effective: 12/15/2012

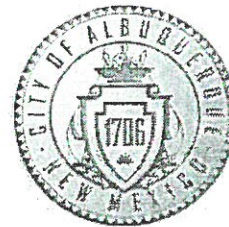


Route 5 - Weekday West / Southbound

ALVARADO TRANSPORTATION CENTER	UNIVERSITY OF NM HOSPITAL	CARLISLE & MENAUL	MONTGOMERY & SAN MATEO	MONTGOMERY & WYOMING	MONTGOMERY & JUAN TABO	MONTGOMERY TRAMWAY PARK
A	B	C	D	E	F	G
5:16a	5:19a	5:24a	5:31a	5:40a	5:47a	6:00a
5:49a	5:52a	5:57a	6:04a	6:13a	6:20a	6:33a
6:22a	6:25a	6:31a	6:38a	6:47a	6:54a	7:08a
6:45a	6:49a	6:56a	7:03a	7:15a	7:23a	7:39a
7:08a	7:12a	7:19a	7:26a	7:38a	7:46a	8:02a
7:30a	7:34a	7:41a	7:48a	8:00a	8:08a	8:23a
7:53a	7:57a	8:04a	8:11a	8:22a	8:30a	8:45a
8:13a	8:16a	8:23a	8:31a	8:42a	8:50a	9:05a
8:33a	8:36a	8:43a	8:51a	9:02a	9:10a	9:25a
8:52a	8:55a	9:02a	9:10a	9:21a	9:29a	9:44a
9:12a	9:15a	9:22a	9:30a	9:41a	9:49a	10:04a
9:33a	9:36a	9:43a	9:51a	10:02a	10:10a	10:25a
9:55a	9:58a	10:05a	10:12a	10:24a	10:32a	10:47a
10:20a	10:23a	10:30a	10:37a	10:49a	10:57a	11:12a
10:50a	10:53a	11:00a	11:07a	11:19a	11:27a	11:42a
11:15a	11:18a	11:25a	11:32a	11:44a	11:52a	12:07p
11:40a	11:44a	11:50a	11:58a	12:10p	12:18p	12:34p
12:05p	12:09p	12:15p	12:23p	12:35p	12:43p	12:59p
12:35p	12:39p	12:45p	12:53p	1:05p	1:13p	1:29p
1:00p	1:04p	1:10p	1:18p	1:30p	1:38p	1:54p
1:20p	1:24p	1:30p	1:38p	1:51p	1:59p	2:15p
1:40p	1:44p	1:50p	1:58p	2:11p	2:19p	2:35p
2:00p	2:04p	2:10p	2:18p	2:31p	2:39p	2:55p
2:18p	2:22p	2:29p	2:37p	2:50p	2:59p	3:15p
2:38p	2:42p	2:49p	2:57p	3:10p	3:19p	3:35p
2:58p	3:02p	3:09p	3:17p	3:30p	3:39p	3:55p
3:16p	3:20p	3:27p	3:35p	3:48p	3:57p	4:13p
3:36p	3:40p	3:47p	3:55p	4:08p	4:17p	4:33p
3:56p	4:00p	4:07p	4:15p	4:28p	4:37p	4:53p
4:16p	4:20p	4:27p	4:35p	4:48p	4:57p	5:12p
4:37p	4:41p	4:48p	4:56p	5:08p	5:16p	5:30p
4:57p	5:01p	5:08p	5:16p	5:28p	5:36p	5:50p
5:17p	5:21p	5:28p	5:36p	5:48p	5:55p	6:09p
5:40p	5:44p	5:50p	5:57p	6:08p	6:15p	6:28p
6:17p	6:20p	6:26p	6:33p	6:43p	6:50p	7:03p
6:43p	6:46p	6:52p	6:59p	7:09p	7:16p	7:29p
7:13p	7:16p	7:22p	7:29p	7:39p	7:46p	7:59p
7:43p	7:46p	7:52p	7:59p	8:09p	8:16p	8:29p
8:48p	8:51p	8:57p	9:04p	9:14p	9:21p	9:34p

Route 5 - Weekday North / Eastbound

ALVARADO TRANSPORTATION CENTER	UNIVERSITY OF NM HOSPITAL	CARLISLE & MENAUL	MONTGOMERY & SAN MATEO	MONTGOMERY & WYOMING	MONTGOMERY & JUAN TABO	MONTGOMERY TRAMWAY PARK
G	F	E	D	C	B	A
6:17a	6:30a	6:37a	6:46a	6:54a	7:00a	7:04a
6:38a	6:51a	6:58a	7:07a	7:15a	7:21a	7:25a
7:10a	7:24a	7:32a	7:42a	7:50a	7:56a	8:00a
7:32a	7:47a	7:56a	8:06a	8:14a	8:20a	8:24a
7:55a	8:10a	8:18a	8:28a	8:36a	8:42a	8:46a
8:15a	8:29a	8:37a	8:47a	8:55a	9:01a	9:05a
8:37a	8:51a	8:59a	9:09a	9:17a	9:23a	9:27a
8:55a	9:09a	9:17a	9:27a	9:35a	9:41a	9:45a
9:15a	9:29a	9:37a	9:47a	9:55a	10:01a	10:05a
9:35a	9:49a	9:57a	10:07a	10:15a	10:22a	10:26a
9:53a	10:07a	10:16a	10:26a	10:35a	10:42a	10:46a
10:15a	10:29a	10:38a	10:48a	10:57a	11:04a	11:08a
10:40a	10:54a	11:03a	11:13a	11:22a	11:29a	11:33a
11:05a	11:19a	11:28a	11:38a	11:47a	11:54a	11:58a
11:30a	11:44a	11:53a	12:03p	12:12p	12:19p	12:23p
11:55a	12:09p	12:18p	12:28p	12:37p	12:44p	12:48p
12:20p	12:34p	12:44p	12:54p	1:04p	1:11p	1:15p
12:45p	12:59p	1:09p	1:19p	1:29p	1:36p	1:40p
1:10p	1:24p	1:34p	1:45p	1:54p	2:02p	2:06p
1:30p	1:45p	1:55p	2:07p	2:18p	2:26p	2:31p
1:50p	2:05p	2:15p	2:27p	2:38p	2:46p	2:51p
2:10p	2:26p	2:36p	2:47p	2:58p	3:06p	3:11p
2:30p	2:45p	2:57p	3:08p	3:19p	3:27p	3:31p
2:50p	3:05p	3:17p	3:28p	3:39p	3:47p	3:51p
3:10p	3:25p	3:37p	3:48p	3:59p	4:07p	4:11p
3:30p	3:45p	3:57p	4:08p	4:19p	4:27p	4:31p
3:50p	4:05p	4:17p	4:28p	4:39p	4:47p	4:51p
4:10p	4:25p	4:37p	4:48p	4:59p	5:07p	5:11p
4:30p	4:45p	4:57p	5:08p	5:19p	5:27p	5:31p
4:50p	5:05p	5:17p	5:28p	5:39p	5:47p	5:51p
5:15p	5:30p	5:41p	5:52p	6:01p	6:07p	6:11p
5:41p	5:54p	6:03p	6:13p	6:21p	6:27p	6:31p
6:00p	6:13p	6:22p	6:32p	6:40p	6:46p	6:50p
6:20p	6:33p	6:42p	6:51p	6:59p	7:05p	7:09p
6:50p	7:03p	7:12p	7:21p	7:29p	7:35p	7:39p
7:24p	7:37p	7:46p	7:55p	8:03p	8:09p	8:13p
7:55p	8:08p	8:17p	8:26p	8:34p	8:40p	8:44p
8:40p	8:53p	9:00p	9:09p	9:16p	9:22p	9:26p
9:27p	9:40p	9:47p	9:56p	10:03p	10:09p	10:13p



STANDARD LETTER SCOPE OF TRAFFIC IMPACT STUDY (TIS)

TO: Terry Brown, P.E., PTOE
P. O. Box 92051
Albuquerque, NM 87199-2051
tobe@swcp.com

MEETING DATE: February 27, 2015

ATTENDEES: Terry Brown, Jeanne Wolfenbarger (COA)

PROJECT: Sandia Area Federal Credit Union and Starbucks (northwest corner of Montgomery and Cairo)

REQUESTED CITY ACTION: ☐ Zone Change ☐ Site Development Plan

☐ Subdivision ☒ Building Permit ☐ Sector Plan ☐ Sector Plan Amendment

☐ Curb Cut Permit ☐ Conditional Use ☐ Annexation ☐ Site Plan Amendment

PO Box 1293

ASSOCIATED APPLICATION: This includes a 4500 square-foot bank with a drive-thru and a 2000 square-foot Starbucks with a drive-thru.

Albuquerque

The Traffic Impact Study should follow the standard report format, which is outlined in the DPM. The following supplemental information is provided for the preparation of this specific study. As each item identified in the scoping letter is completed, check the appropriate (box).

New Mexico 87103

1. Trip Generation - Use Trip Generation Manual, 9th Edition (Incorporate 30% pass-by traffic)

www.cabq.gov

2. Appropriate study area:

Signalized Intersections: Montgomery / Juan Tabo

Unsignalized Intersections: Montgomery / Cairo

Driveway Intersections: All proposed site drives.

3. Intersection turning movement counts (7-9 a.m. peak hour, 4-6 p.m. peak hour).

Intersections that need to be counted by developer: signalized and unsignalized listed above.

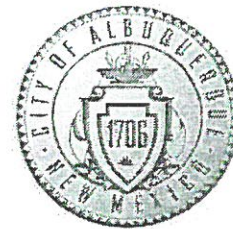
4. Type of intersection progression and factors to be used:
Type III arrival type (see "2010 Highway Capacity Manual" or equivalent as approved by staff). Unless otherwise justified, peak hour factors and % heavy commercial should be taken directly from the MRCOG turning movement data provided or as calculated from current count data by consultant.

5. Boundaries of area to be used for trip distribution.
City Wide - residential, office or industrial;
2-mile radius - commercial;
6. Basis for trip distribution.
Residential - Use inverse relationship based upon distance and employment. Use employment data from 2035 Socioeconomic Forecasts, MRCOG - See MRCOG website for most current data.

Office/Industrial - Use inverse relationship based upon distance and population. Use population data from 2035 Socioeconomic Forecasts, MRCOG - See MRCOG website for most current data.

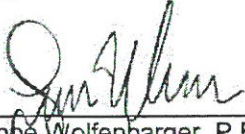
Commercial - Use relationship based upon population. Use population data from 2035 Socioeconomic Forecasts, MRCOG - See MRCOG website for most current data.
7. Traffic Assignment: Logical routing on the major street system.
8. Proposed developments which have been approved but not constructed that are to be included in the analyses: None.
9. Method of intersection capacity analysis - planning or operational (see "2010 Highway Capacity Manual" or equivalent [i.e. HCS, Synchro, Teapac, etc.] as approved by staff). Must use latest version of design software and/or current edition of design manual.
Implementation Year: 2017
10. Traffic conditions for analysis:
 - a. Project completion year without proposed development (yr. 2017);
 - b. Project completion year with proposed development (yr. 2017).
11. Background traffic growth.
Method: use 10-year historical growth based on standard data from the MRCOG Traffic Flow Maps. Minimum growth rate to be used is 1/2%.
12. Planned (programmed) traffic improvements.
List planned CIP improvements in study area and projected project implementation year: None at this time.
13. Items to be included in the study:
 - a. Intersection analysis.
 - b. Arterial LOS analysis;
 - c. Recommended street, intersection and signal improvements.
 - d. Site design features such as turning lanes, median cuts, queuing requirements and site circulation, including driveway signalization and visibility.
 - e. Transportation system impacts.
 - f. Other mitigating measures.
 - g. Accident analyses ☐ yes ☒ no.
Location(s):
 - h. Weaving analyses ☐ yes ☒ no.

CITY OF ALBUQUERQUE



14. Number of copies of report required: 2 hard copies plus electronic copy

The Traffic Impact Study for this development proposal, project name, shall be performed in accordance with the above criteria. If there are any questions regarding the above items, please contact me at 924-3924.



Jeanne Wolfenbarger, P.E.
Senior Engineer for
Transportation Development Section

03-05-15
Date

cc: TIS Task Force Attendees
file

PO Box 1293

Albuquerque

New Mexico 87103

www.cabq.gov